



## Stormwater Pollution Prevention for Construction Sites

### 1) Purpose

The purpose of this document is to assist property owners, developers, engineers and construction personnel with developing plans and implementing methods to control pollutants associated with stormwater discharges from construction activities. This guideline outlines minimum requirements for compliance with the City's Stormwater Management Plan, MS4 Permit and associated Ordinances adopted as a result of changes in stormwater pollution regulations. Although this document refers to specific regulations, it is not a comprehensive recitation or interpretation of minimum requirements that may apply to construction activity by agencies such as ADEQ or the EPA.

*See section 10 for definitions and abbreviations.*

### 2) History

EPA issued regulations in 1990 authorizing the creation of a phased NPDES permitting system for stormwater discharges. In 1999, EPA published rules that implemented Phase II of the stormwater program. In December 2002, the EPA designated ADEQ as the regulating authority and the AZPDES program was developed.

In March of 2003, the Phase II program expanded to small municipalities which included the City of Goodyear. Over a five year period, operators of small municipalities were required to develop, implement, and enforce a program to prevent, or reduce pollutants to the maximum extent practicable, discharges of pollutants to the City's MS4 and Waters of the United States.

In compliance with Phase II regulations, the City of Goodyear developed a Stormwater Management Plan, a Stormwater Pollution Ordinance, and obtained permit coverage through ADEQ. The Stormwater Management Plan outlines 6 distinct programs in which the Engineering Department participates through plan review and compliance inspection processes relating to construction site stormwater runoff control.

### 3) Site Classifications

The City has two classifications for all construction sites that result in a land disturbance. There are distinct plan preparation, construction, and permit termination requirements for each classification. Documents have been prepared to assist applicants with developing plans and are available on the City's Website. Projects are classified as either small sites or large sites as follows:

Small Sites: (meet all of following criteria)

- area of land disturbance is less than 1 acre, and
- not part of a Larger Common Plan of Development or Sale, and
- located farther than ¼ mile from impaired or unique waters \*

Large Sites: (meet any of following criteria)

- construction that results in land disturbance of 1 acre or greater, or
- less than 1 acre if part of a Larger Common Plan of Development or Sale, or
- project is located within 1/4 mile of unique or impaired waters \*

\* The City of Goodyear identifies a project to be within ¼ mile of impaired or unique waters if any portion of the project is closer than ¼ mile to the water's floodway boundary as delineated in FEMA Flood Insurance Rate Maps.

#### **4) Plan Requirements and Reviews**

All projects shall incorporate controls to prevent pollutants from leaving the site. Plans will be reviewed for placement of controls to minimize pollutants associated with stormwater runoff. Plans shall be developed so as to not cause flooding, negatively effect drainage or impact adjacent property. Sites adjacent to or having a potential to discharge stormwater into another municipality shall obtain consent of proposed construction from that municipality prior to final plan approval by the City of Goodyear. Submittal to the City of Goodyear does not negate or replace requirements to comply with any ADEQ or EPA regulation. The operator is to submit any information to ADEQ or the EPA and obtain permits as required.

##### **Small Site Requirements**

A “BMP Exhibit” shall be included as a separate sheet in the grading and drainage plan set, that demonstrates placement of controls (BMPs) to prevent runoff of pollutants into any stormwater system or adjacent property. If a project does not required grading plans, then either a separate BMP exhibit shall be included in the plans, or BMPs shall be clearly identified on the plan sheets. The exhibit shall include any perimeter control, drainage inlet protection and wash protection devices necessary to control erosion and to prevent sediments and pollutants from leaving the site. Exhibits shall also identify the person responsible for implementation and maintenance of BMPs. BMPs shall be selected, installed and maintained per the Drainage Design Manual for Maricopa County, Volume III Erosion Control. The use of straw bales as a BMP is not permitted in the City of Goodyear. SWPPP preparation as described in section 5 does not apply to small sites. A Small Site Checklist is available to aid applicants with preparing the exhibit for review.

##### **Large Site Requirements**

A SWPPP shall be prepared and accompany the grading and drainage documents submitted for review. Reviews follow the normal plan review process unless the SWPPP is required to be submitted to ADEQ for review and approval. ADEQ currently reviews and approves only those projects located within 1/4 mile of unique or impaired waters. For these projects, the SWPPP shall be submitted to the City for review and found to be in general compliance with the City’s requirements prior to submitting to ADEQ; and, the City will not issue a CSP until the City receives a copy of ADEQ’s approval to proceed. Plans submitted to ADEQ prior to City review may require correction and/or resubmittal to ADEQ. A Large Site Checklist is available to aid applicants with preparing documents for plan review.

#### **5) SWPPP Preparation (Large Sites Only)**

A SWPPP is a two-part document consisting of a Narrative and a Site Map. Documents shall conform to ADEQ’s General Permit AZG2008-001, the City’s Engineering Design Standards and Policies Manual (EDS&PM) Administration Section and Chapters 1, 2 and 3, and this section. As a minimum standard, BMPs shall be selected, installed and maintained per the Drainage Design Manual for Maricopa County, Volume III Erosion Control. The use of straw bales as a BMP is not permitted in the City of Goodyear.

##### **Narrative**

Narratives shall include enough topographical information to demonstrate pre and post stormwater flows and impacts to adjacent property. Narratives shall indicate any existing or proposed construction adjacent to or within the site and how SWPPP efforts will be coordinated between the sites. Narratives shall also identify any sensitive and protected areas and how these areas will be preserved. Construction staging shall be described including the sequence of activities applicable to that stage.

##### **Site Map**

Site maps shall be prepared as a separate and individual plan set including a cover sheet and additional sheets as necessary to identify changes in drainage during different stages of construction. The site shall be divided into the following three stages of construction; Initial, Interim, and Final. Each stage shall be shown on a separate sheet and include BMPs applicable to that stage. If the project is phased, then each

project phase shall be broken down into construction stages. Refer to the Plan Review Checklist for minimum information shown on every sheet.

• **Initial Stage.** This plan sheet shall provide grading, erosion and sediment controls for the initial clearing, grubbing and grading of the site. These BMPs shall be installed at the outset of construction, prior to any land-disturbing activities. Initial controls are to be placed on existing grades, but shall be based in part on proposed grading operations. In addition to minimum required information, this sheet shall include:

1. Contours appropriate to the site to demonstrate existing topography, extending a minimum of 100 feet beyond the property line.

• **Interim Stage.** These BMPs shall be based on proposed grades and drainage features and are installed after initial stage. For some BMPs, such as inlet protection, interim controls are installed after the construction of site infrastructure. In addition to minimum required information, this sheet shall include:

1. Location of all interim erosion and sediment controls, designed in conjunction with the proposed site topography, but also considering the controls designed in the Initial phase sheet and;
2. Location of all buildings, drainage features and facilities, paved areas, retaining walls, water quality facilities, or other permanent features to be constructed in connection with, or as a part of, the proposed work, per approved plans.
3. Flow arrows and volumes with proposed contours or major dimensions, locations, and slopes of proposed grading.

• **Final Stage.** BMPs shown in the Final phase sheet shall be installed as one of the last steps in the construction process, such as final seeding and mulching and granite placement. This plan sheet shows controls for final completion of the site. In addition to minimum required information this sheet shall include:

1. Any Initial or Interim BMPs that are to be removed and any resulting disturbed area to be stabilized.
2. Location of all final erosion and sediment control BMPs, permanent landscaping, and measures necessary to minimize the movement of sediment off site until permanent vegetation can be established.
3. Show area of buildings, pavement, sod, and permanent landscaping (define types) per approved improvement plans.
4. Show BMPs to be removed at the end of construction; for example:
  - construction pond dewatering
  - stabilized staging areas
  - street inlet protection
  - vehicle tracking controls
  - construction fencing

## 6) City Issued Construction Stormwater Permits (CSP)

The City will issue a separate CSP for all projects requiring a grading permit and all “Large Sites”. The CSP shall be obtained prior to performing any land disturbance activities. A Construction Stormwater Permit Fee Schedule is required for issuance of the permit. The permittee and/or owner/operator shall be ultimately responsible for compliance with City permit conditions and City issued violations and fines. This permit is in addition to any permit required by other agencies such as ADEQ or the EPA.

There are federal, state, and city permits that may be required prior to the start of construction of a project. It is not the City’s responsibility to ensure that the plans for a proposed project satisfy state and federal permit requirements or that all permits have been obtained. (I.e. Section 404 permitting, U.S. Fish and Wildlife Service Threatened and Endangered Species Clearance, Archeological, etc.)

### Terminating Coverage under the CSP

• **Small Sites.** Site stabilization, final inspection and approval of improvements are required to terminate coverage under the CSP permit.

• **Large Sites.** After all construction activities have been completed and the City determines the site has met final stabilization requirements with temporary BMPs removed, the authorized site representative may file a Notice of Termination (NOT) with ADEQ, with a copy submitted to the City Inspector. The authorized site representative shall also submit a copy of the NOT acknowledgement Letter issued by ADEQ to the City, which will effectively terminate coverage under the CSP permit.

## **7) Construction requirements**

### **Pre-construction Meeting**

An on-site pre-construction meeting shall be arranged with the City Inspector after obtaining a Construction Stormwater Permit and prior to any construction activity or placement of BMPs. In attendance shall be the operator, the owner or owner's representative, the general contractor, and any person delegated to carry out stormwater pollution prevention provisions.

### **BMP Placement and Maintenance**

BMPs shall be installed and in operation prior to any grading or land clearing activities. Controls shall be placed in such a manner to insure sediment-laden water does not enter drainage systems, adjacent properties, or violate any water standard. Regular inspection and maintenance shall be provided to ensure BMPs are in an operable condition at all times. Damaged controls shall be repaired within 72 hours and prior to the next rain event. BMPs shall not be removed until the site has been stabilized and the potential for erosion has passed.

### **SWPPP Inspection and Management (Large Sites Only)**

It is the Operator's responsibility to ensure the project is in compliance with all Federal, State, and Local requirements, to include implementation, construction, inspection, maintenance, replacement, upgrading of facilities and record management of the SWPPP. Any violations and fines are the responsibility of the owner/operator and/or site contractor. All SWPPP documents shall be on-site and available for review upon notice by ADEQ, EPA, or City of Goodyear representatives.

The operator shall perform, at a minimum, a visual inspection of the construction site once every seven calendar days or once every 14 calendar days and within 24 hours of rain event greater than or equal to a half an inch ( $\frac{1}{2}$  inch). If within  $\frac{1}{4}$  mile of an impaired water, then inspections shall be performed at a minimum of once every seven calendar days and visually observe stormwater discharges at all discharge locations within one business day after each rain event of half an inch ( $\frac{1}{2}$  inch) or greater. The operator shall prepare a report documenting his/her findings on the conditions of the SWPPP controls and note any erosion problem areas. The report is to be maintained on site by the operator.

### **Posting (Large Sites Only)**

A sign or other notice shall be posted near the main entrance of the construction site with the following information: AZPDES authorization number for the project; name and telephone number of a local office or on-site contact person; a description of the type of construction project; the location of the SWPPP, and the name and telephone number of a contact person for accessing the SWPPP.

**Dewatering Activities:** Dewatering devices must discharge in a manner that will not affect streams, wetlands, drainage systems, or off-site property. Discharged waters shall be free of any sediment and pollutants. Dissipation and filtering devices shall be placed at the discharge end of hose to contain sediments and prevent any erosion.

## 8) Post Construction Sediment Control

The developer/owner is responsible for inspection and maintenance of the project during the warranty period for post construction sediment control. Facilities found to have accumulated sediments shall be immediately cleaned and measures taken to prevent sediment from entering any adjacent property or storm sewer system. The cleanup should be completed within 72 hours and prior to the next rain event. Sediments shall be removed from the project and properly disposed.

Facilities found deficient in minimizing sediment and erosion from stormwater events shall be immediately reported to the City's Engineering Department. These facilities shall be repaired, replaced or re-designed to correct the deficiency to the City's satisfaction. Additional plan review and permitting may be required prior to correcting the deficiency.

## 9) Enforcement

The City may at any time perform a compliance inspection of the construction site and/or SWPPP. Failure to comply with any condition, correction notice or violation of any Ordinance may lead to legal and enforcement action and/or fines. These actions are independent of enforcement actions that may be implemented by other departments within the City of Goodyear or any County, State and Federal agency.

**Levels of Actions.** The Engineering Department has two levels of enforcement action for non-compliance. Enforcement action varies for each category, depending on the severity of the violation. Non-compliance may also result in the violation being reported to other City departments or agencies.

### Level I

Level I Actions may result in an immediate issuance of a Stop Work Order. Examples of Level I Actions include the following:

- Clearing, grubbing, grading or placement of BMPs without a required CSP and/or grading permit
- Failure to restrict construction to limits of disturbance
- Failure to protect sensitive/protected areas
- Failure to place BMPs prior to construction activity
- Failure to correct Level II violations as directed

### Level II

Remediation for Level II Actions may result in a Notice to Comply being issued. Examples of Level II Actions include the following:

- Failure to clean up tracking of material onto roadways or sediment leaving the site
- Failure to maintain SWPPP and CSP requirements
- Failure to schedule a pre-construction meeting

**Stop Work Orders.** If a project is issued a Stop Work Order, all work on site shall cease, excluding any work required to bring the site to a safe condition (e.g., backfilling of holes and trenches). Corrective actions may be completed; however, the Permittee(s) shall inform the Inspector of such activities.

## 10) Definitions and Abbreviations

**ADEQ** – Arizona Department of Environmental Quality.

**AZPDES** – Arizona Pollutant Discharge Elimination System

**BMP's or Best Management Practices** – methods, measures or practices to prevent or reduce the introduction of pollutants into receiving waters. In addition, the term shall include erosion and sediment control BMPs, stormwater conveyance, stormwater diversion, and treatment structures, and any procedure or facility used to minimize the exposure of pollutants to stormwater or to remove pollutants from stormwater.

**Construction Activity** – includes clearing, grading, excavating, stockpiling of fill material and other similar activities resulting in a land disturbance

**CSP**- a Construction Stormwater Permit issued by the City of Goodyear.

**Day** - a calendar day or any consecutive 24-hour period that reasonably represents the calendar day

**Discharge** – any addition of any pollutant to waters of the United States or to a MS4 from any point source.

**EDS&PM**- City of Goodyear Engineering Design Standards and Policies Manual

**EPA** – United States Environmental Protection Agency.

**Ephemeral** - a surface water that has a channel that is at all times above the water table, and that flows only in direct response to precipitation.

**FCDMC**- Flood Control District of Maricopa County

**FIRM** – FEMA Flood Insurance Rate Map

**Impaired Water** - waters that have been assessed by ADEQ, under the Clean Water Act, Section 303(d), as not attaining a water quality standard for at least one designated use, and are listed in Arizona's 2004 303(d) List and Other Impaired Waters.

**Larger Common Plan of Development or Sale** - a contiguous area where multiple separate and distinct construction activities are occurring under one plan (e.g., the operator is building on three half-acre lots in a 6-acre development). The plan in a common plan of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that construction activities may occur on a specific plot.

**MS4 (Municipal Separate Storm Sewer System)**- a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, district, association, or other public body (created by or pursuant to State law)...including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States. (ii) Designed or used for collecting or conveying stormwater; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.”

**NOI (Notice of Intent)** - the application to operate under the ADEQ general permit.

**NOT (Notice of Termination)** - the application to terminate coverage under the ADEQ general permit

**Non-stormwater Discharge** – any discharge to City right-of-way or a stormwater collection system that is not composed entirely of stormwater.

**NPDES** – National Pollutant Discharge Elimination System.

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

**Rain Event** - is defined as when rain drops (ultimately resulting in 0.5 inch accumulation as recorded by the closest Flood Control District of Maricopa County rain gage) reach the ground surface of the construction site. Separate rain events are distinguished by a 24 hour period of no rain reaching the ground surface of the construction site.

**Receiving Water** - includes Waters of the U.S. and conveyances thereto, including MS4s

**Significant Materials or Sediment** – any solid, liquid or gaseous substance other than stormwater that causes or may cause or contribute to the violation of a water quality standard pursuant to Article 2, Title 49, Arizona Revised Statutes.

**Site Operator**- any person associated with a construction project that meets one or both of the following two criteria: a. The person has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or b. The person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

**Stabilization** - covering or maintaining an existing cover over soil that reduces and minimizes erosion

**Stormwater** - runoff, surface flows and drainage that is comprised solely of any form of precipitation.

**Stormwater Collection System** – all or any part of any publicly or privately owned system or structure designed or utilized to receive, collect, detain, retain, or convey stormwater and any direct connection to such system or structure. Such a system may include, but is not limited to swales, curbs, gutters, ditches, channels, parks, pipes, watercourses, drywells, culverts, storm drains, catch basins, retention or detention areas, spillways, scuppers, pump stations and common areas.

**SWPPP (Stormwater Pollution Prevention Plan)** – a plan which includes narrative information and a site map describing how requirements in ADEQ’s AZG 2008-001 Permit are met, an identification of construction/contractor activities that could cause pollutants in the stormwater, and a description of measures or practices to control these pollutants.

**Unique Water** - a surface water that has been designated by ADEQ as an outstanding state resource under A.A.C. R18-11-112.

**Waters of the United States** – 1. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; 2. All interstate waters, including interstate wetlands; 3. All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters: a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or c. Which are used or could be used for industrial purposes by industries in interstate commerce; 4. All impoundments of waters otherwise defined as waters of the United States under this definition; 5. Tributaries of waters identified in paragraphs (1) through (4) of this definition; 6. The territorial sea; and 7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs 1. through 6. of this definition.

**Within ¼ Mile of Impaired or Unique Waters** - if any portion of the project is closer than ¼ mile to the water’s floodway boundary as delineated in FEMA Flood Insurance Rate Maps.