

# STORMWATER MANAGEMENT PLAN July 2024



# **STORMWATER MANAGEMENT PLAN**

**CITY OF PHOENIX**

**REVISED JULY 2024**



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## Acronyms

ACDC	Arizona Canal Diversion Channel
ADEQ	Arizona Department of Environmental Quality
A.R.	Administrative Regulation
AST	Aboveground Storage Tank
AZPDES	Arizona Pollutant Discharge Elimination System
B&R	Budget and Research Department
BMP	Best Management Practice
CFR	Code of Federal Regulations
City	City of Phoenix
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EFA	Environmental Facility Assessment
EPA	Environmental Protection Agency
ESD	Environmental & Safety Division
G&D	Grading and Drainage
GIS	Geographic Information System
GSI	Green Stormwater Infrastructure
HHW	Household Hazardous Waste
HMMP	Hazardous Materials Management Program
HOA	Homeowner's Association
HR	Human Resources Department
IDDE	Illicit Discharge Detection and Elimination
IPM	Integrated Pest Management
IPP	Industrial Pretreatment Program
KPB	Keep Phoenix Beautiful
LEED	Leadership in Energy and Environmental Design
LID	Low Impact Development
MEP	Maximum Extent Practicable
MFI	Municipal Facility Inventory
MS4	Municipal Separate Storm Sewer System
MSGP	Multi-Sector General Permit
NEC	No Exposure Certificate
NOI	Notice of Intent
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
OEP	Office of Environmental Programs
OAW	Outstanding Arizona Water
PAM	Pollution Awareness Marker
PAYS	Phoenix At Your Service
P.C.C.	Phoenix City Code
PDD	Planning and Development Department

PHXYou	Phoenix You (University)
PRD	Parks and Recreation Department
PSW	Protected Surface Water
PSWL	Protected Surface Water List
PWD	Public Works Department
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
SDS	Safety Data Sheet
SIC	Standard Industrial Classification
SOP	Standard Operating Procedure
STR	Street Transportation Department
STORM	Stormwater Outreach for Regional Municipalities
SWM	Stormwater Management Section
SWMP	Stormwater Management Plan
SWPP	Surface Water Protection Program
SWPPP	Stormwater Pollution Prevention Plan
SWQS	Surface Water Quality Standard
TMDL	Total Maximum Daily Load
TRT	Technical Review Team
TSDf	Treatment, Storage, or Disposal Facility
UST	Underground Storage Tank
WOTUS	Waters of the United States
WSD	Water Services Department
WU	Walkable Urban
WWTP	Wastewater Treatment Plant



## 1.0 EXECUTIVE SUMMARY

The City of Phoenix (City) Stormwater Management Plan (SWMP) is a detailed plan that identifies the major programs, policies, and procedures implemented by the City to minimize the impact of urban activities on the quality of stormwater. The City is required to develop this plan as a large Municipal Separate Storm Sewer System (MS4) under the Arizona Pollutant Discharge Elimination System (AZPDES) permit program administered by the Arizona Department of Environmental Quality (ADEQ). The City's MS4 Permit was issued by ADEQ on December 21, 2020, and became effective July 1, 2021. A permit modification to incorporate the new State Surface Waters Protection Program (SWPP) was issued May 12, 2022. A subsequent modification was issued on February 3, 2023, to address 24-hour reporting time frames. The MS4 Permit is the driving force behind the development and content of this document. As such, the City is required to develop a SWMP that outlines the specific goals, objectives, and associated timelines for the management and monitoring of activities that impact the quality of stormwater run-off based upon the permit conditions.

The SWMP addresses the major programmatic areas including Public Education and Outreach, Public Involvement, Illicit Discharge Detection and Elimination (IDDE), Municipal Facilities, Industrial Sites, Construction Sites, Post-Construction, and the wet weather monitoring program. The SWMP is a comprehensive document that has been written to reflect the requirements of the permit in addition to providing the details of the major programmatic areas; therefore, the SWMP includes an introduction and regulatory overview, a description of how the stormwater program is managed, sections addressing the major programmatic areas, and additional sections describing the training program, the monitoring program, and the approach to evaluating program effectiveness.

This plan was developed with input from multiple City departments and approved by the applicable department directors. The Certification Statement is included in Appendix A.

A copy of the SWMP and the most recent Stormwater Annual Report is available on the City's website ([Water Services Stormwater Program \(phoenix.gov\)](https://www.phoenix.gov/water-services/stormwater-program)).

## 2.0 INTRODUCTION TO THE STORMWATER MANAGEMENT PLAN

The SWMP is the principal document that translates the MS4 Permit requirements into City programs and procedures. The SWMP is used by the City in development of individual ordinances, plans, policies, and procedures to protect stormwater quality.

The initial SWMP was prepared to comply with the requirements of the MS4 Permit issued by the Environmental Protection Agency (EPA) Region 9 in 1997. The SWMP evolves as requirements and practices within the City change and as MS4 permit requirements change. It also includes programmatic changes that were incorporated since the initial MS4 Permit was issued in 1997.

The SWMP covers the geographic boundary of the City of Phoenix MS4, and addresses stormwater quality concerns related to urbanization, construction activities, and non-stormwater discharges.

### 2.1 PROGRAM OVERVIEW

The SWMP serves as the primary document that describes the program elements necessary to comply with the MS4 Permit. The program elements are identified in Figure 2-1.

In addition to the descriptions of program elements contained within the SWMP, each City department with stormwater management responsibilities maintains documentation of their internal procedures. Examples of this documentation include the following information:

- The City's stormwater ordinance
- Illicit Connection/Illegal Discharge investigation, enforcement, and response procedures
- Field screening procedures (dry weather outfall monitoring)
- Industrial/commercial inspection procedures, database, and checklist
- City of Phoenix facility assessment program
- Hazardous Materials Management Program
- Drainage system maintenance schedule for the MS4
- Development review, approval and permitting
- Construction site inspection program
- Post-construction program

These documents are reviewed and updated as necessary to keep up with changes within the City and with changing local, state and federal regulations. These programs will remain, however, in compliance with the MS4 Permit and the programs outlined in this SWMP. These documents are stored electronically on a SharePoint site: [Stormwater Management Program - All Documents](#).

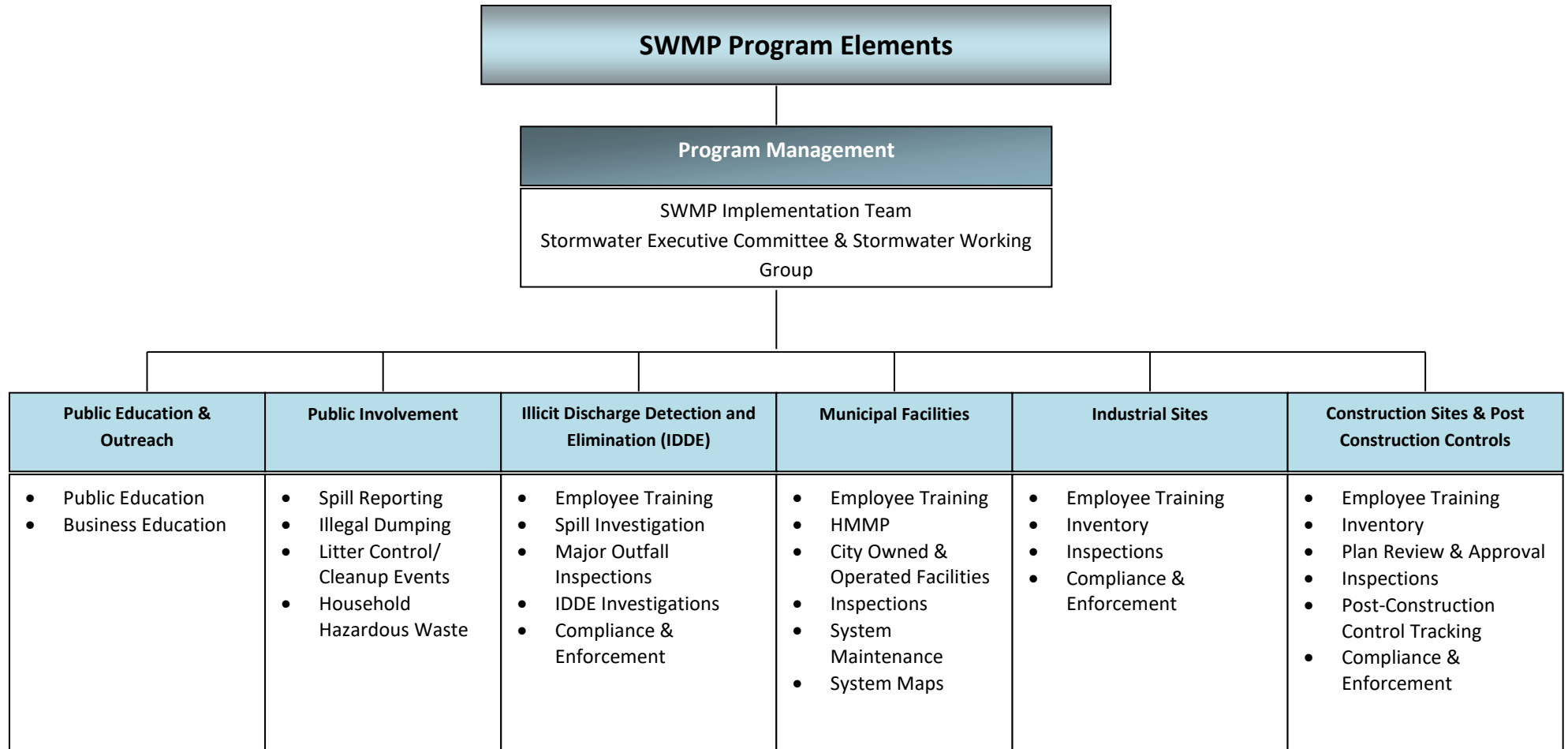


Figure 2-1: Program Elements of SWMP

## 2.2 REGULATORY FRAMEWORK

### 2.2.1 NPDES Permitting for Stormwater Discharges

The Water Quality Act of 1987, Clean Water Act (CWA) Section 402(p), required the EPA to regulate stormwater discharges under the National Pollutant Discharge Elimination System (NPDES) using a phased approach. The CWA authorizes the discharge of pollutants to Waters of the United States (WOTUS) from a point source only if the discharge is in compliance with a NPDES permit. EPA's program includes NPDES applications and corresponding permits for stormwater discharges associated with industrial and construction activities and for stormwater discharges from MS4s. The requirements of Section 402(p) applicable to MS4 NPDES permits include:

- A requirement to effectively prohibit non-stormwater discharges into the MS4, and
- A mandate to implement controls to reduce the pollutants in stormwater discharges to the maximum extent practicable (MEP). Controls may include management practices, control techniques and systems, design and engineering methods, maintenance / repair activities, and other provisions deemed appropriate by the administering authority for the control of such pollutants.

EPA's Final Rule for NPDES Permit Application Regulations was effective December 17, 1990, and is commonly referred to as the "Phase I stormwater regulations." These regulations are administered nationwide through the EPA's NPDES program and apply to MS4s serving a population of 100,000 or more.

MS4s are comprised conveyances that are owned by a state, city, town, county, district, association, or other public body, which may include streets, channels, pipes, basins, etc. The Phase I stormwater regulations require that the MS4 reduce the discharge of pollutants to the MEP using management practices, control systems, design and engineering methods, maintenance/repair activities, and other appropriate techniques. The Phase I stormwater regulations include requirements for specified industrial operations and construction activities, and outlines required planning, recordkeeping, and reporting activities, and a defined compliance schedule for.

In 2002, the EPA granted NPDES permitting authority to the State of Arizona. ADEQ administers the program as the AZPDES permit program. Arizona passed the State Surface Water Protection Rule in May 2021. ADEQ is administering this program as the SWPP which includes both WOTUS and non-WOTUS protected surface waters (PSWs), and provides protection for certain non-WOTUS waters. A modification to the City's MS4 permit included state protected surface waters (PSWs) which are cataloged in ADEQ's PSW List (PSWL). The final PSWL and surface water quality standards (SWQS) were promulgated by ADEQ on January 27, 2023, and became effective February 20, 2023.

### 2.2.2 Impaired and Not-Attaining Water Bodies

Section 303(d) of the CWA requires that states, territories, and authorized tribes develop lists of impaired waters in their jurisdiction. The lists are required to be updated every other year. Water bodies included on the 303(d) list are considered impaired because they do not meet water quality standards for at least one designated use. The current 303(d) List for Arizona can be accessed from the following website: [WQD | Surface Water Monitoring & Assessment | ADEQ \(azdeq.gov\)](https://www.azdeq.gov/wqd/surface-water-monitoring-and-assessment).

While the City's MS4 does not currently discharge to an impaired water or not-attaining water, if a PSW becomes impaired, the City will monitor for any 303(d) listed parameter(s) at a representative outfall discharging to the impaired water. In addition, the City will review and revise the SWMP to incorporate best management practices (BMPs) to minimize discharges of the listed parameter(s) to the MEP. The City will also evaluate mechanisms to monitor BMP effectiveness.

The MS4 permit could be reopened and modified by ADEQ to include additional permit conditions if one or more of the receiving waters become classified as impaired or not-attaining during the permit term.

A Total Maximum Daily Load (TMDL) will be developed when an impaired water is classified as not-attaining. A TMDL provides the maximum amount of a pollutant that a water body can receive and still meet water quality standards. A TMDL also apportions pollutant loadings between point and nonpoint pollutant sources. To comply with CWA requirements, priority rankings must be established for impaired waters and TMDLs must be determined. The extent of pollution in the water body and the beneficial uses of the water (fishing, swimming, municipal water supply, etc.) are factors in the TMDL calculation. The City's MS4 does not discharge to any surface waters with an established TMDL. However, if a TMDL is established in the future, the SWMP will be revised to incorporate BMPs to address waste load allocations and monitoring requirements.

### **2.2.3 Outstanding Arizona Waters**

Surface waters identified by ADEQ as an outstanding water resource are protected in the State of Arizona. None of the receiving waters within the City's jurisdiction have been classified as Outstanding Arizona Waters (OAWs). The MS4 permit could be reopened and modified to include additional permit conditions if one or more of the receiving waters receive the classification of OAW during the permit term.

## **2.3 PHOENIX AREA WATER QUALITY CONCERNS**

### **2.3.1 Stormwater Runoff and Urbanization**

As an area becomes more urbanized, the capacity of the land to naturally infiltrate stormwater is lowered. As buildings, roads, parking lots, driveways, and sidewalks are constructed, the quantity of impervious surface area increases. Stormwater washing over these surfaces picks up pollutants, increases in volume, flows more quickly, and increases in temperature compared with stormwater flowing over areas consisting of natural vegetation (EPA, 1997). Larger quantities of pollutants are generated by the growing population resulting in stormwater runoff with higher pollutant loads. Pollutant sources include tailpipe emissions and fluids from vehicles, fertilizers, pesticides, litter, pet wastes, and household chemicals. Receiving waters may be impacted by contaminated stormwater runoff and by pollutants illegally dumped into storm drains, and by soils that are windblown or destabilized.

### **2.3.2 Construction Impacts and Stormwater Runoff**

Construction activities can impact stormwater quality if measures are not implemented to prevent erosion and sediment transport. Pollutants, (including phosphorus, metals, and organic compounds), are often absorbed onto fine sediment particles and transported to receiving water bodies. It is generally known that erosion rates from construction sites are greater than from almost any other land use (AZPDES Fact Sheet, 2008).

### 2.3.3 Non-Stormwater Discharges

MS4s frequently receive non-stormwater discharges. Most non-stormwater discharges are prohibited by the MS4 permit unless authorized separately under the AZPDES Program. Exceptions are included in the permit for discharges of emergency fire-fighting activities and other allowable non-stormwater discharges, including potable water, air conditioning condensate, irrigation water, individual residential car washing, dechlorinated swimming pool water, street wash water, and discharges authorized by another NPDES or AZPDES permit.

Non-stormwater discharges that are not exempt or covered by another permit are considered illicit discharges in the City's stormwater program. Sources of illicit discharges can include process water, sanitary and industrial wastewater, and improperly handled spills or material disposal. Unauthorized discharges can occur when materials that were spilled or improperly handled or stored are washed into the storm drain system during a storm event, or when materials are intentionally dumped into a storm drain. These illicit discharges may contain heavy metals, toxics, oil and grease, solvents, household hazardous materials, radiator fluids, litter, viruses, and bacteria.

### 2.3.4 Climate

The climate of the Phoenix area consists of hot, dry summers and mild winters. Average annual precipitation ranges from 5 to 8 inches per year in the urban desert. Most of the precipitation occurs between July and September during the summer monsoon season, and between December and March, as winter storms move inland from the west.

- Winter storms generally originate over the Pacific Ocean as a result of the interaction between polar Pacific and tropical Pacific air masses and move eastward over the basin. These storms can last for several days and are accompanied by widespread precipitation in the form of rain.
- Summer monsoon storms are usually associated with an influx of tropical maritime air originating over the Gulf of Mexico or the South Pacific Ocean and entering the area from a southeast to a southwest direction. Storms typically consist of heavy precipitation falling in a short period of time, accompanied by high winds, and blowing dust.

### 2.3.5 Receiving Waters

The City's MS4 Permit authorizes stormwater discharges to WOTUS and non-WOTUS PSWs including portions of the Salt River, Indian Bend Wash, Skunk Creek Wash, New River, and Cave Creek Wash. The MS4 also discharges to constructed distribution systems including the Grand Canal, Arizona Canal, Arizona Canal Diversion Channel (ACDC), Cross Cut Canal, Old Cross Cut Canal, and the Papago Diversion Channel. Most of these distribution systems are included in the PSWL as PSWs under the generic listing "Phoenix Area Canals" or are considered conveyances to a WOTUS or non-WOTUS PSW. Runoff from the central part of the City flows to the Papago Diversion Channel, the Grand Canal, and the Arizona Canals, which discharge to Skunk Creek and New River, which discharge to the Agua Fria River. Stormwater runoff from the northern part of the City, including Cave Creek Wash, flows to the ACDC, to Skunk Creek, and then to the Agua Fria River. The Agua Fria River discharges to the Salt River west of the City. Stormwater from the northeastern area of the City flows from the Indian Bend Wash and drains to the Salt River. Stormwater from the central and southern part of the City flows to the Salt River.

There are numerous other smaller washes in the Phoenix area that may receive stormwater through MS4 connections. Some examples are Scatter Wash in northwest Phoenix, Dreamy Draw Wash in north-central Phoenix, and Echo Canyon Wash in east-central Phoenix. ADEQ maintains a database that lists the waters on the PSWL and a map of a selection of those waters.

[AZPDES - Overview \(arcgis.com\)](http://arcgis.com)

## 3.0 PROGRAM MANAGEMENT

### 3.1 PERMITTEE AND PERMITTEE RESPONSIBILITIES

The MS4 permit is administered by the City Water Services Department (WSD); however, multiple departments are involved in the day-to-day responsibilities of implementing the stormwater program. A SWMP Implementation Team (also known as the Stormwater Working Group) is tasked with overseeing and assessing progress on each of the elements of the program. The Team includes representatives from each of the following City departments and functions with direct stormwater responsibilities:

Table 3-1 Permittee and Permittee Responsibilities

Department	Responsibilities
Water Services Department (WSD)	Public Education & Outreach Public Involvement (Hotline & Workshops) Illicit Discharge Detection and Elimination Industrial Inspections Outfall Inspections Enforcement & Compliance Wet Weather Monitoring Construction Inspections (WSD Projects) Reporting
Street Transportation Department (STR)	Drainage System Maintenance Roadway Maintenance Roadway/Utility Plan Review & Inspections Mapping Municipal Construction Inspection coordination Floodplain Management
Office of Environmental Programs (OEP)	Municipal Facility Inspections Municipal Construction Inspections Training Program Oversight Spill Tracking Hazardous Materials Mgmt. Program Coordination
Planning and Development Department (PDD)	Public Education & Outreach Construction Plan Review Construction Inspections Post Construction Inventory & Inspections Enforcement & Compliance
Public Works Department (PWD)	Public Education & Outreach Public Involvement (Household Hazardous Waste)
Parks Department (PRD)	Public Involvement (River Cleanup Events)

The Working Group meets monthly and directs the implementation of the SWMP and coordinates the overall MS4 Permit compliance program. The Working Group members also provide technical assistance and support to the WSD when changes to legislative initiatives and regulatory requirements occur.

The Stormwater Executive Committee, which includes members from WSD, STR, PWD, PDD, OEP, and the Law Department, provides management oversight of the program. The Stormwater Executive Committee



meets quarterly to review the budget, progress toward meeting permit goals, and stormwater improvement projects.

## 3.2 FUNDING SOURCES

Implementation of the SWMP is funded through the following resources:

- **Stormwater Management Excise Tax:** A monthly excise tax assessed on all City Services bills to fund MS4 permit-required programs. Single-family residential accounts are charged a set fee with all other water accounts charged a graduated rate by meter size using the equivalent dwelling unit methodology. The City funds most direct MS4 Permit compliance program activities through this tax.
- **General Fund/Other Revenues:** The City departments utilize general fund revenues to finance a portion of MS4 Permit compliance activities.
- **Permit Fees:** The City charges fees for services such as construction inspections, plan review checks, permit issuance, report reviews, and other recoverable costs relative to the MS4 Permit.

The City Budget and Research (B&R) Department conducted a review of the program's resources in 2009. The B&R report and recommendations were reviewed by the Phoenix City Council in April of 2010. Council authorized an increase in the stormwater excise tax in 2010 to provide additional resources to support the program. The City council approved an increase to the stormwater excise tax in 2023 to fund programs required by the new permit, such as the Post-Construction program, retrofit feasibility study, increased public outreach, and expanded inspections, monitoring, and mapping.

## 3.3 LEGAL AUTHORITY AND ENFORCEMENT

### 3.3.1 Legal Authority

Although ADEQ and EPA may have overlapping legal authority over some discharges to and from MS4s (i.e., through the State's General Permits for stormwater discharges associated with industrial facilities or construction activities), the City must still independently establish, maintain and enforce adequate legal authority to control discharges to the MS4 (40 Code of Federal Regulations (CFR) §122.26(d)(2)(i)(A-F)). Conversely, ADEQ and EPA are independently responsible for enforcing their own legal authorities. The City's legal authority utilizes ordinances, permits, and procedures or similar means, as necessary. At minimum, an MS4 Permittee's legal authority must authorize the City to:

- control the contribution of pollutants to the MS4 by stormwater discharges associated with industrial activity and the quality of stormwater discharged from sites of industrial activity,
- control the contribution of pollutants to the MS4 by stormwater discharges associated with construction activity and the quality of stormwater discharged from construction sites,
- prohibit illicit connections and discharges to the MS4,
- control discharges to the MS4 of spills, dumping, or disposal of materials other than stormwater,
- require compliance with conditions in ordinances, permits, contracts, or orders,

- carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions, including the prohibition on illicit discharges to the MS4, and
- establish requirements for post-construction stormwater controls.

Proper legal authority is necessary for the City to effectively implement compliance programs to reduce pollutants in discharges of stormwater runoff to the MEP. The legal authority necessary to implement compliance programs and pursue enforcement is provided through local stormwater, floodplain, and erosion control ordinances, known as Phoenix City Codes (P.C.C.). The City details these rules and regulations through stormwater quality ordinance (P.C.C. Chapter 32C), a floodplain management ordinance (P.C.C. Chapter 32B), and a grading and drainage (G&D) ordinance (P.C.C. Chapter 32A). Copies of these ordinances are available online at <https://phoenix.municipal.codes/>.

The City does not have the authority to enforce the provisions of Arizona’s General Permit for Stormwater Discharges Associated with Industrial Activities, Arizona’s General Permit for Stormwater Discharges Associated with Construction Activity, Arizona’s Pesticide General Permit, or Arizona’s De Minimis General Permit, all of which are administered by ADEQ. However, City Stormwater and G&D ordinances may address items similar to those identified in some of these statewide permits.

### **3.3.2 Enforcement**

The goal of the City’s Enforcement Program is to document the enforcement of stormwater ordinances fairly and consistently throughout the City’s jurisdiction. The City periodically reviews ordinances to verify that they include measures to address compliance expectations for construction sites, commercial establishments, and industrial facilities. The City has also developed policies and procedures to determine if facilities are operating in compliance with the applicable stormwater G&D ordinances. It is recognized that there is no clear, standard approach to handling all the enforcement situations that may be encountered and that the professional judgment of individual inspectors will guide the appropriate level of response.

Enforcement measures have been integrated into the appropriate elements of this SWMP and those sections provide guidelines on how City departments implement enforcement actions appropriate for a given violation.

#### **Prioritizing Violations**

Prioritizing violations is important for focusing City resources on those violations that may have the greatest potential impact on stormwater quality. The prioritization of violations is based on many factors, including the type of violation, whether there is a threat to human health and the environment, duration of the violation, good faith efforts to comply, and compliance history. City staff uses their experience and professional judgment to determine the appropriate enforcement response. WSD Inspectors follow standard operating procedure (SOP) 6021, Stormwater Enforcement Response Plan. Other departments have SOPs or guidance documents to respond to and prioritize violations.

### **Recordkeeping and Reporting**

The City maintains records of enforcement activities, including:

- Inspection notes or reports
- Copies of communications with the parties in violation of applicable rules and requirements
- Documentation of follow-up actions
- Responses received from violators
- Correspondence with other agencies, if applicable.

### **3.4 BEST MANAGEMENT PRACTICES/CONTROL MEASURES**

The City has developed and implemented BMPs, also referred to as control measures. The BMPs include options or practices that can be implemented to prevent pollutants from entering stormwater.

The BMPs include but are not limited to:

- Public Education & Outreach
- Public Involvement
- Illicit Discharge Detection & Elimination
- Industrial Inspections
- Municipal Inspections
- Construction Inspections
- Post-Construction Controls
- Drainage System Maintenance
- Roadway Maintenance
- Employee Training
- The Hazardous Materials Management Program (HMMP)

## 4.0 PUBLIC EDUCATION AND OUTREACH

### 4.1 INTRODUCTION

The City has developed a strong area-wide Public Education and Outreach Program. Public education is an important element in any municipal stormwater program. Increasing public awareness and gaining public involvement is essential in controlling pollution associated with stormwater runoff. Communicating the impacts of stormwater runoff to selected targets increases the likelihood that they will support and participate in program implementation.

To expand outreach opportunities, City has partnered with other local entities, including Stormwater Outreach for Regional Municipalities (STORM) and Keep Phoenix Beautiful (KPB) to promote conservation, pollution prevention, and environmental awareness.

#### MS4 Permit Requirements

The City's MS4 Permit identifies target audiences and topics for the Public Education & Outreach Program. For the general public, residential audiences, schools, and homeowners, homeowner's associations (HOAs) topics may include, but are not limited to:

- post-construction ordinances and long-term maintenance requirements for permanent stormwater controls,
- stormwater runoff issues and residential stormwater management practices,
- potential water quality impacts of application of pesticides, herbicides, fertilizer and bmps to minimize runoff of pollutants in stormwater,
- potential impacts of animal wastes on water quality and the need to clean up and properly dispose of pet waste to minimize runoff of pollutants in stormwater,
- illicit discharges and illegal dumping, proper management of non-stormwater discharges, and providing information on reporting spills, dumping, and illicit discharges,
- spill prevention, proper handling and disposal of toxic and hazardous materials, and measures to contain and minimize discharges to the storm sewer system,
- installation of catch basin markers at storm sewer inlets to minimize illicit discharges and illegal dumping to the storm sewer system,
- proper management and disposal of used oil, and
- community activities (monitoring programs, environmental protection organization activities, etc.).

Topics identified for audiences in the development, construction, and business communities include:

- planning ordinances and G&D design standards for stormwater management in new developments and significant redevelopments,
- municipal stormwater requirements and stormwater management practices for construction sites,

- illicit discharges and proper management of non-stormwater discharges,
- spill prevention, proper handling of toxic and hazardous materials, and measures to contain and minimize discharges to the storm sewer system,
- 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,
- stormwater management practices, pollution prevention plans, and facility maintenance procedures, and
- water quality impacts associated with land development (including new construction and redevelopment)

The topics listed above are not exclusive, and the City may focus outreach efforts on target groups and topics most relevant to the MS4.

## 4.2 IMPLEMENTATION

### Stormwater Outreach

The City conducts a variety of stormwater-related public outreach activities including workshops and public service announcements for the general public, the business community, and schools. An Outreach/Marketing Plan is developed to outline specific activities each fiscal year. The City's stormwater website ([Water Services Stormwater Program \(phoenix.gov\)](http://www.phoenix.gov/water-services/stormwater-program)) provides information on residential, business, and construction stormwater management practices. The website also includes an interactive site for general stormwater pollution awareness. The City also develops and maintains stormwater related videos and various stormwater handouts, including BMP brochures and activity books.

In January 2021, the City implemented an annual Stormwater Awareness Week, which is a weeklong public outreach campaign to focus attention on stormwater pollution and pollution prevention activities. Other municipalities and organizations in the area have also joined the effort. The campaign includes live virtual presentations, social media, billboards, and radio ads.

The City participates with STORM to provide coordinated stormwater outreach throughout the Phoenix metropolitan area. STORM members use social media, radio spots, videos, and their website ([STORM \(Stormwater Outreach for Regional Municipalities\) \(azstorm.org\)](http://www.azstorm.org)) to deliver stormwater education to members of the general public and select businesses.

### Pollution Awareness Markers

The City installs Pollution Awareness Markers (PAMs) on catch basin inlets as a visual reminder that dumping to the storm drain is prohibited. PAMs contain the stormwater management logo or mascot and the words "Storm Drain No Dumping." PAMs are made of recycled has and have a 25-year life expectancy. WSD SOP 6008 covers how to properly install a PAM.

**Recycling Education**

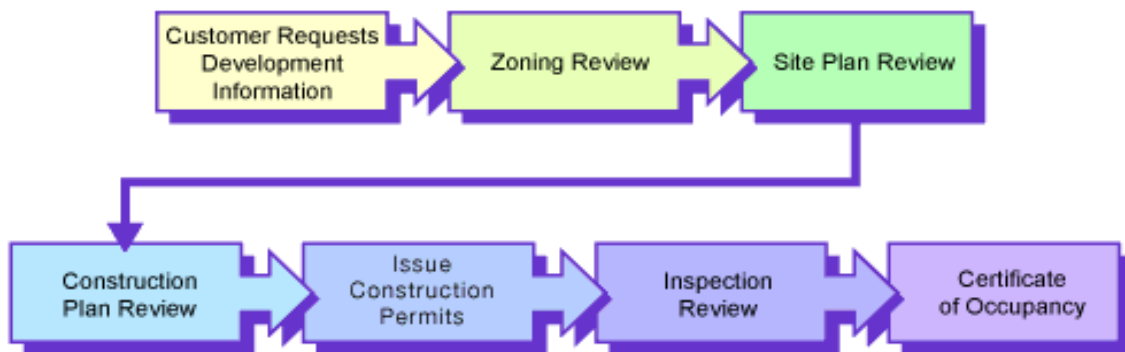
The PWD Zero Waste team provides presentations to schools, conducts tours of the City’s material recovery facilities for residential communities and homeowners, and promotes City recycling programs at special events.

**Keep Phoenix Beautiful**

The City partners with KPB, an affiliate of Keep America Beautiful, that organizes and implements programs in three areas: education/outreach, community gardens, and neighborhood beautification. KPB gives youth education presentations for Phoenix schools, Head Start programs, and community centers. The presentations reach both students and teachers. Topics emphasize solid waste management, including recycling, litter control, and waste prevention. Giveaway materials distributed at events include brochures, volunteer listings, pencils, recycling bags, and activity books.

**Educational Program for Developers and Contractors**

The PDD conducts periodic meetings for developers and contractors to provide information about the development process depicted in the flowchart shown in Figure 4-1. In addition to PDD activities, STORM conducts periodic outreach to developers and construction site operators.



**Figure 4-1: Development Process Overview**

**Five Year Plan**

The City has developed a five-year Public Education and Outreach Plan to focus on specific target audiences and topics, as required under the permit. It aligns with STORM’s five-year plan which is adopted by a majority of the member cities in Arizona. The plan includes the following:

**Table 4-1 Five-Year Public Education and Outreach Plan**

When	Theme	Status	Topics for Target Audiences	
Fiscal 2023 (July 2022 – June 2023)	Stormwater Runoff Issues:	Complete	HOA: Best Management practices	Development Community: grading /drainage standards

When	Theme	Status	Topics for Target Audiences	
Fiscal 2024 (July 2023- June 2024)	Post Construction Ordinances & IDDE	Complete	Residential Community: Illicit discharges and illegal dumping, proper management of non-stormwater discharges, and to provide information on reporting spills, dumping, and illicit discharges	Commercial Business: Stormwater management practices, pollution prevention plans, and facility maintenance procedures
Fiscal 2025 (July 2024- June 2025)	Water Quality Impacts	On-Going	General Public.: 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	Businesses: Illicit discharges and proper management of non-stormwater discharges
Fiscal 2026 (July 2025- June 2026)	Stormwater Runoff Issues and Illicit discharges	Future	Residential/HOA: Potential water quality impacts of application of pesticides, herbicides and fertilizer and control measures to minimize runoff of pollutants in stormwater	Construction: Municipal stormwater requirements and stormwater management practices for construction sites
Fiscal 2027 (July 2026- June 2027)	IDDE Reporting and Stormwater requirements and management for construction sites	Future	Schools: Stormwater runoff issues and residential stormwater management practices	Development: Water quality impacts associated with land development (including new construction and redevelopment).

Situations may arise that change the plan without prior modification of the SWMP. For example, the City may identify an industry group or topic that requires special and timely attention. The intent will be to provide public education on the causes of stormwater pollution and control measures that minimize pollution to the MEP.

## 5.0 PUBLIC INVOLVEMENT

The City conducts the following public involvement activities that provide the public with an opportunity to participate in the City's stormwater management program, including:

- hosting an annual public workshop to inform and engage interested members of the public with the development and implementation of all parts of the SWMP,
- creating opportunities for citizens to participate in the implementation of stormwater controls,
- providing and publicizing a reporting system to facilitate and track public reporting of spills, discharges, and/or dumping to the MS4,
- implementing a household hazardous waste (HHW) collection program to facilitate proper disposal of used oil, antifreeze, pesticides, herbicides, paints, and other hazardous materials, and
- Posting the SWMP and Annual Report on the City's website ([phoenix.gov/stormwater](http://phoenix.gov/stormwater)).

### 5.1 PUBLIC REPORTING OF STORMWATER ISSUES

The City promotes myPHX311 (formerly known as Phoenix at Your Service (PAYS)) to simplify access to City departments <https://www.phoenix.gov/atyourservice>. Members of the public can also notify the City of potential stormwater concerns by calling the Stormwater Hotline at (602) 256-3190 or 7-1-1 (TTY), through the website at [Water Services Stormwater Program \(phoenix.gov\)](http://Water Services Stormwater Program (phoenix.gov)), or via email ([ask.water@phoenix.gov](mailto:ask.water@phoenix.gov)). The Stormwater Management Section (SWM) tracks the number and types of complaints received and the number of investigations initiated by the section.

## 5.2 MUNICIPAL PROGRAMS

### 5.2.1 Stream Clean-up

The Parks and Recreation Department (PRD) holds stream clean-up events at Rio Salado Habitat Restoration Area, Cave Creek Wash, Skunk Creek Wash, and Apache Wash to educate the public about stormwater pollution and water quality. Park Rangers also conduct trail and trailhead programs emphasizing the need for, and the regulations regarding picking up animal waste. Failing to pick up waste is a citable offence per P.C.C. Section 27-12, but staff prefer to utilize educational contact whenever possible.

### 5.2.2 Household Hazardous Waste

PWD organizes the HHW collection program. This program assists residents in properly disposing of potentially hazardous or toxic materials, including household paint, batteries, used oil, antifreeze, and pesticides in addition to a variety of other non-liquid items.

Information on the HHW program is available on the City website at [Public Works Household Hazardous Waste and Electronics \(phoenix.gov\)](http://Public Works Household Hazardous Waste and Electronics (phoenix.gov)) or by calling (602) 262-6251.

Examples of wastes that are accepted as part of the HHW collection program include the following items:

- Chemicals: Cleaning chemicals, photochemicals, pool chemicals, aerosols
- Paints: household, paint thinner/stripper, stains



- Automotive: Automotive fluids, car wash and wax, gasoline/diesel/kerosene fuels, tire cleaner/treatment
- Garden: Fertilizers, pesticides
- Miscellaneous: Circuit boards, fluorescent and CFL lightbulbs, mercury thermostats, road flares
- Cylinders: Camp stove propane tank, fire extinguisher, grill propane tank
- Batteries: single-use, rechargeable, lead acid
- Electronics: All types of phones, cables and connectors, calculators, cameras and camcorders, computer/hard drives, holiday lights, ink/toner cartridges, keyboard and mice, modems/routers, monitors, portable music players, printers/scanner/fax machines, projectors, remotes and cords, speakers, surge protectors and power strips, tablets and e-readers, TV's, typewriter, VCR/DVD and blue-ray players, video game equipment, webcams

Examples of wastes that are not accepted in the HHW collection program include the following items:

- Regular refuse and bulk trash
- Business/commercial waste
- Explosives/ammunition
- Compressed gases such as methyl-acetylene propadiene propane (MAPP) or Acetylene
- Radioactive materials
- Biomedical waste
- Medications and sharps
- Volatile materials

Residents can also drop off limited varieties of HHW at the 27<sup>th</sup> Avenue and North Gateway Transfer Stations. Acceptable wastes and conditions can be found at [Public Works Transfer Stations \(phoenix.gov\)](http://phoenix.gov).

### **5.3 KEEP PHOENIX BEAUTIFUL**

KPB's mission is to promote a clean and healthy environment by increasing knowledge and utilization of the reduce, reuse, and recycling philosophy. They also provide anti-litter and recycling education and foster community pride through active participation in special events such as cleanup and beautification projects. KPB has a contract with the City and provides outreach community services to complement the efforts of the PWD to benefit residents throughout the City ([Community Gardens | Keep Phoenix Beautiful | Phoenix \(keepphxbeautiful.org\)](http://keepphxbeautiful.org)).

KPB hosts and participates in numerous neighborhood cleanups annually to reduce litter in neighborhoods and the environment. KPB also hosts annual 'I Recycle Phoenix' events, which divert electronics, clothing,

household goods, shredded paper, and Christmas Trees from the landfill. These special projects involve residents and result in a healthier, cleaner, and more beautiful environment.

## 6.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION

### 6.1 MEASURES TO CONTROL ILLICIT CONNECTIONS AND ILLEGAL DUMPING TO MS4

The City prohibits illicit discharges to the MS4, and controls discharges to the MS4 resulting from spills, dumping, or disposal of materials other than stormwater.

The WSD has an Illicit Discharge Detection and Elimination (IDDE) Program to investigate and eliminate illegal discharges to the MS4. The program includes field inspections, regulatory enforcement, and illicit discharge education.

#### P.C.C. Chapter 32C Stormwater Quality Protection

The City's Stormwater Quality Protection Ordinance prohibits the release of significant quantities of materials, pollutants, or stormwater that "may reasonably be expected to cause or contribute to: damage to a public right-of-way or public storm drain system; a violation of an applicable water quality standard; or a violation of any condition of a stormwater AZPDES permit". A copy of the Ordinance is included in Appendix B ([Chapter 32C Stormwater Quality Protection | Phoenix City Code \(municipal.codes\)](#)).

#### Non-Stormwater Discharge Evaluation

Most non-stormwater discharges, not covered by a separate AZPDES permit, are prohibited under the MS4 Permit. However, the MS4 Permit and P.C.C. Chapter 32C authorize non-stormwater discharges, provided they are not significant sources of pollutants, including the following list:

1. Water line flushing
2. Landscape irrigation
3. Diverted stream flows
4. Rising ground waters
5. Uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(B)(20) to separate storm sewers
6. Uncontaminated pumped groundwater
7. Discharges from potable water sources
8. Foundation drains
9. Air conditioning condensation
10. Irrigation water
11. Springs
12. Water from crawl space pumps
13. Footing drains
14. Lawn watering
15. Individual residential car washing
16. Flows from riparian habitats and wetlands
17. Dechlorinated swimming pool discharges

18. Street wash water
19. Discharges or flows from emergency firefighting activities
20. Discharges authorized by another NPDES or AZPDES permit

The Ordinance allows the issuance of temporary discharge permits for the release of uncontaminated non-stormwater if the release will not cause a violation of a surface water quality standard or a condition of a NPDES/AZPDES permit. Requests to discharge are reviewed to determine if applicable requirements are fulfilled. If a discharge permit is not granted, staff provides guidance to the applicant on the best method for disposal. Options may include discharging to the sanitary sewer cleanout, using the water for irrigation, or contacting a non-hazardous liquid waste hauler. The City may require commercial or industrial applicants to provide a water analysis report prior to issuing a permit. At a minimum, pH, chlorine levels, and color are required. Specific restrictions may be applied in the permit, including flow rate and time of discharge limitations. WSD SOP 6026 covers temporary stormwater discharge permits.

Non-stormwater or unauthorized discharges identified by field personnel or through complaints received from the public are recorded in the SWM database. Trained staff members investigate these reports and enter their findings and any actions initiated in the appropriate database fields. Records of temporary discharge permits issued by ESD are also maintained. WSD SOP 6013 covers complaint receipt and investigations.

## **6.2 PRACTICES FOR FIELD SCREENING**

The outfall inventory is maintained in the SWM database and currently includes 783 active outfalls, and 258 major outfalls. The number of outfalls and major outfalls may change depending on the federal WOTUS definition.

Fifteen outfalls are currently considered priority outfalls under the permit requirements, though this number may vary from year-to-year. Priority outfalls include major outfalls that discharge to impaired waters or not-attaining waters, major outfalls that have been a source of illicit discharge in the past five years, and major outfalls that have been identified as priority for illicit discharges and other non-stormwater flows. Outfalls with dry-weather flow, where the source has been identified as allowable under City code and the flow has been determined to not be significantly polluted, are removed from the priority outfall list.

The City's Stormwater Management Program maps showing outfalls, structural controls, rain gauge locations, drainage pipes and their associated outfalls, stormwater conveyances, catchment basins and zoning polygons and other information are available to City employees on the City's Geographic Information System (GIS). Maps of the five (5) monitored outfalls are included in Appendix C of this plan. In addition, a list of major outfalls is included in Appendix D.

### **6.2.1 Inspection Priorities and Schedule**

Priority outfalls are inspected annually. Approximately 20 percent of the remaining major outfalls are inspected annually, so that every outfall is inspected at least once every five years. The inspection schedule

is reviewed annually and updated as needed. WSD SOP 6024 describes outfall inspections and outfall inventory prioritization.

### 6.2.2 Field Screening Procedures

Field screening activities are conducted on outfalls that have a dry weather flow as outlined in WSD SOP 6007. The screening includes a visual inspection of the outfall and surrounding area, as well as qualitative analyses of flows. City personnel perform field screening on dry weather discharges if the flow rate is found to be sufficient—typically greater than 0.03 gallons per minute. Colorimetric field kits are typically used for field screening. The results are used to determine if the flow is ‘significantly polluted’ (i.e., pollutants exceeding a trigger). The information obtained from the field screening is used to prioritize IDDE investigations. The SWM database is used to track and record findings from field screening procedures.

## 6.3 INVESTIGATING POTENTIAL ILLICIT DISCHARGES

Potential illicit discharges are identified in several ways, including through outfall inspections, field screening, and storm drain maintenance. Illicit connections and illegal discharges may also be identified from complaints from the public.

SWM inspectors typically respond to illicit discharge reports within three business days. The City immediately responds to illicit discharges that constitute a threat to human health or the environment. When applicable, information is given to the discharger and a field notice of violation (NOV) may be issued. If necessary, an industrial inspection may be conducted to bring the business into compliance with City Code. All observations are recorded in the SWM database and enforcement action may be initiated shortly afterward.

The Street Maintenance Dispatch Office (known as Dispatch 19) maintains a data retrieval system to record work requests and field observations. Some typical examples of service requests include cleaning streets, catch basins, washes, pipes and outfalls and responding to spills in the roadway. All requests for service received by the Streets Department Dispatch and are logged into a computer database called Citizen Serve (STR Maintenance Dispatch <dispatch@phoenix.gov>). The information is transmitted to the appropriate service center where it is assigned to staff. The location and responsible party are included in the system, as well as a description of the work completed. The Citizen Serve system provides a convenient mechanism for tracking cases, and also provides access to historical data, which may be used to note trends. For larger spills, the City’s emergency contractor may be dispatched for clean-up response.

### 6.3.1 Dry Weather Discharges

Procedures are in place to investigate dry weather flows observed during outfall inspections. The inspector uses field screening procedures to identify and characterize the discharge. SWM prioritizes dry weather discharges that exceed a trigger or appear to be obvious wastewater discharges. Outfalls that have a dry-weather flow observed during routine inspections are documented. The SWM database automatically triggers an IDDE investigation and staff begin to search for the source of flow using a variety of techniques. IDDE investigations typically involve tracing the flow up the storm drain system and may include performing a video inspection. Each investigation is documented. Corrective action is initiated if the source(s) can be identified, and illegal flow can be verified. If the source of the flow can be identified and determined to be

allowable under City code, and the flow is not “significantly polluted”, the outfall will be removed from the priority list. WSD SOP 6006 describes the IDDE procedure for dry weather flow investigations.

### **6.3.2 Illicit Discharge Investigation**

When notified by staff or a third party of a potential illicit discharge in the City’s jurisdiction, the occurrence is logged into the SWM database, prioritized, and assigned to an inspector. Response time is typically less than three (3) working days. Discharges that threaten human health or the environment are investigated immediately. Triggers have been set up in the SWM database to assist the inspectors in prioritizing the illicit discharges. Staff evaluate the field screening and determine if the recent discharge warrants a higher priority than the illicit flow currently being investigated. The City may also utilize consultants or contractors to assist with complex or high priority IDDE investigations.

Once the source has been identified, the City evaluates if the discharge is:

- Allowable through an AZPDES Permit
- Allowable under P.C.C or the MS4 permit
- Illicit

### **6.3.3 Illicit Discharge Elimination**

When an illicit discharge source has been located, it is evaluated to determine if it is allowable under City Code or permitted through the State. If the discharge is allowable or permitted, no additional action may be necessary. However, if the discharge is not allowable, or is determined to be significantly polluted, corrective action is initiated as soon as possible, but not more than 60 days after the source has been identified.

The discharger may be asked to remove or reduce the source. If this is not possible or practical, then the City may issue a Temporary Stormwater Discharge Permit allowing the discharger to continue to release non-stormwater flows to the storm drain system provided certain conditions are met per P.C.C Chapter 32C. If the discharger is required to remove or eliminate the source and does not comply with the order, the investigators initiate enforcement action. The Enforcement Response Plan (WSD SOP 6021) includes specific details on enforcement actions (Appendix E).

The City will coordinate with other MS4’s to address pollutants that may enter one MS4 from another MS4. This coordination may include courtesy notifications or field investigations with staff from all MS4’s affected.

### **6.3.4 Industrial Facility Inspections**

If the potential source of an illicit discharge is an industrial facility, SWM may conduct a facility inspection. During the inspection, inspectors evaluate the facility’s potential to pollute stormwater, and look for signs of illicit discharges and direct connections to the MS4. If they believe that an illicit connection exists between the facility and the storm drain, inspectors may use one or more techniques including smoke and dye testing, a video inspection, reviewing facility schematics or other means. Should an illegal connection exist, the inspector can require that the connection be severed immediately in an enforcement action.

See Section 9.3 for more detail on industrial and commercial facility inspections.

### **6.3.5 Tracking and Reporting**

SWM uses a computer database to track the inspections conducted, observations made by inspectors, and enforcement actions initiated (if any). The database provides security for the stormwater program data and includes functionality to retrieve data and generate reports. Reports are generated to provide information required for the annual report and as requested by City management.

## **6.4 ILLICIT DISCHARGE PUBLIC AWARENESS AND REPORTING PROGRAM**

As discussed in Section 5.1, members of the public are encouraged to notify the City of potential stormwater contamination issues. Inspections are also conducted in response to complaints of dumping or illicit discharges. The City advertises the Stormwater Hotline in both English and Spanish.

## 7.0 MUNICIPAL FACILITIES AND ACTIVITIES

### 7.1 CITY HAZARDOUS MATERIALS MANAGEMENT PROGRAM

Administrative Regulation (A.R.) 2.314, Hazardous Materials Owned by the City of Phoenix; Responsibilities for Compliance with Local, State, and Federal Rules Governing Hazardous Materials, adopts the Hazardous Material Management Program (HMMP) as the official City guidance for hazardous materials management.

The HMMP was developed to assist City operations to comply with federal, state, and local environmental and safety regulations. It also provides a basic understanding of hazardous waste regulations, how to determine a facility's hazardous waste generator category and how to understand and properly apply City hazardous waste and materials procedures. The procedures apply to all City departments unless stated otherwise.

The HMMP protocols are designed to reduce potential for stormwater contamination by establishing procedures and standards for preventing spills, waste generation, and proper storage of hazardous materials. All protocols meet or exceed ADEQ and EPA Hazardous Waste and Universal Waste Regulations as mandated by the Resource Conservation and Recovery Act (RCRA). Protocols include:

- Used Batteries – Recycling and Disposal
- Management of Hazardous Building Materials at City of Phoenix Facilities
- Hazardous Materials Purchasing Program
- Disposal and Recycling of Hazardous Waste and Materials
- Pesticide Management Program
- Spill Preparedness
- Storage and Handling of Hazardous Materials
- Stormwater Management
- Universal Waste Lamps, Mercury Containing Equipment, Lamp Ballasts and Aerosols
- Used Oil and Petroleum Contaminated Absorbent Material

The HMMP contains a comprehensive Stormwater Management Policy which applies to all City facilities that have the potential to impact stormwater quality. The policy includes reference to other stormwater rules and permits that may be applicable to City departments, such as the Multi-Sector General Permit (MSGP) and De Minimis General Permit. City facility BMPs are covered in detail in the policy. Note that BMPs for hazardous materials and hazardous wastes are also included in "Storage and Handling of Hazardous Materials" and other HMMP procedures.

The HMMP is maintained by the OEP. Each HMMP procedure is targeted for review at least once every two years and revised as necessary. Revisions may be made more frequently if regulatory or operational requirements change. Updates to the HMMP are posted on-line upon conclusion of all interdepartmental reviews and comments. The procedures for HMMP updates are documented in the OEP SOP "Hazardous Materials Management Program (HMMP) and Spill Log" (OEP-SW2).

The Stormwater Management Policy within the HMMP was updated in June 2022 to include requirements from the updated 2021 MS4 permit, including general Good Housekeeping Measures. Departments with

specific job tasks (for example, utility installation and street maintenance) have developed specific procedures for these tasks.

## **7.2 PROPER MANAGEMENT OF USED OILS AND TOXICS**

The City collects and recycles used oil from municipally-owned facilities. The City follows all EPA and ADEQ rules and regulations relating to the labeling, storing, recycling, and disposing of used oil, oil debris, and petroleum contaminated soil. These requirements are augmented by the City's HMMP procedures, specifically the "Used Oil and Petroleum Contaminated Absorbent Materials" procedure, and individual department procedures such as the PWD Fleet Services Division procedure "Facility Spill Response Plan." These procedures are revised as needed and in accordance with regulatory changes.

All other toxic and hazardous materials and wastes are stored, handled, and disposed of in accordance with the HMMP protocols previously described in Section 7.1 above.

## **7.3 CONTROLS FOR PESTICIDES, HERBICIDES AND FERTILIZERS**

The City follows all EPA, Arizona Department of Agriculture Pest Management Division, and State of Arizona statutes, rules, and regulations relating to the use, disposal and storage of pesticides, herbicides, and fertilizers that are used on the perimeter of buildings, in landscaped areas, and other areas impacted by City-owned property. These requirements are augmented by the City's HMMP procedures, specifically "Pesticide Management Program," "Municipal Facility Stormwater Management Policy," and individual department procedures. The City's PRD and WSD both submitted Notices of Intent (NOI) to ADEQ under the AZPDES General Permit for Point Source Discharges from the Application of Pesticides to PSW, which required development of Pesticide Discharge Management Plans.

The City's Pesticide Management Program HMMP is focused on the principle of Integrated Pest Management (IPM). IPM seeks to reduce the amount and toxicity of pesticides and eliminate the need for pesticide use, where possible, by implementing measures that eliminate conditions that attract pests. The Pesticide Management Program HMMP is applicable to any City department that purchases, transports, stores, uses or controls pesticides or uses contractors to perform these activities.

Pesticides are routinely used in and around public buildings, grounds, and outdoor areas to manage weeds, spiders, insects, and on occasion, rodents. IPM can be equally effective and is more protective of human health and the environment. This program is also consistent with the City's sustainability efforts and is creditable in Leadership in Energy and Environmental Design (LEED) Certification for Existing Buildings: Operation and Maintenance Certification.

## **7.4 SPILL PREVENTION AND RESPONSE**

As previously discussed, the City standard for managing hazardous waste and hazardous materials is the HMMP supported by A.R. 2.314. The HMMP directs personnel to protect chemical storage areas from weather, and to store in a manner that minimizes the potential for stormwater contamination. This can be accomplished by locating the storage areas indoors or by using an appropriate canopy for outdoor storage. Guidance is also provided in the HMMP Manual on secondary containment, security, permitting requirements, spill response, proper signs, and labeling requirements. Container storage requirements such



as aisle spacing, limitations on drum stacking, segregation of incompatible materials, and types and condition of containers are presented.

Safety Data Sheets (SDSs) must be available for stored materials, and inventory information must be entered by departments into the City Safety Data System. The HMMP includes a Material & Waste Storage Area Checklist that assists City employees in minimizing spills caused by improper storage practices. Additional regulatory requirements specific to managing hazardous wastes are included in the HMMP.

Environmental Facility Assessments (EFAs) are conducted at City-owned and operated facilities in accordance with the City's MS4 permit. The OEP SOP Municipal Facility Inventory, Environmental Facility Assessments/EFA and Prioritization Process (OEP-SW1) contains the OEP EFA procedures. As part of the EFA, each facility's spill response procedures are reviewed. These inspections help assess the City's hazardous material management process and its impact to stormwater. Spill kits and emergency number information is also reviewed during EFAs. Spill prevention and response standards are included in the HMMP Spill Preparedness Policy. Facilities subject to the policy are required to develop a spill response program including posting emergency numbers and implementing BMPs to prevent hazardous material spills.

## 7.5 OTHER MUNICIPAL FACILITIES AND ACTIVITIES

The City implements other programs and activities that supplement the stormwater program. These activities include, but are not limited to:

- Purchasing
- Recycling
- CWA Section 404 Program
- Riparian Area Restoration and Preservation Projects
- Brownfields

**Purchasing:** Purchasing is an important control point for managing the use and/or disposal of products which may be hazardous waste after use or have the potential to pollute stormwater. The City Sustainable Purchasing Policy and Hazardous Materials Purchasing Policy under the HMMP are available to departments before ordering a new product. These policies create a preference for products that have reduced toxicity, contain recycled or bio-based materials, are energy or water efficient, divert waste from landfill through recovery/reuse services, use alternative fuels, renewable energy, or contain sustainable forestry certified materials.

**Recycling:** The City purchases recycled material products and recycles wastes whenever possible. The City recycles the following items within municipal operations:

- Fluorescent, high intensity discharge, sodium vapor, high- and low-pressure mercury vapor, metal halide and metal arc lamps
- Mercury-containing thermostats

- Batteries – lead acid, nickel cadmium, nickel halide, lithium
- Printer and toner cartridges
- Used oil
- Cardboard and paper
- Aluminum
- Antifreeze
- Scrap metal
- Spent fuels
- Plastics
- **CWA Section 404 Program:** The City's 404 Program was established in OEP in 1998 to help departments review projects, address and minimize the impacts of construction or maintenance on water bodies/channels, and obtain Section 404 permits and associated Section 401 certifications for the discharge of dredged or fill material in WOTUS. In metro Phoenix, the 404 Program focuses on City projects with the potential to have impacts in WOTUS, but also includes considerations for connected desert washes (that may not be WOTUS under the current definition) that are key wildlife habitat and movement corridors. The program also helps project managers consider and minimize impacts to other natural and cultural resources.
- **Riparian Area Restoration and Preservation Projects:** Riparian areas are among the most biologically rich habitats and once represented a much larger portion of the Phoenix area. Aided by community leaders, the City recognized the importance of these areas and worked with various partners to restore them. Two key projects, the Rio Salado Habitat Restoration Area and the Tres Rios Ecosystem Restoration Area, encompass hundreds of acres of wetlands and riparian vegetation which are open to the public and provide numerous environmental education opportunities.
- **Brownfields:** The City also supports Brownfields redevelopment through a municipal grant program. Brownfields is a term used to describe real estate that is contaminated or perceived to be contaminated by hazardous substances or petroleum products. Examples include closed landfills, abandoned gas stations, and former manufacturing and dry-cleaning facilities. The City encourages and supports the cleanup and redevelopment of Brownfields, thereby reducing the health and environmental risk from the property, creating jobs, increasing property values, and revitalizing neighborhoods.

## 8.0 MS4 MAINTENANCE

### 8.1 DRAINAGE SYSTEM (STRUCTURAL CONTROLS) MAINTENANCE

The City has a comprehensive program that develops, implements, maintains, and monitors structural and treatment control BMPs. The maintenance program addresses upkeep needed for open channels, catch basins, retention/detention basins, and structures for stormwater runoff treatment. BMPs are deployed to minimize impacts to the receiving waters to the MEP. Drainage system maintenance is the responsibility of the Street Transportation Department (STR).

Drainage system maps are available for review by employees on the City's GIS. GIS map of all City outfalls are maintained and updated by the Streets Department.

#### 8.1.1 Drainage System Monitoring Program

STR Maintenance Foreman and employees assigned to the Vactor equipment are scheduled to perform monthly visual inspections of the drainage system assigned to their area. The four areas in the City are identified as geographically Northeast General Maintenance – Union Hills Service Center, Central General Maintenance – Glenrosa Service Center, Southwest General Maintenance – Salt River Service Center, and Southeast General Maintenance – Okemah Service Center. The lists are maintained by STR and include the addresses of the priority area, map location, and date of service column.

Outfalls are monitored by SWM at the frequency required in the MS4 permit (Section 4.4(E)(2)). High Priority outfalls are monitored annually and all other non-priority major outfalls are observed at least once every five years (approximately 20% per year).

#### 8.1.2 Maintenance Priorities and Schedule

STR Drainage Foremen prioritize and schedule maintenance using the following criteria:

- Full closure of the drain
- Plugged or partial closure of the drain
- Geographical location – assign cleanup of system based on proximity and location.

For any new problem locations identified after monsoons, staff follow protocol on how to address the situation to mitigate the problem.

#### 8.1.3 System Maintenance

Maintenance is performed based on the severity of the drain blockage. Repairs are performed based on the degree of damage and the repair schedule.

The BMP for drainage system cleaning and maintenance instructs STR employees to clear debris and trash from constructed easements, detention basins, and washes. STR employees should be aware that items like oil, paint, and other pollutants may be illegally dumped in these areas and must be cleaned up and disposed of properly. Any chemicals encountered are removed and disposed of by the City hazardous materials contractor

not by City employees. Non-hazardous debris collected is deposited directly into the dump truck bed for disposal, not stored on the street surface or shoulder. Employees should dump Vector truck tanks at designated sludge drying bed the 91<sup>st</sup> Avenue Wastewater Treatment Plant (WWTP) during normal operations. During significant storm events where flooding occurs, City policy allows rainwater pumped from sumps and standing water to be disposed of through existing storm drain inlets. Debris that contains or has the potential to contain hazardous or bio-hazardous materials is removed and disposed of by specialized contractors trained and equipped to handle these materials.

## **8.2 OPERATION AND MAINTENANCE OF PUBLIC STREETS, ROADS, AND HIGHWAYS**

### **8.2.1 Maintenance Priorities and Schedules**

STR is responsible for design, construction, and maintenance of all City streets. Prioritizing street surface maintenance (including crack sealing, pothole repair, and more extensive pavement restoration) is managed using a computerized pavement management system that analyzes ride quality. The surface distress information generated by the program helps STR to determine the pavement's structural adequacy and is used to prioritize maintenance on a City-wide basis. Records of system maintenance are generated when the Citizen Serve system creates a work request for an activity. The work is performed by STR personnel and then recorded in the Citizen Serve system when completed.

### **8.2.2 System Maintenance Practices**

The BMP for drainage facility component cleaning and maintenance instructs STR employees to clear debris and trash from man-made easements, detention basins, and washes prior to mowing. Employees are reminded to be aware that items like oil, paint, and other pollutants may be illegally dumped in these areas and must be cleaned up and disposed of properly. Any chemicals encountered are removed and disposed of by the City hazardous materials contractor not by City employees. Non-hazardous debris collected is deposited directly into the dump truck bed for disposal, not stored on the street surface or shoulder. When catch basins and storm drain lines are cleaned out, non-hazardous debris is also placed in the dump truck bed. Employees must dump Vector trucks at designated sludge drying bed the 91<sup>st</sup> Avenue WWTP during normal operations. Debris that contains or has the potential to contain hazardous or bio-hazardous materials is removed and disposed of by specialized contractors trained and equipped to handle these materials.

During significant storm events, the City allows rainwater pumped from sumps and standing water to be disposed of through existing storm drain inlets.

Records of system maintenance are generated when the Citizen Serve system creates a work request for an activity. The work is performed by STR personnel and then recorded in the Citizen Serve system when completed.

### **8.2.3 Street/Parking Lot Sweeping Program**

To reduce the amount of debris that may enter the storm drain system, the City has implemented a street sweeping program that encompasses all areas of the City. The City maintains a fleet of Particulate Matter 10 motor brooms. Most parking lots are swept on an as-needed or on-call basis. Some City facilities (e.g., Service

Centers) may develop site-specific sweeping schedules. The sweeping schedule for streets varies according to the type:

- Major and collector streets are scheduled to be swept once every 14 days
- Local streets are scheduled to be swept once every three (3) months
- Parking lots are swept as needed or on request
- High priority areas in the City are scheduled to be swept every seven (7) days
- Non-Attainment areas are swept on a seven-day cycle.

STR coordinates the street sweeping schedule with PWD's bulk trash pickup schedule. Residential street sweeping follows bulk trash collection, whenever possible. Beginning September 2024, PWD will begin the process of retrieving bulk trash from the public by formal request. In addition, personnel pick up trash, weeds, and debris in empty lots and the right-of-way, as requested by employees or citizens.

Occasionally, adherence to the published schedule is delayed responding to events that are non-routine. Equipment and personnel resources are directed to priority tasks such as debris cleanup after storm events to ensure public safety. Storm events in a specific area of the City may preempt routine maintenance in an area that was unaffected by the storm. Unscheduled equipment maintenance is an additional non-routine task that can affect maintenance schedules.

#### **8.2.4 Street Repair Practices**

The STR Street Maintenance Division has developed and implemented BMPs for routine activities that have the potential to impact the storm drain system. When performing asphalt maintenance and removal activities, employees are instructed to place debris and rubble directly into the bed of the dump truck as opposed to staging the material on the street or shoulder. Spraying activities are controlled such that overspray is minimal. Any material generated during equipment flushing or tool cleaning must be disposed of properly.

Materials generated during concrete removal and replacement are managed in a similar manner. When hand-mixing concrete, employees must employ practices to prevent water from flowing onto the pavement. The mobile mix truck and contractor ready mix trucks are required to utilize buckets to collect equipment cleaning water and excess concrete material for proper disposal.

Water utilized during concrete/asphalt sawing operations is contained in sand or absorbent material and placed in the dump truck bed for disposal. Excess soil removed when an auger is used to place posts for permanent barricades is collected for disposal at the designated landfill.

## 9.0 INDUSTRIAL SITES

### 9.1 MEASURES TO CONTROL POLLUTANTS

The City's industrial and commercial facility inspection program includes measures to monitor, control and eliminate pollutant discharges from sources throughout the MS4 boundary. It is a priority for the City to maintain good working relationships with the industrial community while ensuring that stormwater and the MS4 receiving waters are protected.

Industrial Pretreatment inspectors include stormwater compliance in their annual inspections of permitted facilities. A stormwater assessment has been incorporated into the ESD Commercial Inspection Section's inspection program. The SWM section has provided ESD commercial inspectors with the tools needed to conduct stormwater screening at restaurants, auto repair shops, and car washes.

### 9.2 PRIORITIES AND IMPLEMENTING CONTROLS

#### 9.2.1 Industrial Facility Inventory

The City prioritizes the industrial facility inventory by considering factors such as potential pollutants, and potential for exposure. The City's industrial facility inventory is maintained in the ESD database and includes the following:

- Facilities subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA)
- Hazardous waste treatment, storage, or disposal facilities (TSDFs)
- Landfills
- Industrial facilities permitted for pretreatment discharges to the sanitary sewer
- Industrial facilities that the City considers to be potential source of substantial pollutant loading to the MS4

A listing of the SARA Section 313 facilities, TSDFs, and landfills can be generated from the City's database. In addition, the City has compared the list of facilities that have applied to ADEQ for coverage under the MSGP to their industrial facility list. Where doing so will enhance the program, the City has added those MSGP facilities to the industrial list.

ESD receives regular email notification of new facilities coming into Phoenix from PDD. The information is reviewed by the Industrial Pretreatment Program (IPP) and added to the inventory, when applicable. New facilities are also added when identified by staff during inspections of neighboring facilities.

The City's inventory is reviewed on an annual basis and updated as necessary. The update may include an updated MSGP list from ADEQ, and/or the most recent lists from EPA (e.g., SARA Title III, Tier II, or TSDF). The inventory is revised to address any significant gaps. WSD SOP 6003 describes industrial facility inventory prioritization and inspection procedures.

### 9.2.2 Municipal Facility Inventory

The municipal facility inventory (MFI) identifies those municipal facilities with chemical storage and the potential to discharge pollutants to the City's MS4. Facilities that consist of only administrative buildings and parking areas were not identified to be of concern regarding stormwater runoff pollution.

The MFI, or facilities subject to the stormwater-required facility assessments, was initially compiled by OEP in December 2009. Data included in the MFI includes the facility name and address, standard industrial classification (SIC) code, contact name, latitude and longitude, and a brief description of activities of concern at the facility that may discharge pollutants in stormwater. The facility inventory is continually reviewed by OEP and facilities may be added as they come online or removed based upon closures, consolidations, or operational changes. The last inspection date for each facility is tracked in OEP's database. The SOP "Municipal Facility Inventory, Environmental Facility Assessments/EFA and Prioritization Process" (OEP-SW1) contains the OEP MFI procedures.

The MFI at the time the SWMP was updated is included in Appendix F.

### 9.2.3 Higher Risk Facilities

#### Industrial Facilities (Private)

SARA Section 313, TSD, and landfill facilities are required to be inspected under the terms of the MS4 permit and are considered as higher risk (high priority) facilities for purposes of industrial inspections. An additional consideration for determining high priority facilities includes the results of stormwater screening inspections conducted by other ESD Sections. If Commercial or IPP Inspectors identify a stormwater concern, they forward the information to the SWM section for additional evaluation. In addition, facilities that have a high potential to pollute stormwater based on past stormwater inspection results are also considered high priority.

The rationale used to identify high priority industrial facilities is reviewed annually. If conditions change (e.g., wet weather monitoring results, impaired waters, location, etc.), the high priority inspection list may be adjusted. Similarly, the high priority list may be adjusted based on the trends observed at specific industry sectors.

#### Municipal Facilities

The City's MS4 Permit requires development of a system to review and prioritize the MFI for more frequent inspections. This requirement under the 2009 MS4 permit was completed in June 2011. Under the 2021 MS4 Permit, the City's "higher risk" prioritization method has been further refined based on the criteria included in the permit.

The SOP Municipal Facility Inventory, Environmental Facility Assessments/EFA and Prioritization Process (OEP-SW1) contains the OEP higher risk prioritization procedure, using the following as the criteria for determining higher risk facilities:

- RCRA Large Quantity Generator, OR

- Multi-departmental sites with Facility Stormwater Plans (excludes sites listed in Appendix G that have Stormwater AZPDES coverage, such as MSGP), AND
- Within 0.25 miles of a Surface Water that is one of the following:
  - a) Impaired\*
  - b) Not-Attaining\*
  - c) Outstanding Arizona Water
  - d) Perennial or Intermittent

\* Impaired & Not-Attaining criteria do not apply if the surface water is Impaired or Not-Attaining for *E. coli* or similar parameters for which the City operations would not contribute pollutants.

Facilities will continue to be reviewed against the higher-risk facility criteria during each annual assessment cycle and facilities are added or removed to the list, based upon those results. As per the MS4 permit, the City may continue to refine this “higher risk” facility prioritization system. Appendix F includes identification of “higher risk” facilities under this new prioritization method.

**9.2.4 Municipal Facility Inspections/Facility Assessments**

The City conducts an EFA at City-owned and operated facilities in accordance with the City’s MS4 permit. OEP conducts EFAs on 20% of the facilities in the MFI each year, which may include follow-up inspections. The higher risk criteria laid out in Section 9.2.3 (Municipal Facilities) is used to identify facilities for more frequent EFAs. EFA findings must be corrected within 90 days or an implementation schedule must be in place. Findings not corrected within 60 days are referred to the Environmental Program Coordinator for elevation and follow-up. The SOP “Municipal Facility Inventory, Environmental Facility Assessments/EFA and Prioritization Process” (OEP-SW1) contains the OEP EFA procedures.

Identification of the potential pollutants at each municipal facility was necessary to select appropriate candidate BMPs to reduce pollutants in stormwater runoff to the MEP. The use of appropriate BMPs is assessed during each EFA for activities addressed in the HMMP, such as spill response procedures, hazardous materials/waste container management, building and parking lot washing, solid waste/litter control, scrap metal storage, pesticides and fertilizer use, used oil and universal waste protocols, etc.

Table 9-1 identifies activities of concern that may be associated with activities conducted or based at the City’s municipal facilities. Table 9-2 presents a matrix of pollutants of concern and the activities that may produce them.

**Table 9-1: Municipal Facilities and Activities in the City of Phoenix Inventory**

Type of Municipal Facility	Activities of Concern Conducted
Maintenance Yards and Hazardous Materials Storage Facilities	Loading, unloading, handling, and storage of significant materials including anti-freeze, asphalt, batteries, chemicals, concrete, diesel wastes, emulsions, fertilizer, fuel, green wastes, hazardous materials, new and used oil, paint products, pesticides, scrap metal, solvents, trash and debris
	Filling of aboveground and underground storage tanks (ASTs and USTs) with fuels
	Dispensing of fuels to vehicles, equipment, and portable fuel containers



Type of Municipal Facility	Activities of Concern Conducted
	Vehicle and equipment parking and storage Vehicle, equipment, and material washing and steam cleaning Leak and spill cleanup Landscape, garden, and general maintenance and cleaning
Fueling Stations	Filling of aboveground and underground storage tanks (ASTs and USTs) with fuels Dispensing of fuels to vehicles, equipment, and portable fuel containers
Parks and Recreational Facilities, including Golf Courses and Landscape Areas	Landscape, garden, and general maintenance and cleaning Application of pesticides/herbicides Leak and spill cleanup
Warehouses	Loading, unloading, handling, and storage of materials Landscape, garden, and general maintenance and cleaning
Fire and Police Stations	Loading, unloading, handling, and storage of significant materials Vehicle and equipment maintenance Vehicle and equipment parking and storage Vehicle washing and steam cleaning Dispensing of fuels to vehicles, equipment, and portable fuel containers Leak and spill cleanup Landscape, garden and general maintenance and cleaning
Service Centers	Vehicle and equipment maintenance Vehicle and equipment parking and storage Vehicle and equipment washing and steam cleaning Loading, unloading, handling, and storage of significant materials. Filling of aboveground and underground storage tanks (ASTs and USTs) with fuels Dispensing of fuels to vehicles, equipment, and portable fuel containers Leak and spill cleanup Bulk material pile storage
Swimming Pools	Storage and use of chemicals, including chlorine Filter maintenance and backwashing Landscape, garden, and general maintenance and cleaning
Water Treatment Facilities	Loading, unloading, handling, and storage of materials Vehicle washing and steam cleaning Storage and use of chemicals, including chlorine Leak and spill cleanup Landscape, garden, and general maintenance and cleaning
Roads, streets, highways and parking facilities	Leak and spill cleanup Striping, saw cutting, and sealing
Flood control projects and devices, drainage facilities and associated maintenance activities	Leak and spill cleanup Vegetation control
Active or closed municipal/sanitary landfills	Vehicle and equipment parking and storage Vehicle and equipment maintenance Leak and spill cleanup
POTWs and sanitary sewage collection facilities	Loading, unloading, handling and storage of materials Filling of ASTs and USTs with fuels Storage and use of chemicals, including chlorine Vehicle washing and steam cleaning Landscape, garden and general maintenance and cleanup
Sites for disposing and treating sewage sludge	Sewage sludge application

Type of Municipal Facility	Activities of Concern Conducted
Municipal airports	Leak and spill cleanup
	Filling of ASTs and USTs with fuels.
	Landscape, garden and general maintenance and cleaning
	Dispensing of fuels to vehicles, equipment, and portable fuel containers
	Vehicle and equipment parking and storage
Other landscaped areas	Landscape, garden and general maintenance and cleaning

**Table 9-2: Potential Pollutants of Concern**

Potential Pollutants	Material Loading, Unloading, Handling, or Storage	Filling of ASTs & USTs	Dispensing Fuel	Vehicle & Equipment Maintenance	Vehicle & Equipment Parking and Storage	Vehicle & Equipment Material Washing & Steam Cleaning	Leak & Spill Cleanup	Landscape, Garden, and General Maintenance & Cleaning
Asphalt	✓							
Chemicals/Acids/Bases	✓			✓	✓		✓	
Diesel Wastes	✓			✓			✓	
Fertilizer	✓						✓	
Fuel and Fuel Spills		✓	✓	✓			✓	
Hazardous Materials	✓			✓	✓		✓	✓
Herbicides	✓						✓	✓
New/Used Oil	✓			✓			✓	
Oil and Grease Spills	✓			✓	✓	✓	✓	
Paint Products	✓			✓			✓	✓
Pesticides/Herbicides	✓						✓	✓
Soil stockpiles	✓							✓
Solvents	✓			✓			✓	
Trash and Illegal Dumping	✓			✓	✓			✓
Parts Washer Water				✓	✓	✓		

### 9.3 INSPECTIONS AND MONITORING OF INDUSTRIAL FACILITIES

#### 9.3.1 Inspection Procedures

The City values its relationship with the industrial community and uses the inspection program as an opportunity to provide guidance and information on stormwater protection. Communicating and verifying the implementation of appropriate BMPs are an important part of the inspection process.

The City has developed an inspection program for industrial facilities to identify compliance with local stormwater ordinances. Inspection procedures are documented in WSD SOP 6003. When conducting facility/business inspections, at a minimum, the following are reviewed:

- investigate any sources of non-stormwater discharges to the storm drain system
- determine the corrective actions or BMPs needed to contain or halt the discharge
- initiate the corrective actions, if needed
- determine if the property has an AZPDES Stormwater permit, NOI, No Discharge Certification, or No Exposure Certification
- document any information needed for follow-up compliance or enforcement actions
- verify that the facility is operating under its SWMP or Stormwater Pollution Prevention Plan (SWPPP) and recommended BMPs in accordance with P.C.C. Chapter 32C, the City's Stormwater Quality Ordinance

Inspection findings are documented in the SWM database.

### Re-inspection of Industrial Facilities

The SWM employees inspect approximately 20 percent of the stormwater facility inventory every year, including follow-up inspections. The SWM Section has established a goal of re-inspecting industrial facilities every three (3) to seven (7) years. The SWM database automatically generates a new inspection task, depending on the priority; high-risk facilities are scheduled for inspection every three (3) years, normal priority facilities are scheduled every five (5) years, and low-risk facilities (e.g., low potential to pollute stormwater) are inspected every seven (7) years. In addition, the Chief Water Quality Inspector may select a facility for an accelerated re-inspection based on compliance history or concerns.

### Minimum BMPs for Industrial Facilities

Minimum BMPs for industrial and commercial facilities within the City's jurisdiction have been identified to reduce the discharge of pollutants to the MEP. City inspectors notify the industrial and commercial facilities of these minimum BMPs, as applicable.

Minimum BMPs for facilities storing hazardous materials or hazardous waste include:

- hazardous waste/materials storage areas are clean and protected from rainfall and runoff,
- trash bin areas are clean, lids are closed, and there are no signs of leakage from the trash bins,
- aboveground tanks have been properly maintained including no signs of leakage, and secondary containment is in good condition,
- onsite storm drain inlets are protected from inappropriate non-stormwater discharges,
- oil/water separators are covered or indoors and connected to sanitary sewer,
- wash water from wash pads and/or mop buckets is directed through a control device to the sanitary sewer and does not discharge to the MS4,
- parking lot areas are free of trash, debris, and fluids other than water,
- facility has coverage under the MSGP, if appropriate,

Restaurants are expected to implement the minimum BMPs below:

- oil and grease wastes are not discharged onto a parking lot, street or adjacent catch basin,
- trash bin areas are clean, lids are closed, and there are no signs of leakage,
- floor mats, filters and garbage containers are not washed in adjacent parking lots, alleys, sidewalks, or streets and no wash water is discharged to MS4, and
- parking lot areas are cleaned by sweeping, not by hosing down, and the facility operator uses dry methods for spill cleanup.

### 9.3.2 AZPDES Non-Filers

SWM Inspectors make note of facilities that may be subject to the MSGP, but cannot provide documentation of coverage (e.g., lack an NOI and/or SWPPP). A report of these “non-filer” facilities is submitted to ADEQ monthly. The City does not determine compliance or non-compliance with AZPDES permits, but rather forwards information to ADEQ, as required under the MS4 permit.

### 9.3.3 Enforcement

If during a routine inspection or an inspection in response to a complaint, an inspector observes that a business/facility is non-compliant with the City’s stormwater ordinance (including the prohibition of non-exempt non-stormwater discharges or minimum BMPs) the City will initiate enforcement procedures. As described in Section 3.3.2 and Appendix E (Enforcement Response Plan), the severity of the violation is based on various factors. After considering the various factors, the City will determine the level of enforcement that is required. Enforcement may include the following informal and formal actions:

- Verbal Warning
- Inspection Report with Requirements
- NOV
- Field NOV
- Show Cause Proceeding
- Civil Citation

Enforcement is escalated as necessary to bring the facility into compliance.

## 9.4 OTHER MEASURES TO CONTROL POLLUTANTS FROM LANDFILLS, TRANSFER STATIONS, AND INDUSTRIAL FACILITIES

The City has obtained coverage under the MSGP for an operating landfill (SR85), two transfer stations (North Gateway and 27<sup>th</sup> Avenue), three airports (Deer Valley, Goodyear, Sky Harbor), and three wastewater treatment facilities (Cave Creek Water Reclamation Plant, 91<sup>st</sup> Avenue WWTP, and 23<sup>rd</sup> Avenue WWTP). A closed landfill (Skunk Creek) has a No Exposure Certificate (NEC). The landfill portion of the 27<sup>th</sup>

Avenue transfer station also has Sector L closure under the MSGP. Those located in the jurisdiction of the City's MS4 are included in Appendix G.

Each of these locations (except for those with an NEC) are required to have a SWPPP that include identification of the potential sources of pollution and the proper measures or BMPs that will reduce or eliminate pollutant loadings in stormwater discharges. Example BMPs in the SWPPPs include:

- Good Housekeeping
- Preventive Maintenance
- Visual Inspections
- Training
- Spill Prevention and Response
- Sediment and Erosion Control
- Management of Runoff

## 10.0 CONSTRUCTION SITES

### 10.1 MEASURES TO CONTROL POLLUTANTS FROM CONSTRUCTION SITES

One of the purposes of the City's construction site plan review and permitting program is to reduce pollutant loads from development projects to the MEP. The development approval and permitting processes promote project-specific requirements in the form of conditions of approval, design specifications, tracking, inspection, and enforcement actions. These features are planned, designed and evaluated in accordance with the City's mandate to protect stormwater runoff quality.

### 10.2 CONSTRUCTION SITE PLANS

PDD oversees plan review for private construction projects and most municipal construction projects that occur in the City's MS4 jurisdiction. Some municipal projects, such as those in the right-of-way, are not required to submit plans to PDD for approval. In these cases, the department managing the project, usually Aviation, WSD or STR, reviews the construction site plans. A municipal Stormwater Plan Review Checklist was created under the 2021 permit revision to document the review and provide consistency.

#### 10.2.1 Maintaining a Construction Project Inventory

PDD maintains a database of all construction projects for which they have issued a building, paving, or G&D permit.

OEP maintains the Municipal MS4 Project Inventory of City projects that are not required to submit plans to PDD for approval. OEP adds Aviation, STR WSD, and other applicable City Department projects to this inventory via the completed Stormwater Plan Review Checklist. OEP has documented procedures for maintaining the Inventory in the SOP "Municipal MS4 Project Inventory, Prioritization Process and MS4 Construction Inspections" (OEP-SW3).

#### 10.2.2 MS4 Plan Review of Construction Sites

Construction projects are required to incorporate site design, source control, and/or treatment control BMPs that comply with the City's G&D Ordinance (P.C.C. Chapter 32A) and the current Stormwater Policies and Standards in the construction SWMP.

The G&D plan must include design standards and provisions for retaining stormwater onsite, unless exempted per P.C.C. Chapter 32A-24 and the current Stormwater Policies and Standards manual. PDD reviews G&D plans submitted for a project and issues a grading permit once the submittal is determined to satisfy all requirements. (A permit can be denied if the Director of PDD determines that the proposed activities would cause a violation of the NPDES/AZPDES Program.)

The plan must demonstrate that it incorporates the on-site retention of stormwater for a 100-year, 2-hour storm event in all areas of Phoenix except those exempted by law or excluded under the technical appeals process.

For municipal projects that are not required to submit plans to PDD for approval, the department managing the project (usually Aviation, WSD or STR) completes the municipal Stormwater Plan Review Checklist for

projects that are => 1 acre, or < 1 acre but part of a larger common plan of development. These checklists are submitted to OEP for inclusion in the Municipal MS4 Project Inventory.

### 10.2.3 Plan Approval (or Permits)

PDD administers the plan review and permit process established for G&D, paving, construction SWMP, and floodplain management. Permit requirements for stormwater facilities include:

- 1) Drainage Facility Civil Permit
- 2) G&D Permit
- 3) Construction Stormwater Permit

PDD has reviewed and revised standard conditions of approval to remain in line with provisions of the MS4 Permit, the SWMP, or the Construction General Permit (CGP). To minimize the short-term and long-term impacts of stormwater runoff on receiving water quality from development projects, PDD requires additional information/submittals before permits may be issued:

- Prior to the issuance of any G&D or building permits for projects that will result in soil disturbance of more than one (1) acre of land (or smaller projects that are part of a larger plan of development), the applicant shall demonstrate that coverage has been obtained under the AZPDES General Permit for Stormwater Discharges Associated with Construction Activity by providing a copy of the NOI submitted to the ADEQ, including the AZCON Authorization Number. Note that an Erosivity Waiver or No Discharge Certification may be accepted in lieu of an NOI.
- Projects that must comply with ADEQ's AZPDES requirements shall prepare and implement a SWPPP. A copy of the current SWPPP shall be kept at the project site and be available for review upon request. As required by both EPA and ADEQ the SWPPP is a free-standing document, not a page on the construction plans, as required by both EPA and ADEQ.
- Prior to G&D or building permit close-out and/or the issuance of a certificate of use or a certificate of occupancy, the applicant shall demonstrate that all BMPs have been constructed, installed, and implemented in conformance with approved plans and specifications.

## 10.3 CONSTRUCTION BEST MANAGEMENT PRACTICES

Sediment is the most common pollutant from construction activities. Soil can clog inlets and pipes, cause flooding, or increase turbidity or impede flow of streams. Construction site operators must design, install, and maintain effective erosion and sediment controls to minimize the discharge of pollutants to the MS4 in compliance with the municipal stormwater ordinance. Operators must also implement BMPs to protect against other pollutants present at the job site, including chemicals and construction waste.

Common construction site BMPs include, but are not limited to:

- protecting inlets to dry wells and storm drains from soil and chemicals,
- stabilizing construction entrances and exits to reduce track out,

- installing perimeter protection, such as silt fencing, straw wattles, or filter socks,
- stabilizing inactive soil or sand piles with BMPs such as a tarp or perimeter controls,
- conducting concrete wash-out in designated locations,
- properly storing chemicals (e.g., secondary containment, covered, etc.),
- minimizing the area disturbed and the time-period of disturbance, and
- preserve vegetation when possible and stabilize disturbed areas.

These BMPs must be properly maintained so that they continue to operate effectively. Damaged or ineffective BMPs must be repaired or replaced.

## 10.4 SITE INSPECTIONS AND ENFORCEMENT

### 10.4.1 Inspection Priorities

Construction projects are inspected at least once for compliance with MS4 requirements. Effective July 1, 2022, construction projects greater than or equal to one (1) acre are inspected every three to six months, depending on the priority. The following high priority projects will be inspected every three months:

- a) Projects that disturb more than five (5) acres, **and**
- b) are within  $\frac{1}{4}$  mile of a PSW, **and**
- c) have a direct discharge path to a PSW.

Projects that do not meet these criteria will be inspected every six (6) months; however, the city may opt to inspect more frequently. OEP has documented procedures for OEP construction inspections in the SOP “Municipal MS4 Project Inventory, Prioritization Process and MS4 Construction Inspections” (OEP-SW3).

### 10.4.2 Inspection Procedures

PDD conducts construction inspections per the Civil Engineering Construction Inspection Checklist Technical Review Team (TRT) 00027. The following items are addressed during construction site inspections:

- For projects of one (1) acre or more, verify that an approved SWPPP/SWMP and Construction Permit are available, where applicable.
- Confirm compliance with the City’s stormwater ordinance, including review of the BMP site map.

After notification from the developer that work is to begin, a pre-construction meeting is scheduled. PDD inspection staff verify that the developer has obtained G&D, paving, and stormwater permits prior to holding the pre-construction meeting. At the meeting, the developer is notified of stormwater requirements, and the site-specific stormwater plan should be available at the meeting to discuss. A construction entrance and placement of BMPs is the first to occur. Once entrance BMPs are installed,



stormwater inspections can occur in part on any inspection of the site. Inspections generally include, but are not limited to:

- Track out measures
- Tire wash racks
- Silt fencing
- Straw bales
- Straw wattles
- Perimeter controls
- Chemical storage
- Portable toilets
- Concrete wash-out.

BMPs must be installed per the construction SWMP and maintained in place during the construction period. During periods of rain, inspections include observing drainage at project sites.

For those municipal construction projects which do not require a G&D permit from PDD, such as right-of-way projects, the department plan review staff schedules pre-construction meetings with the contractor. Construction site stormwater inspections for these projects are conducted by OEP staff or by properly trained departmental staff. For example, WSD conducts inspections for WSD projects that are not subject to PDD Plan Review. These inspections address the same requirements as discussed above.

#### **10.4.3 Inspection Records**

PDD documents construction site inspection information in the inspection database. Based on the inspection findings, PDD conducts follow-up inspections as necessary to verify compliance with the requirements of the City's MS4 Permit.

For projects which do not require a G&D and stormwater permit from PDD, such as projects in the right-of-way, OEP documents and maintains construction site inspection information in its database. WSD tracks and schedules all construction inspections for WSD project and maintains WSD inspection reports and findings.

OEP has documented OEP's procedures for the construction process in the SOP "Municipal MS4 Project Inventory, Prioritization Process and MS4 Construction Inspections" (OEP-SW3).

#### **10.4.4 Enforcement Processes and Actions**

If after an inspection it appears that a site/project is non-compliant with the applicable City stormwater or erosion control ordinance or requirements, PDD begins enforcement procedures. Upon observing a deficiency of any installed BMP, or noting a missing BMP, inspection staff will follow a procedure of progressive actions to verify compliance by the developer. The actions are as follows:

- 1) The inspector will verbally notify the superintendent of the job (owner's representative) of the observed deficiency and ask for corrective action, usually by the end of the day.
- 2) The inspector will issue a written notification stating that the verbal notification was not acted on and issue a specific schedule for the completion of the corrective action.

- 3) A written notice is issued stating that all civil inspections will cease on the project until corrections are completed and until a meeting between the project owner and the inspector's supervisor is held to discuss the breakdown in communication.
- 4) All inspections are held on the project – no forward progress will be approved.

As an additional measure, a re-inspection fee is charged to a project for failing any directive after a second inspection. Corrections of findings for municipal projects are referred to the Project Manager. The City department supervisor, such as the OEP Environmental Program Coordinator may escalate to the department management if findings are not resolved in a timely manner. The OEP process for escalation of unresolved findings is documented in the OEP SOP "Municipal MS4 Project Inventory, Prioritization Process and MS4 Construction Inspections" (OEP-SW3).

For municipal projects, the Project Manager may withhold payment until the issue is corrected.

For private projects, failure to develop specific BMPs or to implement the BMPs located in the SWPPP or SWMP may subject the PDD Permittee(s) to fines not less than \$500 nor more than \$2,500.

#### 10.4.5 Project Closeout

The end of the construction phase is accompanied by the close out of permits and issuance of certificates of use and/or occupancy. PDD uses this milestone to validate satisfactory completion of all conditions of approval for development projects.

BMPs for development projects cannot be considered effective unless a mechanism is in place to provide for long-term reliability, which is achieved through proper implementation, operation, and maintenance. Therefore, once construction of a project is complete, the owner is responsible for the long-term implementation, operation and maintenance of BMPs, and most particularly for treatment control BMPs.

The responsibility to provide for the long-term implementation, operation, and maintenance of BMPs associated with a development project may:

- Remain with a private entity (property owner, HOA, etc.); or
- Be transferred to a public entity (e.g., a city, county, special district, etc.) through dedication of the property; or
- Be transferred to a public entity, or another private party through a contract.

#### 10.4.6 AZPDES Non-Filers

While conducting an inspection, if it appears that the project may be required to have coverage under the CGP and the operator indicated that a SWPPP is not onsite, the PDD inspector provides the operator with information on the requirements of the AZPDES Permit. They also note the operator name and location for inclusion on a non-filer notification report to ADEQ. These reports are submitted monthly to ESD. Projects with an Erosivity Waiver or No Discharge Certification will not be considered non-filers.

## 11.0 POST-CONSTRUCTION CONTROLS

The City has a Stormwater Post-Construction Program that includes an inventory, inspection, maintenance, and tracking program. Projects that meet all the following criteria fall under this program:

- A public or private development or redevelopment project that results in disturbance of one (1) acre or greater in size,
- The permit application was submitted on or after July 1, 2022,
- the project contains at least one post-construction stormwater control (retention/detention basin, dry well, catch basin with filter insert, underground stormwater storage, etc.). It does not include infrastructure used strictly for conveyance such as gutters, storm drains, catch basins, etc., and
- the post-construction stormwater control discharges or has the potential to discharge to the City's MS4.

Post-construction requirements are included in an amendment to the City of Phoenix Storm Water Policies and Standards. The G&D requirements are included in P.C.C. Chapter 32A and program compliance details are listed in P.C.C. Chapter 32C. Guidance and reference materials are located on the PDD website: [www.phoenix.gov/pdd/stormwater](http://www.phoenix.gov/pdd/stormwater).

### 11.1 GREEN STORMWATER INFRASTRUCTURE AND LOW IMPACT DEVELOPMENT PRACTICES

The City encourages the use of GSI in construction projects. An example of a type of permanent stormwater feature that could be used is green stormwater infrastructure. GSI, also known as low impact development (LID), includes a variety of design elements, including pervious paving materials, vegetated bioswales, and bioretention basins. See [www.phoenix.gov/pdd/gsi](http://www.phoenix.gov/pdd/gsi) for more information.

Effective July 1, 2011, the City adopted a voluntary construction code that incorporates sustainable design and construction standards. The Phoenix Green Construction Code is available on the City's web page ([Planning and Development Codes, Ordinances, Standards and Interpretations \(phoenix.gov\)](http://www.phoenix.gov/planning-and-development-codes-ordinances-standards-and-interpretations)). The 'whole project' approach encourages GSI through natural resource conservation and environmentally responsible land use and development.

The City Manager's Infrastructure Strategic Plan ([City Manager Infrastructure Strategic Plan \(phoenix.gov\)](http://www.phoenix.gov/city-manager-infrastructure-strategic-plan)) includes strategies aimed at providing safe, clean, efficient, sustainable, multi-modal surface transportation systems to support the needs of present and future residents. A key strategy for this priority is the planning, designing, and constructing facilities with GSI to increase shade canopy and promote pedestrian mobility, parks, preserves, tree and shade master plans, and habitat restoration.

The Phoenix City Council adopted the Complete Streets ([Street Transportation Complete Streets Program \(phoenix.gov\)](http://www.phoenix.gov/street-transportation-complete-streets-program)) policy on June 28, 2017, and the Complete Streets Design Guidelines on October 17, 2018. The Design Guidelines include guidance and information on use of GSI and low-impact development principles in the right of way for stormwater management. The guidance was primarily adopted from, with permission, Watershed Management Group's *Green Infrastructure for Southwestern Neighborhoods (2012)*.

Other design principles in the guidelines include improvement of pedestrian and bicycle safety and access and incorporation of street amenities like street furniture and shade accommodation.

In 2020, the Planning and Development Department adopted the Greater Phoenix Metro Area GI/LID Handbook ([Greater Phoenix Green Infrastructure and LID Handbook - Sustainable Cities Network \(asu.edu\)](#)) for use outside of street rights-of-way and in 2021, 8 of the 10 standard details in that handbook were incorporated into the 2021 City Supplement to the 2019 Maricopa Association of Governments Details for Public Works Construction ([LastVersion04052022.pdf \(phoenix.gov\)](#)) for work within street rights-of-way. In alignment with the City's commitment to GSI, standard details for common GSI features were adopted in July 2023 and included in the Street Planning and Design Guidelines Manual ([Street Planning and Design Guidelines Manual.pdf \(phoenix.gov\)](#)).

The Phoenix General Plan is the long-range guide for the City, and addresses issues such as energy, housing, neighborhoods, public facilities, natural resources, transportation and land use. The General Plan includes a detailed section on stormwater including: Land Use and Design Principles; Policy Documents and Maps, and Tools: Policies and Actions. This section encourages the use of green infrastructure or other post-construction methods for "capturing and using stormwater and urban runoff for beneficial purposes." PDD leads inter-departmental discussions every year to update the listed "policies and actions" that may be needed due to a completed action or new policy. A major update to the Phoenix General Plan is underway in 2024 and additional emphasis on GSI is included.

The City's Walkable Urban (WU) Code was adopted in July 2015. The WU Code, which was developed as part of the light-rail corridor revitalization initiative, Reinvent Phoenix, encourages the use of GSI and green-infrastructure practices to meet the newly developed landscape standards within the Code. Overall, the new WU Code encourages walkability, use of mass transit, and supports additional livability principles through the incorporation of trees, shade, and other natural systems.

## 11.2 PLAN REVIEW

PDD plan review staff follow the appropriate checklist for review of important information. When staff review site plans, they verify that the site retention volume is adequate to prevent runoff for the required storm event. If inspectors find that the plans are not being followed, they may stop work on the project. If the problem continues, court-ordered injunctions may be sought or civil penalties assessed.

P.C.C. Chapter 32A, the City's G&D Ordinance, and the current Storm Water Policies and Standards establishes implementation and enforcement procedures. G&D Permits are issued to applicants who fulfill the application requirements, including the submittal of a stormwater management plan when applicable.

Staff from PDD hold pre-application, fact finding, preliminary approval, and pre-construction meetings with private developers to discuss many issues, including the need to minimize the total volume of runoff, the peak rate of runoff from roof drains, on-site retention of stormwater, controlling erosion, and post-construction controls.

An overview of the PDD process for stormwater related submittals is provided below:

- The customer submits grading/drainage and stormwater plans for review,
- PDD provides red lines on plans,

- the customer addresses the red lines,
- plans are approved for construction by PDD,
- the customer applies for required permits,
- permits are created by PDD, including Civil G&D and Civil Construction Stormwater Management Plan,
- PDD staff checks to verify that an NOI has been submitted and an AZPDES CGP number has been received before the customer can purchase permits (Note: An Erosivity Waiver or No Discharge Certification is also acceptable.),
- the customer schedules a Pre-Construction Meeting prior to beginning work,
- BMPs are implemented by the customer prior to the start of construction,
- the PDD Inspector verifies that track out and BMPs are properly maintained during each inspection,
- final inspection is conducted to confirm the project was constructed as designed and all temporary BMPs are removed, and then
- a warranty inspection is performed by PDD one-year after completion.

### 11.3 INVENTORY

PDD tracks municipal and private projects that have post-construction controls reviewed and permitted by PDD and the criteria outlined in Section 11.0. OEP collects information on municipal projects that are not reviewed by PDD (i.e., do not require a grading and drainage permit) and provides this information to PDD via the Plan Review Checklist. Additionally, PDD maintains an inventory of municipal projects that are not reviewed by PSD and includes them in a municipal post-construction program inventory.

### 11.4 INSPECTION PROGRAM

11.4.1 A post-construction or one-year warranty inspection is conducted by PDD staff on each construction project for which permits were issued. This inspection provides an opportunity to identify corrective action to be implemented by the developer or responsible sub-contractor for a variety of items, including stormwater and G&D controls.

11.4.2 Property owners or their designees should conduct inspections at the frequency identified in their O&M Plan. Copies of these inspections should be retained for a period of five (5) years and made available to the City upon request.

11.4.3 PDD staff may also conduct a physical or administrative inspections at projects with post-construction controls because of a complaint or routine inspection.

### 11.5 ENFORCEMENT STRATEGY/ACTIONS

11.5.1 The current Storm Water Policies and Standards detail the requirements for and responsibility of permanent post-construction control maintenance. All drainage facilities owned and/or operated by private entities, including HOAs, shall be properly maintained to promote performance of the drainage

facilities consistent with the original design intent. All drainage facilities that are to be maintained by the City of Phoenix shall be encompassed within a City owned property, public right-of-way, public right-of-way easement, or public drainage easement and clearly shown on the recorded plat.

11.5.2 PDD staff can enforce on these requirements through the authority granted in P.C.C. Chapters 32A and 32C. After considering the various factors, the City will determine the level of enforcement that is required. Enforcement may include the following informal and formal actions:

- Verbal Warning
- Inspection Report with Requirements
- NOV
- Field NOV
- Civil Citation

## **11.6 DESIGN AND MAINTENANCE STANDARDS APPLICABLE TO POST-CONSTRUCTION**

The analysis and design of stormwater retention facilities for new developments must include provisions to retain the stormwater runoff from a 100-year, 2-hour duration storm occurring within the property boundaries per P.C.C. Chapter 32A, current City Stormwater Policies and Standards, and the current version of Maricopa County Flood Control District's Drainage Design Manual for Maricopa County, Volumes 1-2 and Drainage Policies and Standards Manual for Maricopa County, unless otherwise required. A person may not install or use a direct connection to the public storm drain system without written permission of the City Manager.

11.6.1 Per the current City Stormwater Policies and Standards, a person shall maintain BMPs and post-construction stormwater controls to achieve and maintain the original design intent for detention, retention, and treatment.

11.6.2 Effective March 1, 2024, maintenance and inspection recommendations for post-construction controls will be documented using the Stormwater Post-Construction Control Operations and Maintenance (O&M) Plan TRT 00132. Private projects that meet the criteria in Section 11.0 will submit the O&M Plan with the Civil Plan Review Package for G&D and/or Paving Plans.

11.6.3 A property owner or their designee should inspect the controls at least once per year and conduct proactive and corrective maintenance activities as recommended in the O&M Plan. Copies of the maintenance records should be retained for no less than five (5) years and provided to the City upon request.

## 12.0 STORMWATER TRAINING PROGRAM

Knowledge of the applicable requirements and the overall Stormwater Management Program helps personnel with program responsibilities, recognize potential violations, respond appropriately, and effectively coordinate with other agencies. The City has a SWMP Training Program for its staff to address the training requirements outlined in the MS4 Permit. It is accomplished through training offered by multiple departments and is coordinated by OEP. Training requirements, course number, course objectives frequencies and brief descriptions of the subject matter covered in the courses are presented in the Citywide Stormwater Training Plan Appendix H.

The Human Resources (HR) Department maintains electronic records of formal training attended by employees (tracked in the City's HR information system, called PHXYou) which is used to provide a summary of training activities in the MS4 Annual Report. Some departments may track training using their department procedures.

The SWMP Training Program targets two categories of employees: 1) municipal employees without direct stormwater responsibilities and 2) municipal employees with direct stormwater program responsibilities. Examples of employees with direct responsibilities include municipal facility inspectors, industrial facility inspectors, plan reviewers, and construction project inspectors.

### 12.1 FIELD STAFF TRAINING

Select field staff with no direct stormwater responsibilities receive awareness training. Awareness training includes information on the City's MS4 Permit, harmful and prohibited practices like hazardous materials spills, and illegal dumping, and reporting procedures. Training on spill prevention and response provides specific practices to minimize spills and discharges to the storm drain system. Hazardous materials handling training discusses proper handling, storage, and disposal of used oil and other toxic and hazardous materials and wastes to prevent spills, exposure to rainfall, and contamination of stormwater runoff.

### 12.2 MUNICIPAL EMPLOYEES WITH SPECIFIC JOB RESPONSIBILITIES

City employees who perform any of the following tasks receive training to minimize stormwater pollution:

- Street repair and road improvement
- Material handling and spill management
- Handling, storage, and disposal of used oil and other toxic and hazardous materials
- Water and sanitary sewer system maintenance and repair
- Municipal stormwater inspections

### 12.3 INSPECTOR AND STORMWATER FIELD STAFF TRAINING

#### Illicit Discharge Detection and Elimination

Inspectors and other stormwater field staff are educated and updated on detecting, investigating, and identifying illicit discharges, de minimis discharges, and other sources of non-stormwater discharges. On-

the-job training includes a requirement to complete a series of tasks and then demonstrate proficiency. This includes, but is not limited to, computer proficiency in a variety of programs, familiarity with 40 CFR 122 and P.C.C. Chapter 32C, policies and procedures, field training on outfall inspection/sampling and field training on IDDE complaint investigations, field screening techniques, sampling methods, and field measurements.

### **Municipal Stormwater Inspectors**

The Environmental Quality Specialists and Environmental Program Managers that inspect municipal construction projects are trained in stormwater management practices and pollution prevention planning. This training is listed in Appendix H and includes information on P.C.C. Chapter 32C and other stormwater discharge regulations and permit requirements.

### **Industrial Site Inspectors**

These inspectors in WSD are educated and updated on stormwater management practices and BMPs for facilities subject to inspection. Information on requirements for stormwater discharges associated with industrial activity and common BMPs is provided and is listed in Appendix H. In addition, on-the-job training must be completed on industrial/commercial inspections, and each new SWM inspector must demonstrate proficiency requirements.

### **Construction Project Plan Reviewers, Inspectors, and Post-Construction Program Staff**

PDD plan reviewers, inspectors, and post-construction program staff complete sessions required per Appendix H and receive on the job training in the following areas:

- G&D design standards
- Plan review procedures
- Municipal ordinances related to stormwater and construction
- Requirements for structural and non-structural management practices on construction sites such as erosion and sediment controls
- Post-construction stormwater controls
- Construction BMP maintenance requirements
- Inspection procedures
- Enforcement procedures

### **City Staff and Project Managers**

City staff may also attend outside training sponsored by industry associations (e.g., Building Industry Association, American Society of Civil Engineers, etc.), the ADEQ, or training sponsored by other entities when funding is available.

Other department (Aviation, WSD, STR) City Project Managers receive training on the Stormwater Plan Review Checklist and MS4 permit plan review requirements.



## 13.0 WET WEATHER MONITORING PROGRAM

### 13.1 OVERVIEW OF THE PROGRAM FOR WATER QUALITY MONITORING

The City has five (5) major outfall locations in the wet weather monitoring program. The monitoring sites and rain gauge locations are depicted on the Stormwater Management Program Maps and included in Appendix C. The first overview map shows five stars, those are the five major outfall locations and each of the following drainage maps shows each of these sites with the correlating drainage area. These outfall locations were selected to best characterize stormwater discharges from the citywide system.

The SWM collects the wet weather samples and maintains the sampling equipment. Samples are analyzed by the WSD Compliance Laboratory.

### 13.2 QUALIFYING STORM EVENT

A qualifying storm event is rainfall in the amount of 0.1 inches or more with a resulting discharge. Samples must be collected from qualifying storm events that are at least 72 hours (3 calendar days) after a previous qualifying storm event. For each qualifying storm event, a record is kept that includes:

- the date of the event,
- The amount of rainfall in the drainage area for each stormwater monitoring location, and
- a notation of whether samples were collected or not, and a reason if samples were not collected, when applicable.

The summer wet season is defined as the period between June 1 and October 31, and the winter wet season is the period between November 1 and May 31.

Samples must be collected during the first representative storm event that occurs in each wet season, and for subsequent representative storm events so that samples are collected once for each of the five (5) outfalls during each wet season.

The parameters for which stormwater samples that must be analyzed are listed in Tables 1 (one time per wet season) and 2 (one time per wet season during year 4) of the MS4 Permit.

### 13.3 WATER QUALITY ASSESSMENT

Precipitation and water quality data are maintained by SWM. Quality control procedures, including data analysis and reporting procedures, are implemented to verify the integrity of the data. Other software may be used as needed to analyze the data and create reports. The Stormwater Working Group meets at least annually to review and assess available water quality data, assess overall program effectiveness, and review and update the SWMP as necessary.

The City's MS4 does not discharge to any impaired waters listed on Arizona's 303(d) List, not-attaining waters listed in the 305(b) Water Quality Assessment Report, or to an Outstanding Arizona Water. The MS4 Permit may be reopened if these conditions change.

If the 303(d) list is updated to include a surface water that receives discharge from the MS4, the City will evaluate control measures and implement BMPs as warranted to reduce the discharge of any listed parameter(s) to the maximum extent practicable. The SWMP will be revised to include a section on BMPs to control discharges and monitor their effectiveness. In addition, the 303(d) listed parameter(s) will be included in the wet weather monitoring at a representative outfall.

#### **Persistent Exceedances of Water Quality Standards**

If an exceedance of water quality standards occurs due to stormwater runoff discharges, notwithstanding the implementation of the SWMP and other conditions of the MS4 Permit, the City will try to identify potential sources of the pollutant(s), evaluate the effectiveness of existing BMPs, and implement additional BMPs to improve stormwater quality.

WSD will attempt to identify potential sources of the pollutant(s) of concern through research and inspections. Research includes the identification of industry types that are known to use the pollutant(s), potential non-industrial sources of the pollutant(s), review of industries in the targeted catchment area(s), and visual reconnaissance of the targeted catchment area(s).

WSD will evaluate existing BMPs that may affect the pollutant(s) of concern and determines if revisions are warranted or if new BMPs are recommended. Input may be needed from other departments, including STR, PWD, or PDD, depending on the nature of the pollutant(s), the identified source(s), and the applicable BMPs.

The City reports information on exceedances to ADEQ in the wet weather sampling submittals.

If a recurring, consecutive exceedance of a SWQS exists at an outfall, and the exceedances are not a routine or ubiquitous stormwater pollutant (e.g., *E. coli*, dissolved copper, lead), the City will submit an Action Plan to ADEQ within 60 calendar days of becoming aware of the repeated exceedance.

### **13.4 DISCHARGE MONITORING REPORTS**

When available, wet weather data is submitted to ADEQ electronically in a Discharge Monitoring Report (DMR) via the myDEQ portal. The DMRs are submitted within 30 business days of receipt of lab reports for each outfall. The reports must include:

- Discharge Monitoring Reports
- Storm event data attachment (as appropriate)
- Copies of laboratory reports
- Bench sheets or similar documentation for field testing parameters

Until the myDEQ portal is functioning, wet-weather data is submitted to ADEQ via email using Excel spreadsheet templates provided by the agency.

## 14.0 PROGRAM EVALUATION, REPORTING AND REVISION

### 14.1 ANNUAL REPORTING

Each year the City prepares an MS4 Annual Report summarizing the implementation of the programs described in the SWMP for submittal to the ADEQ. The Annual Report must be submitted by September 30 of each year on a form provided by ADEQ and must include the information provided in Appendix A of the Permit. To support preparation of the Annual Report, the City departments with program responsibilities submit data to ESD for compilation and submission. The Annual Report must be submitted to ADEQ electronically via myDEQ. Access to the current SWMP is provided to ADEQ with the Annual Report each September.

### 14.2 PROGRAM EVALUATION

The City will regularly assess the component programs of the SWMP to identify improvements that promote the reduction of pollutants in stormwater runoff to the MEP while also supporting the responsible management and allocation of the public resources available to implement the SWMP.

#### Short Term Strategies

The short-term strategy for assessing the effectiveness of the SWMP focuses on quantitative, indirect methods (that is, not directly based on the quality of stormwater runoff or receiving water quality) of assessment. The City may track the following data that are believed to have an influence on stormwater runoff and receiving water quality:

- the estimated quantity of material collected under litter removal and street sweeping programs,
- the total number of construction site inspections for stormwater compliance,
- the total number of industrial and commercial facility inspections for stormwater compliance,
- the number of City staff receiving training for activities related to SWMP implementation,
- the number of stormwater complaints and illicit discharges investigated,
- public involvement opportunities, and
- public education and outreach events.

#### Long Term Strategies

The long-term strategy for assessing the effectiveness of the SWMP focuses on water quality data obtained as part of the Stormwater Monitoring Program. There is inherent variability in stormwater runoff, reviewing several years of monitoring data is necessary to identify statistically significant trends and formulate conclusions. Additionally, because there are numerous program elements being implemented concurrently and other environmental regulations indirectly impact stormwater runoff, the ability to identify cause-and-effect relationships between a specific program element and/or BMP and improvement in the quality of stormwater runoff is complicated, and may not be feasible.

### Program Effectiveness

In addition to assessing the effectiveness of the various program elements, the City also evaluates the effectiveness of the overall Stormwater Management Program. The legal authority and program management elements are assessed to determine if changes are needed to comply with permit requirements or other regulatory updates. Major accomplishments and recommended improvements are discussed in the program evaluations.

The effectiveness of the Public Education and Outreach Program is measured using the following tools:

- **Public Surveys** – The City uses surveys to help assess the effectiveness of public education and outreach activities. Past survey results indicate that citizen awareness of stormwater protection has remained at approximately the same level. The City may seek to develop more targeted surveys to determine awareness levels of specific target groups.
- **Employee Feedback** – The City may modify the public education program based on employee feedback or knowledge of stormwater quality issues affecting a specific drainage area.
- External consultant evaluation as required by the MS4 permit.

## 14.3 SWMP REVISIONS

As part of the annual review process, the Stormwater Working Group reviews the SWMP to identify the need, if any, for revisions. Additionally, the SWMP will be revised under the following conditions:

- if new BMPs or modifications to existing BMPs are determined to be necessary,
- to address impacts on water quality caused, or contributed to by discharges from the MS4,
- to include new requirements necessary to comply with new State or Federal statutory or regulatory requirements,
- to incorporate specific BMPs to address a recurring, consecutive exceedance of a non-routine stormwater pollutant,
- to incorporate specific TMDL requirements and programs into the SWMP in the event that TMDLs are established during the permit term, and
- to incorporate requirements that would become applicable in the event that a receiving water in the MS4 is classified as an Outstanding Arizona Water.

# **APPENDIX A**

## **CERTIFICATION STATEMENT**

**SWMP – APPENDIX A  
CERTIFICATION**

The SWMP must be signed and certified by either a principal executive officer or ranking elected official; or by a “duly authorized representative” of that person in accordance with Section 7.2 of the permit.

*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 ensure 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.*

 <small>James Swanson (Sep 25, 2024 14:58 PDT)</small>	Sep 25, 2024
James Swanson Assistant Water Services Director	Date

**Concurrences**

	Sep 26, 2024
Jason Blakley Assistant Planning & Development Director	Date

	Sep 25, 2024
Brandy A. Kelso Street Transportation Interim Director	Date

	Sep 27, 2024
Felipe Moreno Public Works Director	Date

Nancy Allen Environmental Programs Administrator	Date
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	Sep 27, 2024
RoseMarie R. Horvath Assistant Chief Council	Date

## **APPENDIX B**

### **STORMWATER RELATED ORDINANCES**

CHAPTER 32A  
GRADING AND DRAINAGE



## Chapter 32A

# GRADING AND DRAINAGE<sup>1</sup>

- Sec. 32A-1. Purpose.
- Sec. 32A-2. Scope.
- Sec. 32A-3. Enforcement.
- Sec. 32A-4. Minor variances.
- Sec. 32A-5. Appeals.
- Sec. 32A-6. Permits required and exceptions.
- Sec. 32A-7. Hazardous conditions.
- Sec. 32A-8. Definitions.
- Sec. 32A-9. Permit requirements.
- Sec. 32A-10. Permit limitations and conditions.
- Sec. 32A-11. Denial of permit.
- Sec. 32A-12. Grading permit fees and plan review fees.
- Sec. 32A-13. Necessity for completion of grading before occupation of building.
- Sec. 32A-14. Design standards for cuts.
- Sec. 32A-15. Design standards for fills.
- Sec. 32A-16. Design standards for setbacks.
- Sec. 32A-17. Design standards for drainage.
- Sec. 32A-18. Grading, inspections and supervision.
- Sec. 32A-19. Safety precautions.
- Sec. 32A-20. Responsibility of permittee.
- Sec. 32A-21. Modification of approved plan.
- Sec. 32A-22. Completion of work.
- Sec. 32A-23. Adoption of City of Phoenix Stormwater Policies and Standards Manual.
- Sec. 32A-24. Design standards for on-site retention of stormwater.
- Sec. 32A-25. *Reserved.*
- Sec. 32A-26. Hillside lots/mountain preserves.
- Sec. 32A-27. Violations and penalties.
- Sec. 32A-28. Jurisdiction of court.
- Sec. 32A-29. Commencement of civil action.
- Sec. 32A-30. Admission or denial of allegation; hearing; findings of court; civil sanction.

**1 Cross reference**—Development Advisory Board, § [2-164](#) et seq.; building regulations, ch. [9](#); subdivisions, ch. [32](#); development of hillside areas, § [32-32](#); floodplains, ch. [32B](#); stormwater quality protection, ch. [32C](#); Planning and Development Department fee schedule, app. A.2.

### **Sec. 32A-1. Purpose.**

- A. The purpose of this chapter is to safeguard life, limb, property, and public welfare by establishing minimum requirements for regulating grading and drainage and procedures by which these requirements may be enforced.
- B. All grading shall be performed in accordance with the provisions of this chapter, but this chapter shall not be construed to prevent the enforcement of other laws which prescribe more restrictive limitations nor shall the provisions of this chapter be presumed to waive any limitations imposed by other statutes or ordinances. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1)

### **Sec. 32A-2. Scope.**

This chapter sets forth rules and regulations to control earthwork construction, including excavation embankments and drainage on property other than public street and alley right-of-way; establishes the administrative procedure for issuance of permits; and provides for approval of plans, specifications, and inspection of such construction. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1)

### **Sec. 32A-3. Enforcement.**

- A. The official charged with the enforcement of this chapter is the Planning and Development Director.
- B. It shall be unlawful to perform any work described in Section [32A-2](#) without obtaining a permit from the Planning and Development Director. Work described in Section [32A-2](#) that proceeds without the required permit shall be subject to the investigation and remediation fee set forth in Appendix A.2 of the City Code. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 1; Ord. No. G-3313, § 1; Ord. No. G-3346, § 5; Ord. No. G-3887, § 1; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012)

### **Sec. 32A-4. Minor variances.**

The Planning and Development Director may grant a minor variance to this chapter's provisions and amendments relating thereto when there exists an unnecessary hardship substantially limiting the preservation and enjoyment of property rights and resulting from a literal interpretation of this chapter's provisions and amendments relating thereto. This minor variance shall not apply to the requirements imposed by the NPDES/AZPDES program, nor be authorized unless it is found that:

- A. Special circumstances or conditions apply to this permit application; and
- B. The minor variance is necessary for the preservation and enjoyment of substantial property rights; and

- C. The minor variance will not be materially detrimental to the person residing or working in the vicinity, to adjacent property, to the neighborhood or to the public welfare in general; and
- D. The minor variance will be in harmony with the purposes sought to be attained by this chapter's provisions and amendments relating thereto. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 3; Ord. No. G-3313, § 1; Ord. No. G-3887, § 1; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012)

### **Sec. 32A-5. Appeals.**

Appeals from decisions of the Planning and Development Director in interpreting this chapter may be taken to the Development Advisory Board. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 1; Ord. No. G-1569, § 1; Ord. No. G-3313, § 1; Ord. No. G-3887, § 1; Ord. No. G-4176, § 12, 1999; Ord. No. G-5590, § 1, 2011)

### **Sec. 32A-6. Permits required and exceptions.**

- A. *Drainage.* No person shall obtain a building permit, required by the Phoenix Building Construction Code, for work in or over any natural watercourse, drainageway, canyon, ravine, arroyo or other potential flood hazard area without first having obtained a grading permit from the Planning and Development Director. All such work and activities authorized by the grading permit shall comply with this chapter and the City of Phoenix Stormwater Policies and Standards Manual.
- B. *Flood hazard area.* No person shall obtain a building permit, required by the Phoenix Building Construction Code, in an area of special flood hazard without first obtaining a grading permit from the Planning and Development Director and its approval of by the Street Transportation Director. All such work and activities authorized by the grading permit shall comply with this chapter and the City of Phoenix Stormwater Policies and Standards Manual.
- C. *Filling and excavating.* No person shall do any grading, filling or excavating without first having obtained a grading permit from the Planning and Development Director except for the following, only to the extent such grading, filling or excavating does not result in land disturbance over one acre:
1. An excavation which (a) is less than two feet in depth, or (b) which does not create a cut slope greater than five feet in height and steeper than one vertical to one and one-half horizontal.
  2. A fill less than one foot in depth and placed on natural terrain with a slope flatter than one vertical to five horizontal and which does not exceed 100 cubic yards on any one site and does not obstruct a drainage course.
  3. An excavation of 10,000 cubic yards or less or eight feet or less below finished grade for basements and footings of a building, retaining wall, or other structure authorized by a valid building permit. This shall not exempt any fill made with the material from such excavation nor exempt any excavation having an unsupported height greater than five feet after the completion of such structure.

4. Excavation or deposition of earth materials within a property which is dedicated or used, or to be used for cemetery purposes not obstructing a watercourse, except where such grading is within 100 feet of the property line or intended to support structures.
5. Mining, quarrying, excavating, processing, or stockpiling of rock, sand, gravel, aggregate, or clay where established and provided for by law; provided, that such operations do not affect the lateral support or unduly increase the stresses in or pressure upon any adjacent or contiguous property.
6. Grading in an isolated, self-contained area if the Planning and Development Director finds that no apparent danger to private or public property can now or thereafter result from the grading operations.
7. Grading in public rights-of-way and easements done under a permit issued by the Planning and Development Director.
8. Grading by a public utility company in private easements that does not obstruct a natural watercourse.
9. New sanitary landfills and refuse disposal areas that are regulated by the Arizona Department of Environmental Quality and the Maricopa County Air Quality Department.

D. Notwithstanding subsections C.1 and 2 of this section, no person shall commence or conduct any clearing, grubbing, and/or grading of land which is designated as hillside under the Zoning Ordinance of the City of Phoenix, or which land has specific zoning or development stipulations attached to it which prohibit or control grading, clearing or grubbing on said land, or which land is in a zoning district which prohibits or controls clearing, grubbing and/or grading of said land, without first having obtained a permit from the Planning and Development Director.

E. Notwithstanding the provisions of subsection [C](#) of this section, the NPDES/AZPDES program may require a construction stormwater management plan and impose additional requirements and prohibitions. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, §§ 1, 3; Ord. No. G-2786, § 1; Ord. No. G-3313, § 1; Ord. No. G-3887, § 1; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012; Ord. No. G-7116, § 1, 2023)

### **Sec. 32A-7. Hazardous conditions.**

Whenever any existing excavation or embankment or fill has become a hazard to life and limb, or endangers property, or adversely affects the safety, use, or stability of a public way or drainageways, such condition shall be deemed a nuisance and the owner of the property upon which the excavation or fill is located, or other person or agent in control of said property, upon receipt of notice in writing from the Planning and Development Director shall within the period specified therein repair or eliminate such excavation or embankment so as to eliminate the hazard and be in conformance with the requirements of this chapter and the City of Phoenix Stormwater Policies and Standards Manual. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 3; Ord. No. G-3313, § 1; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012)

**Cross reference**—Nuisances, § [23-11](#) et seq.

## Sec. 32A-8. Definitions.

For the purposes of this chapter, the words and phrases herein defined shall be construed in accordance with the definitions set forth in this section unless it is apparent from the context that a different meaning is intended.

*Bedrock* means the solid, undisturbed bedrock in place either at the ground surface or beneath surficial deposits of gravel, sand or soil.

*Building Official* means the Building Official of the City of Phoenix Planning and Development Department.

*Clearing or grubbing* means the removal of any plant, bush, tree, cacti, or earth or rock.

*Earthwork* means the cut, fill, import or disposal of excess earth, sand, gravel, rock or other earthen material.

*Excavation* means any act by which earth, sand, and gravel, rock, or other earthen material is cut into, dug, uncovered, displaced or relocated, and shall include the conditions resulting therefrom.

*Existing grade* means the grade or elevation of the existing ground surface prior to excavating or filling.

*FEMA* means the Federal Emergency Management Agency.

*Fill* means deposits of soil, rock, or other materials placed by humans.

*Finish grade* means the final grade or elevation of the ground surface after grading is completed.

*Grading* means any excavating, filling, moving of natural earthen ground surface or combination thereof, and shall include the conditions resulting from any excavation, fill or movement of the natural earthen ground surface, including the natural drainage pattern.

*NPDES/AZPDES program* means the Federal National Pollutant Discharge Elimination System (NPDES) Program administered nationally pursuant to [33](#) U.S.C. Section [1342](#) and the Arizona Pollutant Discharge Elimination System (AZPDES) Program administered in Arizona pursuant to Arizona Revised Statutes, Title [49](#), Chapter 2, Article 3.1, requiring the control or elimination of erosion and other forms of water pollution from a site. As used in this chapter, the term also includes the requirements of Chapter [32C](#) of this Code.

*On-lot detention* means detaining stormwater on an individual lot for a given design frequency storm, said area of lot being exclusive of public streets, alleys, or other land dedicated for public use.

*On-site retention* means retaining stormwater that falls on the site for a given design frequency, said site being exclusive of public streets, alleys or other land dedicated for the public use.

*Outfall of lot* means the lowest point of the lot (when final grading and improvements are complete) that will provide for continuity of drain water disposal to the street, alley, or drainage channel or easement.

*Planning and Development Director* means the City of Phoenix Planning and Development Director or the Director's designee.

*Retaining wall* means a wall which supports earth higher on one side than the other side (measured from the top of the footing to the top of the retaining wall); a retaining wall over three feet high shall be designed by an Arizona registered civil or structural engineer and approved by the Planning and Development Department prior to construction.

*Rough grade* means an approximate elevation of the ground surface conforming to the proposed design.

*Site* means any lot or parcel of the land or contiguous combination thereof, under the same ownership, where grading is performed or permitted.

*Soil* means all earth material of whatever origin that overlies bedrock.

*Supervising engineer* means an Arizona registered engineer who has been employed to design or oversee work regulated by this chapter. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 2; Ord. No. G-1641, § 1; Ord. No. G-3313, § 1; Ord. No. G-3887, § 1; Ord. No. G-3994, § 1, 1997; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012; Ord. No. G-7116, § 1, 2023)

**Cross reference**—Definitions and rules of construction generally, § [1-2](#).

## **Sec. 32A-9. Permit requirements.**

A. *Application.* To obtain a grading permit, a person shall file an application in writing on a form furnished by the Planning and Development Director. A separate application shall be required for each site and may cover both excavation and filling.

B. Every application shall:

1. Identify and describe the work to be covered by the permit for which application is made.
2. Describe the land on which the proposed work is to be done by lot, block, tract or similar description that will identify readily and definitely locate the proposed work and give name and address of property owner.
3. Indicate the intended use for which the site is being prepared.
4. Give proposed location of deposit area and name and address of person who will receive excavated material and evidence that such person is willing to receive the material (if off site).
5. Be accompanied by plans, specifications and a geotechnical report as required in subsection [C](#) of this section and a stormwater pollution prevention plan (SWPPP) if required as stated in subsection [G](#) of this section.
6. State the estimated quantities of earthwork involved, including, but not limited to, cut, fill, import, borrow and the excess disposal.

7. Be signed by the applicant, or the applicant's authorized agent, who may be required to submit evidence to indicate such authority.
8. Locate all retaining walls and state height planned in the project.
9. Provide typical cross sections of retaining wall and privacy wall at all locations along the perimeter of the project.
10. Give such other information as reasonably may be required by the Planning and Development Director and the City of Phoenix Stormwater Policies and Standards Manual.

C. *Plans, specifications and geotechnical report.* Each application for a grading permit shall be accompanied by two sets of plans, specifications and geotechnical report, except when waived by the Planning and Development Director for minor or insignificant work. The plans, specifications and geotechnical report shall be prepared, sealed and signed by an Arizona registered engineer.

D. *Exceptions to plans, specifications and geotechnical report requirements.*

1. Plans and specifications need not be prepared by an Arizona registered engineer if the Planning and Development Director waives such requirement because technical engineering is not required.
2. When waived by the Planning and Development Director in cases where soils and geologic conditions are not significant factors in the design, a geotechnical report need not be submitted.
3. Plans, specifications and geotechnical reports shall not be required by the Planning and Development Director for work in a legal subdivision or for work which is in an area under an approved site plan required by the Zoning Ordinance, provided such subdivision or site plan approval is granted subsequent to the effective date of this chapter. The requirements of this chapter shall be fulfilled during the approval process of the subdivision or site plan.

E. *Information on plans, specifications and geotechnical report.* Plans shall be prepared to scale and shall be of sufficient clarity to indicate the nature and extent of the work proposed and show in detail conformance to the provisions of this chapter and all relevant laws, ordinances, rules and regulations. The first sheet of each set of plans shall give the location of the work and the name and address of the owner and person by whom they were prepared. The plans shall comply with the City of Phoenix Stormwater Policies and Standards Manual and shall show, at a minimum, the following information:

1. General vicinity map of the proposed site.
2. Property limits and accurate contours of existing ground and details of terrain and area drainage. All elevations shall conform with National Geodetic Vertical Datum (NGVD), 1929.
3. Limiting dimensions, elevations, slopes and finish contours or elevations to be achieved by the grading, and proposed drainage channels and related construction.

4. Detailed plans of all surface and subsurface drainage devices, walls, cribbing, dams and other protective devices to be constructed with, or as part of, the proposed work together with a map showing the drainage area and the estimated runoff of the area served by any drainage system.
  5. Location of any buildings or structures on the property where the work is to be performed and the location of any building or structures on land of adjacent property owners which are within 50 feet of the property or which may be affected by the proposed grading operations.
  6. Any additional plans, drawings, specifications or calculations reasonably required by the Planning and Development Director.
  7. Provisions for on-site retention of stormwater, unless waived by the City of Phoenix Stormwater Policies and Standards Manual, or the Planning and Development Director, or otherwise not required by this chapter.
  8. In areas of special flood hazard, indicate the area of special flood hazard as delineated by FEMA.
  9. Specifications shall contain information covering construction and material requirements.
  10. Plans and specifications shall be based on the geotechnical report when such a report is required.
- F. The geotechnical report shall show the information obtained from surface, subsurface and geological investigations necessary to provide information on which to base the design of the proposed project. The report shall include, but need not be limited to, pertinent data as applicable to the proposed project concerning:
1. The nature, distribution and strengths of existing soil and rock.
  2. Geologic factors affecting stability and safety.
  3. Conclusions and recommendations for grading requirements including the correction of weak and/or unstable conditions.
  4. Opinions and recommendations covering the adequacy of sites to be developed by the proposed grading operations.
- G. As required by State or Federal regulations, a stormwater pollution prevention plan (SWPPP), as per the NPDES/AZPDES program, shall be submitted by the owner applicant or the applicant's representative with the grading and drainage plan. The requirements of the erosion control plan, construction stormwater management plan, and/or stormwater post-construction program maintenance plan are listed in the City of Phoenix Stormwater Policies and Standards Manual. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 3; Ord. No. G-1260, § 1; Ord. No. G-1641, § 1; Ord. No. G-3313, § 1; Ord. No. G-3887, § 1; Ord. No. G-3994, § 1, 1997; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012; Ord. No. G-7116, § 1, 2023)



## **Sec. 32A-10. Permit limitations and conditions.**

A. *General.* The issuance of a grading permit shall constitute an authorization to do only that work which is described or illustrated on the application of the permit or on the site plans and specifications approved by the Planning and Development Director.

The issuance of a permit or the approval of drawings and specifications shall not be construed to be a permit for, nor an approval of any violation of or deviation from the provisions of this chapter or any other ordinance, law, rule or regulation. A permit issued shall be invalid if, in the work completed, a violation of this chapter or deviation therefrom, ensued. When such violation occurs, the permit shall be deemed to be canceled and the ground restored to the condition it was in prior to start of the grading work.

The issuance of a permit based upon drawings and specifications shall not prevent the Planning and Development Director from thereafter requiring the correction of errors in said drawings and specifications or from stopping unlawful construction operations being carried on thereunder.

B. *Jurisdiction of other agencies.* Permits issued under the requirements of this chapter shall not relieve the permittee of the responsibility for securing required permits for work to be done that is regulated by any other ordinance, department, or division of the City of Phoenix or other governing agency.

C. *Time limits.* The permittee shall fully perform and complete all of the work required to be done pursuant to the grading permit within the time limit specified. If no time limit is specified, the permittee shall complete the work within 180 days after the date of the issuance of the grading permit.

If the permittee is unable to complete the work within the specified time, they shall, prior to the expiration of the permit, present in writing to the Planning and Development Director a request for an extension of the time, setting forth the reasons for the requested extension. If, in the opinion of the Planning and Development Director, such an extension is warranted, he may grant additional time for the completion of the work.

D. *Storm drainage precautions.* All persons performing any grading operations shall put into effect all safety regulations and rules required by County, State or Federal law and all safety precautions that are required by the Planning and Development Director; and comply with the City of Phoenix Stormwater Policies and Standards Manual; and provide adequate erosion and sedimentation control as required by the NPDES/AZPDES program.

E. *Conditions of approval.* In granting any permit under this chapter, the Planning and Development Director may attach such conditions as may be reasonably necessary to prevent creation of a nuisance or hazard to public or private property. Such conditions may include, but shall not be limited to:

1. Compliance with dust control requirements of the Maricopa County Air Quality Department.
2. Requirements for fencing of excavations or fills which would otherwise be hazardous.
3. Improvement of any existing site condition to bring it up to the standards of this chapter.
4. Salvage of protected native plant species prior to commencing grading operations.

5. Temporary fencing of protected hillside and desert preservation areas prior to commencing grading operations.
6. Implementation of any stormwater best management practices deemed necessary to prevent pollutants from entering the public storm drain system.

F. *Liability.* Neither the issuance of a permit under the provisions of this chapter nor the compliance with the provisions hereof, or with any conditions imposed in the permit issued hereunder, shall relieve any person from responsibility for damage to other persons or property, nor impose any liability upon the City for damage to other persons or property.

G. *Revocation.* Should the Planning and Development Director find the work under any permit issued under these provisions is not proceeding in accordance with the drawings, specifications, and details of the application upon which such permit was issued, and/or is proceeding in violation of this or any other ordinance of the City, or should he find that there has been any false statement or misrepresentation as to a material fact in the application, payment for said permit or plans on which the permit was based, the Planning and Development Director shall notify the person obtaining the permit and the owner that such work fails to conform to said permit, or that the permit was obtained by false representations and that such failure in obtaining the permit be corrected without delay. If the owner or person obtaining the permit fails or refuses to make such correction within the time specified in said notice, the Planning and Development Director shall revoke such permit and serve notice of such revocation upon such person to whom the permit was issued. Such notice shall be in writing and signed by the Planning and Development Director. It shall be unlawful for any person to proceed with any part of such work after such notice is served. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 3; Ord. No. G-3313, § 1; Ord. No. G-3887, § 1; Ord. No. G-3994, § 1, 1997; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012; Ord. No. G-7116, § 1, 2023)

## **Sec. 32A-11. Denial of permit.**

A. *Geological or flood hazard.* If, in the opinion of the Planning and Development Director, the land area for which grading is proposed is subject to geological or flood hazard to the extent that the proposed corrective work will not eliminate or sufficiently reduce the hazard to human life or property, the grading permit and the building permits for habitable structures shall be denied.

B. *Unlawful grading.* The Planning and Development Director shall not issue a permit in any case where he finds that the work as proposed by the applicant will endanger any private property or result in the deposition of debris on any public way or seriously interfere with any existing drainage course. However, if it can be shown to the satisfaction of the Planning and Development Director that the hazard would be essentially eliminated by the construction of retaining structures, buttress fills, drainage devices, or by other means, the Planning and Development Director may issue the permit after the applicant has complied with Sections [32A-9.E](#) and F.

C. *Noncompliance with the NPDES/AZPDES program.* If, in the opinion of the Planning and Development Director, the activities covered by the permit would cause a violation of any aspect of the NPDES/AZPDES program, a permit may be denied or may be granted subject to any requirements necessary to prevent or remedy the violation as

expeditiously as practicable. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 3; Ord. No. G-3313, § 1; Ord. No. G-3887, § 1; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012)

### **Sec. 32A-12. Grading permit fees and plan review fees.**

- A. Before issuance of a grading permit, the Planning and Development Director shall collect the fees set forth in Appendix A.2 of the City Code. Such fees shall be paid in lawful money of the United States or by collectible draft or check. Should such draft or check be uncollectible within a reasonable time, the permit shall be null and void. The application for permit shall state the quantity of excavation and fill involved. For excavation and fill on the same site, the fee shall be based on the volume of the excavation or fill, whichever is greater.
- B. The Planning and Development Director shall collect the fees set forth in Appendix A.2 of the City Code before providing grading and drainage plan review services. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 3; Ord. No. G-2216, § 1; Ord. No. G-2225, § 2; Ord. No. G-2511, § 1; Ord. No. G-2628, § 1; Ord. No. G-2786, §§ 2, 3; Ord. No. G-3010, § 1; Ord. No. G-3127, § 2; Ord. No. G-3313, § 1; Ord. No. G-3346, § 5; Ord. No. G-5590, § 1, 2011)

### **Sec. 32A-13. Necessity for completion of grading before occupation of building.**

- A. *Necessity for completion of improvements before occupation of building.*
1. The Building Official shall deny final approval of any building permit or any clearance for occupation of any building, until all the required grading, retention and improvements including corrective work necessary to remove and eliminate any hazard, all as determined by the Planning and Development Director, are completed and have been inspected and approved. The Planning and Development Director, at the Director's option, may accept cash, a letter of credit or a surety bond to guarantee the corrective work if occupancy is sought before the work is done if posted with the Planning and Development Department in the form as provided by subsection B or C herein.
  2. The cash, letter of credit or surety bond may be retained or called upon by the Planning and Development Department at any time as funds to be utilized for performing any work required to complete the required grading and improvements, if the Planning and Development Department finds that the required grading and improvements are not being satisfactorily completed.
- B. *Bond conditions.* Every bond (cash, letter of credit or surety) shall include the conditions that the permittee shall:
1. Comply with all of the provisions of this chapter, applicable laws, and ordinances.
  2. Comply with all of the terms and conditions of the permit for excavation or fill to the satisfaction of the Planning and Development Director.

3. Complete all of the work contemplated under the permit within the time limit specified in the permit or in Section [32A-10.C](#). The Planning and Development Director may, for sufficient cause, extend the time specified in the permit but no such extension shall release the surety upon the bond.

4. The bond (cash, letter of credit or surety) shall include penalty provisions on a form approved by the City Attorney for failure to complete the work on schedule.

C. *Failure to complete work.* The term of each bond (cash, letter of credit or surety) shall begin upon the date of filing and shall remain in effect until the completion of the work to the satisfaction of the Planning and Development Director. In the event of failure to complete the work and failure to comply with all of the conditions and terms of the permit, the Planning and Development Director may have the work required by the permit to be completed to the Director's satisfaction. The surety executing such bond or deposit shall continue to be firmly bound to have all work completed and provide for the payment of all necessary costs and expenses that may be incurred or expended by the governing agency in causing any and all such required work to be done. In the case of a cash deposit, said deposit or any unused portion thereof shall be refunded to the permittee. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 3; Ord. No. G-2406, § 1; Ord. No. G-2786, §§ 4, 5; Ord. No. G-3313, § 1; Ord. No. G-3994, § 1, 1997; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012)

## **Sec. 32A-14. Design standards for cuts.**

*Maximum slope.* Cuts shall not be steeper in slope than one vertical to one and one-half horizontal unless a retaining wall or other approved support is provided or unless the owner furnishes a geotechnical report proving to the satisfaction of the Planning and Development Director that the proposed deviation will be stable, will not endanger any property or result in the deposition of debris on any public way or interfere with any existing drainage course.

The Planning and Development Director may require the excavation to be made with a cut face flatter in slope than one vertical to one and one-half horizontal if the Director considers it necessary for stability and safety. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 3; Ord. No. G-3313, § 1; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012)

## **Sec. 32A-15. Design standards for fills.**

A. *Finishing.* All material placed as fill shall be bladed and graded to a uniform surface and shall not be left on the site as irregular dumping.

B. *Compaction.* All fills shall be compacted to not less than the minimum densities as listed below and as determined in accordance with the then current version of ASTM D698. Field density shall be determined by the then current version of ASTM D1556.

***Location***

***Minimum Density\****

Under structures	95%
Parking lots, driveways, roads	95%
Yards, open space	75%

\* Unless a modification is indicated based on a geotechnical report.

Fills which will support the foundations of structures shall be constructed under the supervision of an Arizona registered engineer.

C. *Exceptions to fill design standards.*

1. Fills in non-hillside areas that are made for yard purposes and which do not exceed 18 inches in depth need not be compacted.
2. Sanitary landfills and refuse disposal areas which are regulated by the Arizona Department of Environmental Quality and the Maricopa County Air Quality Department.

When foundations of structures are not to be supported by the fill, the Planning and Development Director may allow deviations from the above requirements if he finds that their strict enforcement is unduly restrictive for the intended purpose.

D. *Preparation of ground.* The area over which fills are to be made shall be cleared of all trash, trees, stumps, timber, debris, or other material not suitable as a foundation for a fill. Where slopes are one vertical to five horizontal or steeper, scarifying or benching into sound bedrock or other competent material shall be required. Five feet of the lowermost bench shall be exposed beyond the toe of the fill. The bench shall be sloped for sheet overflow or a paved drain shall be provided.

E. *Fill slope.* No fill shall be made which creates an exposed surface steeper in slope than one vertical to one and one-half horizontal.

The Planning and Development Director may require that the fill be constructed with an exposed surface flatter than one vertical to one and one-half horizontal if this is necessary for stability and safety. Slopes of fills which are not compacted in accordance with Section [32A-15.B](#) may not exceed one vertical to two horizontal.

F. *Fill material.* The material to be used for fill shall be approved by the supervising engineer prior to use when the fill is to support the foundations of structures. No organic material shall be permitted in fills. When the fill material includes large rocky or hard lumps, such as hardpan or cemented gravel which cannot be broken readily, such material shall be well distributed throughout the fill. Sufficient earth or other fine material shall be placed around the larger material as it is deposited so as to fill the interstices and produce a dense, compact fill. However, such material shall not be placed within two feet of the finished grade of the fill.

G. *Slopes to receive fill.* Fills toeing out on natural slopes which are steeper than one vertical to two horizontal will not be permitted.

H. Dredged and fill materials are allowed only as a temporary measure during emergency operations such as water line breaks, replacing sewer and water valves, or other repairs as necessary to the City's operation. No dredge or fill shall be stockpiled in the street, right-of-way, easement or stormwater conveyance for more than five working days, or less if rain is forecast, without proper best management practices in place to protect the storm drain system. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 3; Ord. No. G-3313, § 1; Ord. No. G-3994, § 1, 1997; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012; Ord. No. G-7116, § 1, 2023)

### **Sec. 32A-16. Design standards for setbacks.**

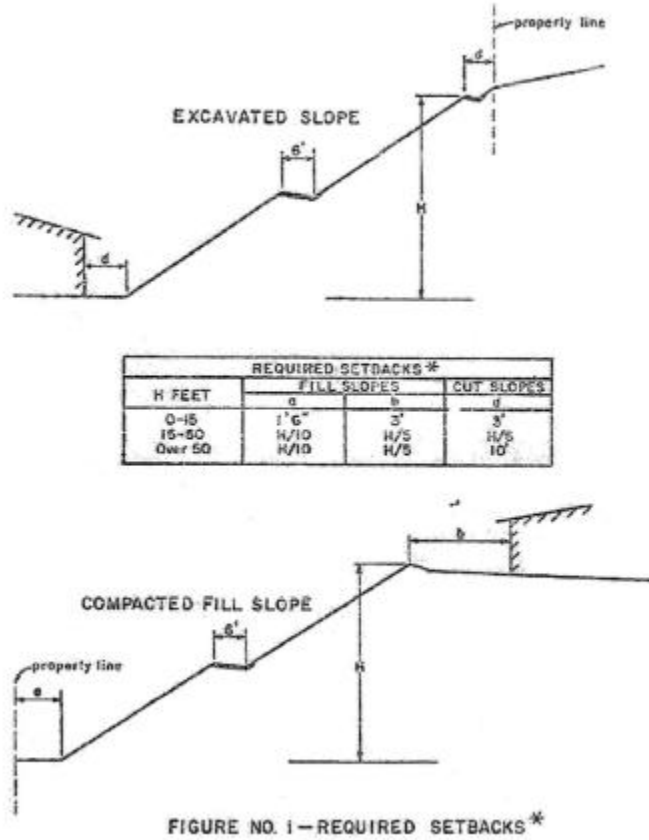
- A. Cuts and fills shall be set back from property lines and buildings shall be set back from cut or fill slopes in accordance with Figure No. 1. Retaining walls may be used to reduce the required setback when approved by the Planning and Development Director.
- B. Fill placed on or above the top of an existing or proposed cut or natural slope steeper than one vertical to three horizontal shall be set back from the edge of the slope a minimum distance of six feet.
- C. Building foundations shall be set back from the top of slope a minimum distance of six feet for all cut slopes steeper than two horizontal to one vertical. No buildings shall be constructed on cut or fill slopes steeper than three horizontal to one vertical.
- D. The setbacks given in this section are minimum and may be increased by the Planning and Development Director, if considered necessary for safety or stability or to prevent possible damage from water, soil, or debris, or when development standards contained in Section [703](#) of the Phoenix Zoning Ordinance require an increase in setbacks. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 3; Ord. No. G-3313, § 1; Ord. No. G-3887, § 1; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012)

### **Sec. 32A-17. Design standards for drainage.**

- A. All drainage facilities shall comply with the City of Phoenix Stormwater Policies and Standards Manual.
- B. *Existing drainage facilities.* No person shall alter any natural drainage course or existing drainage facility in such a way as to damage or endanger by flooding, erosion, or any other means, any public or private property or improvements.
- C. *Disposal.* All drainage facilities shall be designed to carry surface waters to the nearest practical street storm drain or natural watercourse approved by the Planning and Development Director and any other governmental agency having jurisdiction as a safe place to deposit such waters.
- D. *Erosion prevention.* Adequate provision shall be made to prevent surface waters from damaging the face of an excavation or fill. All slopes shall be protected from surface water runoff from above by berms, swales, walls, stabilized slope treatment, or other protection as approved by the Planning and Development Director.

E. *Terrace drains.* All swales or ditches on drainage terraces shall be graded to provide suitable drainage and designed to prevent erosion and provide durability.

**Figure 1. Required Setbacks\***



\* This setback is not the setback referred to in the Zoning Ordinance. Greater setback distances may be required by the Zoning Ordinance.

(Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-3313, § 1; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012)

**Sec. 32A-18. Grading, inspections and supervision.**

A. *Supervised grading required.* All fills used or intended to be used for the support of foundations of structures and, when required by the Planning and Development Director, all grading affecting stability of adjacent property, shall be performed under the supervision of an engineer registered in the State of Arizona and shall be designated "supervised grading." Grading not supervised in accordance with this section shall be designated "regular grading."

B. *Regular grading requirements.* The Planning and Development Director may inspect the work, and may require adequate inspection and compaction control by a soils testing agency.

C. *Supervised grading requirements.* For supervised grading, it shall be the responsibility of the supervising engineer to supervise and coordinate all site inspection and testing during grading operations. Geotechnical reports shall also be required as specified in Section [32A-9](#). All necessary reports, compaction data, and soils engineering and engineering geological recommendations shall be submitted to the Planning and Development Director by the supervising engineer.

Geotechnical reports certifying the compaction or acceptability of all fills shall be required except as exempted by Section [32A-15](#).C. These shall include, but not be limited to, inspection of areas cleared, compacted, and otherwise prepared to receive fill; the placement and compaction of fill material; and the inspection or review of the construction of retaining walls, subdrains, drainage devices, buttress fills, and similar measures.

D. *Notification of noncompliance.* If, in the course of fulfilling his responsibility under this chapter, the supervising engineer finds that the work is not being done in conformance with this chapter or the plans approved by the Planning and Development Director, he shall immediately notify the person in charge of the grading work and Planning and Development Department in writing of the nonconformity and of the corrective measures to be taken. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 3; Ord. No. G-3313, § 1; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012)

## **Sec. 32A-19. Safety precautions.**

A. If at any stage of the work the Planning and Development Director determines by inspection that further grading as authorized will endanger any property or result in the deposition of debris on any public way or interfere with any existing drainage course, the Planning and Development Director shall require, as a condition to allowing the work to be completed, that such reasonable safety precautions be taken as he considers advisable to avoid such likelihood of damage.

B. Notice to comply shall be submitted to the permittee and the owner in writing. After a notice to comply is written, a period of ten days shall be allowed for the contractor to begin to make the corrections unless an imminent hazard exists, in which case the corrective work shall begin immediately.

C. If the Planning and Development Director finds any existing conditions not as stated in the granting permit or approved plans, he may refuse to approve further work until approval is obtained for a revised grading plan which will conform to the existing conditions. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 3; Ord. No. G-3313, § 1; Ord. No. G-5590, § 1, 2011)



## **Sec. 32A-20. Responsibility of permittee.**

- A. *Compliance with plans and requirements.* All permits issued hereunder shall be presumed to include the provision that the applicant, his agent, contractors, or employees, shall carry out the proposed work in accordance with all the requirements of this chapter.
- B. *Protection of utilities.* During the grading operations, the permittee shall be responsible for the prevention of damage to any street or drainage facilities or to any public utilities or services. This responsibility applies within the limits of grading and along any routes of travel of equipment.
- C. *Protection of adjacent property.* The permittee is responsible for the prevention of damage to adjacent property and no person shall excavate on land sufficiently close to the property line to endanger any adjoining public street, sidewalk, alley, or other public or private property prior to supporting and protecting such property from settling, cracking, or other damage which might result. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1)

## **Sec. 32A-21. Modification of approved plan.**

No modification of the approved grading plans may be made without the approval of the Planning and Development Director. All necessary geotechnical reports shall be submitted with the plans. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 3; Ord. No. G-3313, § 1; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012)

## **Sec. 32A-22. Completion of work.**

- A. *Final reports.* Upon completion of the work, the Planning and Development Director may require the following reports:
1. Certification by the supervising engineer that all grading, lot drainage, and drainage facilities have been completed in conformance with the approved plans, the City of Phoenix Stormwater Policies and Standards Manual and this chapter.
  2. A geotechnical report including certifications of soil bearing capacity of compacted fills, summaries of field and laboratory tests and locations of tests.
  3. An engineering geology report based on the final construction. It shall include specific approval of the grading as affected by geological factors. Where necessary, a revised geologic map and cross sections, and any recommendations regarding building restrictions or foundation setbacks, shall be included.
- B. *Notification of completion.* The permittee or his agent shall notify the Planning and Development Director when the grading operation is ready for final inspection. Final approval shall not be given until all work, including installation of all drainage structures and their protective devices, have been completed and required reports have been submitted. (Ord. No. G-1177, § 1; Ord. No. G-1192, § 1; Ord. No. G-1203, § 3; Ord. No. G-3313, § 1; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012)

### **Sec. 32A-23. Adoption of City of Phoenix Stormwater Policies and Standards Manual.**

The Street Transportation Department Director in coordination with the Planning and Development Director shall prepare and maintain a City of Phoenix Stormwater Policies and Standards Manual with policies, standards, procedures, and practices related to stormwater management and compliance with this code. The City of Phoenix Stormwater Policies and Standards Manual is a comprehensive, state-of-the-practice drainage design document that addresses flood hydrology, stormwater drainage facilities, grading requirements and floodplain regulation and shall govern all drainage requirements for development, public and private, within the City of Phoenix. The City of Phoenix Stormwater Policies and Standards Manual shall be placed on file in the office of the City Clerk and shall be available to the public on the City of Phoenix website, [www.phoenix.gov](http://www.phoenix.gov). (Ord. No. G-2786, § 6; Ord. No. G-3313, § 1; Ord. No. G-3887, § 1; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012)

### **Sec. 32A-24. Design standards for on-site retention of stormwater.**

A. On-site retention of stormwater shall be required for all developments. This requirement may be waived for isolated developments under one-half acre where there will be no critical drainage problem created by the additional runoff from the proposed development. The NPDES program may require on-site retention for parcels less than one-half acre.

B. On-site stormwater retention areas shall be adequate to contain the volume of water required by the latest edition of the City of Phoenix Stormwater Policies and Standards Manual in effect at the time of the first submittal of plans to the Planning and Development Department.

All developments shall not increase the 100-year two-hour peak runoff, change the time of the peak, nor increase the total runoff from its pre-development values. (Ord. No. G-1641, § 2; Ord. No. G-2786, § 7; Ord. No. G-3313, § 1; Ord. No. G-3887, § 1; Ord. No. G-3994, § 1, 1997; Ord. No. G-5590, § 1, 2011; Ord. No. G-5707, 2012)

### **Sec. 32A-25. Reserved.**

(Ord. No. G-5707, 2012)

### **Sec. 32A-26. Hillside lots/mountain preserves.**

A. Lots in the hillside development area as regulated by Section [32-32](#) of the City Code shall have an individual grading and drainage plan per each lot. The grading and drainage plan shall be approved and permit issued before a house permit can be obtained.

B. All lots (or plats) adjacent to the mountain preserve shall show the boundary of the Phoenix Mountain Preserve as determined by the survey prepared for the Parks and Recreation Department; conflicts between the private deed description and the City's survey shall be resolved prior to obtaining approval of the grading and drainage plan and/or building safety permit. (Ord. No. G-3887, § 1; Ord. No. G-4419, § 5, 2002)

### **Sec. 32A-27. Violations and penalties.**

- A. The remedies herein are cumulative and the City may proceed under one or more remedies.
- B. Any owner or responsible party who causes, permits, facilitates, or aids or abets any violation of any provision of this chapter or who fails to perform any act or duty required by this chapter is subject to a civil sanction of not less than \$500.00 nor more than \$2,500.00. The \$500.00 minimum sanction may not be waived.
- C. Any owner or responsible party who causes, permits, facilitates, or aids or abets any violation of any provision of this chapter or who fails to perform any act or duty required by this chapter is guilty of a Class 1 misdemeanor.
- D. Each day any violation of any provision of this chapter or the failure to perform any act or duty required by this chapter exists shall constitute a separate violation or offense. (Ord. No. G-4036, § 1, 1997; Ord. No. G-5707, 2012)

**State law reference**—Penalty for ordinance violations, A.R.S. §§ [9-499.01](#), [9-240\(B\)\(28\)](#).

### **Sec. 32A-28. Jurisdiction of court.**

- A. Jurisdiction of all proceedings to enforce the provisions of this chapter shall be in the Municipal Court of the City of Phoenix.
- B. Civil actions to enforce this chapter may be adjudicated by a judge or a court hearing officer. (Ord. No. G-4036, § 2, 1997; Ord. No. G-5707, 2012)

### **Sec. 32A-29. Commencement of civil action.**

Any civil action to enforce the provisions of this chapter shall be commenced and summons shall be issued in accordance with the procedures set forth in Arizona Revised Statutes, City ordinance or as provided in the Local Rules of Practice and Procedure—City Court—City of Phoenix. (Ord. No. G-4036, § 3, 1997; Ord. No. G-5707, 2012)

**Sec. 32A-30. Admission or denial of allegation; hearing; findings of court; civil sanction.**

- A. A person served with a civil citation or complaint shall appear at the time and place stated in the citation or summons, or may appear prior to the time and admit or deny the allegations of the complaint. Allegations not denied at the time of appearance are deemed admitted.
- B. If the allegations are admitted, the court shall enter judgment for the City and impose a civil sanction.
- C. If the person denies the allegations, the court shall set the matter for hearing. Civil hearings are informal and held without a jury, and the City is required to prove the violation charged by a preponderance of the evidence. Technical rules of evidence do not apply, except for statutory provisions relating to privileged communications. If the person elects to be represented by counsel, the person shall so notify the court at least ten days prior to the hearing date. Hearings may be recorded. If the court finds in favor of the person, the court shall enter an order dismissing the citation or complaint. If the court finds in favor of the City, the court shall enter judgment for the City and impose a civil sanction.
- D. If the person served with a civil citation or complaint fails to appear on or before the time directed to appear or at the time set for hearing by the court, the allegations shall be deemed admitted and the court shall enter judgment for the City and impose a civil sanction. (Ord. No. G-4036, § 4, 1997)

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**The Phoenix City Code is current through Ordinance G-7247, passed April 17, 2024.**

Disclaimer: The City Clerk's Office has the official version of the Phoenix City Code. Users should contact the City Clerk's Office for ordinances passed subsequent to the ordinance cited above.

[City Website: www.phoenix.gov](http://www.phoenix.gov)

[Hosted by Code Publishing Company, A General Code Company.](#)

**CHAPTER 32B**  
**FLOODPLAIN MANAGEMENT**

# Chapter 32B

## FLOODPLAINS<sup>1</sup>

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- Sec. 32B-27. Nature of variances.

**Sec. 32B-28. Board of Review.****Sec. 32B-29. Conditions for variances.**

**1 Cross reference**—Development Advisory Board, § [2-164](#) et seq.; building regulations, ch. [9](#); subdivisions, ch. [32](#); grading and drainage, ch. [32A](#).

**State Law reference**—Floodplain management, A.R.S. § [48-3601](#) et seq.; municipal floodplain management programs, A.R.S. § [48-3610](#).

## **Article I. Authorization and Purpose**

**Sec. 32B-1. Authorization and findings.**

In Section [48-3610](#), Arizona Revised Statutes, the Arizona State Legislature authorized incorporated cities to adopt regulations in conformance with Section [48-3609](#), Arizona Revised Statutes, which are designed to promote the public health, safety and general welfare of its citizenry. Therefore, the Phoenix City Council finds as follows:

- A. The special flood hazard areas of the City of Phoenix are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
- B. These flood losses may be caused by the cumulative effect of obstructions in special flood hazard areas which increase flood heights and velocities and, when inadequately anchored, cause damage in other areas. Uses that are inadequately flood-proofed, elevated or otherwise protected from flood damage also contribute to the flood loss. (Ord. No. G-5707, 2012; Ord. No. G-6611, 2019; Ord. No. G-7116, § 2, 2023)

**Sec. 32B-2. Purpose.**

It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flooding in specific areas by provisions designed to:

- A. Protect human life and health;
- B. Minimize expenditure of public money for costly flood control projects;
- C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

- D. Minimize prolonged business interruptions;
- E. Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone and sewer lines; and streets and bridges located in special flood hazard areas;
- F. Help maintain a stable tax base by providing for the sound use and development of special flood hazard areas so as to minimize blight areas caused by flooding;
- G. Participate in and maintain eligibility for flood insurance and disaster relief. (Ord. No. G-5707, 2012; Ord. No. G-6611, 2019; Ord. No. G-7116, § 2, 2023)

### **Sec. 32B-3. Methods of reducing flood losses.**

- A. These regulations take precedence over any less restrictive conflicting local laws, ordinances and codes.
- B. In order to accomplish its purposes, this chapter includes methods and provisions to:
  - 1. Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;
  - 2. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
  - 3. Control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;
  - 4. Control filling, grading, dredging, and other development which may increase flood damage; and
  - 5. Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas. (Ord. No. G-5707, 2012)

### **Sec. 32B-4. Implementation.**

To implement the regulation of the floodplain areas in the City of Phoenix, the City Council is designated as the Floodplain Board, and the City Engineer, or a City Engineer appointed designee, is designated as the administrative agent for these regulations, or Floodplain Administrator. (Ord. No. G-2027, § 2; Ord. No. G-5707, 2012; Ord. No. G-6611, 2019; Ord. No. G-7116, § 2, 2023)

**Note**—Formerly, § 32B-1



## Article II. Definitions

### Sec. 32B-5. Definitions.

Unless specifically defined below, words or phrases used in this chapter must be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

*Accessory structure* means a vehicular parking or storage structure located on the same parcel of property as a principal structure.

*Appeal* means a request for a review of the Floodplain Administrator's interpretation of any provision of this chapter or a request for a variance.

*Area of shallow flooding* means a designated AO or AH Zone on a community's flood insurance rate map (FIRM). These zones have a one percent or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

*Base flood* means a flood that has a one percent chance of being equaled or exceeded in any given year (also called the "100-year flood").

*Base flood elevation (BFE)* means the computed water surface elevation resulting from a flood that has a one percent or greater chance of being equaled or exceeded in any given year.

*Basement* means any area of the building having its floor below grade on all sides.

*Building.* See *Structure*.

*CLOMR* means Conditional Letter of Map Revision issued by FEMA.

*Community* means any state, area or city thereof, or any Indian tribe or authorized tribal organization, or authorized native organization, which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.

*Development* means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, utilities, pipelines, mining, dredging, filling, grading, paving, or excavation or drilling operations or storage of equipment or materials.

*Elevation certificate* means an administrative tool of the National Flood Insurance Program (NFIP) that is used to provide elevation information necessary to ensure compliance with community floodplain management ordinances, to determine the proper insurance premium rate, and to support a request for a Letter of Map Amendment (LOMA) or Letter of Map Revision based on fill (LOMR-F).

*Encroachment* means the advance or infringement of uses, plant growth, fill, excavation, buildings, permanent structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

*Erosion* means the gradual wearing away process of landmasses.

*FEMA* means the Federal Emergency Management Agency.

*Flood or flooding* means a general and temporary condition of partial or complete inundation of normally dry land areas from: (1) the overflow of floodwaters; and/or (2) the unusual and rapid accumulation or runoff of surface waters from any source.

*Flood insurance rate map (FIRM)* means the official map on which FEMA has delineated both the special flood hazard areas and the risk premium zones applicable to the community.

*Flood insurance study (FIS)* means the official report provided by FEMA that includes flood profiles, FIRM, and the water surface elevations of the base flood.

*Floodplain or flood prone area* means any land area susceptible to being inundated by water from any source. See *Flood or flooding*.

*Floodplain Administrator* means the City of Phoenix City Engineer, or a City Engineer appointed designee, who is charged with administering and enforcing these floodplain management regulations.

*Floodplain Board or Board* means the City of Phoenix City Council or a board appointed by the Phoenix City Council.

*Floodplain management* means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including but not limited to emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.

*Floodplain management regulations* means this chapter and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as grading and erosion control) and other application of enforcement power which control development in flood prone areas. This term describes Federal, State or local regulations in any combination thereof, which provide standards for preventing and reducing flood loss and damage.

*Floodproofing* means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate the risk of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents.

*Flood-related erosion* means the collapse or subsidence of land along the shore of a lake or other body of water as a result of undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding.

*Floodway* means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. This is also referred to as "regulatory floodway."

*Functionally dependent use* means a use which cannot perform its intended purpose unless it is located or carried out proximate to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, and does not include long-term storage or related manufacturing facilities.

*Governing body* means the local governing unit, i.e., county or municipality, which is empowered to adopt and implement regulations to provide for the public health, safety and general welfare of its citizenry.

*Highest adjacent grade* means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

*Historic structure* means any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
  - a. By an approved state program as determined by the Secretary of the Interior; or
  - b. Directly by the Secretary of the Interior in states without approved programs.

*LOMR* means Letter of Map Revision issued by FEMA. It is an official amendment to the currently effective FEMA map.

*Lowest floor* means the lowest floor of the lowest enclosed area, including the basement. An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of this chapter.

*Manufactured home* means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For floodplain management purposes the term *manufactured home* also includes park trailers, travel trailers, and

other similar recreational vehicles placed on a site for greater than 180 consecutive days. For insurance purposes the term *manufactured home* does not include park trailers, travel trailers, and other similar recreational vehicles.

*Manufactured home park or subdivision* means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

*Market value* means replacement cost of a structure less depreciation since construction.

*Mean sea level* means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD of 1929), North American Vertical Datum (NAVD) of 1988, or other datum, to which base flood elevations shown on a community's flood insurance rate map are referenced.

*New construction* means, for purposes of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial flood insurance rate map or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, *new construction* means structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

*Obstruction* includes, but is not limited to, any dam, wall, wharf, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure, vegetation or other material in, along, across or projecting into any watercourse which may alter, impede, retard or change the direction and/or velocity of the flow of water, or due to its location, its propensity to snare or collect debris carried by the flow of water, or its likelihood of being carried downstream.

*One-hundred-year flood or 100-year flood* means a flood having a one percent chance of being equaled or exceeded in any given year. See *Base flood*.

*Person* means any individual or the individual's agent, a firm, partnership, association, corporation, or any agent of the aforementioned groups, or this State or its agencies or cities.

*Principal structure* means a structure used or intended to be used for the principal use as permitted on such lot by the regulations of the zoning district in which it is located, exclusive of any detached accessory structures.

*Recreational vehicle* means a vehicle that is:

1. Built on a single chassis; and
2. Four hundred square feet or less when measured at the largest horizontal projection; and
3. Designed to be self-propelled or permanently towable by a light duty truck; and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

*Regulatory flood elevation (RFE)* means an elevation one foot above the base flood elevation for a watercourse.

*Regulatory floodway* means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

*Riverine* means relating to, formed by, or resembling a river (including tributaries), stream, or brook.

*Sheet Flow Area*. See *Area of shallow flooding*.

*Special flood hazard area (SFHA)* means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. These areas are designated as Zone A, AO, AE, A99, or AH on the FIRM and other areas as determined by the criteria adopted by the Director of the Arizona Department of Water Resources.

*Start of construction* includes substantial improvement and other proposed new development, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not the alteration affects the external dimensions of the building.

*Structure* means a walled and roofed building that is principally above ground; this includes a gas or liquid storage tank or a manufactured home.

*Substantially damaged building* means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

*Substantial improvement* means any reconstruction, rehabilitation, addition, or other improvement of a structure, the total cumulative cost of which tracked over a rolling five-year period equals or exceeds 50 percent of the market value of the structure before the *start of construction* of the improvement. This term includes structures which have incurred *substantial damage*, regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations or State or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to ensure safe living conditions; or
2. Any alteration of a *historic structure*; provided, that the alteration will not preclude the structure's continued designation as a *historic structure*.

*Variance* means a grant of relief from the requirements of this chapter which permits construction in a manner that would otherwise be prohibited by this chapter.

*Violation* means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required by this chapter is presumed to be in violation until such time as that documentation is provided.

*Water surface elevation* means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, North American Vertical Datum (NAVD) of 1988, or other datum, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

*Watercourse* means any lake, river, creek, stream, wash, arroyo, channel, or other topographic feature on or over which waters flow at least periodically. The term may include specifically designated areas in which flood damage may occur. (Ord. No. G-2027, § 2; Ord. No. G-3092, § 2; Ord. No. G-5707, 2012; Ord. No. G-6611, 2019; Ord. No. G-7116, § 2, 2023)

**Cross reference**—Definitions and rules of construction generally, § [1-2](#).

**Note**—Formerly, § 32B-2

## **Article III. General Provisions**

### **Sec. 32B-6. Lands to which this chapter applies.**

This chapter applies to all special flood hazard areas within the corporate limits of the City of Phoenix. (Ord. No. G-5707, 2012; Ord. No. G-6611, 2019; Ord. No. G-7116, § 2, 2023)

### **Sec. 32B-7. Basis for establishing special flood hazard areas.**

The special flood hazard areas identified by FEMA in a scientific and engineering report entitled "The Flood Insurance Study (FIS) for Maricopa County, Arizona and Incorporated Areas" dated September 30, 2005, with accompanying FIRMs dated September 30, 2005, and all subsequent amendments and/or revisions, are hereby adopted by reference and declared to be a part of this chapter. This FIS and attendant mapping is the minimum area of applicability of this chapter and may be supplemented by studies for other areas which allow implementation of this chapter and which are recommended to the Floodplain Administrator. The Floodplain Administrator, within its area of jurisdiction, will delineate (or may, by rule, require developers of land to delineate) for areas where development is ongoing or imminent, and thereafter as development becomes imminent, floodplains consistent with the criteria developed by FEMA and the Director of the Arizona Department of Water

Resources. The FIS and FIRM panels are on file at City of Phoenix City Hall, 200 W. Washington Street, Phoenix, AZ 85003. (Ord. No. G-5707, 2012; Ord. No. G-6611, 2019; Ord. No. G-7116, § 2, 2023)

### **Sec. 32B-8. Compliance.**

All development of land, construction of residential, commercial or industrial structures, or future development within delineated floodplain areas is subject to the terms of this chapter and other applicable regulations. (Ord. No. G-5707, 2012)

### **Sec. 32B-9. Abrogation and greater restrictions.**

This chapter is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this chapter and another ordinance, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail. (Ord. No. G-5707, 2012)

### **Sec. 32B-9A. Interpretation.**

In the interpretation of this chapter, all provisions will be:

- A. Considered as minimum requirements;
- B. Construed to achieve the purposes of this chapter; and
- C. Deemed neither to limit nor repeal any other powers granted under State statutes. (Ord. No. G-6611, 2019)

### **Sec. 32B-10. Disclaimer of liability.**

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This chapter does not imply that land outside the special flood hazard areas or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the City of Phoenix, any officer or employee thereof, the State of Arizona or FEMA, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder. (Ord. No. G-5707, 2012; Ord. No. G-7116, § 2, 2023)

## Sec. 32B-11. Statutory exceptions.

A. In accordance with Section [48-3609\(I\)](#), Arizona Revised Statutes, unless expressly provided, this and any regulation adopted pursuant to this article does not affect:

1. Existing legal uses of property or the right to continuation of such legal use. However, if a nonconforming use of land or a building or structure is discontinued for 12 months, or destroyed to the extent of 50 percent of its value as determined by a competent appraiser, any further use must comply with this article and regulations of the City of Phoenix;
2. Reasonable repair or alteration of property for the purposes for which the property was legally used on August 3, 1984, or any regulation affecting such property takes effect, except that any alteration, addition or repair to a nonconforming building or structure which would result in increasing its flood damage potential by 50 percent or more must be either floodproofed or elevated to or above the regulatory flood elevation;
3. Reasonable repair of structures constructed with the written authorization required by Section [48-3613](#), Arizona Revised Statutes; and
4. Facilities constructed or installed pursuant to a certificate of environmental compatibility issued pursuant to Title 40, Chapter 2, Article 6.2, Arizona Revised Statutes.

B. Before the following types of construction authorized by Section [48-3613\(B\)](#), Arizona Revised Statutes begins, the property owner or their agent must submit plans for the construction to the Floodplain Administrator for review and comment pursuant to Section [48-3613\(C\)](#), Arizona Revised Statutes:

1. The construction of bridges, culverts, dikes and other structures necessary to the construction of public highways, roads and streets intersecting or crossing a watercourse;
2. The construction of storage dams for watering livestock or wildlife, structures on banks of a watercourse to prevent erosion of or damage to adjoining land if the structure will not divert, retard or obstruct the natural channel of the watercourse or dams for the conservation of floodwaters as permitted by Title [45](#), Chapter 6, Arizona Revised Statutes;
3. Construction of tailing dams and waste disposal areas for use in connection with mining and metallurgical operations. This subsection does not exempt those sand and gravel operations that will divert, retard or obstruct the flow of waters in any watercourse from complying with and acquiring authorization from the Floodplain Board pursuant to regulations adopted by the Floodplain Board under this article;
4. Other construction upon determination by the Floodplain Board that written authorization is unnecessary;
5. Any flood control district, county, city, town or other body from exercising powers granted to it under Title [48](#), Chapter 21, Article 1, Arizona Revised Statutes;
6. The construction of streams, waterways, lakes and other auxiliary facilities in conjunction with development of public parks and recreation facilities by a public agency or city; and



7. The construction and erection of poles, towers, foundations, support structures, guy wires and other facilities related to power transmission as constructed by any utility whether a public service corporation or a city.

C. In accordance with Section [48-3613\(D\)](#), Arizona Revised Statutes, in addition to other penalties or remedies otherwise provided by law, this state, a city or a person who may be damaged or has been damaged as a result of the unauthorized diversion, retardation or obstruction of a watercourse has the right to commence, maintain and prosecute any appropriate action or pursue any remedy to enjoin, abate or otherwise prevent any person from violating or continuing to violate this section or regulations adopted pursuant to Title [48](#), Chapter 21, Article 1, Arizona Revised Statutes. If a person is found to be in violation of this section, the court shall require the violator to either comply with this section, if authorized by the Floodplain Board, or remove the obstruction and restore the watercourse to its original state. The court may also award such monetary damages as are appropriate to the injured parties resulting from violation including reasonable costs and attorney fees. (Ord. No. G-5707, 2012; Ord. No. G-6611, 2019; Ord. No. G-7116, § 2, 2023)

## **Sec. 32B-12. Violations.**

A. It is unlawful for a person to engage in any development or to divert, retard or obstruct the flow of waters in a watercourse if it creates a hazard to life or property without securing the written authorization required by Section [48-3613](#), Arizona Revised Statutes. Where the watercourse is a delineated floodplain, it is unlawful to engage in any development affecting the flow of waters without securing written authorization required by Section [48-3613](#), Arizona Revised Statutes.

B. Any person found guilty of violating any provision of this chapter shall be guilty of a Class 1 misdemeanor. Each day that a violation continues shall be a separate offense.

C. A person who without written authorization damages or interferes with a facility that is owned, operated, or otherwise under the jurisdiction of the community is liable for both of the following:

1. Any actual damages to persons or property that is caused by the damage or interference.
2. Payment of costs to the community for remediating the damage or interference. (Ord. No. G-5707, 2012; Ord. No. G-6611, 2019; Ord. No. G-7116, § 2, 2023)

## **Sec. 32B-13. Declaration of public nuisance.**

All development located or maintained within any special flood hazard area after August 8, 1973, in violation of this chapter, is a public nuisance and may be abated, prevented or restrained by action of the City. (Ord. No. G-5707, 2012; Ord. No. G-7116, § 2, 2023)

**Sec. 32B-14. Abatement of violations.**

Within 30 days of discovery of a violation of this chapter, the Floodplain Administrator shall submit a report to the Floodplain Board which shall include all information available to the Floodplain Administrator which is pertinent to said violation. Within 30 days of receipt of this report, the Floodplain Board shall either:

- A. Take any necessary action to effect the abatement of such violation; or
- B. Issue a variance to this chapter in accordance with the provisions of Article VI herein; or
- C. Order the owner of the property upon which the violation exists to provide whatever additional information may be required for their determination. Such information must be provided to the Floodplain Administrator within 30 days of such order and the Floodplain Administrator shall submit an amended report to the Floodplain Board within 20 days. At the next regularly scheduled public meeting, the Floodplain Board shall either order the abatement of said violation or they shall grant a variance in accordance with the provisions of Article VI herein; or
- D. Submit to the Federal Emergency Management Agency a declaration for denial of insurance, stating that the property is in violation of a cited State or local law, regulation or ordinance, pursuant to Section 1316 of the National Flood Insurance Act of 1968 as amended. (Ord. No. G-5707, 2012)

**Sec. 32B-15. Reserved.**

(Ord. No. G-5707, 2012; Ord. No. G-7116, § 2, 2023)

**Sec. 32B-16. Severability.**

This chapter and the various parts thereof are hereby declared to be severable. Should any section of this chapter be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of this chapter as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid. (Ord. No. G-5707, 2012)

## Article IV. Administration

### Sec. 32B-17. Designation of the Floodplain Administrator.

The City Engineer, or City Engineer appointed designee, is hereby appointed to administer, implement and enforce this chapter by granting or denying development permits in accordance with its provisions. (Ord. No. G-5707, 2012; Ord. No. G-6611, 2019; Ord. No. G-7116, § 2, 2023)

### Sec. 32B-18. Duties and responsibilities of the Floodplain Administrator.

- A. *Permit review.* Review all development permits to determine that:
1. The permit requirements of this chapter have been satisfied;
  2. All other required State and Federal permits have been obtained;
  3. The site is reasonably safe from flooding;
  4. In areas where a floodway has not been designated, that proposed development does not adversely affect the carrying capacity of areas where base flood elevations have been determined. For purposes of this chapter, *adversely affect* means that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point.
- B. *Substantial improvement and substantial damage procedures.*
1. Using FEMA Publication P-758, "Substantial Improvement/Substantial Damage Desk Reference (2010)," develop detailed procedures for identifying and administering requirements for substantial improvement and substantial damage, to include defining "market value."
  2. Ensure procedures are coordinated with other departments and divisions and implemented by community staff.
- C. *Use of other base flood data.* When base flood elevation data has not been provided in accordance with Section [32B-7](#), the Floodplain Administrator will obtain, review and reasonably utilize any base flood elevation data available from a Federal, State or other source, in order to administer Article [V](#) of this chapter. Any such information must be consistent with the requirements of FEMA and the Director of the Arizona Department of Water Resources and may be submitted to the Floodplain Board for adoption.
- D. Obtain and maintain for public inspection:

1. Certification required in Sections [32B-20\(C\)\(1\)](#) and [32B-24](#) (lowest flow elevations, bottom of the structural frame and utilities);
  2. Certification required in Section [32B-20\(C\)\(2\)](#) (lowest floor elevations or floodproofing of nonresidential structures and utilities);
  3. Certification required in Section [32B-20\(C\)\(3\)](#) (flood vents);
  4. Certification required in Section [32B-23\(A\)\(2\)](#) (subdivisions and other proposed development standards);
  5. Certification required in Section [32B-26\(A\)](#) (floodway encroachments);
  6. Records of all variance actions, including justification for their issuance; and
  7. Obtain and maintain improvement and damage calculations, required for subsection [B](#) of this section, over a rolling five-year period.
- E. *Notification of other entities.*
1. Whenever a watercourse is to be altered or relocated:
    - a. Notify adjacent communities and the Arizona Department of Water Resources prior to such alteration or relocation of a watercourse, and submit evidence of such notification to FEMA through appropriate notification means; and
    - b. Ensure that the flood carrying capacity of the altered or relocated portion of said watercourse be maintained.
  2. *Base flood elevation and rate of flow due to physical alterations.*
    - a. Base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, the Floodplain Administrator will notify FEMA of the changes by submitting technical or scientific data in accordance with [44](#) CFR Section [65.3](#). Such a submission is necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and floodplain management requirements will be based upon current data.
    - b. Within 120 days after completion of construction of any flood control protective works which changes the rate of flow during the flood or the configuration of the floodplain upstream or downstream from or adjacent to the project, the person or agency responsible for installation of the project must provide to the governing bodies of all jurisdictions affected by the project a new delineation of all floodplains affected by the project. The new delineation must be done according to the criteria adopted by the Director of the Arizona Department of Water Resources.
  3. *Corporate boundary changes.* Notify FEMA of acquisition by means of annexation, incorporation or otherwise, of additional areas of jurisdiction.

F. *Map determinations.* Make interpretations, where needed, as to the exact location of the boundaries of the special flood hazard areas (e.g., where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary will be given a reasonable opportunity to appeal the interpretation as provided in Article [VI](#) of this chapter.

G. *Remedial actions.* Take actions on violations of this chapter as required in Section [32B-14](#).

H. *Policies and procedures.* Develop and adopt policies and procedures necessary to implement this chapter. (Ord. No. G-5707, 2012; Ord. No. G-6611, 2019; Ord. No. G-7116, § 2, 2023; Ord. No. G-7218, § 1, 2024)

## **Sec. 32B-19. Establishment of development permit.**

A development permit must be obtained before construction or development begins, including placement of manufactured homes, within any special flood hazard area established in Section [32B-7](#). Application for a development permit must be made on forms furnished by the Floodplain Administrator and may include, but not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions and elevation of the area in question, existing or proposed structures, fill, storage of materials, drainage facilities and the location of the foregoing. Specifically, the following information is required:

- A. Proposed elevation in relation to mean sea level of the lowest floor (including basement) of all structures. In Zone AO, elevation of existing highest adjacent natural grade and proposed elevation of lowest floor of all structures;
- B. Proposed elevation in relation to mean sea level to which any nonresidential structure will be floodproofed;
- C. Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in Section [32B-20\(C\)\(2\)](#);
- D. Base flood elevation data for subdivision proposals or other development greater than 50 lots or five acres, whichever is the lesser; and
- E. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development. (Ord. No. G-5707, 2012; Ord. No. G-6611, 2019; Ord. No. G-7116, § 2, 2023)

## **Article V.**

### **Provisions for Flood Hazard Reduction**

## **Sec. 32B-20. Standards of construction.**

In all special flood hazard areas the following standards are required:

A. *Anchoring.*

1. All new construction and substantial improvements must be anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy; and
2. All manufactured homes must meet the anchoring standards of Section [32B-24\(A\)\(2\)](#).

B. *Construction materials and methods.*

1. All new construction and substantial improvements must be constructed with materials and utility equipment resistant to flood damage;
2. All new construction and substantial improvements must be constructed using methods and practices that minimize flood damage;
3. All new construction and substantial improvement and other proposed new development with mechanical and utility equipment utilized by the structure must be constructed to or above the regulatory flood elevation;
4. Within Zone AH or AO, adequate drainage paths must be constructed around structures on slopes to guide floodwaters around and away from proposed structures.

C. *Elevation and floodproofing.*

1. *Residential construction.* Residential construction, new or substantial improvement, must have the lowest floor, including basement, elevated to or above the regulatory flood elevation:
  - a. In Zone AO, the base flood elevation is determined from the FIRM panel. If unspecified, the required elevation is a minimum two feet above the highest adjacent grade.
  - b. In Zone A, where a BFE has not been determined, the base flood elevation is determined locally as set out in Section [32B-18\(C\)](#).
  - c. In Zones AE and AH, the base flood elevation is determined from the FIS and/or FIRM.
  - d. A garage attached to a residential structure, constructed with the garage floor slab below the regulatory flood elevation, must be designed to allow for the automatic entry and exit of floodwaters and must be used solely for parking, access and/or storage. See subsection [\(C\)\(3\)](#) of this section.

Upon completion of the structure, the elevation of the lowest floor including basement must be certified by a registered professional engineer or surveyor, and verified by the community's building inspector to be properly elevated. Such certification and verification must be provided to the Floodplain Administrator.

2. *Nonresidential construction.* Nonresidential construction, new or substantial improvement, must either be elevated to conform with subsection [\(C\)\(1\)](#) of this section or together with attendant utility and sanitary facilities:

- a. Be floodproofed below the elevation recommended under subsection [\(C\)\(1\)](#) of this section so that the structure is watertight with walls substantially impermeable to the passage of water; and
  - b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
  - c. Upon completion of the structure, certification by a registered professional engineer or surveyor that the elevation requirements of the lowest floor, including basement, of this section have been satisfied shall be provided to the Floodplain Administrator; or certification by a registered professional engineer or architect that the floodproofing standards of this section are satisfied shall be provided to the Floodplain Administrator for verification.
3. *Flood openings.* All new construction and substantial improvement with fully enclosed areas below the lowest floor (excluding basements) that are usable solely for parking of vehicles, building access or storage, and which are subject to flooding, must be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Designs for meeting this requirement must meet or exceed the following criteria:
- a. For nonengineered openings:
    - (1) Have a minimum of two openings, on different sides of each enclosed area, having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding.
    - (2) The bottom of all openings must be no higher than one foot above grade.
    - (3) Openings may be equipped with screens, louvers, valves, or other coverings or devices; provided, that they permit the automatic entry and exit of floodwater; or
  - b. For engineered openings (or covers and devices):
    - (1) Are specifically designed and certified by a registered engineer or architect as meeting the required performance and design requirements.
    - (2) Have an evaluation report issued by the International Code Council Evaluation Service (ICC-ES), Inc., a subsidiary of the International Code Council, Inc.
4. *Manufactured homes.* Manufactured homes must meet the standards in Section [32B-24](#).
5. *Accessory structures.*
- a. An "accessory structure" used solely for parking or storage, as defined in Article [II](#) of this chapter, may be constructed such that its floor is below the regulatory flood elevation, provided the structure is designed and constructed in accordance with the following requirements:
    - (1) Use of the accessory structure must be limited to parking or storage;

- (2) The portions of the accessory structure located below the regulatory flood elevation must be built using flood-resistant materials;
- (3) The accessory structure must be adequately anchored to prevent flotation, collapse and lateral movement;
- (4) Any mechanical and utility equipment in the accessory structure must be elevated or floodproofed to or above the regulatory flood elevation;
- (5) The accessory structure must comply with floodway encroachment provisions in Section [32B-26](#); and
- (6) The accessory structure must be designed to allow for the automatic entry of flood waters in accordance with subsection [\(C\)\(3\)](#) of this section.

Accessory structures not meeting the above standards must be constructed in accordance with all applicable standards in this section.

Upon completion of an accessory structure, certification by a registered professional engineer, surveyor or local official that the requirements of this section have been satisfied must be provided to the Floodplain Administrator for verification.

6. *Machinery and service equipment.* All new construction, substantial improvement and other proposed new development must be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding. (Ord. No. G-5707, 2012; Ord. No. G-6611, 2019; Ord. No. G-7116, § 2, 2023; Ord. No. G-7218, § 2, 2024)

### **Sec. 32B-21. Standards for storage of materials and equipment.**

- A. The storage or processing of materials that could be injurious to human, animal or plant life if released due to damage from flooding is prohibited in special flood hazard areas.
- B. Storage of other material or equipment may be allowed if not subject to damage by floods and if firmly anchored to prevent flotation, or if readily removable from the area within the time available after flood warning. (Ord. No. G-5707, 2012; Ord. No. G-7116, § 2, 2023)

### **Sec. 32B-22. Standards for water supply and waste disposal systems.**

- A. All new or replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from systems into flood waters.



- B. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- C. Waste disposal systems shall not be installed wholly or partially in a regulatory floodway. (Ord. No. G-5707, 2012; Ord. No. G-7116, § 2, 2023)

### **Sec. 32B-23. Additional development standards, including subdivisions.**

- A. All new subdivision proposals and other proposed development (including proposals for manufactured home parks and subdivisions), greater than 50 lots or five acres, whichever is the lesser, shall:
  - 1. Identify the area of the special flood hazard area and the base flood elevation.
  - 2. Identify on the final plans the elevation(s) of the proposed structure(s) and pads. If the site is filled above the base flood elevation, the final lowest floor and grade elevations shall be certified by a registered professional engineer or surveyor and provided to the Floodplain Administrator.
- B. All subdivision proposals and other proposed development shall be consistent with the need to minimize flood damage.
- C. All subdivision proposals and other proposed development shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
- D. All subdivision proposals and other proposed development shall provide adequate drainage to reduce exposure to flood hazards. (Ord. No. G-5707, 2012; Ord. No. G-7116, § 2, 2023)

### **Sec. 32B-24. Standards for manufactured homes.**

- A. All manufactured homes that are placed on site or substantially improved must:
  - 1. Be elevated so that the bottom of the structural frame or the lowest point of any attached appliances, whichever is lower, is at or above the regulatory flood elevation; and
  - 2. Be securely anchored to an adequately anchored foundation system to resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.
- B. Upon completion of installation of the manufactured home, certification by a registered professional engineer or surveyor that the elevation requirements of this section have been satisfied must be provided to the Floodplain Administrator for verification. (Ord. No. G-5707, 2012; Ord. No. G-6611, 2019; Ord. No. G-7116, § 2, 2023)

### **Sec. 32B-25. Standards for recreational vehicles.**

All recreational vehicles placed on a site in a special flood hazard area shall:

- A. Be on site for fewer than 180 consecutive days; or
- B. Be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
- C. Meet the permit requirements of Article [IV](#) of this chapter and the elevation and anchoring requirements for manufactured homes in Section [32B-24](#). (Ord. No. G-5707, 2012; Ord. No. G-7116, § 2, 2023)

### **Sec. 32B-26. Floodways.**

Located within special flood hazard areas established in Section [32B-7](#) are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and erosion potential, the following provisions apply:

- A. Prohibit encroachments, including fill, new construction, substantial improvements and other development, unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- B. If this section is satisfied, all new construction and substantial improvements shall comply with all other applicable flood hazard reduction provisions of Article V. (Ord. No. G-5707, 2012; Ord. No. G-7116, § 2, 2023)

## **Article VI. Variance Procedure**

### **Sec. 32B-27. Nature of variances.**

A. The variance criteria set forth in this article are based on the general principle of zoning law that variances pertain to a piece of property and are not personal in nature. A variance may be granted for a parcel of property with physical characteristics so unusual that complying with the requirements of this chapter would create hardship to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants or the property owners.

Hardship means a situation that would result from a failure to grant the requested variance under this article. The variance must be exceptional, unusual, and peculiar to the property involved. Economic or financial reasons,

inconvenience, aesthetic considerations, physical handicaps, personal preferences, or the disapproval of one's neighbors are not hardship. All of these problems can be resolved through other means without granting a variance, even if the alternative is more expensive, or requires the property owner to build elsewhere or put the parcel to a different use than originally intended.

B. It is the duty of the City of Phoenix to help protect its citizens from flooding. This need is so compelling and the implications of the cost of insuring a structure built below the regulatory flood elevation are so serious that variances from the flood elevation or from other requirements in the flood ordinance are quite rare. The long-term goal of preventing and reducing flood loss and damage can only be met if variances are strictly limited. Therefore, the variance guidelines provided in this chapter are more detailed and contain multiple provisions that must be met before a variance can be properly granted. The criteria are designed to screen out those situations in which alternatives other than a variance are more appropriate. (Ord. No. G-5707, 2012; Ord. No. G-7116, § 2, 2023)

### **Sec. 32B-28. Board of Review.**

A. The Floodplain Board of the City of Phoenix shall hear and decide appeals and requests for variances from the requirements of this chapter.

B. The Floodplain Board shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the Floodplain Administrator in the enforcement or administration of this chapter.

C. In considering such applications, the Floodplain Board shall consider all technical evaluations, all relevant factors, standards specified in other sections of this chapter, and:

1. The danger that materials may be swept onto other lands to the injury of others;
2. The danger to life and property due to flooding or erosion damage;
3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
4. The importance of the services provided by the proposed facility to the community;
5. The necessity to the facility of a waterfront location, where applicable;
6. The availability of alternative locations for the proposed use, which are not subject to flooding or erosion damage;
7. The compatibility of the proposed use with existing and anticipated development;
8. The relationship of the proposed use to the Comprehensive Plan and Floodplain Management Program for that area;
9. The safety of access to the property in time of flood for ordinary and emergency vehicles;

10. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site; and
  11. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, water system and streets and bridges.
- D. Upon consideration of the factors of this section and the purposes of this chapter, the Floodplain Board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.
- E. Any applicant to whom a variance is granted will be given written notice over the signature of a community official that:
1. The issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25.00 for \$100.00 of insurance coverage; and
  2. Such construction below the regulatory flood level increases risks to life and property.
- F. The Floodplain Administrator will maintain a record of all variance actions, including justification for their issuance. (Ord. No. G-5707, 2012; Ord. No. G-6611, 2019; Ord. No. G-7116, § 2, 2023)

### **Sec. 32B-29. Conditions for variances.**

- A. Variances shall only be issued:
1. Upon determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances;
  2. For the repair, rehabilitation, or restoration of structures listed in the National Register of Historic Places or the Arizona Register of Historic Places, upon a determination that the proposed repair or rehabilitation will not preclude the structures' continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure;
  3. Upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief;
  4. Upon a showing of good and sufficient cause;
  5. Upon a determination that failure to grant the variance would result in hardship to the applicant;
  6. Upon a showing that the use cannot perform its intended purpose unless it is located or carried out in close proximity to water. This includes only facilities defined in this chapter under "functionally dependent use."
- B. Variances shall not be issued within any floodway if any increase in the base flood elevation would result.

C. Variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the regulatory flood elevation, provided the procedures of this chapter have been fully considered. As the lot size increases beyond one-half acre, the technical justification required for issuing the variance increases. (Ord. No. G-5707, 2012; Ord. No. G-6611, 2019; Ord. No. G-7116, § 2, 2023)

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**The Phoenix City Code is current through Ordinance G-7247, passed April 17, 2024.**

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CHAPTER 32C  
STORMWATER QUALITY PROTECTION

## Chapter 32C

# STORMWATER QUALITY PROTECTION<sup>1</sup>

*Sec. 32C-1—32C-99. Reserved.*

**Sec. 32C-100. General powers and purpose.**

**Sec. 32C-101. Definitions.**

**Sec. 32C-102. Declaration of nuisance.**

**Sec. 32C-103. Prohibited and permitted practices.**

**Sec. 32C-104. Stormwater management plan.**

**Sec. 32C-105. City authorized discharges.**

**Sec. 32C-106. Inspections.**

**Sec. 32C-107. Violations and penalties.**

**Sec. 32C-108. Requirement to monitor, analyze and remediate.**

**Sec. 32C-109. Stormwater treatment devices.**

**Sec. 32C-110. Green stormwater infrastructure.**

**Sec. 32C-111. Fees.**

**1 Cross references**—Sewers, ch. [28](#); grading and drainage, ch. [32A](#); environmental protection, ch. [40](#).

**Sec. 32C-1—32C-99. Reserved.**

### **Sec. 32C-100. General powers and purpose.**

A. The City Manager will regulate the use, grading, paving, maintenance, and operation of public rights-of-way and public storm drain systems so as to reduce the discharge of pollutants, to the maximum extent practicable, that may cause or contribute to either a violation of any applicable surface water quality standard or any condition of a NPDES/AZPDES permit issued to the City, or any other act that causes or contributes to obstruction of or damage to a public storm drain system. The City Manager may regulate the use of the public storm drain system through administrative rules, permits, and other written forms of approval for activities that could release pollutants or stormwater to a public storm drain system.

B. Compliance with this chapter does not relieve, modify, or otherwise affect a person's obligation to comply with any other applicable federal, state, or local legal requirement.

C. The City Manager will provide implementation guidance to assist the public in complying with this chapter. This guidance may consist of fact sheets, policy and procedure manuals, and other pertinent information relating to the development and implementation of best management practices for stormwater quality protection. (Ord. No. G-3589, § 1; Ord. No. G-5707, 2012; Ord. No. G-7116, § 3, 2023)

## Sec. 32C-101. Definitions.

As used in this chapter, the following terms shall have the designated meanings.

*Best management practice (BMP)* means schedules of activities, prohibition of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of protected surface waters. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

*City Manager* means the City Manager for the City of Phoenix or the City Manager's designee.

*Direct connection* means any pipe, conduit or other conveyance that is inserted into any part of the public storm drain system either temporarily or permanently.

*Discharge* means any release, spill, leak, pump, flow, escape, leaching (including subsurface migration or deposition to groundwater), dumping or disposal of any liquid, semi-solid or solid substance to a public right-of-way or public storm drain system.

*Discharge permit* means a City-issued document (permit) authorizing the release of uncontaminated stormwater or non-stormwater to the public storm drain system for a specified period of time.

*Firefighting activities* means all emergency response activities that control or extinguish fires. The phrase does not include the release of significant materials that occur after an emergency situation has ended.

*Green stormwater infrastructure* means infrastructure constructed with a range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspire stormwater and reduce flows to the public storm drain system or to surface waters. These features are also sometimes referred to as low impact development (LID).

*Illicit connection* means any man-made conveyance or drainage system, pipeline, conduit, inlet or outlet, through which the discharge of any pollutant to the public storm drain system occurs or may occur. The term "illicit connection" does not include legal nonconforming connections.

*Nonresidential property* means any real property that is actually or intended to be used for commercial, industrial, agricultural, or recreational purposes, including but not limited to the immediate vicinity of five or more connected residential dwelling units, and residential subdivisions or dwellings that have not been occupied by a bona fide purchaser or tenant.

*NPDES/AZPDES permit* means an authorization to discharge stormwater issued under the NPDES/AZPDES program.

*NPDES/AZPDES program* means the Federal National Pollutant Discharge Elimination System (NPDES) Program administered nationally pursuant to 33 U.S.C. Section 1342 and the Arizona Pollutant Discharge Elimination System (AZPDES) Program administered in Arizona pursuant to Arizona Revised Statutes, Title [49](#), Chapter [2](#), Article [3.1](#).



*Owner* means a property owner or any person or entity that has physical control, authority, or responsibility for a business, property, or stormwater management device.

*Permit* means written authorization to engage in specific conduct or an activity that is issued pursuant to and in accordance with the particular laws, rules, or ordinances governing that conduct or activity.

*Pollutant* means 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, and mining, municipal, and agricultural waste, or any other liquid, solid, gaseous or hazardous substances.

*Pollution* means the presence of pollutants on land or in stormwater.

*Pollution prevention* means operational procedures and processes and improvements in housekeeping or management techniques that reduce potential or actual releases of pollutants to the environment including all air, water and land resources affected by those pollutants.

*Post-construction stormwater control* means any device or feature permanently installed and designed to manage or treat stormwater, including but not limited to retention, detention, storage, infiltration, or treatment systems.

*Public storm drain system* means all or any part of the publicly owned stormwater conveyance system, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains located within easements, rights-of-way, parks, streets, roads, or highways, or in common areas of real property leased from the City of Phoenix, that are used for collecting, retaining, or conveying stormwater.

*Release* means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, placing, leaching, dumping, or disposing into or on any land in a manner that significant materials, pollutants, or stormwater has the reasonable potential to be introduced into the public storm drain system.

*Significant materials* means any solid, liquid, or gaseous substance other than uncontaminated stormwater, that can release pollutants, including but not limited to: raw materials; fuels; solvents; detergents; finished materials; hazardous substances designated under Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act, [42 U.S.C. Section 9601\(14\)](#); any chemical for which a report must be filed pursuant to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, [42 U.S.C. Section 11023](#); fertilizers; pesticides; herbicides; and waste materials, including garbage, trash, ashes, slag, yard waste, animal waste, and sludge.

*Stormwater* means rainfall runoff, snow melt runoff, and surface runoff and drainage.

*Stormwater management plan (SWMP)* means a document, tailored to the facility's site-specific conditions and activities, identifying the facility's plan for eliminating, minimizing or reducing the amount of pollution in stormwater discharged from the site.

*Stormwater pollution prevention plan* means a site-specific, written document that identifies potential sources of stormwater pollution at a site; describes practices to reduce pollutants in stormwater discharges from a site; and

identifies procedures the site operator will implement to comply with the terms and conditions of a NPDES/AZPDES permit.

*Surface water quality standard* means a standard adopted for a protected surface water pursuant to Section [49-221](#), Arizona Revised Statutes and, in the case of waters of the United States, pursuant to Section [49-222](#), Arizona Revised Statutes.

*Uncontaminated* means the absence of pollutants. (Ord. No. G-3589, § 1; Ord. No. G-5707, 2012; Ord. No. G-7116, § 3, 2023)

**Cross reference**—Definitions and rules of construction generally, § [1-2](#).

## **Sec. 32C-102. Declaration of nuisance.**

A. A public nuisance is anything that is injurious or obnoxious to health or the environment, or is offensive to the sense, or is an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property by any considerable number of persons, or which obstructs the free passage or use, in any customary manner, of any street, alley, sidewalk, or other public right-of way.

B. It is hereby declared to be a public nuisance for any person to store, use, manufacture, process, handle or release significant materials, pollutants, or stormwater in a manner that causes or contributes to any of the following:

1. The conditions or circumstances as defined in subsection [A](#) of this section;
2. Damage to a public right-of-way or public storm drain system;
3. A violation of a surface water quality standard;
4. A violation of any applicable condition of a NPDES/AZPDES permit.

C. An act is not a public nuisance if it is authorized in any of the following:

1. This chapter;
2. An administrative rule, permit, plan approval, or other authorization issued in compliance with this chapter;
3. A NPDES/AZPDES permit. (Ord. No. G-3589, § 1; Ord. No. G-5707, 2012; Ord. No. G-7116, § 3, 2023)

## **Sec. 32C-103. Prohibited and permitted practices.**

A. A person may not use, store, treat or dispose of stormwater, pollutants, or significant materials in a manner that creates a public nuisance as defined in Section [32C-102](#).

B. A person may not release to a publicly owned right-of-way, retention or detention basin, or public storm drain system any substance that is not composed entirely of stormwater, except for the following:

1. Releases pursuant to a NPDES/AZPDES permit;
2. Releases resulting from emergency firefighting activities;
3. Releases of materials as provided in subsection [F](#), [G](#) or [H](#) of this section.

C. A person may not install or use a direct connection to the public storm drain system without written permission of the City Manager.

D. A person shall maintain best management practices and post-construction stormwater controls, including but not limited to stormwater retention and detention basins, drywells, and storage structures. Maintaining post-construction stormwater controls and BMPs means achieving and maintaining the original design intent for detention, retention, and treatment. The person shall keep written records and documentation of all inspections, cleaning, repair, calibration, and maintenance required demonstrating compliance with this subsection. The owner shall keep the records for a minimum of five years from the date the record is created and shall make the records available to the City upon request.

E. A person may not interfere with or prohibit any City employee from conducting any activities in furtherance of the requirements of this chapter, including conducting inspections and collecting samples.

F. This section does not prohibit releases of stormwater from stormwater retention or detention basins if a permit or approval is first obtained from the City Manager. A person seeking such a permit or approval shall demonstrate that the release is not reasonably expected to contain pollutants or cause or contribute to a public nuisance as defined in this chapter.

G. This section does not prohibit releases from the following sources, provided those releases are not a significant source of pollutants and are discharged in a manner that does not create a public nuisance as defined in this chapter:

1. Water line flushing.
2. Landscape irrigation.
3. Diverted stream flows.
4. Rising ground waters.
5. Uncontaminated groundwater infiltration (as defined at [40 CFR 35.2005\(b\)\(20\)](#)) to separate storm sewers.
6. Uncontaminated pumped groundwater.
7. Discharges from potable water sources.
8. Foundation drains.

9. Air conditioning condensation.
10. Irrigation water.
11. Springs.
12. Water from crawl space pumps.
13. Footing drains.
14. Lawn watering.
15. Individual residential car washing.
16. Flows from riparian habitats and wetlands.
17. Dechlorinated swimming pool discharges.
18. Street wash water.
19. Discharges or flows from emergency firefighting activities.

H. This section does not prohibit releases to the public storm drain system that are authorized pursuant to a NPDES/AZPDES permit; provided, that all conditions of that permit are met and the City has been provided a copy of the applicable authorization to discharge or other written proof of permit coverage. Examples of this include releases authorized under the NPDES/AZPDES general permits for de minimis discharges or stormwater discharges associated with industrial activity. An authorization under a separate NPDES/AZPDES permit, however, does not exempt a person from preparing a stormwater management plan and submitting it to the City, if required under Section [32C-104](#). (Ord. No. G-3589, § 1; Ord. No. G-5707, 2012; Ord. No. G-7116, § 3, 2023)

## **Sec. 32C-104. Stormwater management plan.**

A. A person who conducts an activity on nonresidential property or conducts an activity for a fee or charge on residential property that has the reasonable potential to affect the quality or volume of stormwater impounded upon or released from the property, regardless of whether it is raining at the time, shall prepare a written stormwater management plan as described in this section. There is a rebuttable presumption that a stormwater management plan is not required for activities conducted within completely enclosed structures and in other areas that are permanently inaccessible to contact with stormwater or other sources of water, including run-on and run-off. A person required by this subsection to prepare a stormwater management plan shall provide the plan to the City upon the City's request.

B. A person applying pursuant to any chapter of the Phoenix City Code for authorization, permission, or a permit to perform or engage in an activity that has the reasonable potential to affect the quality or volume of stormwater impounded upon or released from their property as a result of the activity for which approval is sought shall prepare and submit to the City a stormwater management plan.

- C. A stormwater management plan must include all of the following:
1. A description of the types of all significant materials that will be on the property;
  2. A description of the land use and materials management practices that could lead to the pollution of stormwater during all phases of existing and proposed land use;
  3. A description of the manner in which significant materials will be used, stored, treated or disposed of; the methods to minimize, to the maximum extent practicable, the pollution of stormwater;
  4. All best management practices to be utilized for the following:
    - a. Managing litter.
    - b. The use, storage, treatment, and disposal of significant materials.
    - c. The use, storage, and disposal of pesticides and herbicides.
    - d. Reducing the volume and/or velocity of discharges to a public storm drain system.
    - e. The use of landscape features to reduce the quantity and/or velocity of stormwater or a pollutant that may be released off site.
    - f. Maintenance of retention basins and other post-construction stormwater controls and facilities.
    - g. Underground storage and other treatment devices.
    - h. Maintenance and cleaning of storage areas, work areas, drives, parking lots, vehicles, and buildings.
    - i. Ensuring that significant materials are not exposed to direct contact with stormwater.
    - j. Spill prevention and remediation.
  5. Any additional information concerning stormwater management and pollution prevention efforts that are or will be prepared or used to comply with any Federal, State, or local rules, regulations, or permits that relate to discharges of stormwater.
- D. A stormwater management plan may apply to more than one parcel of property so long as the activities on the properties are sufficiently similar that a single plan is appropriate. A stormwater management plan must apply to all contiguous land under common ownership or control and must specifically state the address of each parcel of property subject to the plan. A stormwater management plan is not transferable to new property owners and/or operators.
- E. The City Manager will not issue permits, approvals or other authorizations that require stormwater management plans as provided in subsection [B](#) of this section until the City Manager has received the applicable stormwater management plan. The City Manager may modify or revoke the City permit, approval, or authorization if significant materials are not managed in accordance with the applicable stormwater management plan.

F. The persons identified in subsections [A](#) and [B](#) of this section shall fully implement their stormwater management plan. If the affected property or activities at the property are modified in a manner that may cause a material change in the volume, velocity, or quality of stormwater released off site, the person must promptly revise and implement the person's stormwater management plan to maintain compliance with this chapter.

G. The City Manager may require amendments to a stormwater management plan as the City Manager determines necessary to reduce or eliminate pollutant sources from reaching the public storm drain system or environment.

H. A stormwater pollution prevention plan (SWPPP) that complies with a NPDES/AZPDES permit and applicable requirements of [40](#) CFR Part [122](#) may be used as part or all of the stormwater management plan required by this section (Ord. No. G-3589, § 1; Ord. No. G-5707, 2012; Ord. No. G-7116, § 3, 2023)

### **Sec. 32C-105. City authorized discharges.**

A. The City Manager may permit a person to release uncontaminated non-stormwater to the public storm drain system or public right-of-way if the City Manager determines that the release will not cause a violation of a surface water quality standard or a condition of a NPDES/AZPDES permit. The City Manager may condition the release as necessary to ensure compliance with this chapter. The permittee shall comply with all surface water quality standards.

B. The fee for a permit approved under this section is at least \$1,000.00 per year. The duration of the permit may not exceed five years. There is no permit fee if the uncontaminated stormwater or nonstormwater discharges are no more frequent than twice per calendar year and less than 50,000 gallons per discharge. Discharges authorized under and in compliance with a NPDES/AZPDES permit are not required to obtain a City discharge permit or pay a permit fee.

C. Compliance with this section does not relieve, modify, or otherwise affect a person's obligation to comply with any other applicable Federal, State, or local legal requirement. (Ord. No. G-5707, 2012; Ord. No. G-7116, § 3, 2023)

### **Sec. 32C-106. Inspections.**

A. The City Manager is authorized to enter and inspect real property, structures, and buildings at reasonable times and in a reasonable manner as necessary to assess compliance with this chapter or a NPDES/AZPDES permit. These inspections will be conducted in accordance with applicable constitutional or statutory requirements. A person subject to the requirements of this chapter shall allow all inspection, monitoring, and access to records, documents, and other information reasonably needed by the City Manager for the purposes of administering this chapter. A person subject to the requirements of this chapter that denies a City representative reasonable access to its premises is in violation of this chapter.

- B. Inspections conducted pursuant to this chapter may include items covered by other chapters of the Phoenix City Code that relate to the quality or management of stormwater and associated stormwater devices and controls.
- C. The City Manager may collect and analyze samples of stormwater and significant materials, install and require the installation of stormwater sampling and measurement devices, and examine records concerning significant materials and stormwater activities. (Ord. No. G-3589, § 1; Ord. No. G-5707, 2012; Ord. No. G-7116, § 3, 2023)

**Note**—Formerly, § 32C-105

### **Sec. 32C-107. Violations and penalties.**

- A. The remedies specified in this chapter are cumulative, and the City Manager, or the City Attorney, may proceed under these or any other remedies authorized by law. In addition to any other authorized remedies, a person who violates any provision of this chapter shall be guilty of a Class 1 misdemeanor. Each day of violation shall be a separate offense.
- B. A person having control over an activity or any real property, or who causes, authorizes, facilitates, aids or assists any violation of any provision of this chapter, or who fails to abate any nuisance or prohibited practice for which the person is responsible, is guilty of a Class 1 misdemeanor.
- C. The City Manager may issue a notice of violation, compliance order, or other compliance and enforcement documentation to any person who has violated or is in violation of this chapter. Failure to perform any act required in the notice of violation, compliance order, or other compliance and enforcement documentation shall be a separate violation for each day the violation continues beyond the date of the notice of violation compliance order, or other compliance and enforcement documentation.
- D. The City Manager may enter into consent orders, assurances of voluntary compliance, negotiated settlement agreements or other similar documents establishing an agreement with any person responsible for noncompliance. These documents have the same force and effect as any other orders issued under this article and may be enforced by a court of competent jurisdiction.
- E. The transfer of ownership, possession, or control of real property to another person does not relieve the transferor of responsibility for violations of this chapter, as provided in subsection [B](#) of this section, which occurred before the transfer unless the transferee accepts responsibility in writing for the violations.
- F. A person who violates this chapter is subject to a civil sanction of not more than \$2,500.00 for each violation. Each day of each violation shall constitute a separate violation. The City Manager may request the City Attorney commence an action in a court of competent jurisdiction to recover the civil penalties.
- G. The owner of record of the property upon which a violation of this chapter occurs is presumed to be a person having lawful control over an activity or real property, unless the owner establishes that another person has knowingly and in good faith accepted responsibility for the activity or property at issue. If more than one person is

identified as the owner of record, those persons are jointly and severally in lawful possession and control of the activity or land.

H. Any person causing or contributing to a violation of this chapter or a permit issued pursuant to this chapter shall notify the City immediately upon learning of the events that resulted in the violation. Within five days of submitting this notification, the person shall submit to the City a detailed written statement describing the cause of the violation and the measures being taken to prevent reoccurrence. Neither the submission to the City of the original notification nor the detailed written statement relieves the person of liability for any expense, loss or damage to the public storm drain system, or for any fines imposed on or by the City for a violation of this chapter or a NPDES/AZPDES permit. (Ord. No. G-3589, § 1; Ord. No. G-5707, 2012; Ord. No. G-7116, § 3, 2023)

**State law reference**—Penalty for ordinance violations, A.R.S. §§ [9-499.01](#), [9-240\(B\)\(28\)](#).

**Note**—Formerly, § 32C-106

### **Sec. 32C-108. Requirement to monitor, analyze and remediate.**

A. Where a reasonable basis exists to conclude that a person engaged in any activity and/or owning or operating any property has violated this chapter, the City Manager may require by written notice that the person undertake, at their expense, such monitoring and analysis and furnish the resulting reports to the City as necessary to determine compliance with this chapter.

B. Where a person engaged in any activity and/or owning or operating any property has violated this chapter, the City Manager may require by written notice that the person remediate or restore, within a specified period of time, any property, conveyance or equipment contaminated by or otherwise adversely affected by the activities giving rise to the violation. (Ord. No. G-5707, 2012; Ord. No. G-7116, § 3, 2023)

### **Sec. 32C-109. Stormwater treatment devices.**

A. The City Manager may require a person that seeks to use a direct connection to the public storm drain system to provide, at the person's sole expense, such treatment devices, facilities or interceptors as may be necessary to comply with the limits provided for in this chapter. The person shall submit plans, specifications, and any other pertinent information relating to proposed treatment devices, facilities or interceptors to the City Manager for approval. The person may not construct the treatment devices, facilities or interceptors until the written approval from the City is obtained. City approval of the plans and inspection of the construction does not relieve the owner from complying with the release limits set forth in this chapter.

B. Where treatment devices, facilities or interceptors are used in direct connection to the public storm drain system, the owner shall maintain continuously at their own expense those devices, facilities or interceptors in satisfactory and effective operation consistent with the original design and intent of the devices, facilities, or interceptors.



C. All treatment devices, facilities and interceptors must be of a type and capacity approved by the City Manager and must be located as to be readily and easily accessible for cleaning and inspection. Additionally, interceptors must be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature and must be of substantial construction, watertight, and equipped with easily removable covers when a bolted cover is required.

D. The owner shall keep written records and documentation of all inspections, cleaning, repair, calibration, and maintenance required demonstrating compliance with this section. The owner shall keep the records for a minimum of five years from the date the record is created and shall make the records available to the City upon request. (Ord. No. G-5707, 2012; Ord. No. G-7116, § 3, 2023)

### **Sec. 32C-110. Green stormwater infrastructure.**

Through the administration of this chapter, the City Manager will encourage the use of green stormwater infrastructure to control the release of pollutants into the public storm drain system. (Ord. No. G-5707, 2012; Ord. No. G-7116, § 3, 2023)

### **Sec. 32C-111. Fees.**

(Ord. No. G-5707, 2012)

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**The Phoenix City Code is current through Ordinance G-7247, passed April 17, 2024.**

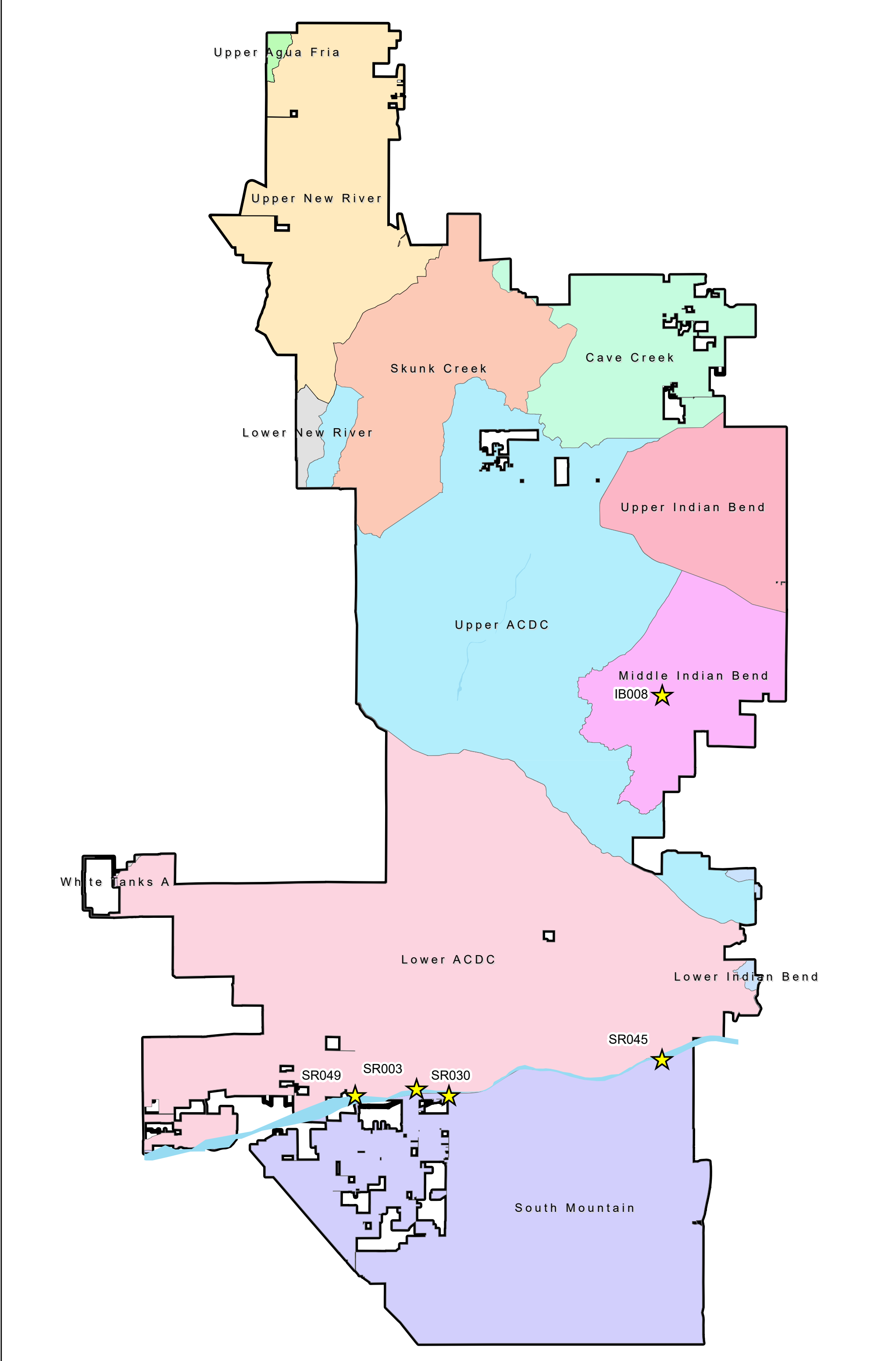
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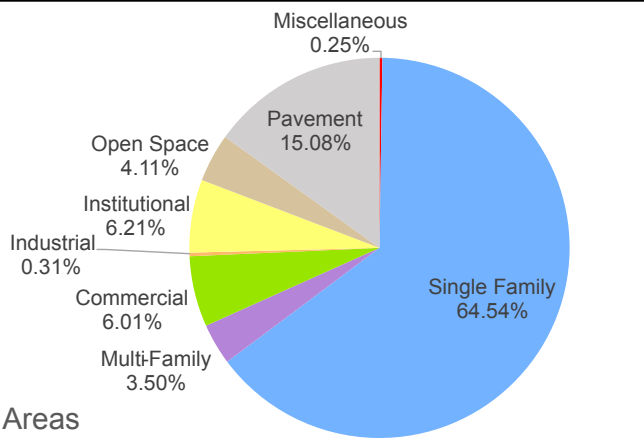
## **APPENDIX C**

### **DRAINAGE SYSTEM MAPS**

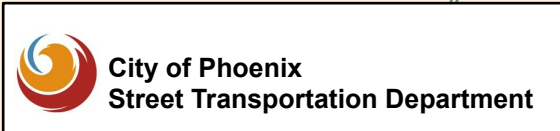
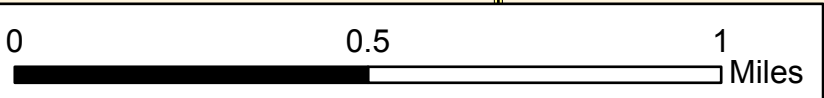
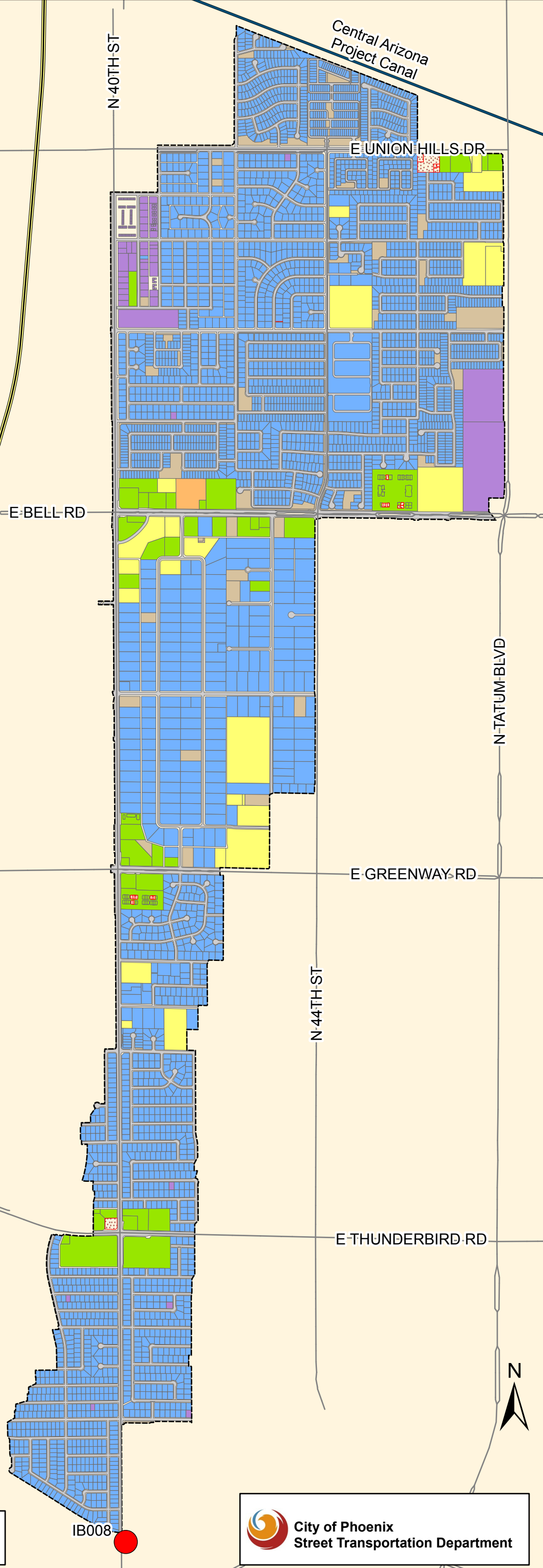
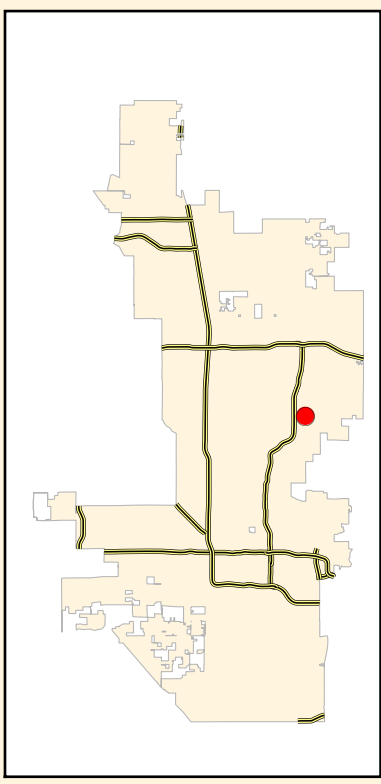


City of Phoenix Watersheds


















Drainage Area IB008

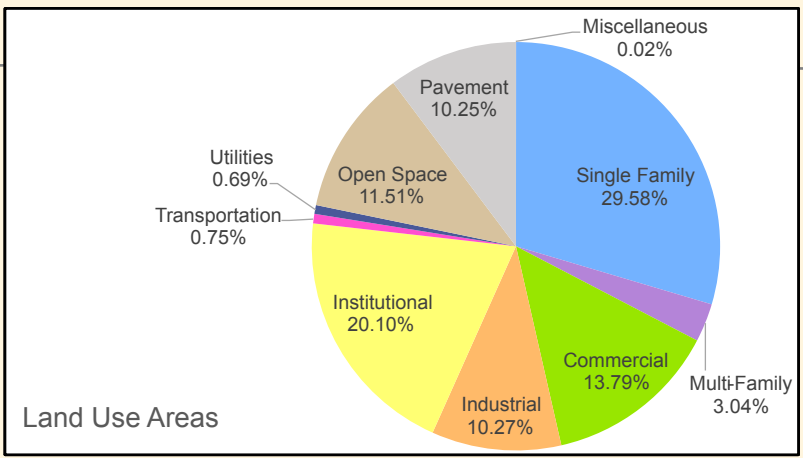
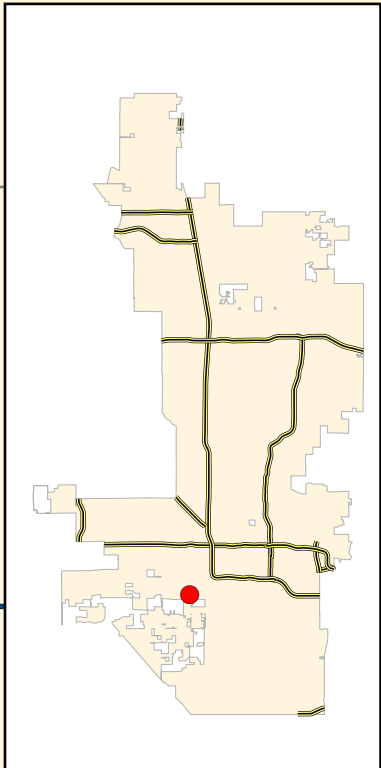
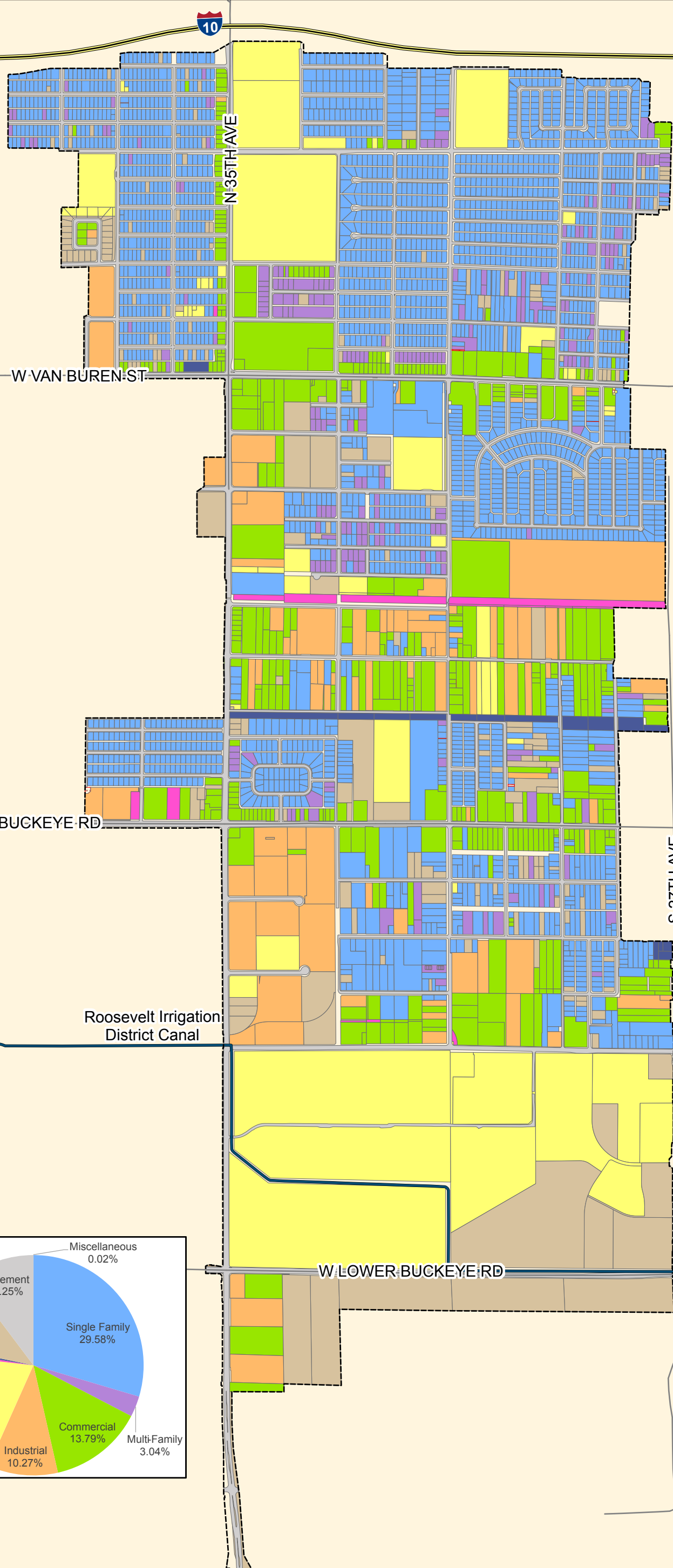


- Outfalls
  - Freeways
  - Streets
  - Canals
  - Rivers
  - Pavement
  - City Limit
  - Drainage Areas
- Land Use**
- Commercial
  - Industrial
  - Institutional
  - Miscellaneous
  - Multi Family Residential
  - Open Space
  - Single Family Residential
  - Transportation
  - Utilities



Drainage Area SR003

-  Outfalls
  -  Freeways
  -  Streets
  -  Canals
  -  Rivers
  -  Pavement
  -  City Limit
  -  Drainage Areas
- Land Use**
-  Commercial
  -  Industrial
  -  Institutional
  -  Miscellaneous
  -  Multi Family Residential
  -  Open Space
  -  Single Family Residential
  -  Transportation
  -  Utilities



SR030


















Drainage Area SR030

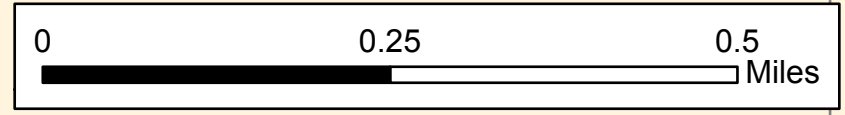
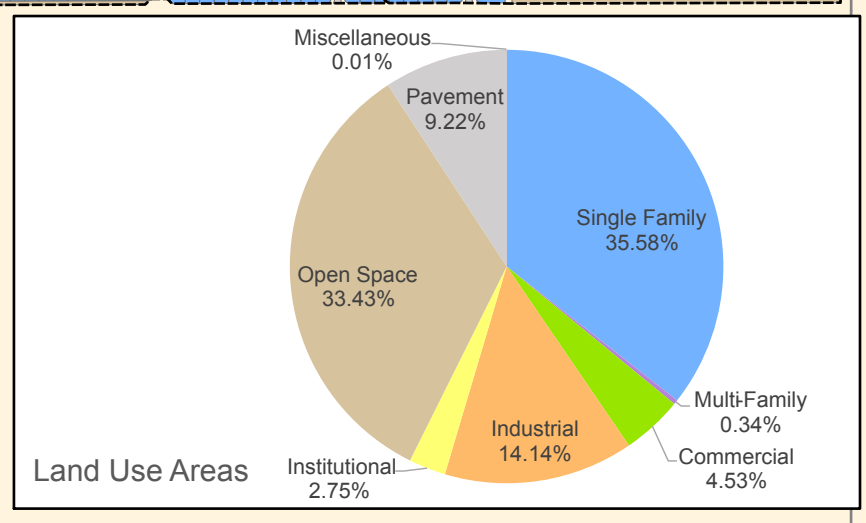
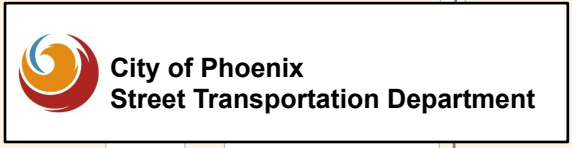
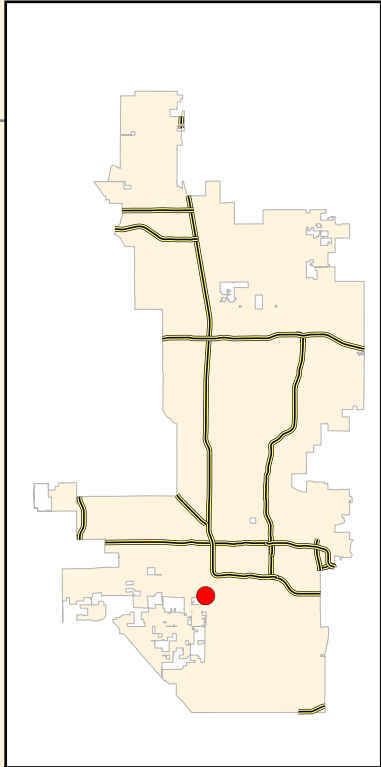
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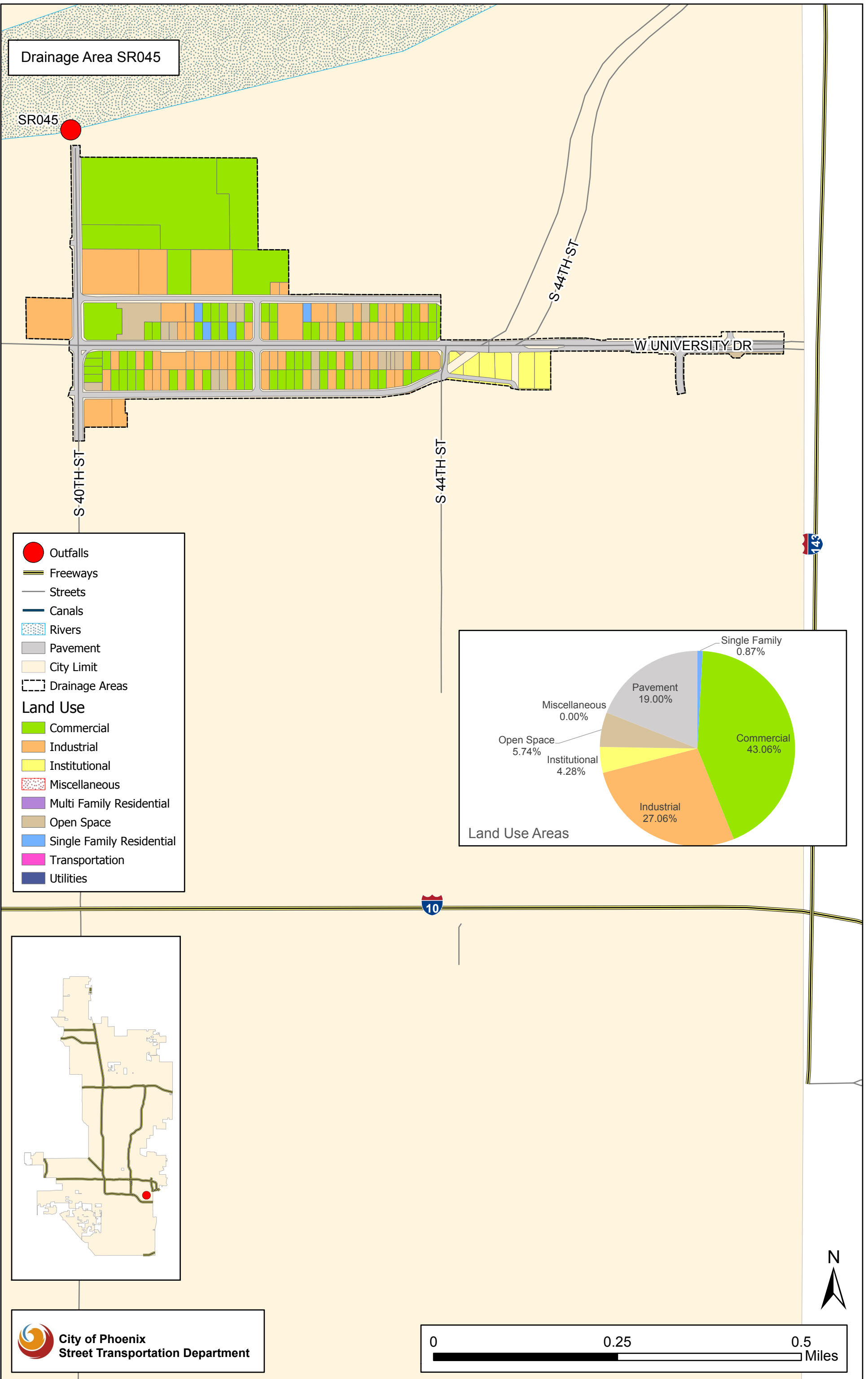
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S-27TH AVE

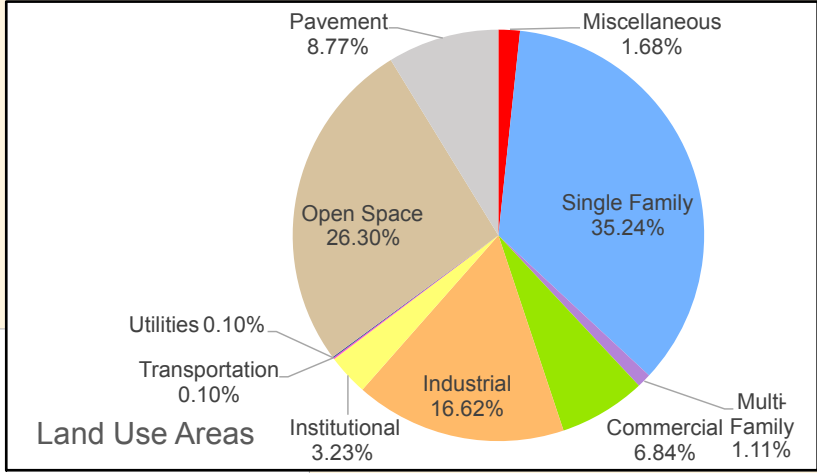
W SOUTHERN AVE

-  Outfalls
  -  Freeways
  -  Streets
  -  Canals
  -  Rivers
  -  Pavement
  -  City Limit
  -  Drainage Areas
- Land Use**
-  Commercial
  -  Industrial
  -  Institutional
  -  Miscellaneous
  -  Multi Family Residential
  -  Open Space
  -  Single Family Residential
  -  Transportation
  -  Utilities

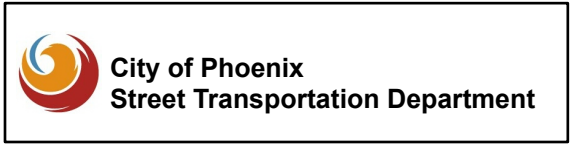
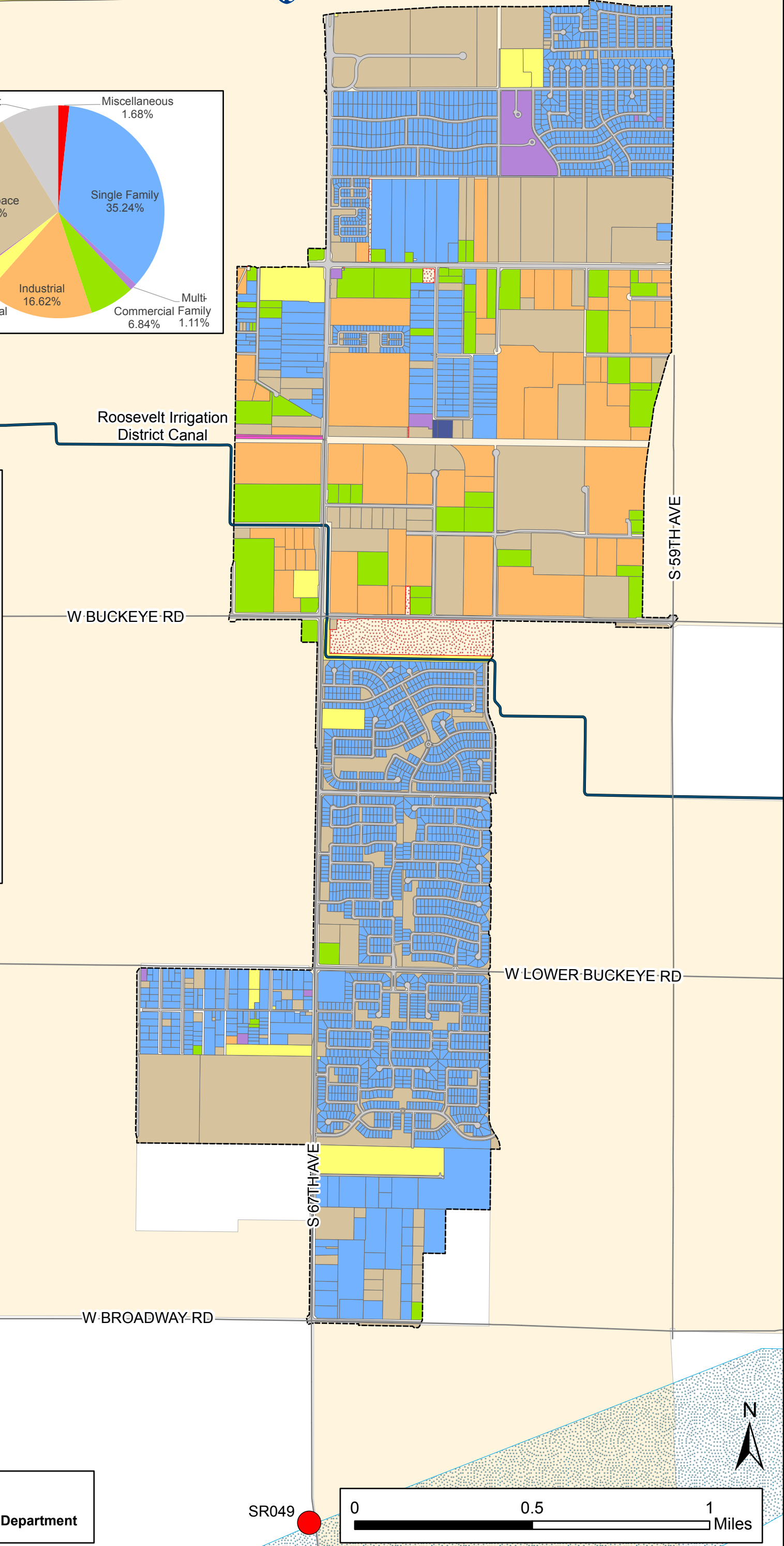
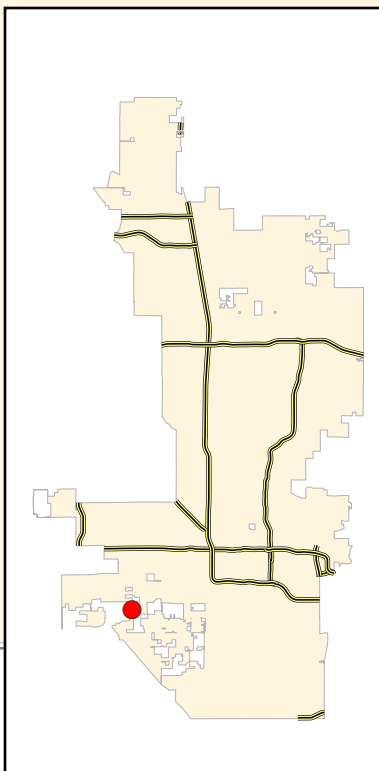




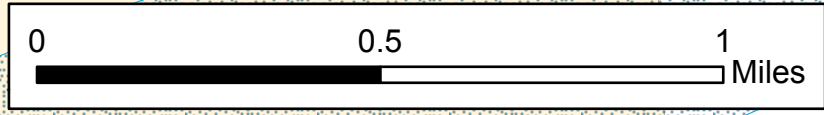
Drainage Area SR049



- Outfalls
  - Freeways
  - Streets
  - Canals
  - Rivers
  - Pavement
  - City Limit
  - Drainage Areas
- Land Use**
- Commercial
  - Industrial
  - Institutional
  - Miscellaneous
  - Multi Family Residential
  - Open Space
  - Single Family Residential
  - Transportation
  - Utilities



SR049





## **APPENDIX D**

### **INVENTORY OF MAJOR OUTFALLS**

Outfall Id	Site Address	Latitude	Longitude	Drain Size	Last Inspection	Next Inspection
<b><u>AC/DC-Arizona Canal Diversion Channel</u></b>		<b><u>Count: 34</u></b>				
AC001	51st Ave And Cactus Road, Phoenix, AZ	33.5965	-112.1695	78 Inches	01/12/2021	2026
AC002	43rd Ave And Peoria Ave, Phoenix, AZ	33.5829	-112.1519	90 Inches	01/12/2021	
AC003	43rd Ave And Peoria Ave, Phoenix, AZ	33.5817	-111.8500	42 Inches	01/12/2021	2026
AC004	35th Ave And Acdc Channel, Phoenix, AZ	33.5725	-111.8656	96 Inches	08/14/2023	
AC005	30th Ave And Metrocenter, Phoenix, AZ	33.5697	-111.8744	53 Inches	01/11/2021	
AC006	29th Ave And Metrocenter, Phoenix, AZ	33.5708	-111.8789	48 Inches	01/11/2021	2026
AC007	29th Ave And Metrocenter, Phoenix, AZ	33.5708	-111.8789	43 Inches	01/11/2021	2026
AC008	I-17 (Black Canyon Fwy) And Acdc Channel, Phoenix, AZ	33.5714	-111.8825	27 Inches	02/03/2021	2026
AC010	19th Ave And Acdc Channel, Phoenix, AZ	33.5721	-112.0997	36 Inches	01/13/2021	2026
AC011	7th St And Acdc Channel, Phoenix, AZ	33.5964	-111.1694	42 Inches	02/04/2021	2026
AC012	18th Pl And Acdc Channel, Phoenix, AZ	33.5357	-112.0422	48 Inches	02/09/2021	2026
AC013	24th St. Water Treatment Plant And Acdc Channel, Phoenix, AZ	33.5264	-112.9692	36 Inches	02/10/2021	2026
AC014	2 Mile Tunnel And Acdc Channel, Phoenix, AZ	33.5964	-111.8308	36 Inches	02/10/2021	2026
AC015	33rd Dr And Acdc Channel, Phoenix, AZ	33.5714	-111.8692	12 Inches	01/11/2021	2026
AC018	18th Ave And Hatcher, Phoenix, AZ	33.5715	-112.0974	36 Inches	01/13/2021	2026
AC033	7th Ave And Acdc Channel, Phoenix, AZ	33.5690	-112.0829	42 Inches	02/03/2021	2026
AC034	12th Ave And Acdc Channel, Phoenix, AZ	33.5700	-111.9086	36 Inches	02/04/2021	2026
AC039	14th St And Acdc Channel, Phoenix, AZ	33.5817	-111.8503	36 Inches	02/04/2021	2026
AC044	6th St And Acdc Channel, Phoenix, AZ	33.5581	-111.9339	36 Inches	02/04/2021	2026
AC048	10th St And Acdc Channel, Phoenix, AZ	33.5564	-111.9375	96 Inches	02/04/2021	2026
AC070	Dunlap Ave And Short Tunnel, Phoenix, AZ	33.5708	-111.8794	60 Inches	02/04/2021	2026
AC081	Hwy 51 And Acdc Channel, Phoenix, AZ	33.5353	-112.0415	6 x 6 Feet	02/09/2021	2026
AC083	24th St. Water Treatment Plant And Acdc Channel, Phoenix, AZ	33.5714	-111.8822	36 Inches	02/10/2021	2026
AC085	2 Mile Tunnel And Acdc Channel, Phoenix, AZ	33.5714	-111.8822	30 Inches	02/10/2021	2026
AC106	2 Mile Tunnel And Acdc Channel, Phoenix, AZ	33.5189	-111.9872	36 Inches	02/10/2021	2026
AC124	2 Mile Tunnel And Acdc Channel, Phoenix, AZ	33.5347	-112.0414	36 Inches	07/15/2003	
AC128	7th Ave And Dunlap Ave, Phoenix, AZ	33.5681	-111.9200	12 Inches	02/03/2021	2027
AC147	23rd Ave And Acdc, Phoenix, AZ	33.5733	-111.8928	40 Feet	02/08/2021	2026
AC148	21st Dr And Acdc, Phoenix, AZ	33.5728	-111.8956	40 Feet	02/08/2021	2026
AC150	20th Dr And Acdc, Phoenix, AZ	33.5725	-111.8969	50 Feet	02/08/2021	2026
AC151	20th Ave And Acdc, Phoenix, AZ	33.5722	-111.8983	40 Feet	02/08/2021	2026
AC152	20th Dr And Acdc, Phoenix, AZ	33.5719	-111.8994	24 Feet	02/08/2021	2026

Outfall Id	Site Address	Latitude	Longitude	Drain Size	Last Inspection	Next Inspection
<b><u>AC/DC-Arizona Canal Diversion Channel</u></b>		<b><u>Count: 34</u></b>				
AC169	Morten Ave And Acdc, Phoenix, AZ	33.5472	-111.9422	40 Feet	02/09/2021	2026
AC195	9th Avenue And Acdc Channel, Phoenix, AZ	33.5689	112.0844	72 Inches	10/20/2021	2027
<b><u>AF-Agua Fria</u></b>		<b><u>Count: 4</u></b>				
AF002	Encanto Blvd And Sr101 West (9500 W), Phoenix, AZ	33.4722	-111.7342	42 Inches	07/22/2020	2026
AF003	Mcdowell Rd And Sr101 West (9700 W), Phoenix, AZ	33.4653	-111.7325	4 x 11 Feet	07/22/2020	2026
AF005	Camelback Rd And Sr Loop 101, Phoenix, AZ	33.5081	-112.2680	35 Inches	07/22/2020	2026
AF006	Camelback Road And 114th Aveune, Phoenix, AZ	33.5067	-111.6958	60 Inches	07/22/2020	2026
<b><u>AZ-Arizona Canal</u></b>		<b><u>Count: 6</u></b>				
AZ001	Arizona Canal And 42nd St, Phoenix, AZ	33.5073	-111.9913	36 Inches	02/10/2020	2025
AZ002	Arizona Canal And 56th St, Phoenix, AZ	33.4894	-111.9606	48 Inches	02/04/2020	2025
AZ003	Arizona Canal And 57th St, Phoenix, AZ	33.4896	-111.9595	48 Inches	02/04/2020	2025
AZ025	Arizona Canal And 21st St, Phoenix, AZ	33.5275	-112.0346	36 Inches	02/10/2020	2025
AZ028	Arizona Canal And 56th St, Phoenix, AZ	33.4891	-111.9610	6 Feet	02/04/2020	2025
AZ030	Arizona Canal And 44th St, Phoenix, AZ	33.5043	-111.9869	8 Inches	02/10/2020	2025
<b><u>CAP-Central Arizona Project</u></b>		<b><u>Count: 2</u></b>				
CAP002	19224 N North TatumBlvd Phoenix, AZ	33.6592	11.9828	20 Feet	08/17/2020	2027
CAP003	56th Street And Cap (Central Arizona Project), Phoenix, AZ	33.6453	11.9469	20 Feet	08/17/2020	2027

Outfall Id	Site Address	Latitude	Longitude	Drain Size	Last Inspection	Next Inspection
<b><u>CC-Cave Creek Wash</u></b>		<b><u>Count: 26</u></b>				
CC002	23rd Ave And Mountain View Rd, Phoenix, AZ	33.5746	-112.1088	48 Inches	07/16/2019	2025
CC003	Peoria Ave And Cave Creek Wash, Phoenix, AZ	33.5816	-112.1119	84 Inches	06/24/2024	
CC004	25th Ave And Cholla Rd, Phoenix, AZ	33.5892	-112.1145	78 Inches	07/23/2019	2025
CC005	25th Ave And Cactus Rd, Phoenix, AZ	33.5963	-112.1119	48 Inches	06/03/2020	2025
CC006	25th Ave And Larkspur Dr, Phoenix, AZ	33.5999	-112.1111	30 Inches	08/27/2019	2025
CC008	23rd Ave And Thunderbird Rd, Phoenix, AZ	33.6108	-112.1076	72 Inches	09/10/2019	2025
CC010	19th Ave And Greenway Rd, Phoenix, AZ	33.6243	-112.0999	90 Inches	09/13/2019	2025
CC024	Shangri-La Rd And Cave Creek Wash, Phoenix, AZ	33.5881	-112.1147	36 Inches	08/15/2019	2025
CC041	901 W DanburyRd Phoenix, AZ	33.6421	-112.0849	10 Feet	10/10/2019	2025
CC043	7th Ave And Cave Creek Wash, Phoenix, AZ	33.6444	-112.0830	60 Inches	10/10/2019	2025
CC044	3rd Ave And Grovers Ave, Phoenix, AZ	33.6476	-112.0790	16 Feet	10/10/2019	2025
CC047	232 W MichiganAve Phoenix, AZ	33.6508	-112.0782	14 Feet	10/23/2019	2025
CC049	237 W WagonerRd Phoenix, AZ	33.6524	-112.0785	8 Feet	10/23/2019	2025
CC050	Union Hills Dr And Cave Creek Wash, Phoenix, AZ	33.6544	-112.0788	72 Inches	10/23/2019	2025
CC057	Cave Creek Golf Course At Acoma Dr, Phoenix, AZ	33.6183	-112.1067	42 Inches	09/10/2019	2025
CC060	18019 N Villa RitaDr Phoenix, AZ	33.6498	-112.0786	18 Feet	04/21/2020	2025
CC063	19819 N 3rdSt Phoenix, AZ	33.6663	-112.0701	20 Feet	11/13/2019	2025
CC064	19801 N 3rdSt Phoenix, AZ	33.6658	-112.0699	7 Feet	11/13/2019	2025
CC077	519 W HelenaDr Phoenix, AZ	33.6448	-112.0814	15 Feet	10/10/2019	2025
CC078	4th Ave And Muriel Dr, Phoenix, AZ	33.6463	-112.0792	24 Feet	10/10/2019	2025
CC079	4th Ave And Angela Dr, Phoenix, AZ	33.6457	-112.0798	16 Feet	10/10/2019	2025
CC080	4th Ave And Angela Dr, Phoenix, AZ	33.6458	-112.0797	16 Feet	10/10/2019	2025
CC081	17415 N 6thAve Phoenix, AZ	33.6444	-112.0823	19 Feet	10/10/2019	2025
CC082	Cave Creek Gc And Cave Creek Wash, Phoenix, AZ	33.6237	-112.1054	42 Inches	10/17/2019	2025
CC087	Deer Valley Road And 11th Pl, Phoenix, AZ	33.6843	-112.0575	66 Inches	11/19/2019	2025
CC094	7th St And Lone Cactus, Phoenix, AZ	33.6809	-112.0659	54 Inches	11/19/2019	2026
<b><u>CO-Charter Oak</u></b>		<b><u>Count: 2</u></b>				
CO001	Nisbet Rd And 42nd St, Phoenix, AZ	33.6226	-111.9905	5 Feet	06/24/2024	
CO015	Thunderbird Rd And 41st Place, Phoenix, AZ	33.6114	111.9917	5 Feet	06/24/2024	

Outfall Id	Site Address	Latitude	Longitude	Drain Size	Last Inspection	Next Inspection
<b><u>EF-East Fork of Cave Creek</u></b>		<b><u>Count: 27</u></b>				
EF001	Cave Creek Rd And Greenway Pkwy, Phoenix, AZ	33.6317	-111.9689	72 Inches	09/15/2022	
EF002	16th St And Greenway Pkwy, Phoenix, AZ	33.6342	-111.9561	84 Inches	09/15/2022	
EF003	18th St And Greenway Pkwy, Phoenix, AZ	33.6342	-111.9558	84 Inches	09/15/2022	
EF004	20th St And Greenway Pkwy, Phoenix, AZ	33.6327	-112.0397	96 Inches	11/16/2022	
EF006	9th St And Greenway Pkwy, Phoenix, AZ	33.6369	-111.9386	96 Inches	09/20/2022	
EF007	9th St And Greenway Pkwy, Phoenix, AZ	33.6374	-112.0616	36 Inches	09/20/2022	
EF008	Cave Creek Rd And Greenway Pkwy, Phoenix, AZ	33.6317	-111.9686	72 Inches	09/19/2022	
EF009	16th St And Greenway Pkwy, Phoenix, AZ	33.6361	-111.9522	48 Inches	09/15/2022	
EF010	7th St And Greenway Pkwy, Phoenix, AZ	33.6374	-112.0660	84 Inches	11/16/2022	
EF011	7th St And Greenway Pkwy, Phoenix, AZ	33.6370	-112.0657	36 Inches	11/16/2022	
EF012	7th St And Greenway Pkwy, Phoenix, AZ	33.6373	-112.0657	36 Inches	11/16/2022	
EF015	22nd St And East Fork, Phoenix, AZ	33.6322	-111.9650	36 Inches	09/19/2022	
EF016	22nd St And East Fork, Phoenix, AZ	33.6322	-111.9650	36 Inches	09/19/2022	
EF018	21st St And East Fork, Phoenix, AZ	33.6322	-111.9628	36 Inches	09/19/2022	
EF019	21st St And East Fork, Phoenix, AZ	33.6322	-111.9628	42 Inches	09/19/2022	
EF027	12th St And East Fork, Phoenix, AZ	33.6369	-111.9428	36 Feet	09/20/2022	
EF034	301 W Monte Cristo Ave Phoenix, AZ	33.6313	-112.0771	6 Feet	11/28/2022	
EF037	Moon Valley Park, Phoenix, AZ	33.6272	-111.9183	5 Feet	11/28/2022	
EF039	16042 N 1st St Phoenix, AZ	33.6325	-111.9267	8 Feet	11/28/2022	
EF051	19th Pl And Greenway Pkwy, Phoenix, AZ	33.6331	-111.9581	36 Inches	09/19/2022	
EF058	15406 N 7th Dr Phoenix, AZ	33.6256	-111.9167	90 Inches	11/30/2022	
EF065	Union Hills And 25th Way, Phoenix, AZ	33.6547	112.0264	48 Inches	12/20/2022	
EF066	Union Hills And 25th Way, Phoenix, AZ	33.6547	112.0261	63 Inches	12/20/2022	
EF069	Utopia Rd Between 27th And 28th Street, Phoenix, AZ	33.6622	112.0239	48 Inches	12/08/2022	
EF070	Utopia Road Between 27th And 28th St., Phoenix, AZ	33.6622	112.0239	96 Inches	12/08/2022	
EF088	Cave Creek And 101, Phoenix, AZ	33.6731	-112.0306	58 Inches	01/12/2023	
EF091	2302 E Grovers Ave Phoenix, AZ	33.6482	-112.0320	96 Inches	01/11/2023	
<b><u>GC-Grand Canal</u></b>		<b><u>Count: 2</u></b>				
GC001	Grand Ave And Grand Canal, Phoenix, AZ	33.4892	-112.1273	24 Inches	01/28/2020	2025
GC002	Grand Ave And Grand Canal, Phoenix, AZ	33.4891	-112.1276	36 Inches	02/03/2020	2025

Outfall Id	Site Address	Latitude	Longitude	Drain Size	Last Inspection	Next Inspection
<b><u>IB-Indian Bend Wash</u></b>		<b><u>Count: 18</u></b>				
IB001	52nd St And Shea Blvd, Phoenix, AZ	33.5825	-111.9679	36 Inches	11/15/2023	
IB002	52nd St And Shea Blvd, Phoenix, AZ	33.5825	-111.9688	84 Inches	11/15/2023	
IB003	Tatum Blvd And Cholla St, Phoenix, AZ	33.5906	-111.9774	66 Inches	11/28/2023	
IB004	Tatum Blvd And Cholla St, Phoenix, AZ	33.5901	-111.9770	66 Inches	11/28/2023	
IB005	52nd St And Indian Bend Wash, Phoenix, AZ	33.5837	-111.9688	14 x 3 Feet	11/15/2023	
IB007	36th St And Sweetwater Ave, Phoenix, AZ	33.6036	-112.0042	78 Inches	11/07/2023	
IB008	40th St And Indian Bend Wash, Phoenix, AZ	33.5989	-111.9953	66 Inches	06/24/2024	
IB010	40th Street And Indian Bend Wash. North Side Of Wash., Phoenix, AZ	33.5989	-111.9954	36 Inches	09/11/2018	
IB011	56th St And Indian Bend Wash, Phoenix, AZ	33.5739	-111.9609	66 Inches	11/28/2023	
IB013	Cactus Rd And Indian Bend Wash, Phoenix, AZ	33.5974	-111.9929	72 Inches	11/07/2023	
IB016	Tatum Blvd And Cholla St, Phoenix, AZ	33.5914	-111.9779	36 Inches	11/28/2023	
IB018	Cactus Rd And Indian Bend Wash, Phoenix, AZ	33.5975	-111.9929	72 Inches	11/07/2023	
IB021	10202 N 54thPI Phoenix, AZ	33.5791	-111.9643	36 Inches	01/04/2024	
IB035	Thunderbird Rd And Indian Bend Wash, Phoenix, AZ	33.6118	-112.0090	60 Inches	11/29/2023	
IB036	Thunderbird Rd And Indian Bend Wash, Phoenix, AZ	33.6119	-112.0091	60 Inches	11/29/2023	
IB037	Thunderbird Rd And Indian Bend Wash, Phoenix, AZ	33.6130	-112.0090	6 x 10 Feet	11/28/2023	
IB038	Thunderbird Rd And Indian Bend Wash, Phoenix, AZ	33.6130	-112.0090	84 Inches	11/29/2023	
IB050	40th St And Indian Bend Wash. North Side Of Wash., Phoenix, AZ	33.5989	-111.9953	48 Inches	06/24/2024	
<b><u>LC-Laveen Channel</u></b>		<b><u>Count: 9</u></b>				
LC001	4532 W Alta VistaRd Phoenix, AZ	33.3875	-111.8433	9 Feet	09/15/2021	2027
LC008	53rd Ln And Baseline Rd, Phoenix, AZ	33.3781	-112.1750	66 Inches	07/22/2021	2027
LC015	63rd Land And Beverly Rd, Phoenix, AZ	33.3730	-112.1970	26 Inches	09/15/2021	2027
LC017	7377 W Magdalena Ln, Phoenix, AZ	33.3703	112.2136	34 Inches	09/15/2021	
LC018	7810 S 74thAve Phoenix, AZ	33.3742	-111.7808	36 Inches	09/15/2021	2027
LC020	S 63rd Ave And Lacc, Phoenix, AZ	33.3731	112.1947	60 Inches	09/16/2021	2027
LC022	4724 W CarsonRd Phoenix, AZ	33.3830	-112.1616	8 Feet	09/16/2021	2027
LC023	North Side Of Channel. About 50 Ft. West Of 51st Street Culvert., Phoenix, AZ	33.3824	-112.1687	62 Inches	07/22/2021	2027
LC026	Inside West Tunnel Culvert @ Baseline And Lacc, Phoenix, AZ	33.3771	-112.1808	48 Inches	07/22/2021	2027
<b><u>MV-Moon Valley</u></b>		<b><u>Count: 6</u></b>				
MV001	19th Ave And Sweetwater Ave, Phoenix, AZ	33.6040	112.0990	48 Inches	08/08/2022	
MV005	12th Ave And Thunderbird Rd, Phoenix, AZ	33.6070	112.0870	54 Inches	03/27/2023	
MV007	7th St And Hearn Rd, Phoenix, AZ	33.6153	-111.9344	48 Inches	03/27/2023	
MV019	7th St. And E. Roberts Rd. West Side Of Street, Phoenix, AZ	33.6120	112.0600	50 Inches	06/24/2024	
MV020	7th St. And E. Roberts Rd. West Side Of Street., Phoenix, AZ	33.6110	112.0600	50 Inches	06/24/2024	
MV023	23rd Avenue And Wood DriveAve Phoenix, AZ	33.6030	-112.1080	46 Feet	06/24/2024	

Outfall Id	Site Address	Latitude	Longitude	Drain Size	Last Inspection	Next Inspection
<b><u>NR-New River</u></b>		<b><u>Count: 5</u></b>				
NR001	44th Lane And Kastler Ln, Phoenix, AZ	33.8100	112.1228	40 Inches	09/13/2021	2027
NR002	44th Lane And Lapenna Drive, Phoenix, AZ	33.8814	112.1561	40 Inches	09/13/2021	2027
NR004	4640 W HeyerdahlCt Phoenix, AZ	33.8725	112.1611	40 Inches	09/13/2021	2027
NR005	N 45th Ave And W Emily Dr, Phoenix, AZ	33.8786	112.1575	40 Inches	09/13/2021	2027
NR006	45th Ave And Judson Drive, Phoenix, AZ	33.8764	112.1581	36 Inches	09/13/2021	2027
<b><u>OC-Old Cross-Cut Canal</u></b>		<b><u>Count: 16</u></b>				
OC001	Old Cross Cut And Washington St, South Tunnel, Phoenix, AZ	33.4478	-111.9810	36 Inches	05/20/2024	
OC002	Old Cross Cut And Van Buren St, South Tunnel, Phoenix, AZ	33.4511	-111.9810	42 Inches	05/20/2024	
OC004	46th St And Mcdowell Rd, Phoenix, AZ	33.4660	-111.9801	42 Inches	04/17/2024	
OC005	48th St And Thomas Rd, Phoenix, AZ	33.4800	-111.9780	36 Inches	05/14/2024	
OC006	48th St And Earll Dr, Phoenix, AZ	33.4840	-111.9780	52 Inches	05/13/2024	
OC007	48th St And Indian School Rd, Phoenix, AZ	33.4940	-111.9780	36 Inches	05/14/2024	
OC008	46th St And Mcdowell Rd, Phoenix, AZ	33.4660	-111.9810	54 Inches	04/17/2024	
OC022	48th St And Oak St, Phoenix, AZ	33.4730	-111.9780	48 Inches	04/25/2024	
OC039	46th Street And Roosevelt Street - Old Cross Cut, Phoenix, AZ	33.4580	-111.9820	6 x 5 Feet	03/25/2024	
OC053	48th St And Osborn Rd, Phoenix, AZ	33.4880	-111.9780	52 Inches	03/14/2024	
OC054	48th St And Osborn Rd, Phoenix, AZ	33.4870	-111.9780	8 x 6 Feet	03/13/2024	
OC055	48th St And Weldon Ave, Phoenix, AZ	33.4900	-111.9780	48 Inches	03/18/2024	
OC062	48th St And Thomas Rd, Phoenix, AZ	33.4800	-111.9780	36 Inches	03/12/2024	
OC072	Old Cross Cut And Granada, Phoenix, AZ	33.4680	-111.9790	42 Inches	03/11/2024	
OC090	48th St. And Indian School, Phoenix, AZ			102 Inches	05/14/2024	
OC091	48th st And OsbornRd Phoenix, AZ			48 Inches	05/14/2024	
<b><u>PD-Papago Diversion Channel</u></b>		<b><u>Count: 1</u></b>				
PD010	35th Ave And Papago Diversion Channel, Phoenix, AZ	33.4636	-112.1347	54 Inches	03/05/2024	
<b><u>PV-Paradise Valley</u></b>		<b><u>Count: 2</u></b>				
PV002	34th St And Lincoln Dr, Phoenix, AZ	33.5300	112.0000	48 Inches	07/12/2022	
PV004	35th St And Lincoln Dr, Phoenix, AZ	33.5300	112.0000	48 Inches	07/12/2022	

Outfall Id	Site Address	Latitude	Longitude	Drain Size	Last Inspection	Next Inspection
<b>SC-Skunk Creek</b>		<b>Count: 23</b>				
SC001	56th Ave And Union Hills Dr, Phoenix, AZ	33.6553	-111.8208	10x11 Feet	11/03/2021	2027
SC002	51st Ave And Skunk Creek, Near Norhtwest Bike Lane Off Bridge., Phoenix, AZ	33.6622	-111.8308	36 Inches	11/03/2021	2027
SC014	19640 N 47thAve Phoenix, AZ	33.6641	-112.1604	6 Feet	11/09/2021	2027
SC015	46th Dr And Behrend Dr, Phoenix, AZ	33.6650	-111.8397	6 Feet	11/09/2021	2027
SC016	19810 N 46thAve Phoenix, AZ	33.6659	-112.1596	6 Feet	11/09/2021	2027
SC025	27th Ln And Via Aquila, West Side, Phoenix, AZ	33.8072	-111.8800	4 x 2 Feet	11/15/2021	2027
SC027	Carefree Hwy And 27th Dr, Phoenix, AZ	33.7986	-111.8817	36 Inches	11/22/2021	2027
SC031	35th Dr And Soft Wind Dr, Phoenix, AZ	33.7017	-111.8644	30 Inches	11/16/2021	2027
SC037	Sc Wash And Sr101 Frontage Rd, Phoenix, AZ	33.6700	-111.8489	36 Inches	11/16/2021	2027
SC040	Via Puzzola And Via Del Deserto, Phoenix, AZ	33.8089	-111.8783	36 Inches	11/22/2021	2027
SC044	35th Ave And Parkside Ln, Phoenix, AZ	33.6939	112.1344	35 Inches	11/30/2021	2027
SC046	35206 N 27thDr Phoenix, AZ	33.8031	-112.1187	36 Inches	11/30/2021	2027
SC049	Pinnacle Peack Road And 40th Lane, Phoenix, AZ	33.6981	112.1472	62 Inches	12/02/2021	2027
SC050	South Side Of Pinnacle Peak Road At 40th Lane., Phoenix, AZ	33.6981	112.1475	60 Inches	12/02/2021	2027
SC052	Southside Of Pinnacle Peak Road Just Before 47th Avenue., Phoenix, AZ	33.6978	112.1592	54 Inches	12/02/2021	2027
SC053	Southside Of Pinnacle Peak Road Just Before 47th Avenue., Phoenix, AZ	33.6978	112.1594	48 Inches	11/29/2021	2027
SC054	Southside Of Pinnacle Peak Road Just Before 47th Avenue., Phoenix, AZ	33.6978	112.1594	42 Inches	11/29/2021	2027
SC055	Southside Of Pinnacle Peak Road And 51st Avenue., Phoenix, AZ	33.6978	112.1697	42 Inches	11/29/2021	2027
SC059	23620 N 45thAve Phoenix, AZ	33.7050	112.1567	24 Inches	11/29/2021	2027
SC061	Mariposa Grande And 45th Dr, Phoenix, AZ	33.7031	112.1569	10 Feet	12/20/2021	2027
SC064	Alamedia Road Between 43rd Ave And 45th Dr, Phoenix, AZ	33.7053	112.1553	24 Inches	12/01/2021	2027
SC065	44th Ln And W Misty Willow Ln, Phoenix, AZ	33.7039	112.1556	9 Feet	12/01/2021	2027
SC067	35th Avenue And Williams Drive, Phoenix, AZ	33.6909	-112.1360	56 Inches	12/20/2021	2027



Outfall Id	Site Address	Latitude	Longitude	Drain Size	Last Inspection	Next Inspection
<b>SR-Salt River</b>		<b>Count: 58</b>				
SR001	51st Ave And Salt River, Phoenix, AZ	33.4087	-112.1695	96 Inches	02/05/2024	2025 (2)
SR002	43rd Ave And Salt River, Phoenix, AZ	33.4124	-112.1515	90 Inches	06/10/2024	2025 (4)
SR003	35th Ave And Salt River, Phoenix, AZ	33.4119	-112.1347	75 Inches	05/30/2024	2025 (4)
SR004	27th Ave And Salt River, Phoenix, AZ	33.4178	-112.1169	72 Inches	02/06/2024	2025 (3)
SR005	25th Ave And Salt River, Phoenix, AZ	33.4169	-112.1131	102 Inches	09/09/2021	
SR006	22nd Ave And Salt River, Phoenix, AZ	33.4187	-112.1066	72 Inches	08/26/2021	
SR007	19th Ave And Salt River, Phoenix, AZ	33.4114	-112.0997	54 Inches	09/07/2021	
SR008	15th Ave And Salt River, Phoenix, AZ	33.4149	-112.0908	96 Inches	09/08/2021	2026
SR009	11th Ave And Salt River, Phoenix, AZ	33.4213	-112.0873	81 Inches	08/31/2021	2025
SR010	7th Ave And Salt River, Phoenix, AZ	33.4194	-112.0824	54 Inches	05/01/2024	2025 (4)
SR012	Central Ave And Salt River, Phoenix, AZ	33.4234	-112.0741	42 Inches	08/31/2021	2025
SR013	Central Ave And Salt River, Phoenix, AZ	33.4238	-112.0740	10 x 21 Feet	09/09/2021	2025
SR014	3rd St And Salt River, Phoenix, AZ	33.4224	-112.0695	36 Inches	08/31/2021	2026
SR015	3rd St And Salt River, Phoenix, AZ	33.4224	-112.0695	84 Inches	05/01/2024	2025 (4)
SR016	10th St And Salt River, Phoenix, AZ	33.4217	-112.0605	54 Inches	08/31/2021	2025
SR017	12th St And Salt River, Phoenix, AZ	33.4212	-112.0561	96 Inches	01/16/2024	
SR018	16th St And Salt River, Phoenix, AZ	33.4196	-112.0485	66 Inches	05/28/2024	
SR019	20th St And Salt River, Phoenix, AZ	33.4204	-112.0394	10 x 21 Feet	03/17/2020	
SR020	24th St And Salt River, Phoenix, AZ	33.4184	-112.0304	84 Inches	01/18/2024	2025 (3)
SR024	28th St And Salt River, Phoenix, AZ	33.4204	-112.0186	90 Inches	04/14/2020	
SR026	37th St And Salt River, Phoenix, AZ	33.4270	-112.0056	42 Inches	04/15/2020	
SR027	36th St And Salt River, Under Sky Harbor, Phoenix, AZ	33.4276	-112.0011	82 Inches	04/15/2020	
SR029	47th St And Salt River, Phoenix, AZ	33.4334	-111.9813	78 Inches	04/22/2020	2025
SR030	27th Ave And Salt River, Phoenix, AZ	33.4088	-112.1164	108 Inches	04/24/2024	2025 (4)
SR031	19th Ave And Salt River, Phoenix, AZ	33.4101	-112.1000	60 Inches	04/01/2020	
SR032	7th Ave And Salt River, Phoenix, AZ	33.4164	-112.0824	72 Inches	04/07/2020	
SR033	Central Ave And Salt River, Phoenix, AZ	33.4209	-112.0738	66 Inches	06/04/2024	
SR035	7th St And Salt River, Phoenix, AZ	33.4203	-112.0650	72 Inches	02/19/2020	
SR036	15th St And Salt River, Phoenix, AZ	33.4178	-111.9503	72 Inches	06/04/2024	
SR037	16th St And Salt River, Phoenix, AZ	33.4172	-112.0481	36 Inches	06/04/2024	
SR038	24th St And Salt River, Phoenix, AZ	33.4155	-112.0303	72 Inches	06/05/2024	
SR039	28th St And Salt River, Phoenix, AZ	33.4164	-112.0209	96 Inches	01/09/2024	2025 (4)
SR045	40th St And Salt River, Phoenix, AZ	33.4261	-111.9956	54 Inches	06/05/2024	
SR046	7th St And Salt River, Phoenix, AZ	33.4216	-112.0651	24 Inches	06/04/2024	
SR048	45th St And Salt River, Phoenix, AZ	33.4265	-111.9927	48 Inches	06/05/2024	

Outfall Id	Site Address	Latitude	Longitude	Drain Size	Last Inspection	Next Inspection
<b><u>SR-Salt River</u></b>		<b><u>Count: 58</u></b>				
SR049	67th Ave And Salt River, Phoenix, AZ	33.4001	-112.2042	96 Inches	09/19/2023	2025 (4)
SR052	52nd St And Hohokam Frwy, Phoenix, AZ	33.4370	-111.9729	8 x 5 Feet	06/05/2024	
SR056	28th St And Salt River, Phoenix, AZ	33.4199	-112.0199	36 Inches	04/14/2020	2025
SR059	25th Ave And Salt River, Phoenix, AZ	33.4167	-112.1131	60 Inches	03/27/2020	
SR061	32nd St And Salt River, Phoenix, AZ	33.4230	-112.0133	7 x 5 Feet	05/01/2024	2025 (4)
SR062	38th St And Salt River, Phoenix, AZ	33.4277	-112.0012	60 Inches	04/15/2020	2025
SR063	15th Ave And Salt River, Phoenix, AZ	33.4149	-112.0908	60 Inches	04/03/2020	2025
SR064	19th Ave And Salt River, Phoenix, AZ	33.4115	-112.0990	36 Inches	04/02/2020	2025
SR068	28th St And Salt River, Phoenix, AZ	33.4205	-112.0182	8 x 8 Feet	01/18/2024	2025 (4)
SR069	31st St And Salt River, Phoenix, AZ	33.4228	-111.9858	60 Inches	04/14/2020	2025
SR070	33rd St And Salt River, Phoenix, AZ	33.4236	-112.0125	36 Inches	04/15/2020	2025
SR071	33rd St And Salt River, Phoenix, AZ	33.4247	-112.0105	60 Inches	04/15/2020	2025
SR072	45th St And Salt River, Phoenix, AZ	33.4313	-111.9867	48 Inches	04/22/2020	2025
SR073	45th St And Salt River, Phoenix, AZ	33.4313	-111.9867	60 Inches	04/21/2020	2025
SR075	43rd Ave And Broadway Rd, Phoenix, AZ	33.4038	-112.1514	10 Feet	03/24/2020	
SR076	43rd Ave And Broadway Rd, Phoenix, AZ	33.4041	-112.1509	48 Inches	03/24/2020	
SR079	35th Ave And Salt River, Phoenix, AZ	33.4096	-112.1343	42 Inches	03/25/2020	
SR080	51st Ave And Salt River, Phoenix, AZ	33.4043	-112.1691	42 Inches	03/23/2020	
SR082	75th Ave S/O Broadway Rd, Phoenix, AZ	33.3961	-112.2205	84 Inches	02/27/2020	
SR083	83rd Ave And Salt River, Phoenix, AZ	33.3861	-112.2315	16 Inches	09/19/2023	2025 (4)
SR084	Sw Corner Of The 153 Expressway And The Salt River, Phoenix, AZ	33.4309	-111.9801	72 Inches	04/22/2020	2025
SR088	31st Ave. And Salt River, Phoenix, AZ	33.4080	-112.1248	30 Inches	09/21/2023	2025 (4)
SR089	31st And Salt River, Phoenix, AZ	33.4080	-112.1248	11 Feet	09/19/2023	2025 (4)
<b><u>ST-Sweetwater Tributary of Indian Bend Wash</u></b>		<b><u>Count: 1</u></b>				
ST004	Sweetwater Ave And 35th St, Phoenix, AZ	33.6042	112.0060	36 Inches	07/06/2022	

Outfall Id	Site Address	Latitude	Longitude	Drain Size	Last Inspection	Next Inspection
<b><u>SW-Scatter Wash</u></b>		<b><u>Count: 10</u></b>				
SW001	33rd Ave And Deer Valley Rd, Phoenix, AZ	33.4000	-112.0700	54 Inches	01/03/2022	
SW006	43rd Ave And Behrend Dr, Phoenix, AZ	33.6650	-111.8481	36 Inches	01/19/2022	
SW009	21041 N 33rdAve Phoenix, AZ	33.6775	-112.1300	8 Feet	01/24/2022	
SW011	33rd Ave And Deer Valley Rd, Phoenix, AZ	33.4100	-112.0700	36 Inches	01/24/2022	
SW015	38th Ave And Beardsley Rd, Phoenix, AZ	33.6689	-111.8592	96 Inches	02/03/2022	
SW019	31st Dr And Deer Valley Rd, Phoenix, AZ	33.4100	-112.0700	36 Inches	01/03/2022	
SW026	31st Ave And Deer Valley Rd, Phoenix, AZ	33.4100	-112.0700	36 Inches	02/14/2022	
SW032	22125 SandsDr Phoenix, AZ	33.6867	-112.1190	53 Inches	02/08/2022	
SW037	35th Avenue And Mohawk Lane, Phoenix, AZ	33.6722	-112.1353	48 Inches	02/03/2022	
SW040	35th Avenue And Mohawk Lane, Phoenix, AZ	33.6720	-112.1348	42 Inches	08/31/2023	
<b><u>TD-Tempe Drainage Channel</u></b>		<b><u>Count: 3</u></b>				
TD008	3402 S 40thSt Phoenix, AZ	33.4160	-111.9961	36 Inches	08/28/2023	
TD010	3425 S 40thSt Phoenix, AZ	33.4158	-111.9944	18 Inches	06/25/2024	
TD013	3402 E IlliniSt Phoenix, AZ	33.4127	-112.0083	24 Inches	06/25/2024	
<b><u>TS-Tenth Street Wash</u></b>		<b><u>Count: 2</u></b>				
TS002	11421 N Cave CreekRd Phoenix, AZ	33.5885	-112.0455	48 Inches	09/21/2021	2027
TS007	1425 E Desert CoveRd Phoenix, AZ	33.5847	-111.9489	36 Inches	09/22/2021	2027
<b><u>ZT-Emile Zola Tributary of Indian Bend Wash</u></b>		<b><u>Count: 1</u></b>				
ZT002	33rd Pl And Emile Zola Ave, Phoenix, AZ	33.6078	-111.9897	46 Feet	09/20/2021	2027

## **APPENDIX E**

### **ENFORCEMENT RESPONSE PLAN**



Water Services Department  
Environmental Services Division  
Stormwater Management Section  
2474 South 22<sup>nd</sup> Avenue  
Phoenix, Arizona 85009

Effective Date: APR 27 2023

**STANDARD OPERATING PROCEDURE**

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**Stormwater Enforcement Response Plan**

**Document Number: 6021R8I**

Prepared/Revised by:	<b>James Mendez</b> <small>Digitally signed by James Mendez Date: 2023.04.27 08:53:05 -07'00'</small>	Date: <u>4/27/2023</u>
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Reviewed by:	<b>Marcos Cordova</b> <small>Digitally signed by Marcos Cordova Date: 2023.04.25 12:38:16 -07'00'</small>	Date: <u>4/25/2023</u>
	Chief Water Quality Inspector	
Reviewed by:	<b>Kerri Keller</b> <small>Digitally signed by Kerri Keller Date: 2023.04.27 09:47:10 -07'00'</small>	Date: <u>4/27/2023</u>
	Quality Assurance Manager	
Approved by:	<b>Christine Nuñez</b> <small>Digitally signed by Christine Nuñez Date: 2023.04.27 09:57:28 -07'00'</small>	Date: <u>4/27/2023</u>
	Environmental Programs Coordinator	

## Stormwater Enforcement Response Plan

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## Stormwater Enforcement Response Plan

- 1.0 Purpose
  - 1.1 The purpose of the Stormwater Enforcement Response Plan (ERP) SOP is to provide procedures for initial compliance actions and escalation of enforcement of the Stormwater Quality Protection ordinance under Chapter 32C of the Phoenix City Code.
  - 1.2 This document provides guidance to staff for enforcement response procedures following complaints and facility inspections. Illicit discharge investigations may also utilize this SOP, as appropriate.
  - 1.3 This SOP describes staff actions and time frames for escalating enforcement to achieve compliance with Chapter 32C of the Phoenix City Code. Staff must use professional judgment when evaluating unique situations and determining appropriate response options.
  - 1.4 Changes to this document are outlined in Appendix A.
- 2.0 Responsibilities
  - 2.1 Water Quality Inspectors/Senior Water Quality Inspector (WQI/SWQI) are responsible to follow the procedures outlined in this document in consultation with the Chief Water Quality Inspector (CWQI) and Environmental Programs Coordinator (EPC). The CWQI and SWQIs will train and guide WQIs in appropriate enforcement responses. WQI/SWQI are required to thoroughly document observed conditions at the facility and/or complaint site and provide a monthly update of the status of the inspection as required by A.R.S §9-833.H. WQI/SWQI are also required to keep updated records of all communications with facility or property representatives and make appropriate entries into the database.
  - 2.2 The CWQI is responsible for monitoring adherence to the procedures described in this , providing guidance or direction for complaints and enforcement actions as necessary to the WQI/SWQI, and for interacting with the EPC and legal counsel on enforcement escalation.
  - 2.3 The EPC is responsible for arranging consultations with legal counsel concerning escalated enforcement actions and for providing guidance or direction for complaints and enforcement actions to all stormwater staff as necessary.
  - 2.4 The Environmental Quality Specialist (EQS) is responsible for providing relevant details to enforcement in the Stormwater Annual Report.
- 3.0 Safety and Precautions

There are no hazards associated with this procedure.
- 4.0 Job Planning
  - 4.1 All staff will review this SOP and complete the “Read and Understood” form.
  - 4.2 It is critical that all staff maintain complete and accurate records of inspections, correspondence, and communications with the facility or property representative to support future enforcement.
- 5.0 Procedures
  - 5.1 To ensure the facility or property is brought to compliance progressive enforcement steps are presented in this section. The severity of the compliance or extent of failure to implement

best management practices, recalcitrance, history of repeat violations, and/or other evidence of bad faith will be considered in determining the level of enforcement response. WQI/SWQI, in consultation with the CWQI, will evaluate the individual facility information to determine the appropriate enforcement option. With the approval of the EPC, specific progressive enforcement steps may not be applicable. All compliance letters are transmitted via Certified Mail or hand-delivered when necessary, except for the Closure Letter and Status Letter, which are sent regular mail. For stormwater complaint inspections, the WQI/SWQI will search the database for previous complaints associated with the property address or responsible party.

## 5.2 Industrial/Commercial Facility Enforcement

5.2.1 Informal and formal enforcement actions may be initiated for an industrial or commercial facility following routine Illicit Discharge Detection and Elimination (IDDE) and complaint compliance inspections. See Facility Inspections SOP 6003 for routine facility inspection procedures and the Complaint Investigation SOP 6013 for complaint inspection procedures. Documentation requirements for all enforcement actions are provided in Section 7 of this SOP. Informal actions and requirements may be documented on the inspection form. If the requirements are not addressed during the inspection, a formal inspection letter must be mailed no later than 30 days from the date of the inspection.

5.2.2 A verbal warning is a verbal exchange between the WQI/SWQI and the facility representative and is used ONLY during a complaint investigation or a less-serious IDDE investigation where no requirements are issued. Results of complaint investigations are documented per the procedures in the Stormwater Complaint Investigation SOP 6013.

During a complaint investigation, no letter is written if the facility has corrected the problem immediately and the WQI/SWQI has observed the corrective action and deems it appropriate. However, a complaint inspection report may be warranted to document the findings of the inspection, especially if the inspection results in requirements. WQI/SWQI should check with the CWQI if a complaint inspection report is required.

5.2.3 The Compliance Inspection Letter details concerns noted during the industrial/commercial facility inspection process. The facility inspection process, including the issuance of the Compliance Inspection Letter, is described in the Facility Inspections SOP 6003. Facility inspections typically have a 30-day compliance time-frame. Issuing a Compliance Inspection Letter with requirements is considered an informal enforcement action.

5.2.4 A Notice of Violation (NOV) typically requires compliance within fourteen (14) calendar days. An NOV is issued to a facility:

- If the facility fails to correct compliance issues identified in the Compliance Inspection Letter.
- When compliance issues are critical, or human health or the environment is threatened.
- If the inspection reveals issues that are considered a violation of the City's Municipal Separate Storm System (MS4) permit.

The NOV is prepared by the WQI/SWQI and reviewed and signed by the CWQI or designee.

5.2.5 A Field NOV requires the facility to immediately cease and desist further discharge and provides a date that corrective actions such as cleanup or repairs must be conducted.

The WQI/SWQI may issue a Field NOV to a facility observed actively discharging a pollutant to the MS4 or if there is clear evidence of a recent discharge of a pollutant to the storm drain



system. Field NOVs are not issued for administrative violations (e.g., failure to have a Stormwater Management Plan). In this situation, a compliant inspection report may be appropriate.

- 5.2.6 Show Cause Proceeding: For situations where prior enforcement actions have failed to produce compliance or a reasonable commitment to attain compliance by an established deadline, or at the discretion of the EPC, a meeting will be scheduled. A Show Cause letter will be sent to the facility, establishing a date, time, and location for a meeting between the facility representative(s) and representatives of the City of Phoenix (City). The City's representatives will include the CWQI, EPC, and representative of the Law Department, and in most instances the WQI/SWQI.
- 5.2.6.1 During the Show Cause Proceeding, the City will present evidence establishing the facility's non-compliance. The City will give an overview of the stormwater program, review the compliance issues, prior activities, explain the City enforcement policy, and identify the assessed penalties for non-compliance. The EPC, Law, or Deputy Director will negotiate to reach an agreement on the required compliance activities and the amount of civil sanctions/fines will be assessed. The CWQI will take meeting notes and prepare the meeting minutes. The terms of this agreement will be documented in a Show Cause Proceeding Meeting Minutes memorandum to the file.
- 5.2.6.2 Guidelines for creating a packet for use by City Personnel and the Law Department are found in Exhibit 1. These packets are for City use only and are not intended to be provided to the Facility Representative(s).
- 5.2.6.3 After the Show Cause Proceeding, the Law Department will prepare a draft of the Stormwater Settlement Agreement that details the terms of the agreement reached. The Stormwater Settlement Agreement is signed by the Water Services Director and the facility representative authorized to enter into the agreement. A copy of the Stormwater Settlement Agreement is filed in the facility file and associated compliance dates are entered into the database. A pdf copy of the final settlement agreement should be entered into the database as an attachment.
- 5.2.7 If the violation is intentional or threatens human health or the environment, and the facility does not achieve substantial compliance with the stormwater requirements, a Civil Citation with the Phoenix Municipal Court may be filed. Depending on the situation, a Civil Citation may be issued in lieu of a Show Cause Proceeding. The CWQI will consult with the EPC and Law to determine if a Civil Citation is appropriate.
- 5.2.8 When all elements of enforcement action are met, a Closure Letter will be issued. This letter will inform the individual or facility that they have addressed the issues identified during the inspection and that no additional action is required.
- 5.2.8.1 A facility inspection with no requirements can be closed when the Facility Inspection Report is issued, noting that no additional actions are required.
- 5.2.8.2 A facility investigation can be closed if the facility has resolved all stormwater requirements. The WQI/SWQI prepares the closure memo. No letter is generated for non-operational facilities.
- 5.2.9 WQI/SWQI will conduct a full inspection at industrial/commercial facilities that have repeat complaints in one year or a complaint with conditions that warrant a full inspection. Enforcement actions follow the same procedures as a routine inspection.
- 5.2.10 The Stormwater Management Section's goal is to close 90% of compliance cases within one year of inspection. The MS4 Permit requires 80% of all inspections to be fully resolved within

- one year, facilities required to construct or install extensive structural best management practices or facilities required to pay substantial fines may be offered a compliance schedule by the City. A compliance schedule breaks down the work to be conducted into an enforceable sequence of actions (or payments), with the ultimate result of compliance with the Phoenix City Code Chapter 32C. The Stormwater Management Section may consider a compliance schedule when dealing with companies that conduct a large number of operations outdoors and/or store a large amount of material outdoors (such as scrap yards). WQI/SWQI must discuss with the CWQI any inspections that have not been resolved within six months of the inspection date.
- 5.2.11 If a facility's compliance exceeds 30 days, a written or electronic "update of action resulting from on-site inspection" letter must be sent per A.R.S. 9-833(H). This is referred to as a status letter. The status letter is intended to inform the facility of the current status of compliance process, and to remind them of any impending due dates. A new status letter must be generated and sent to the business monthly until all compliance issues are resolved. For businesses without reliable physical or electronic mail service, these letters may be hand delivered.
- The WQI/SWQI may request the facility to provide a proposed list of actions and time-frame for completion in the facility's response to the Compliance Inspection Letter. The WQI/SWQI reviews the proposed list of actions and time-frames for completion and determines if they are acceptable. If they are not acceptable, the WQI/SWQI can request the facility to meet to negotiate a more agreeable list of actions and time frames. If they are acceptable, the WQI/SWQI incorporates the list of actions and time frames into a compliance schedule issued to the facility. Missing a time-frame is cause for initiating escalated enforcement to the facility. However, any compliance schedule exceeding nine months should proceed to a Show Cause Proceeding.
- 5.2.12 A Flowchart showing typical enforcement process and timeline is included in Exhibit 2.
- 5.3 Residential Complaint Enforcement
- 5.3.1 A Verbal Warning is a verbal exchange between an WQI/SWQI and the resident, and is ONLY used during a complaint investigation where no requirements are necessary. Results of complaint investigations are documented according to the procedures in the Stormwater Inquiry and Complaint Investigation SOP 6013.
- During an complaint investigation, a letter is not typically written if the resident has corrected the problem immediately, the WQI/SWQI observed the corrective action, and deems it appropriate. The WQI/SWQI may also direct the resident to correct the compliance issue within a given time-frame (generally fourteen calendar days or less) using an informal enforcement action. If the WQI/SWQI requires an action by a specific date then a follow-up complaint inspection is required and a complaint inspection report may be warranted. If the resident fails to correct the compliance issue after the first follow-up visit, an inspection letter should be written by the WQI/SWQI .
- 5.3.2 An WQI/SWQI may issue a Field NOV for discharges that could adversely affect human health or the environment or are a violation of Chapter 32C. Examples of such discharges include, oils, paint, hazardous chemicals, or green (algal bloom) pool water.
- 5.3.3 An informational letter is written to advise residents of stormwater requirements. An example of this type of letter is a Neighborhood Letter, used when multiple residents are discharging pool water to a wash behind their properties. An informational letter is considered outreach and generally does not have actions associated with a time-frame. Informational flyers may also be used to educate residents about pollution prevention best management practices.

5.3.4 A Residential Complaint Investigation Letter may be sent to the resident if they fail to comply with the standard guidance information provided during the complaint investigation. A 30-day compliance time-frame is typically specified.

5.3.5 If the resident fails to comply with the Residential Complaint Investigation Letter or the non-compliance is substantial, a Notice of Violation (NOV) or field NOV may be issued (See Section 5.2.5). The CWQI, EPC, and Deputy Director should be consulted along with the Law Department.

#### 5.4 Monetary Assessments

5.4.1 Potential monetary assessments include the sum of civil penalties and reimbursement of City costs (see Section 6.0).

5.4.2 Under Phoenix City Code Chapter 32C, the City is authorized to collect monetary sanctions of not less than \$50 or more than \$2,500 per violation per day. The purpose of assessing penalties is to deter potential violators of Chapter 32C, provide fair and equitable treatment to all MS4 users, and facilitate swift resolution of environmental problems.

Any civil sanction associated with stormwater violations should reflect the seriousness, frequency, and persistence of each violation.

5.4.2.1 This section of the SOP is intended for use by City personnel for settlement purposes and does not create any rights or obligations nor should it be used or relied upon by non-city personnel for any purpose. The City reserves the right to act at variance with this SOP and to change it at any time. Civil penalties may be considered under the following circumstances:

- As the result of a field NOV (in rare situations)
- When an active discharge is observed by an WQI/SWQI or clearly documented by others
- Failure to discontinue a prohibited action(s) after being made aware of non-compliance
- Failure to comply with the written requirements or time-frames specified in a NOV or other Administrative Order (such as a Stormwater Settlement Agreement)
- Damage to City property (including streets, gutters, right-of-way property, municipal storm drains, washes, rivers, etc.) from a prohibited activity
- Injury to City personnel caused by a prohibited activity
- Any other situation in which the City believes civil sanctions are necessary or legal action is contemplated relating to the Stormwater Program.

5.4.2.2 The base amount of the civil penalty can be increased (not to exceed \$2,500 per violation per day), decreased (but not less than \$50 per violation per day), or remain the same after consideration of the seriousness of the violation, any history of such violation, any good faith efforts to comply with the applicable requirements, the economic impact of the penalty on the violator, and such other factors as justice may require.

#### 6.0 Calculations

- 6.1 Violations Entry Sheet Table 2 is a spreadsheet that contains the formulas for calculating penalties. Fines cannot exceed \$2,500 per day per violation. Outstanding compliance issues that are listed in the section of the table titled “Miscellaneous Sanctions” have penalties that are multiplied by the number of days of violation. For most facilities, the first day of violation is the submittal due date included in the Compliance Inspection Letter. This blank Excel spreadsheet is included in the S drive. Stormwater/inspections-Enforcements/Show cause.
- 6.2 Outstanding compliance issues that are listed under the “Discharge to Storm Drain System: Dominant Pollutant” and the “Discharge to Storm Drain System: Material with Potential to Cause Blockage” sections on Table 2. Each occurrence of a discharge is considered a separate offense. The penalty is multiplied by the number of offenses. A copy of penalty calculations is included in the facility file.
- 6.3 Any costs associated with the violation(s), such as sampling, analysis, investigation, surveillance, harm done to the environment, or damage to City infrastructure are not included in the amount of the calculated penalty. Rather, these costs are separate and distinct from civil penalties and can be recovered under the authorities identified in various sections of the Phoenix City Code, including Chapter 32C, and other laws.
- 6.4 Facility instructions for submittal of monetary assessments are included in the Stormwater Settlement Agreement. Monetary assessments are submitted to the Law Department for processing.
- 6.5 The WQI/SWQI will consult with the Law Department before including any material in the facility file that relates to a pending court action. All staff shall document all conversations or correspondence with the facility, providing appropriate information to the Law Department.
- 7.0 Documentation and Reporting
- 7.1 Documentation concerning the facility is attached to facility file, including information collected during the complaint or routine inspection (see Complaint Investigation SOP 6014 and Facility Inspections SOP 6003). The Closure Letter, Compliance Inspection Letter, NOV, field NOV, Show Cause Meeting letter, Closure letter, and/or Residential Complaint Investigation letter should all be included when applicable. If the letter is sent via Certified Mail, the Certified Mail receipts are stapled to the back of the first page of the letter as they are received. Copies of the signed correspondence (e.g., inspection letter, NOV, etc.) should also be included as an attachment to the database.
- 7.2 Copies of correspondence sent to the facility are saved in the S drive under S:/Stormwater/Documents current FY/ according to the type of letter issued. All violations and enforcement actions, including the correspondence date and required response date are entered into the database. If a Compliance Schedule has been developed, the submittal due dates (and date resolved) are entered into the database.
- 7.3 The correspondence log (for telephone calls) and any correspondence received from the facility (including copies of email) are included in the facility file. Telephone calls and correspondence received from the facility are also entered into the database.
- 7.4 Once a facility investigation is closed, the WQI/SWQI files the facility folder in the Stormwater file area. If the facility is no longer in operation, file the facility folder in the “inactive files” area of the Stormwater files. If the facility is still in operation, the WQI/SWQI files the facility folder in Stormwater Management Section’s main facility file area.
- 7.5 Enforcement information is reported to ADEQ in the Annual Report.

- 7.6 Forms used to document the activity performed according to this SOP are shown in Table 1.
- 8.0 References
- 8.1 Phoenix City Code Section 32C
- 8.2 Stormwater Section, Quality Assurance Plan, Document Number 12153, current version.
- 8.3 Stormwater Section, Inquiry and Complaint Investigation SOP, Document 6013, current revision.
- 8.4 Facility Inspections SOP, Document 6003, current revision.
- 8.5 Municipal Separate Storm Sewer System (MS4) Permit, AZS000003, current version.

**Table 1**

**Referenced Forms and Spreadsheets**

Form Number	Title
148-17D	Field NOV Form
6000R0wks	Penalty Calculation Worksheet spreadsheet

**Table 2**

**1.1 Instructions for Violation Entry Sheet**

1. Place an "x" in the yellow box next to the violation type and quantity being assessed. Leave the other yellow boxes blank.
2. If any of the violation categories was "Discharge to Storm Drain System", enter the number of discharge occurrences for each type of discharge in the blue boxes.
3. If there were costs to the city to recover, enter the amount in the orange box.
4. Click on the "Penalty Calculation Sheet" tab at the bottom of the spreadsheet to enter additional information

**1.2 VIOLATION ENTRY SHEET**

DISCHARGE TO STORM DRAIN SYSTEM: DOMINANT POLLUTANT	DISCHARGE OCCURRENCE S	Discharge <55 gal	Discharge >55 gal	Any Quantity
Any "unauthorized" discharge (1)	1	x \$100.00	\$1,500.00	
Organic matter (2)	1			x \$200.00
Septic/sanitary waste (3)	1	x \$250.00	\$2,500.00	
Construction debris (4)	1		x	\$500.00
Any substance that may cause a blockage (5)	1		x	\$1,000.00
Acids and bases (6)	1	x \$1,000.00	\$2,500.00	
Petroleum products (7)	1	x \$1,500.00	\$2,500.00	
Other pollutant not covered above (8)	1			x \$2,500.00

MISCELLANEOUS SANCTIONS		BASE PENALTY PER DAY
Failure to develop and/or submit a SWMP or SWPPP or other required documentation by deadline.	x	\$100.00
Failure to implement Best Management Practice(s)	x	\$100.00
Failure to submit sampling reports, inspection reports or other requested information	xx	\$100.00

CITY COSTS		
Other costs to city (9)	x	Enter total costs: \$300.00

- <sup>1</sup>Any discharge into the public storm drain system not consisting entirely of stormwater which is not listed elsewhere.
- <sup>2</sup>Substances partially or entirely consisting of material derived from an organism.
- <sup>3</sup>Substances typically treated at a waste water treatment plant.
- <sup>4</sup>Debris or material originating from a site of construction activity. <sup>5</sup>Blockages occur when a substance or material may inhibit the flow of stormwater through any part of the Public Storm Drain System, as defined in Sec. 32C-101.
- <sup>6</sup>Substances labeled as 'Acids' and 'Bases' or any substances with pH of 6.0 or less and a pH of 9.5 or greater
- <sup>7</sup>Petroleum products include gasoline, diesel gasoline, kerosene, jet fuels, and other petroleum based products used to run equipment.
- <sup>8</sup>Pollutants including chemicals, pesticides, herbicides, dissolved metals, other hazardous materials as defined in 29 CFR 1910.1200, 40 CFR 355, and 49 CFR 171.8, and hazardous wastes as defined in 40 CFR 261.3.
- <sup>9</sup>Costs incurred to the City associated with Chapter 32C violations required to be recouped from responsible party.

## Appendix A

### Procedural Changes Narrative

The following changes have been incorporated into this revision:

Location	Description
Throughout	Changed inspectors to WQI/SWQI
2.2	Added “to the WQI/SWQI, and for interacting with the EPC and legal counsel on enforcement escalation” to the end.
2.3	Added “to all stormwater staff” to the last sentence
2.4	Added for clarification “to enforcement”
4.2	Changes “inspector” to “all staff” since this is required for all
5.1	Restructure the section for easier reading
Section 5.2 all parts	Minor edits for clarification or reading improvement
5.2.4	Added a bullet “If the inspection reveals issues that are considered a violation of the City’s Municipal Separate Storm System permit.”:
Section 5.3 all parts	Minor edits for clarification or reading improvement





**City of Phoenix**  
 WATER SERVICES DEPARTMENT  
 ENVIRONMENTAL SERVICES DIVISION

**“Read and Understand Form”**

Document Title: Stormwater Enforcement Response Plan

Document/Revision Number: 6021R81

Quick Fix Number: n/a Quick Fix Effective Date: n/a

I have received, agree to read, and will ask any questions I may have. I will adhere to the policies and procedures for the document identified above.

Staff Name (Print)	Staff Signature	Date
Rocky Orosco	Rocky Orosco <small>Digitally signed by Rocky Orosco Date: 2023.04.27 12:50:29 -07'00'</small>	4/27/23
Tobias Estrada	Tobias Estrada <small>Digitally signed by Tobias Estrada Date: 2023.04.27 14:41:54 -07'00'</small>	4/27/23
Patrick Anderson	Patrick Anderson <small>Digitally signed by Patrick Anderson Date: 2023.04.27 14:45:43 -07'00'</small>	4/27/2023
Joel Zurita	Joel Zurita <small>Digitally signed by Joel Zurita Date: 2023.04.27 15:05:46 -07'00'</small>	4/27/2023
Edwin Villalobos	Edwin Villalobos <small>Digitally signed by Edwin Villalobos Date: 2023.04.27 15:36:46 -07'00'</small>	4/27/2023
James Mendez	James Mendez <small>Digitally signed by James Mendez Date: 2023.04.27 16:24:48 -07'00'</small>	4/27/2023
Mike Vega	Michael Vega <small>Digitally signed by Michael Vega Date: 2023.05.02 07:13:33 -07'00'</small>	4/27/2023
Jeffrey Dooley	Jeffrey Dooley <small>Digitally signed by Jeffrey Dooley Date: 2023.05.02 07:28:38 -07'00'</small>	5/02/2023
Robert Rivera	Robert Rivera <small>Digitally signed by Robert Rivera Date: 2023.05.08 07:18:14 -07'00'</small>	5/8/2023
Jessica Henderson	Jessica Henderson <small>Digitally signed by Jessica Henderson Date: 2023.05.08 07:40:55 -07'00'</small>	5/8/2023

Supervisor's Initials: Marcos Cordova  
Digitally signed by Marcos Cordova  
Date: 2023.05.09 09:44:40 -07'00' Date: 5/09/2023

Supervisor's Initials: \_\_\_\_\_ Date: \_\_\_\_\_

Supervisor's Initials: \_\_\_\_\_ Date: \_\_\_\_\_

\*Original RAU filed in archive with document.

Scanned/Attached to document: Initials: K.P. Date: 5/9/23

## **APPENDIX F**

### **INVENTORY OF MUNICIPAL FACILITIES AND OPERATIONS**

**Appendix F**  
**City of Phoenix Municipal Inventory of Facilities with a Potential to Release Pollutants to Stormwater**

City facility	Address	SIC Code (best fit for services at facility)	Operating Status	Latitude - Degrees	Latitude - Minutes	Latitude - Seconds	Longitude - Degrees	Longitude - Minutes	Longitude - Seconds	Facility Contact	Brief Description of Activities of Concern (use letter codes A-N on second worksheet tab. If O (other), please specify.)
Aviation Deer Valley Airport Maintenance Center	702 W. Deer Valley Road	4581	Operational	33	41	3.27	112	4	58.62	Lisa Farinas	A,B,C,D,E,G,H,J,F,L,N
Aviation Sky Harbor Terminal 2, 3, and 4, all applicable buildngs	3400 E. Sky Harbor Blvd.	4581	Operational	33	26	7.62	112	0	31.42	Lisa Farinas	A,B,C,D,E,G,H,J,F,L,N
Convention Center CCEG HVAC	601 E. Washington	7521	Operational	33	26	51.17	112	3	58.96	David Whetton	A,D,F,G
Convention Center Herberger Theater (ES)	222 E. Monroe	6512	Operational	33	27	3.49	112	4	14.58	David Whetton	B,F,G
Convention Center North building	150 N. 5th St.	6512	Operational	33	26	57.75	112	4	7.37	David Whetton	A,B,D,E,F,G
Convention Center Orpheum Basement (BT) and Production Services (PS)	203 W. Adams Street	6512	Operational	33	26	56.33	112	4	36.57	David Whetton	F,G
Convention Center South Building	20 S. 5th Street	6512	Operational	33	26	50.64	112	4	6.45	David Whetton	A,B,D,E,F,G
Convention Center Symphony Hall	225 E. Adams Street	6512	Operational	33	26	56.17	112	4	14.07	David Whetton	A,F,G
Convention Center West Building	100 N. 3rd Street	6512	Operational	33	26	58.02	112	4	14.01	David Whetton	A,B,D,F,G
Fire Operations Center	150 S. 12th Street	9224	Operational	33	26	44.63	112	3	25.23	Jeff Schripsema	B,C
Fire Special Operations	2450 S. 22nd Ave	9224	Operational	33	25	28.57	112	6	25.56	Jeff Schripsema	A,D,E,F,G
Fire Station 01	323 N. 4th Avenue	9224	Operational	33	27	8.44	112	4	43.20	Jeff Schripsema	B,C,D,E,F,G
Fire Station 03	1257 W. Pierce	9224	Operational	33	25	28.57	112	5	26.86	Jeff Schripsema	B,C,D,E,F,G
Fire Station 04	1601 N. 3rd Avenue	9224	Operational	33	27	58.01	112	4	40.64	Jeff Schripsema	B,C,D,E,F,G
Fire Station 05	1840 E. Cambridge Ave.	9224	Operational	33	28	39.93	112	2	30.16	Jeff Schripsema	B,C,D,E,F,G
Fire Station 06	368 W. Apache Street	9224	Operational	33	25	49.30	112	4	48.55	Jeff Schripsema	B,C,D,E,F,G
Fire Station 07	403 E. Hatcher	9224	Operational	33	34	16.04	112	4	4.90	Jeff Schripsema	B,C,D,E,F,G
Fire Station 08	1025 E. Polk	9224	Operational	33	27	9.16	112	3	33.58	Jeff Schripsema	B,C,D,E,F,G
Fire Station 09 & WSD Odor Control Station 84	330 E. Fairmount Street	9224/4952	Operational	33	29	35.82	112	4	6.05	Jeff Schripsema/Lynn Ogata	B,C,D,E,F,G,L
Fire Station 10	2731 N. 24th Drive	9224	Operational	33	28	46.23	112	6	39.66	Jeff Schripsema	B,C,D,E,F,G
Fire Station 11	2727 E. Roosevelt	9224	Operational	33	27	29.43	112	1	22.16	Jeff Schripsema	B,C,D,E,F,G
Fire Station 12	4243 N. 32nd Street	9224	Operational	33	29	34.88	112	0	44.45	Jeff Schripsema	B,C,D,E,F,G
Fire Station 13	2828 N. 47th Place	9224	Operational	33	28	46.22	111	58	43.44	Jeff Schripsema	B,C,D,E,F,G
Fire Station 14	1330 N. 32nd Avenue	9224	Operational	33	27	50.29	112	7	39.10	Jeff Schripsema	B,C,D,E,F,G
Fire Station 15	4730 N. 43rd Avenue	9224	Operational	33	30	22.89	112	9	6.93	Jeff Schripsema	B,C,D,E,F,G
Fire Station 16	1414 E. Mohave	9224	Operational	33	25	54.49	112	3	6.02	Jeff Schripsema	B,C,D,E,F,G
Fire Station 17	1531 E. Missouri	9224	Operational	33	30	58.40	112	2	53.96	Jeff Schripsema	B,C,D,E,F,G
Fire Station 18	5019 N. 23rd Avenue	9224	Operational	33	30	37.21	112	6	28.19	Jeff Schripsema	B,C,D,E,F,G
Fire Station 19	3547 E. Sky Harbor Blvd.	9224	Operational	33	26	3.25	112	0	20.50	Jeff Schripsema	B,C,D,E,F,G
Fire Station 20	726 W. Glendale Avenue	9224	Operational	33	32	19.79	112	5	0.67	Jeff Schripsema	B,C,D,E,F,G
Fire Station 21	1212 S. 27th Avenue	9224	Operational	33	26	10.48	112	7	3.52	Jeff Schripsema	B,C,D,E,F,G
Fire Station 22	230 E. Roeser Road	9224	Operational	33	23	59.88	112	4	12.67	Jeff Schripsema	B,C,D,E,F,G

**Appendix F**  
**City of Phoenix Municipal Inventory of Facilities with a Potential to Release Pollutants to Stormwater**

City facility	Address	SIC Code (best fit for services at facility)	Operating Status	Latitude - Degrees	Latitude - Minutes	Latitude - Seconds	Longitude - Degrees	Longitude - Minutes	Longitude - Seconds	Facility Contact	Brief Description of Activities of Concern (use letter codes A-N on second worksheet tab. If O (other), please specify.)
Fire Station 23	4416 S. 32nd Street	9224	Operational	33	24	21.37	112	0	47.21	Jeff Schripsema	B,C,D,E,F,G
Fire Station 24	2602 N. 43rd Avenue	9224	Operational	33	28	37.57	112	9	7.47	Jeff Schripsema	B,C,D,E,F,G
Fire Station 25	4010 N. 63rd Avenue	9224	Operational	33	29	36.77	112	11	44.07	Jeff Schripsema	B,C,D,E,F,G
Fire Station 26	3301 W. Rose Lane	9224	Operational	33	31	37.81	112	7	49.06	Jeff Schripsema	B,C,D,E,F,G
Fire Station 27	12449 N. 32nd Street	9224	Operational	33	36	1.58	112	0	45.96	Jeff Schripsema	B,C,D,E,F,G
Fire Station 28	7409 S. 16th Street	9224	Operational	33	22	45.40	112	2	48.56	Jeff Schripsema	B,C,D,E,F,G
Fire Station 29	3949 E. Air Lane	9224	Operational	33	26	33.77	112	59	48.53	Jeff Schripsema	B,C,D,E,F,G
Fire Station 30	2701 W. Belmont Ave	9224	Operational	33	32	56.22	112	7	3.31	Jeff Schripsema	B,C,D,E,F,G
Fire Station 31	5730 E. Thunderbird Road	9224	Operational	33	36	42.80	111	57	26.96	Jeff Schripsema	B,C,D,E,F,G
Fire Station 32	7620 S. 42nd Place	9224	Operational	33	22	36.87	111	59	33.80	Jeff Schripsema	B,C,D,E,F,G
Fire Station 33	2409 W. Cactus Road	9224	Operational	33	35	46.13	112	6	38.42	Jeff Schripsema	B,C,D,E,F,G
Fire Station 35	646 E. Paradise Lane	9224	Operational	33	37	59.91	112	3	57.33	Jeff Schripsema	B,C,D,E,F,G
Fire Station 36	21602 N. 9th Avenue	9224	Operational	33	40	55.09	112	5	8.33	Jeff Schripsema	B,C,D,E,F,G
Fire Station 37	16602 N. 40th Street	9224	Operational	33	38	14.56	111	59	47.53	Jeff Schripsema	B,C,D,E,F,G
Fire Station 38	5002 E. Warner Road	9224	Operational	33	19	58.48	111	58	42.76	Jeff Schripsema	B,C,D,E,F,G
Fire Station 39	2276 W. Southern Avenue	9224	Operational	33	23	33.32	112	6	26.71	Jeff Schripsema	B,C,D,E,F,G
Fire Station 40	3838 N. 83rd Avenue	9224	Operational	33	29	26.15	112	14	17.46	Jeff Schripsema	B,C,D,E,F,G
Fire Station 41	2501 W. Morningside Drive	9224	Operational	33	38	54.26	112	6	47.30	Jeff Schripsema	B,C,D,E,F,G
Fire Station 42	3246 W. Greenway	9224	Operational	33	37	32.31	112	7	45.27	Jeff Schripsema	B,C,D,E,F,G
Fire Station 43	4110 E. Chandler Boulevard	9224	Operational	33	18	20.29	111	59	40.55	Jeff Schripsema	B,C,D,E,F,G
Fire Station 44	7117 W. McDowell Road	9224	Operational	33	27	55.25	112	12	44.76	Jeff Schripsema	B,C,D,E,F,G
Fire Station 45	2545 E. Beardsley Road	9224	Operational	33	40	6.95	112	1	37.29	Jeff Schripsema	B,C,D,E,F,G
Fire Station 46	15402 S. Marketplace Way	9224	Operational	33	18	24.45	112	3	7.78	Jeff Schripsema	B,C,D,E,F,G
Fire Station 48	5230 W. Happy Valley Road	9224	Operational	33	42	46.70	112	10	23.45	Jeff Schripsema	B,C,D,E,F,G
Fire Station 49	3750 E. Dynamite Road	9224	Operational	33	44	29.27	111	59	45.37	Jeff Schripsema	B,C,D,E,F,G
Fire Station 50	20225 N. 35th Ave	9224	Operational	33	40	14.71	112	8	2.60	Jeff Schripsema	B,C,D,E,F,G
Fire Station 52	21650 N Tatum Blvd	9224	Operational	33	40	58.79	111	58	36.65	Jeff Schripsema	B,C,D,E,F,G
Fire Station 54 & WSD Odor Control Station 85	9820 W. Campbell Ave.	9224/4952	Operational	33	30	6.12	112	16	13.98	Jeff Schripsema/Lynn Ogata	B,C,D,E,F,G,L
Fire Station 55	26700 N 27th Ave	9224	Operational	33	72	56.67	112	11	70.26	Jeff Schripsema	B,C,D,E,F,G
Fire Station 56	3210 W. Canotia Place	9224	Operational	33	48	3.90	112	7	44.12	Jeff Schripsema	B,C,D,E,F,G
Fire Station 57	1660 W. Dobbins	9224	Operational	33	21	49.10	112	5	43.02	Jeff Schripsema	B,C,D,E,F,G
Fire Station 58	4718 W. Dobbins Road	9224	Operational	33	21	48.20	112	9	40.40	Jeff Schripsema	B,C,D,E,F,G
Fire Station 59	1165 S. 65th Ave	9224	Operational	33	26	16.00	112	11	51.00	Jeff Schripsema	B,C,D,E,F,G
Fire Station 60	2405 W. Townley	9224	Operational	33	33	53.85	112	6	39.59	Jeff Schripsema	B,C,D,E,F,G
Fire Station 61	1925 E. Indian School	9224	Operational	33	29	39.22	112	2	24.20	Jeff Schripsema	B,C,D,E,F,G
Fire Station 72	33027 N. Cave Creek Rd.	9224	Operational	33	47	5.88	111	58	17.47	Jeff Schripsema	B,C,D,E,F,G
Fire Training Academy	2425 W Lower Buckeye	9224	Operational	33	25	17.29	112	6	34.07	Jeff Schripsema	A,B,D,E,F,G
Housing Buchanan Warehouse	701 W. Buchanan	6513	Operational	33	26	33.54	112	4	58.09	Marla Tannenbaum	C,D,F,G,L
Housing Fillmore Gardens	802 N. 22nd Place	6513	Operational	33	27	20.45	112	1	59.30	Marla Tannenbaum	C,D,F,G,H,L

**Appendix F**  
**City of Phoenix Municipal Inventory of Facilities with a Potential to Release Pollutants to Stormwater**

City facility	Address	SIC Code (best fit for services at facility)	Operating Status	Latitude - Degrees	Latitude - Minutes	Latitude - Seconds	Longitude - Degrees	Longitude - Minutes	Longitude - Seconds	Facility Contact	Brief Description of Activities of Concern (use letter codes A-N on second worksheet tab. If O (other), please specify.)
Housing Maryvale Parkway Terrace	4545 N. Maryvale Parkway	6513	Operational	33	30	13.95	112	10	14.05	Marla Tannenbaum	C,D,F,G,H,L
Housing Sunnyslope Manor	205 E. Ruth	6513	Operational	33	33	45.70	112	4	16.91	Marla Tannenbaum	C,D,F,G,H,L
Library Department Burton Barr Library (Public Works)	1221 N. Central Ave.	8231	Operational	33	27	45.00	112	4	23.43	Mikaela Castle	D,O,G
NSD Graffiti Warehouse	3325 W. Flower	1721	Operational	33	29	9.40	112	7	43.90	Christy Blake	O,A,D,F
Police Academy Firearms Shooting Range & Special Assignment Unit Bldg	10001 S. 15th Ave.	9221	Operational	33	21	12.64	112	5	18.39	David Jordan/Chevyn Bryant	D,G,N
Police Academy Defensive Driving Track	8645 W. Broadway Rd.	9221	Operational	33	24	3.55	112	14	38.89	David Jordan/Chevyn Bryant	D,F,G,J
Police MDC and Dive Facility	425 E. Buckeye Rd.	9221	Operational	33	26	11.17	112	4	5.82	David Jordan/Chevyn Bryant	D
Black Mountain Police Precinct (200) & PW Maint	33355 N. Cave Creek Rd.	9221/7538	Operational	33	47	15.85	111	58	8.70	David Jordan/Chevyn Bryant/Mikaela Castle	A,B,C,D,F,J,L
Police Cactus Park Precinct (Briefing Station) & PW Maint	12220 N. 39th Avenue	9221/7538	Operational	33	35	49.51	112	8	36.26	David Jordan/Chevyn Bryant/Mikaela Castle	B,C,D,E
Police Central City Precinct & PW Central City EMD	1902 S. 16th Street	9221/7538	Operational	33	25	45.16	112	2	56.75	David Jordan/Chevyn Bryant/Mikaela Castle	L
Police Deer Valley Tactical Operations, Air Support	102 E. Deer Valley Road	9221	Operational	33	41	11.66	112	4	24.15	David Jordan/Chevyn Bryant	A,D,E,F,J,L
Police Desert Horizon Precinct (Briefing Station) & PW Maint	16030 N. 56th Street	9221/7538	Operational	33	37	57.50	111	57	40.66	David Jordan/Chevyn Bryant/Mikaela Castle	B,C,D,E
Police Estrella Precinct & PW Maint	2111 S. 99th Ave.	9221/7538	Operational	33	25	38.30	112	16	16.11	David Jordan/Chevyn Bryant/Mikaela Castle	B,C,D,E
Police Laboratory Services and Police Crime Lab (PW Facilities)	621 W. Washington	8734/6512	Operational	33	26	50.84	112	4	55.03	David Jordan/Chevyn Bryant/Mikaela Castle	A,B,D,F,G,L
Police & Public Safety Bldg (PW Facilities)	620 W Washington St	9221/6512	Operational	33	26	55.20	112	4	55.15	David Jordan/Chevyn Bryant/Mikaela Castle	A,B,D,G,L
Police Maryvale Precinct & PW Maryvale Police Substation Maint	6180 W. Encanto Blvd.	9221/7538	Operational	33	28	26.44	112	11	33.33	David Jordan/Chevyn Bryant/Mikaela Castle	A,B,C,D,E,F,J,L
Mountainview Police Substation Equipment Management Division & PW Maint	2075 E. Maryland	9221/7538	Operational	33	31	50.45	112	2	12.56	David Jordan/Chevyn Bryant/Mikaela Castle	A,B,C,D,F,J,L
Police Property Management Bureau (PMB) & PW Building Maintenance Site	100 E. Elwood	9221/6512	Operational	33	24	53.66	112	4	12.58	David Jordan/Chevyn Bryant/Mikaela Castle	B,C,D,E,L
Police Department Vehicle Storage Yard	2820 S. 22nd Avenue	9221	Operational	33	25	12.81	112	6	27.89	David Jordan/Chevyn Bryant	D,F,J
Police South Mountain Precinct (Briefing Station) & PW Maint	400 W. Southern Ave.	9221/7538	Operational	33	23	35.12	112	4	44.58	David Jordan/Chevyn Bryant/Mikaela Castle	B,C,D,E

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Police South Resource Bureau Equipment Management Division & PW Maint	3443 S. Central Ave.	9221/7538	Operational	33	24	55.35	112	4	21.81	David Jordan/Chevyn Bryant/Mikaela Castle	A
Police Sunnyslope Precinct (Interim)	750 W. Peoria	9221	Operational	33	34	57.50	112	4	59.12	David Jordan/Chevyn Bryant	B,C,D,E
PRD Downtown Division Civic Space Park and Historic AE England Bldg	424 N. Central	7999	Operational	33	27	6.86	112	4	27.32	Scott Coughlin	A,C,D,F,G,H
PRD Downtown Division Encanto Park	2605 N. 15th Ave.	7999	Operational	33	28	34.64	112	5	23.19	Scott Coughlin	A,C,D,E,F,G,H
PRD Downtown Division Margaret T. Hance Park (includes JFG)	67 W. Culver Street	7999	Operational	33	27	44.06	112	4	35.41	Scott Coughlin	A,C,D,E,F,G,H
PRD Downtown Division Monterey Maintenance	322 E. Oak Street	7999	Operational	33	28	24.10	112	4	7.08	Scott Coughlin	A,C,D,E,F,G,H
PRD Downtown Division Steele Indian School Park Maintenance	300 E. Indian School Rd.	7999	Operational	33	29	55.07	112	4	2.19	Scott Coughlin	A,C,D,E,F,G,H
PRD Natural Resources Division Papago Park Maintenance Yard	1001 N 52nd St	7999	Operational	33	27	9.20	111	57	29.81	Scott Coughlin	A,C,D,F,G,H
PRD Natural Resources Division Pueblo Grande Museum	4619 E. Washington St.	7999	Operational	33	26	48.30	111	59	5.24	Scott Coughlin	A,C,D,F,G,H
PRD Natural Resources Division Ranger Station - Phoenix Mountains Preserve	2245 W. Greenway	7999	Operational	33	37	29.50	112	6	23.50	Scott Coughlin	A,C,D,F,G,H
PRD Natural Resources Division Rio Salado Maintenance Facility	641 W. Lower Buckeye	7999	Operational	33	25	18.59	112	4	48.95	Scott Coughlin	A,C,D,E,F,G,H
PRD Natural Resources Division South Mountain Park Maintenance	10919 S. Central Avenue	7999	Operational	33	20	52.23	112	4	57.56	Scott Coughlin	A,C,D,F,G,H
PRD Northeast Division 52nd Street Maintenance	1001 N. 52nd St.	7999	Operational	33	27	33.04	111	58	8.43	Scott Coughlin	A,B,C,D,E,F,G,H
PRD Northeast Division Bloomfield Warehouse	3201 E Bloomfield Road	7999	Operational	33	35	58.63	112	0	46.21	Scott Coughlin	A,D,F,G
PRD Northeast Division Paradise Valley Park Maintenance	17642 N. 40th Street	7999	Operational	33	39	6.04	111	59	53.12	Scott Coughlin	A,C,D,F,G,H
PRD Northeast Division Sahuaro Maintenance Yard	1602 E. Sahuaro	7999	Operational	33	35	6.53	112	2	50.19	Scott Coughlin	A,C,D,F,G,H
PRD Northwest Division La Pradera Maintenance Yard	3901 W. Glendale Ave.	7999	Operational	33	32	17.61	112	8	34.94	Scott Coughlin	A,C,D,F,G,H
PRD Northwest Division Peoria Maintenance Shop	9850 N. 23rd Ave.	7999	Operational	33	34	35.03	112	6	31.27	Scott Coughlin	A,C,D,E,F,G,H

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PRD Northwest El Oso Park Splash Pad	3451 N. 75 <sup>th</sup> Ave	7999	Operational	33	29	18.00	112	13	7.00	Scott Coughlin	A,F,L,M,G
PRD Northwest Mariposa Park Splash Pad	3150 W. Morten Ave	7999	Operational	33	32	53.00	112	7	38.00	Scott Coughlin	A,F,L,M,G
PRD South Division Cesar Chavez Maintenance Yard	7858 S. 35th Ave.	7999	Operational	33	22	8.58	112	8	31.71	Scott Coughlin	A,C,D,E,F,G,H
PRD South Division Pecos Park Maintenance yard	17010 S. 48th St.	7999	Operational	33	17	29.07	111	59	10.68	Scott Coughlin	A,C,D,E,F,G,H
PRD South Trailside Point Park	7215 W. Vineyard Rd.	7999	Operational	33	23	10.00	112	12	41.00	Scott Coughlin	A,F,G
PRD Special Operations Division Alkire Pool	1617 W. Papago	7999	Operational	33	26	1.17	112	5	41.49	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Cielito Pool	4551 N. 35th Avenue	7999	Operational	33	30	14.21	112	7	57.42	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Coronado Pool	1717 N. 12th Street	7999	Operational	33	28	3.25	112	3	21.31	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Cortez Pool	3434 W. Dunlap	7999	Operational	33	34	4.96	112	7	57.34	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division David Uribe Pool (Cactus Pool)	3801 W. Cactus Road	7999	Operational	33	35	39.06	112	8	27.80	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Deer Valley Pool	19400 N. 19th Avenue	7999	Operational	33	39	46.02	112	6	1.82	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Desert West Softball and PRD Northwest Division Desert West Soccer	6602 W. Encanto Blvd	7999	Operational	33	28	29.03	112	11	46.09	Scott Coughlin	A,C,D,E,F,G,H
PRD Special Operations Division Eastlake Pool	1548 E. Jefferson Street	7999	Operational	33	26	47.17	112	2	53.60	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division El Prado Pool	6428 S. 19th Avenue	7999	Operational	33	23	16.79	112	6	0.54	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Encanto Maintenance Yard and Stores	1802 W. Encanto Blvd.	7999	Operational	33	28	25.12	112	5	51.64	Scott Coughlin	A,B,C,D,E,F,G,H
PRD Special Operations Division Encanto Pool	2121 N. 15th Ave.	7999	Operational	33	28	20.26	112	5	23.39	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Falcon Pool	3420 W. Roosevelt St.	7999	Operational	33	27	33.23	112	7	56.05	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Grant Pool	714 S. 2nd Avenue	7999	Operational	33	26	25.57	112	4	36.25	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Harmon Pool	1239 S. 5th Avenue	7999	Operational	33	26	5.10	112	4	47.24	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Hermoso Pool	5749 S. 20th Street	7999	Operational	33	23	39.50	112	2	17.64	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Holiday Pool	4530 N. 67th Ave.	7999	Operational	33	30	12.68	112	12	16.02	Scott Coughlin	A,F,L,M,G

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PRD Special Operations Division Madison Pool	1440 E. Glenrosa Ave.	7999	Operational	33	29	55.77	112	3	1.12	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Marivue Pool	5625 W. Osborn Rd.	7999	Operational	33	29	13.21	112	10	51.04	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Maryvale Pool	4444 N. 51st Ave.	7999	Operational	33	30	6.17	112	10	10.57	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Mountain View Pool	1104 E. Grovers Ave.	7999	Operational	33	38	52.98	112	3	35.26	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Papago Softball Complex	6201 E. Oak Street	7999	Operational	33	28	13.84	111	56	43.95	Scott Coughlin	A,C,D,F,G,H
PRD Special Operations Division Paradise Valley Pool	17648 N. 40th St.	7999	Operational	33	38	50.46	111	59	51.09	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Pecos Park Pool	17010 S. 48th St.	7999	Operational	33	17	29.07	111	59	10.68	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Perry Pool	3131 E. Windsor	7999	Operational	33	28	41.56	112	0	48.83	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Pierce Pool	2150 N. 46th St.	7999	Operational	33	28	13.56	111	59	0.58	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Reach 11 Maintenance Yard/Sports Complex	2425 and 2405 E. Deer Valley Rd.	7999	Operational	33	41	11.66	112	1	29.73	Scott Coughlin	A,C,D,E,F,G,H
PRD Special Operations Division Roadrunner Pool	3502 E. Cactus Rd.	7999	Operational	33	35	52.86	112	0	25.26	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Roosevelt Pool	6246 S. 7th Street	7999	Operational	33	23	20.25	112	3	57.61	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Rose Mofford Soccer - Maintenance	9833 N. 25th Ave.	7999	Operational	33	34	49.59	112	6	46.10	Scott Coughlin	A,C,D,E,F,G,H
PRD Special Operations Division Starlight Pool	7810 W. Osborn Rd.	7999	Operational	33	29	16.48	112	13	39.36	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Sunnyslope Pool	301 W. Dunlap	7999	Operational	33	34	1.76	112	4	42.40	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Telephone Pioneers of America Pool	1946 W. Morningside	7999	Operational	33	38	57.25	112	6	6.35	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division University Pool	1102 W. Van Buren	7999	Operational	33	27	9.70	112	5	12.91	Scott Coughlin	A,F,L,M,G
PRD Special Operations Division Washington Pool	6655 N. 23rd Ave.	7999	Operational	33	32	3.81	112	6	26.64	Scott Coughlin	A,F,L,M,G
PW 22nd Avenue Equipment Management Division South Truck and Tire Shops & Metro Facilities Division HVAC	2441 S. 22nd Ave.	7538/6512/ 7379	Operational	33	25	29.34	112	6	18.54	Mikaela Castle	A,B,C,D,E,F,G,J,L



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PW Madison Street Fueling Facility	1201 E Madison St.	5541	Operational	33	26	44.63	112	3	25.23	Mikaela Castle	B,C
PW 27th Avenue Transfer Station Solid Waste Disposal Division	3060 S. 27th Avenue	4212/5093	Operational	33	25	1.34	112	7	6.73	Mikaela Castle	A,B,C,D,F,H,L,N
PW 310 Parking Garage Downtown Facilities Division	310 W. Adams St	7521	Operational	33	26	58.86	112	4	42.79	Mikaela Castle	D
PW Calvin C. Goode Downtown Facilities Division - 10th Floor	251 W. Washington	9199	Operational	33	26	52.26	112	4	37.45	Mikaela Castle	L
PW City Hall Facilities Management Division	200 W. Washington	9199	Operational	33	26	54.73	112	4	38.57	Mikaela Castle	L
PW (Maint) Fire Operation Equipment Management Division & Fire Resources Sterling	2625 S. 19th Avenue	7538/9224	Operational	33	25	25.00	112	5	55.44	Mikaela Castle/Jeff Schripsema	A,B,C,D,E,F,G,J,L
PW Municipal Court Building	300 W. Washington	9199	Operational	33	26	55.22	112	4	41.68	Mikaela Castle	L
PW North Gateway Transfer Station Solid Waste Disposal Division	30205 N. Black Canyon Hwy	4212/5093	Operational	33	45	38.69	112	6	58.98	Mikaela Castle	A,B,C,F,N,L
PW Petroleum Stores	2239 W. Lower Buckeye Road	4214	Operational	33	25	18.90	112	6	26.36	Mikaela Castle	B,C,D
Glenrosa (Northwest) Service Center PW Equipment Management Division, Water Services Yard, PRD Warehouse & Maintenance Yard, Street Transportation General and Preventive Maintenance	4020, 4021, 4155 W. Glenrosa	7538/4953/ 4941/4952/ 1611/7999	Operational	33	24	53.60	112	8	43.55	Mikaela Castle/Lynn Ogata/Scott Coughlin/Miguel Vasquez	A,B,C,D,E,F,G,H,J,L,N
Okemah Service Center PW Equipment Management Division & Street Transportation Southeast General Maintenance	3828 E. Anne St.	7538/4953/ 1611	Operational	33	24	52.47	111	59	49.37	Mikaela Castle/Miguel Vasquez	A,B,C,D,E,F,G,H,J,L,N
Salt River (Southwest) Service Center PW Equipment Management Division, Water Services Yard & Street Transportation PSW General Maintenance	3045 S. 22nd Avenue	7538/4953/ 4941/1611	Operational	33	25	7.35	112	6	18.54	Mikaela Castle/Lynn Ogata/Miguel Vasquez	A,B,C,D,E,F,G,H,J,L,N
PW Union Hills (North) Service Center Equipment Management Division, Water Services Yard & Street Transportation (North) Service Center Maintenance	202 E. Union Hills Drive	7538/4953/ 4941/4952/ 1611	Operational	33	39	19.81	112	4	17.37	Mikaela Castle/Lynn Ogata/Miguel Vasquez	A,B,C,D,E,F,G,H,J,L,N

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Street Transportation DCM Shop (Materials Lab)	1034 E. Madison	1611	Operational	33	26	46.58	112	3	35.36	Miguel Vasquez	A,D,F
Street Transportation Signing and Striping	4035 W. Glenrosa	1721	Operational	33	29	53.30	112	8	49.08	Miguel Vasquez	A,D,E,F
Street Transportation Traffic Signal Shop	2141 E. Jefferson Street	1611	Operational	33	26	46.92	112	2	7.37	Miguel Vasquez	A,D,F,E
WSD 23rd Avenue W.W.T.P. (includes Wastewater Collections)	2470 S. 22nd Ave.	4952	Operational	33	25	23.10	112	6	29.40	Lynn Ogata	A,B,C,D,E,F,G,H,J,L
WSD 24th St. WTP	6202 N. 24th St.	4941	Operational	33	26	46.92	112	2	7.37	Lynn Ogata	A,B,C,D,E,F,G,H,J,L
WSD 5E W264 ATF	6630 E. Bell Road	4941	Operational	33	38	26.63	111	56	16.09	Lynn Ogata	L,B
WSD 91st Avenue W.W.T.P. (includes PW 91st Ave EMD)	5615 S. 91st. Ave.	4952/7538	Operational	33	23	37.10	112	15	11.50	Lynn Ogata	A,B,C,D,E,F,G,H,J,L
WSD Booster 2A-B11	4114 N 20th St	4941	Operational	33	29	43.62	112	2	23.05	Lynn Ogata	A,B,D,G,L
WSD Booster 4B-B2	3192 E Sierra Vista Dr	4941	Operational	33	31	57.36	112	0	46.86	Lynn Ogata	L,B,G
WSD Booster 4F-B1, Lower Coral Gables	14627 N. 15th Avenue	4941	Operational	33	37	11.18	112	5	27.67	Lynn Ogata	L,B
WSD Booster 4J-B2 (Short Tank)	7500 N Invergordon Rd	4941	Operational	33	32	45.30	111	56	36.35	Lynn Ogata	L,B,G
WSD Booster 4M-B2, Phoenician	5943 E. Elsie Avenue	4941	Operational	33	30	9.60	111	57	8.60	Lynn Ogata	L,B
WSD Booster 4SC-B1 (Foothills)	15234 Desert Foothills Parkway	4941	Operational	33	18	26.29	112	3	19.53	Lynn Ogata	L,B
WSD Booster 4SC-B2, Privada (Foothills Zone 4)	437 W. Desert Foothills Parkway	4941	Operational	33	18	32.79	112	4	53.94	Lynn Ogata	L,B
WSD Booster 4SE-B1 (Sanctuary)	15651 S. 19th Street	4941	Operational	33	18	14.52	112	2	34.81	Lynn Ogata	L,B
WSD Booster 5EA-B1 (Deem Hills, 4AW-R1)	3301 W. Pinnacle Vista Drive	4941	Operational	33	43	56.76	112	7	48.51	Lynn Ogata	L,B
WSD Booster 5EA-B3, 63rd Avenue and Jomax	27420 N. 63rd Avenue	4941	Operational	33	43	59.53	112	11	41.99	Lynn Ogata	L,B
WSD Booster 5EB-B2	5220 W. Inspiration Mtn. Parkway	4941	Operational	33	43	50.02	112	10	25.21	Lynn Ogata	L,B
WSD Booster 5ED-B1 (I-17 Corridor, Tramonto, 4A-R2)	26701 N. 19th Avenue	4941	Operational	33	43	37.72	112	5	56.65	Lynn Ogata	L,B
WSD Booster 5J-B3	6045 E Cheney	4941	Operational	33	32	44.55	111	57	3.41	Lynn Ogata	L,B,G
WSD Booster 5SB-B1 (Vista Estates)	201 W. Desert Foothills Parkway	4941	Operational	33	18	43.28	112	4	31.40	Lynn Ogata	L,B
WSD Booster 6B-B1 (I-17 Corridor, Tramonto, 5ED-R1)	31601 N. 26th Ave.	4941	Operational	33	46	34.66	112	6	45.60	Lynn Ogata	L,B
WSD Booster 7A-B1 (Cave Creek No. 7, 6A-R1, W299)	26829 N. Cave Creek Road	4941	Operational	33	43	47.54	112	0	18.96	Lynn Ogata	L,B
WSD Booster 7B-B1/8B-B1 (Tramonto, 6B-R1)	34650 N. 27th Avenue	4941	Operational	33	47	55.79	112	7	6.95	Lynn Ogata	L,B
WSD Booster 8A-B1 (Cave Creek No. 8, 7A-R3)	29221 N. Cave Creek Road	4941	Operational	33	45	1.52	111	59	32.74	Lynn Ogata	L,B

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WSD Booster 8CP-B1, Anthem	4505 W. Opportunity Way	4941	Operational	33	51	51.04	112	9	13.28	Lynn Ogata	L,B
WSD Cave Creek Water Reclamation Plant	22841 N. Cave Creek Rd.	4952	Operational	33	41	27.90	112	1	30.60	Lynn Ogata	A,B,C,D,E,F,G,H,J,L
WSD Deer Valley W.T.P., Administration bldg., 2nd Floor Janitorial Room	3030 W. Dunlap Avenue	4941	Operational	33	34	14.80	112	7	31.70	Lynn Ogata	L,B
WSD Lift Station 40, Ray Road	5102 E. Ray Road	4952	Operational	33	19	14.73	111	58	22.95	Lynn Ogata	L,B
WSD Lift Station 41, E. Pecos Road	17017 S. 48th Street	4952	Operational	33	17	29.06	111	58	46.98	Lynn Ogata	L,B
WSD Lift Station 42, W. Pecos Road	3302 W. Pecos Road	4952	Operational	33	17	27.36	112	7	49.64	Lynn Ogata	L,B
WSD Lift Station 43, 75th Avenue	6834 S. 75th Avenue	4952	Operational	33	23	9.73	112	13	13.35	Lynn Ogata	L,B
WSD Lift Station 44, W. Softwind Drive	6570 W. Softwind Drive	4952	Operational	33	42	6.17	112	12	9.16	Lynn Ogata	L,B
WSD Lift Station 46, W. Indian School Road	10652 W. Indian School Road	4952	Operational	33	29	38.01	112	17	23.22	Lynn Ogata	L,B
WSD Lift Station 47, 113th Drive	4102 N. 113th Drive	4952	Operational	33	29	38.57	112	8	9.50	Lynn Ogata	L,B
WSD Lift Station 50, North 49th Dr.	12050 N. 49th Drive	4952	Operational	33	45	46.04	112	9	54.92	Lynn Ogata	L,B
WSD Lift Station 51 and Well 294, North Tatum Rd.	18635 N. Tatum Boulevard	4952/4941	Operational	33	39	42.27	111	58	33.11	Lynn Ogata	L,B
WSD Lift Station 55, South Foothills Drive	16800 S. Foothills Drive	4952	Operational	33	17	33.27	112	4	49.04	Lynn Ogata	L,B
WSD Lift Station 56, South 7th Avenue	11 W. Liberty Lane	4952	Operational	33	17	33.16	112	4	59.62	Lynn Ogata	L,B
WSD Lift Station 61, S. 107th Avenue	4325 S. 107th Avenue	4952	Operational	33	24	26.21	112	17	19.98	Lynn Ogata	L,B
WSD Lift Station 62, 91st Avenue and Broadway Rd	9059 W. Broadway Rd.	4952	Operational	33	24	22.83	112	15	14.62	Lynn Ogata	L,B
WSD Lift Station 64, North 64th Street	18018 North 64th Street	4952	Operational	33	38	59.02	111	56	32.41	Lynn Ogata	L,B
WSD Lift Station 65	27001 N. Valley Parkway	4952	Operational	33	43	49.67	112	5	56.40	Lynn Ogata	L,B
WSD Lift Station 66	30101 N. Black Canyon Freeway	4952	Operational	33	45	18.81	112	6	54.94	Lynn Ogata	L,B
WSD Lift Station 68, Magellan Drive/Anthem West	4925 W. Magellan Drive	4952	Operational	33	52	35.96	112	9	59.06	Lynn Ogata	L,B
WSD Lift Station 72	4555 E Mayo Blvd	4952	Operational	33	39	56.60	111	59	16.53	Lynn Ogata	A,B,D,G,L
WSD Lift Station 73	11284 W. Camelback Road	4952	Operational	33	30	32.42	112	18	7.51	Lynn Ogata	L,B
WSD Odor Control Station 70 (Well 230, 4A-W230)	5712 E. Thunderbird Road	4952	Operational	33	36	42.36	111	57	29.77	Lynn Ogata	L
WSD Odor Control Station 71 (Well 255, 3D-W255)	4002 W. Grovers Avenue	4952	Operational	33	38	50.91	112	8	43.78	Lynn Ogata	L
WSD Odor Control Station 72, 47th Ave. and Pinnacle Peak Road	4653 West Pinnacle Peak Road	4952	Operational	33	41	52.21	112	9	37.70	Lynn Ogata	L

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WSD Odor Control Station 76, Airport East Scrubber	4465 East Sky Harbor Blvd.	4952	Operational	33	26	6.33	111	59	20.41	Lynn Ogata	L
WSD Odor Control Station 78 (Well 272, 2A-W272, 55-608405, Payback Well)	10445 North 43rd Avenue	4952	Operational	33	34	53.52	112	9	4.41	Lynn Ogata	L
WSD Odor Control Station 79, 15th Ave. and Bethany Home Rd. (Yucca Library)	5648 North 15th Avenue	4952	Operational	33	31	10.62	112	5	29.88	Lynn Ogata	L
WSD Odor Control Station 82, 15th Street and Jefferson	1548 East Jefferson Street	4952	Operational	33	26	46.71	112	2	55.72	Lynn Ogata	L
WSD Odor Control Station 86 (McDowell)	1838 East Brill Street	4952	Operational	33	27	54.13	112	2	30.04	Lynn Ogata	L
WSD Odor Control Station 88 (Coronado Park)	1717 North 12th Street	4952	Operational	33	25	50.33	112	3	22.04	Lynn Ogata	L
WSD Odor Control Station 90 (Fire Station 39)	2276 West Southern Avenue	4952	Operational	33	23	33.43	112	6	26.88	Lynn Ogata	L
WSD Odor Control Station - Corona	30 West Corona Avenue	4952	Operational	33	24	23.33	112	4	29.57	Lynn Ogata	L
WSD PRV 0S-R4	6625 West Buckeye Road	4941	Operational	33	26	12.90	112	12	11.36	Lynn Ogata	A,B,D,G,L
WSD PRV 0S-R5	4230 South 35th Ave	4941	Operational	33	24	28.31	112	8	2.90	Lynn Ogata	A,B,D,G,L
WSD 0-R3 PRV 11	9402 West Indian School Road	4941	Operational	33	29	41.10	112	15	45.53	Lynn Ogata	L,B
WSD Service Yard - Campbell Support Services (Well 69)	4436 N. 35th Ave.	4941	Operational	33	30	5.56	112	8	6.67	Lynn Ogata	A,B,C,D,E,F,G,H,J,L
WSD Service Yard - Cave Creek Water Yard	21642 N. 20th Street	4941	Operational	33	40	59.64	112	2	29.82	Lynn Ogata	A,B,C,D,E,F,G,H,J,L
WSD Service Yard - Corona Water Distribution Yard	936 E Broadway	4941	Operational	33	24	21.92	112	4	28.39	Lynn Ogata	A,B,C,D,E,F,G,H,J,L
WSD Service Yard - East Wastewater Collection Service Yard (OCS 75)	3015 N. 52nd Street	4952	Operational	33	28	57.79	111	58	9.08	Lynn Ogata	A,B,C,D,E,F,G,H,J,L
WSD Service Yard - East Distribution, Reservoir Yard	3015 N. 52nd Street	4941	Operational	33	28	57.79	111	58	9.08	Lynn Ogata	A,B,C,D,E,F,G,H,J,L
WSD Service Yard - Morten Water Distribution Yard	7617 N. 21st Avenue	4941	Operational	33	32	56.04	112	6	12.53	Lynn Ogata	A,B,C,D,E,F,G,H,J,L
WSD Service Yard - Remote Facilities Service Yard (WSSS, 2A-B9, 2C-B3)	5204 E. Thomas Road	4941	Operational	33	24	50.44	111	58	9.56	Lynn Ogata	A,B,C,D,E,F,G,H,J,L
WSD Union Hills W.T.P., bldg. 04, Paint/Oil	2001 E. Deer Valley Rd.	4941	Operational	33	4	9.30	112	2	4.80	Lynn Ogata	A,B,C,D,E,F,G,H,J,L
Water Storage 1-ES1 (64th Street Reservoir, 2C-B1, 3B-B1)	2650 N 64th St	4941	Operational	33	28	42.99	111	56	43.38	Lynn Ogata	A,B,D,G,L
WSD Water Storage 1-ES3 ( South Mountain Reservoir, 2S-B4, 3SE-B4, 3S-R1, 4SN-B1)	10830 S. 27th Avenue	4941	Operational	33	20	52.78	112	7	9.85	Lynn Ogata	L,B

**Appendix F**  
**City of Phoenix Municipal Inventory of Facilities with a Potential to Release Pollutants to Stormwater**

City facility	Address	SIC Code (best fit for services at facility)	Operating Status	Latitude - Degrees	Latitude - Minutes	Latitude - Seconds	Longitude - Degrees	Longitude - Minutes	Longitude - Seconds	Facility Contact	Brief Description of Activities of Concern (use letter codes A-N on second worksheet tab. If O (other), please specify.)
WSD Water Storage 1-ES4 (42nd Place Reservoir, Old Highline Reservoir)	8002 S. 42nd Place	4941	Operational	33	22	25.88	111	59	32.75	Lynn Ogata	L,B
WSD Water Storage 2A-ES1 (Shaw Butte Reservoir)	1638 W. Sunnyside Drive	4941	Operational	33	35	35.20	112	5	40.52	Lynn Ogata	L,B
WSD Water Storage 2C-ES1 (Papago Reservoir)	1820 N. 60th Street	4941	Operational	33	28	5.44	111	57	17.27	Lynn Ogata	L,B
WSD Water Storage 2S-ES1 (Lower Mineral Road Reservoir, 3S-B1)	745 E. Mineral Road	4941	Operational	33	21	21.26	112	3	49.98	Lynn Ogata	L,B
WSD Water Storage 2S-ES2 (Police Tank)	1201 W. Olney	4941	Operational	33	21	1.72	112	5	22.99	Lynn Ogata	L,B
WSD Water Storage 3A-ES1 (Sunnyslope Storage Tank, Old Hatcher)	1835 E. Hatcher Road	4941	Operational	33	34	15.80	112	2	32.08	Lynn Ogata	L,B
WSD Water Storage 3A-ES2 (North Mountain Reservoir(at different lat/long), 4A-B2, 3A-R4) & Booster (4A-R2)	10234 N. 7th Street	4941	Operational	33	34	48.47	112	3	58.54	Lynn Ogata	L,B
WSD Water Storage 3D-ES1 (Hedgepeth Hills Reservoir)	21020 N. 47th Avenue	4941	Operational	33	40	38.94	112	9	43.71	Lynn Ogata	L,B
WSD Water Storage 3SE-ES1 (Horse Tank Reservoir, 4SA-B1)	3201 E. Equestrian Trail	4941	Operational	33	20	25.57	112	0	50.39	Lynn Ogata	L,B
WSD Water Storage 3SE-ES2 (Mountain Park Ranch Storage(dif lat/long), 4SA-B3, Diamond Ridge Booster)	14100 S. 24th Way	4941	Operational	33	19	8.06	112	1	49.29	Lynn Ogata	L,B
WSD Water Storage 3SE-ES3 (Foothills Storage Tank)	15805 S. 3rd Street	4941	Operational	33	18	10.37	112	4	9.60	Lynn Ogata	L,B
WSD Water Storage 3S-ES1 (Upper Mineral Road Storage Tank)	901 E. Mineral Road	4941	Operational	33	21	16.87	112	3	41.29	Lynn Ogata	L,B
WSD Water Storage 4A-ES5 (Deems Hills Reservoir)	27442 N. 39th Avenue	4941	Operational	33	44	4.48	112	8	56.72	Lynn Ogata	L,B
WSD Water Storage 4F-ES1 (Upper Coral Gables Storage Tank, 5F-B2, 4FX-R1)	14214 N. 15th Ave.	4941	Operational	33	36	53.83	112	5	20.17	Lynn Ogata	L,B
WSD Water Storage 4M-ES1 (Cholla Invergordon Storage Tank, 5P-B1, Lower Cloudcroft)	5156 N. 61st Street	4941	Operational	33	30	47.47	111	56	59.12	Lynn Ogata	L,B
WSD Water Storage 4SC-ES1 (Tapestry Canyon Storage Tank, 6SA-B1)	1444 E. Desert Willow Drive	4941	Operational	33	19	1.53	112	3	2.98	Lynn Ogata	L,B
WSD Water Storage 5C-ES1 (Red Rock Storage Tank)	4948 E. Red Rock Road	4941	Operational	33	30	59.06	111	58	23.51	Lynn Ogata	L,B

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WSD Water Storage 6A-B1	24201 N. Cave Creek Road	4941	Operational	33	42	24.06	112	1	10.93	Lynn Ogata	L,B
WSD Water Storage 6A-ES1 (Happy Valley Storage Tank)	24425 N. 64th Street	4941	Operational	33	30	45.78	111	56	23.42	Lynn Ogata	L,B
Water Storage 7A-GS2 (Pinnacle Peak)	23425 N 56th St	4941	Operational	33	41	58.00	111	57	32.64	Lynn Ogata	A,B,D,G,L
WSD Water Storage 7B-ES1 (Tramonto Storage Tank)	34701 N. 19th Avenue	4941	Operational	33	48	3.42	112	5	57.01	Lynn Ogata	L,B
WSD Storage 8A-ES1; Booster 11A-B1 & 9A-B3	32625 N 56th St	4941	Operational	33	46	28.01	111	57	33.77	Lynn Ogata	A,B,D,G,L
WSD Well 1-W72	5126 N 37th Avenue	4941	Operational	33	30	46.05	112	8	22.35	Lynn Ogata	L,B
WSD Well 166 (4A-W166, 55- 626582)	4138 E. Greenway Rd	4941	Operational	33	37	37.46	111	59	27.70	Lynn Ogata	L,B
WSD Well 180 (3C-W180, 3C- R3), 55-626589	13009 N. 56th Street	4941	Operational	33	36	17.63	111	57	36.40	Lynn Ogata	L,B
WSD Well 205 - (1S-W205, 1S- R1), 55-626598	4702 W. Estrella Drive	4941	Operational	33	20	2.91	112	9	39.86	Lynn Ogata	L,B
WSD Well 211 (2A-W211, 55- 626603)	3848 W. Cholla Street	4941	Operational	33	35	20.64	112	8	32.92	Lynn Ogata	L,B
WSD Well 218 - (2A-W218), 55- 626610	4375 W. Acoma Drive	4941	Operational	33	37	1.54	112	9	11.07	Lynn Ogata	L,B
WSD Well 232 - (3C-W232), 55- 626624	10831 N. 56th Street	4941	Operational	33	35	7.90	111	57	37.08	Lynn Ogata	L,B
WSD Well 233 - (3C-W233), 55- 626625	10801 N. 56th Street	4941	Operational	33	35	4.44	111	57	36.39	Lynn Ogata	L,B
WSD Well 235 (3C-W235, 3C-B1, 3C-GS1), 55-626627	6026 E. Caballo Street	4941	Operational	33	33	45.17	111	57	4.23	Lynn Ogata	L,B
WSD Well 244 (4A-W244, 5E-B2, CAP, 55-087614)	5602 E. Bell Road	4941	Operational	33	38	26.90	111	57	34.98	Lynn Ogata	L,B
WSD Well 250 (3D-W250, Odor Control Station 77, 55-626637)	4715 West Bell Road	4941	Operational	33	38	19.45	112	9	38.22	Lynn Ogata	L,B
WSD Well 261 (4A-W261, 4A- ES4, 4A-R1, 4A-R4, 6A-B2, 55- 508818, Rose Garden, Desert Ridge)	20805 N. 56th Street	4941	Operational	33	40	29.95	111	57	31.48	Lynn Ogata	L,B
WSD Well 264 - (5E-W264 - Active), 55-501643	6714 E. Juniper Avenue	4941	Operational	33	38	23.80	111	56	8.08	Lynn Ogata	L,B
WSD Well 275 - (4A-W275 - Active), 55-504791	5746 E. Saint John Road	4941	Operational	33	38	51.58	111	57	21.02	Lynn Ogata	L,B
WSD Well 276 Active (Tatum Ranch, 8A-W276, 8A-GS1, 8A- B2), 55-603807	29402 N. 44th Street	4941	Operational	33	45	7.88	111	59	16.38	Lynn Ogata	L,B
WSD Well 280 (9A-W280, 9A- GS1, 9A-B1), 55-527549	4390 E. Rancho Tierra Drive	4941	Operational	33	45	55.50	111	59	9.52	Lynn Ogata	L,B

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WSD Well 281 (9A-W281, 9A-GS2, 9A-B2, 10A-B1, Casa de Cielo Storage Tank), 55-524559	33005 N. 52nd Street	4941	Operational	33	47	11.13	111	58	7.83	Lynn Ogata	L,B
WSD Well 288 (8A-W288, Active), 55-540078	28401 N. Tatum Blvd	4941	Operational	33	44	34.82	111	58	34.59	Lynn Ogata	L,B
WSD Well 289 (8A-W289, Active), 55-540079	28606 N. 56th Street	4941	Operational	33	44	41.65	111	57	39.48	Lynn Ogata	L,B
WSD Well 290 (7A-W290, 7A-B2, 7A-GS1), 55-623687	26425 N. 40th Street	4941	Operational	33	43	33.54	111	59	44.51	Lynn Ogata	L,B
WSD Well 295 - (6A-W295 - Active), 55-560509	22204 N. 40th Way	4941	Operational	33	41	22.39	111	59	6.06	Lynn Ogata	L,B
WSD Well 296 (4A-W296 A163-Active), 55-583886	18604 N. 56th Street	4941	Operational	33	39	19.02	111	57	28.77	Lynn Ogata	A,B,D,G,L
Yellow shading indicates facilities prioritized as higher-risk using the criteria specified in the SWMP.											
Inventory only includes City owned and operated property within the jurisdiction of the MS4. Pink shading indicates facilities with MSGP coverage.											

## **APPENDIX G**

### **MUNICIPAL MSGP FACILITIES**



**Appendix G**  
**Municipal MSGP Facilities**

Department	Facility	Address	POC	Authorization #	Comments
Public Works	Skunk Creek Landfill	3165 West Happy Valley Road Phoenix, AZ 85027	Engineering Supervisor Doug Sawyer 602-534-1157	AZMS-81051	
	27 <sup>th</sup> Avenue Solid Waste Management Facility	3060 South 27 <sup>th</sup> Avenue Phoenix, AZ 85009		AZMS-81050	
	SR 85	28361 West Patterson Road Buckeye, AZ 85326		AZMS-81065	
	North Gateway Transfer Station	30205 North Black Canyon Highway, Phoenix, AZ 85085		AZMS-81064	
Aviation	Sky Harbor International Airport	3400 East Sky Harbor Boulevard, Ste 3300 Phoenix, AZ 85034	Project Manager Lisa Farinas 602-273-2787	AZMS-80274	
	Deer Valley Airport	702 West Deer Valley Road Phoenix, AZ 85027		AZMS-80278	
	Phoenix/Goodyear Airport	1658 South Litchfield Road Goodyear, AZ 85338		AZMS-80276	
Water Services	91 <sup>st</sup> Avenue Wastewater Treatment Plant	5616 South 91 <sup>st</sup> Avenue Tolleson, AZ 85353	Environmental Quality Specialist Doug Taylor 602-534-5081	AZMS-80181	
	23 <sup>rd</sup> Avenue Wastewater Treatment Plant	2470 South 22 <sup>nd</sup> Avenue Phoenix, AZ 85009		AZMS-80180	
	Cave Creek Water Reclamation Plant	22841 North Cave Creek Road Phoenix, AZ 85024		AZMS-80179	
City Clerk	Customer Service Center (Print Shop)	2640 South 22 <sup>nd</sup> Avenue Phoenix, AZ	Environmental Quality Specialist Hilary Hartline 602-534-1778	AZNC-85446	No Exposure Certification September 2020

## **APPENDIX H**

### **CITYWIDE STORMWATER TRAINING PLAN**

**SWMP – APPENDIX H**

City of Phoenix Stormwater Training Plan for AZPDES MS4 Permit (permit effective date 7/1/21)

Training will be provided for new employees with direct stormwater responsibilities at least one time per year.  
 Refresher training for existing employees with direct stormwater responsibility will be provided at least once every two years.  
 In the event there are no new employees in a given period, this will be documented in the Annual Report.  
 Note: Municipal Employee General Awareness Training has different training frequency requirements which are listed below.

**Permit Section 4.4.D Illicit Discharge Detection and Elimination (IDDE)**

Course Objective	Course Topics	Employees Trained/Course Code
<p><b>Municipal Employee Training - Stormwater Inspectors</b>                      Educate and update inspectors on detecting, investigating, and identifying illicit discharges and recognizing allowable sources of non-stormwater discharges.</p>	<p><b>IDDE</b></p> <ul style="list-style-type: none"> <li>• Federal &amp; local regulatory requirements (including MS4 permit, SWMP, Phoenix PCC 32C, allowable AZPDES discharges such as DeMinimis discharges).</li> <li>• Detecting, investigating and identifying illicit discharges.</li> <li>• Field screening procedures, sampling methods, field measurements, and outfall inspections.</li> <li>• Sources of non-stormwater discharges.</li> </ul>	<p><b>Department/Employees</b>  <u>WSD</u></p> <ul style="list-style-type: none"> <li>• Water Quality Inspectors</li> <li>• Senior Water Quality Inspectors</li> <li>• Chief Water Quality Inspectors</li> </ul> <p><b>New Employee &amp; Refresher Training:</b>                      WSSWPB (WSD737-ILT-Stormwater Permits Part B),                      OR equivalent documented OJT</p>
<p><b>Municipal Employee Training – General Awareness</b>                      Educate and update field staff with no direct stormwater responsibilities on illicit discharges and best management practices (BMPs) .</p> <p><b>Provide Initial Training:</b> By July 1, 2022  <b>Provide Additional Training:</b> Select groups of staff every two years (FY 23/24, FY 25/26).</p>	<p><b>Stormwater Pollution Awareness</b></p> <ul style="list-style-type: none"> <li>• MS4 permit and requirements.</li> <li>• Identifying harmful/prohibited practices (illegal dumping or spills) into the City’s stormwater system.</li> <li>• Management procedure (reporting to the WSD Stormwater Management Section).</li> </ul>	<p><b>Department/Employees</b>  <u>PWD</u></p> <ul style="list-style-type: none"> <li>• SWFS Drivers</li> <li>• SWFS Environmental Specialist</li> <li>• Zero Waste Team</li> </ul> <p><b>New &amp; Refresher Employee Training:</b>                      EPTBSW (FY 21/22) - all                      EP8026 (OEP catalog course) and EP8093 also satisfies this training requirement.</p> <p><u>PWD</u></p> <ul style="list-style-type: none"> <li>• SWFS Drivers</li> </ul> <p><b>New &amp; Refresher Employee Training:</b>                      EPTBSW (FY 23/24)                      EP8026 (OEP catalog course) and EP8093 also satisfies this training requirement.</p> <ul style="list-style-type: none"> <li>• SWFS Environmental Specialist and Zero Waste Team</li> </ul> <p><b>New &amp; Refresher Employee Training:</b>                      EP8093 (FY 23/24)                      EP8026 (OEP catalog course) and EPTBSW also satisfies this training requirement.</p> <ul style="list-style-type: none"> <li>• SWFS Foreman, Supervisors, Superintendents</li> </ul> <p><b>New Employee Training and Refresher Training OPTIONAL (FY 23/24):</b>                      EP8093</p> <p><u>WSD</u></p> <ul style="list-style-type: none"> <li>• Water Distribution</li> <li>• Wastewater Collection</li> <li>• Meter Division</li> </ul> <p><b>New &amp; Refresher Employee Training:</b>                      ESSW1*, ESSW4*, ESDM1Z OR ESST1Z (starting FY 21/22)</p>

**SWMP – APPENDIX H (continued)**

Citywide Stormwater Training Plan for City of Phoenix AZPDES MS4 Permit effective date 7/1/21

		<ul style="list-style-type: none"> <li>• Water Distribution</li> <li>• Water Production</li> <li>• Meter Division</li> </ul> <p><b>New &amp; Refresher Employee Training:</b> WSD750-ONL-ESSW1B (starting FY 23/24)</p> <ul style="list-style-type: none"> <li>• Safety</li> <li>• Water and Wastewater Engineering</li> </ul> <p><b>New &amp; Refresher Employee Training:</b> WSD754-ONL-ESSW4A (starting FY 23/24)</p> <ul style="list-style-type: none"> <li>• Wastewater Collections</li> </ul> <p><b>New &amp; Refresher Employee Training:</b> WSD719-ONL-TB-ESSW1T (starting FY 23/24)</p> <p><u>HOU</u> <u>Select employees in the Property Management Division:</u></p> <ul style="list-style-type: none"> <li>• Building Maintenance Foreman</li> <li>• Building Maintenance Worker</li> <li>• Trades Helper</li> </ul> <p><u>NSD</u> <u>Select employees in the Administrative Services, Neighborhood Engagement, Neighborhood Revitalization and Neighborhood Preservation divisions:</u></p> <ul style="list-style-type: none"> <li>• Building Maintenance Foreman</li> <li>• Community Worker II</li> <li>• Community Worker III</li> <li>• Economic Development Program Manager</li> <li>• Housing Rehabilitation Supervisor</li> <li>• Housing Rehabilitation Specialist</li> <li>• Management Assistant II</li> <li>• Neighborhood Inspector I</li> <li>• Neighborhood Inspector II</li> <li>• Neighborhood Specialist</li> <li>• Project Management Assistant</li> <li>• Project Manager</li> <li>• Trades Helper* U2</li> <li>• Volunteer Coordinator</li> </ul> <p><u>PDD</u></p> <ul style="list-style-type: none"> <li>• Field Supervisors and Inspectors (categories - general [residential], plumbing/mechanical, elevator, fire, structural, electrical)</li> <li>• Building Code Examiners (residential and commercial)</li> <li>• Principle Engineering Tech (residential only)</li> </ul> <p><u>PFD</u></p> <ul style="list-style-type: none"> <li>• Fire Prevention Specialist/Inspectors</li> </ul> <p><b>New &amp; Refresher Employee Training:</b> CMO101-ONL-EP8094, <u>QR</u> EPTBGA EP8026 (OEP catalog course) also satisfies this training requirement.</p>
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**SWMP – APPENDIX H (continued)**

Citywide Stormwater Training Plan for City of Phoenix AZPDES MS4 Permit effective date 7/1/21

**Permit Section 4.5.A.1. Municipal Facilities Pollution Prevention & Good Housekeeping Practices**

Course Objective	Course Topics	Employees Trained/Course Code
<p><b>Municipal Employee Training</b> <b>Stormwater Pollution Prevention</b></p> <p>Covers the importance of protecting water quality, pollutants/pollutant sources which may be present at municipal facilities, City operating procedures (e.g., HMMP), inspections, selecting appropriate BMPs, performing job activities to prevent or minimize impacts to water quality, spill prevention/response, and procedures for reporting illegal stormwater discharges.</p>	<p><b>Stormwater Pollution Prevention &amp; Good Housekeeping Practices</b></p> <ul style="list-style-type: none"> <li>• MS4 permit and requirements.</li> <li>• Identifying harmful/prohibited practices (illegal dumping or spills) into the City’s stormwater system.</li> <li>• Management procedure (reporting water quality concerns to the WSD Stormwater Management Section).</li> <li>• Importance of water quality protection and performing job activities (e.g., street repair/improvement, vehicle/equipment maintenance) to prevent or minimize impacts to water quality.</li> <li>• Spill prevention, response procedures, responsibilities, clean-up and reporting.</li> <li>• Municipal facility/job activities pollutant sources.</li> <li>• Proper handling, storage, transportation and disposal of used oil and other hazardous materials/wastes to prevent spills, exposure to rainfall and stormwater runoff.</li> <li>• The City Hazardous Material Management Program (HMMP).</li> <li>• Municipal facility inspections form for site staff.</li> <li>• Selecting appropriate BMPs, including operation and maintenance.</li> <li>• Water and sanitary sewer system maintenance and repair practices to minimize discharges (where applicable).</li> </ul>	<p><b>Department/Employees</b></p> <p><u>PRD</u></p> <ul style="list-style-type: none"> <li>• Field Staff</li> <li>• Maintenance Yard Staff</li> <li>• Warehouse Staff</li> <li>• Foreman</li> <li>• Park Manager</li> <li>• Associated Supervisors</li> </ul> <p><b>New Employee Training:</b> CMO100-ONL-EP8093, EP8062 (four training briefs), EP8092, <u>OR</u> equivalent documented OJT</p> <p><b>Refresher Training:</b> CMO100-ONL-EP8093, EP8062 (four training briefs), <u>OR</u> EP8092</p> <p><u>PWD</u></p> <ul style="list-style-type: none"> <li>• Fleet Services Division Staff</li> </ul> <p><b>New Employee Training:</b> CMO100-ONL-EP8093, PW8026, <u>OR</u> equivalent documented OJT</p> <p>Refresher Training: CMO100-ONL-EP8093, <u>OR</u> PW8026</p> <p><u>STR</u></p> <ul style="list-style-type: none"> <li>• Maintenance field employees</li> <li>• Service center staff</li> </ul> <p><b>New Employee Training:</b> CMO100-ONL-EP8093, EP8065, <u>OR</u> equivalent documented OJT</p> <p>Refresher Training: CMO100-ONL-EP8093, <u>OR</u> EP8065</p> <p><u>WSD (Facility Staff)</u></p> <ul style="list-style-type: none"> <li>• Water Treatment Staff (Water Production)</li> <li>• Wastewater Treatment Staff (Wastewater Treatment)</li> </ul> <p><b>New Employee Training and Refresher Training:</b> WSSTMB, <u>OR</u> equivalent documented OJT</p>

**SWMP – APPENDIX H (continued)**

Citywide Stormwater Training Plan for City of Phoenix AZPDES MS4 Permit effective date 7/1/21

		<p><u>WSD (Field Staff)</u></p> <ul style="list-style-type: none"> <li>• Wastewater Collection staff</li> <li>• Wastewater Distribution staff</li> </ul> <p><b>New Employee Training and Refresher Training:</b>                  WSSWPA,  <u>OR</u> equivalent documented OJT                  Every two years incorporate Hazardous Materials Handlers.</p>
<p><b>Municipal Employee Training</b>  <b>Spill Management</b>                  Procedures and spill management practices to prevent or minimize spills or discharges to the storm sewer system, particularly during spill response.</p>	<p><b>Spill Prevention and Reporting</b></p> <ul style="list-style-type: none"> <li>• Spill prevention &amp; response procedures/responsibilities.</li> <li>• Spill management practices to prevent or minimize discharges to the storm sewer system and drywells.</li> </ul>	<p><b>Department/Employees</b>  <u>PFD</u></p> <ul style="list-style-type: none"> <li>• Company Officers (Fire Captains)</li> <li>• Command Officers</li> </ul> <p><b>New Employee Training:</b>                  EP8051,                  EPTBSW,  <u>OR</u> equivalent documented OJT.  <b>Refresher Training:</b>                  EP8051,  <u>OR</u> EPTBSW</p>
<p><b>Municipal Employee Training</b>  <b>Municipal Stormwater Assessors</b>                  Procedures on how to conduct stormwater Environmental Facility Assessments (EFAs) at municipal facilities.</p>	<p><b>Municipal Stormwater Inspector Training</b></p> <ul style="list-style-type: none"> <li>• Federal &amp; local regulatory requirements (including MS4 permit requirements, SWMP and PCC 32C).</li> <li>• Stormwater BMPs and pollution prevention for municipal facilities.</li> <li>• Stormwater management plans (City Hazardous Materials Management Program), Facility Stormwater Plans and Stormwater Pollution Prevention Plans (SWPPPs) if applicable.</li> </ul>	<p><b>Department/Employees</b>  <u>OEP</u></p> <ul style="list-style-type: none"> <li>• Environmental Quality Specialists</li> </ul> <p><b>New Employee Training:</b>                  EP8064,  <u>OR</u> equivalent documented OJT  <b>Refresher Training:</b>                  EP8064</p>

**Permit Section 4.6.A.1 Industrial and Commercial Facilities**

<b>Course Objective</b>	<b>Course Topics</b>	<b>Employees Trained/Course Code</b>
<p><b>Municipal Employee Training – Industrial and Commercial Facilities</b>                  Educate and update inspectors on stormwater management practices and BMPs for industrial and commercial facilities subject to inspection.</p>	<p><b>Industrial and Commercial Facility Inspections</b></p> <ul style="list-style-type: none"> <li>• Information on requirements for stormwater discharges associated with industrial and commercial activity.</li> <li>• Federal &amp; local regulatory requirements (including MS4 permit requirements and city SWMP)</li> <li>• BMPs, industrial facility inspections, PCC 32C, and AZPDES MSGP.</li> </ul>	<p><b>Department/Employees</b>  <u>WSD</u></p> <ul style="list-style-type: none"> <li>• Water Quality Inspectors</li> <li>• Senior Water Quality Inspectors</li> <li>• Chief Water Quality Inspectors</li> </ul> <p><b>New Employee &amp; Refresher Training:</b>                  WSSWPA (WSD735-ILT-Stormwater Permits A),  <u>OR</u> equivalent documented OJT</p>

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**Permit Section 4.7 Construction and Section 4.8 Post Construction**

Course Objective	Course Topics	Employees Trained/Course Code
<p><b>Plan Review Staff with Stormwater Responsibilities</b> Procedures on how to conduct plan review to verify compliance with local, state and federal stormwater regulations.</p>	<p><b>Plan Review Procedures and Requirements</b></p> <ul style="list-style-type: none"> <li>• Grading and drainage design standards</li> <li>• Review procedures</li> <li>• Municipal ordinances related to stormwater, construction and post-construction.</li> <li>• Requirements for structural and non-structural management practices on construction sites in new development and redevelopment, such as erosion and sediment controls</li> <li>• Post construction stormwater controls</li> <li>• Includes PCC and Stormwater Policies and Standards Manual</li> </ul>	<p><b>Department/Employees</b> <u>Private &amp; Municipal Project Review</u> <u>PDD</u></p> <ul style="list-style-type: none"> <li>• Civil Plan Reviewers and Post-Construction Program Staff (latter FY 23/24)</li> </ul> <p><b>New Employee Training and Refresher Training:</b> WSGDPR (WSD700-ONL Grading &amp; Drainage Plan Review), <u>OR</u> Equivalent documented OJT</p> <p><b>New Employee Training and Refresher Training OPTIONAL (FY 23/24):</b> PDD107-MAT-Stormwater Post Construction</p> <p><u>Municipal Project Review</u> <u>AVN</u></p> <ul style="list-style-type: none"> <li>• Project Managers <u>STR (Vertical Project Management, Horizontal Project Management)</u></li> <li>• Project Managers <u>WSD</u></li> <li>• Project Managers</li> </ul> <p><b>New Employee Training and Refresher Training:</b> WSGDPR (WSD700-ONL Grading &amp; Drainage Plan Review), <u>OR</u> Equivalent documented OJT</p>
<p><b>Construction Inspection Staff with Stormwater Responsibilities</b> Procedures on how to conduct construction inspections to verify compliance with local stormwater regulations and to protect the City’s MS4.</p>	<p><b>Construction Inspection Procedures and Requirements</b></p> <ul style="list-style-type: none"> <li>• Municipal ordinances related to stormwater and construction</li> <li>• Requirements for structural and non-structural control measures</li> <li>• Practices on construction sites, such as erosion and sediment controls</li> <li>• Construction BMPs to reduce pollution from construction activities</li> <li>• Inspection procedures</li> <li>• Enforcement procedures</li> </ul>	<p><b>Department/Employees</b> <u>Private &amp; Municipal Project Construction Inspectors</u> <u>PDD</u></p> <ul style="list-style-type: none"> <li>• Civil Inspectors</li> </ul> <p><b>New Employee Training and Refresher Training:</b> PDD Construction Inspection procedures, <u>OR</u> Equivalent documented OJT/Field inspections</p> <p><u>Municipal Project Construction Inspectors</u> <u>OEP, WSD</u></p> <ul style="list-style-type: none"> <li>• Environmental Quality Specialists</li> </ul> <p><b>New Employee Training</b> EP8074, <u>OR</u> equivalent documented OJT.</p> <p><b>Refresher Training:</b> EP8074</p>
<p><b>Post-Construction Inspection Staff w/Stormwater Responsibilities</b> <b>Note: Implementation was required one (1) year from Permit effective date (July 1, 2022).</b></p> <p>Procedures on how to conduct post construction inspections to meet requirements of the City MS4 permit.</p>	<p><b>Inspection Procedures and Requirements</b></p> <ul style="list-style-type: none"> <li>• Municipal ordinances related to stormwater and post-construction</li> <li>• Requirements for structural stormwater control practices in new development and redevelopment</li> <li>• Maintenance responsibilities through agreements and policies</li> <li>• Inspection procedures</li> <li>• Enforcement procedures</li> </ul>	<p><b>Department/Employees</b> <u>Private &amp; Municipal Project Construction Inspectors</u> <u>PDD (FY 22/23)</u></p> <ul style="list-style-type: none"> <li>• Civil Inspectors</li> </ul> <p><b>New Employee Training and Refresher Training:</b> PDD107-MAT-Stormwater Post Construction</p>

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Citywide Stormwater Training Plan for City of Phoenix AZPDES MS4 Permit effective date 7/1/21

Acronyms

AZPDES = Arizona Pollutant Discharge Elimination System	PCC = Phoenix City Code
BMP = Best Management Practices	PDD – Planning and Development Department
HOU = Housing Department	PFD = Phoenix Fire Department
IDDE = Illicit Discharge and Elimination (IDDE)	PWD = Public Works Department
MS4 = Municipal Separate Storm Sewer System	PRD = Parks & Recreation Department
MSGP = Multi-Sector General Permit	SWMP = Stormwater Management Plan
NSD = Neighborhood Services Department	STR = Street Transportation Department
OJT = On-the-Job Training	SWFS = Solid Waste Field Services Division
OEP = Office of Environmental Programs	WSD = Water Services Department

**Notes**

Training not provided to contractors/subcontractors.

Facilities with specific AZPDES permits (for example, MSGP) are not covered in this training plan, but are governed by that permit.