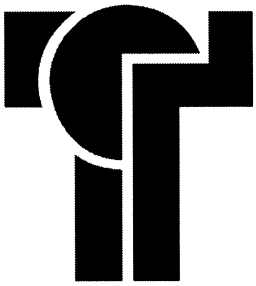


CITY OF TEMPE
STORM WATER MANAGEMENT PLAN

(Revised October, 2003)

Prepared by the

TEMPE WATER UTILITIES DEPARTMENT

In fulfillment of the requirements of 40 CFR 122.26(B)(2)(IV) and incorporated into AZPDES No. AZS000005 by reference

TABLE OF CONTENTS

ATTACHMENTS

D. TEMPE MS4 MAPS INDICATING SERVICE AREA AND ALTERNATIVE RETENTION CRITERIA AREA
E. MODIFIED ORDINANCES
   (1) CHAPTER 12, ARTICLE IV: STORM WATER RETENTION
   (2) CHAPTER 12, ARTICLE VI: STORM WATER POLLUTION CONTROL
   (3) SECTION 19-50: HAULING WASTE FILL OR WASTE EXCAVATION MATERIAL
F. DESCRIPTION OF MAJOR TEMPE STORM DRAIN OUTFALLS TO WATERS OF THE U.S.
G. TEMPE FIRE DEPARTMENT HAZARDOUS MATERIALS POLICY (208.01)
H. INDUSTRIAL FACILITY INSPECTION CHECKLIST

I. INTRODUCTION

A. Program History

When the City of Tempe (City) first developed its storm water management plan and programs as part of the application process for Tempe's first-term Municipal Separate Storm Sewer System (MS4) permit, primary responsibility for securing Tempe's MS4 permit, and developing and implementing required programs, was delegated by the City Manager to Tempe's City Engineer within Tempe's Public Works Department, with isolated programs such as street sweeping and water quality monitoring being implemented by different divisions mostly within the Public Works Department (figure 1). By the time Tempe's permit was issued in 1997, Tempe's Environmental Management Division within the Public Works Department had been created to oversee all of the City's environmental programs, including storm water reporting and compliance programs. Responsibility for implementation of storm water best management practices (BMPs), however, remained primarily with other divisions within Public Works (figure 2). Both before and after issuance of Tempe's MS4 permit, the organizational structure surrounding Tempe's storm water programs was such that the program lead was not responsible for program implementation despite being accountable for results.

Figure 1: Pre-MS4 Permit

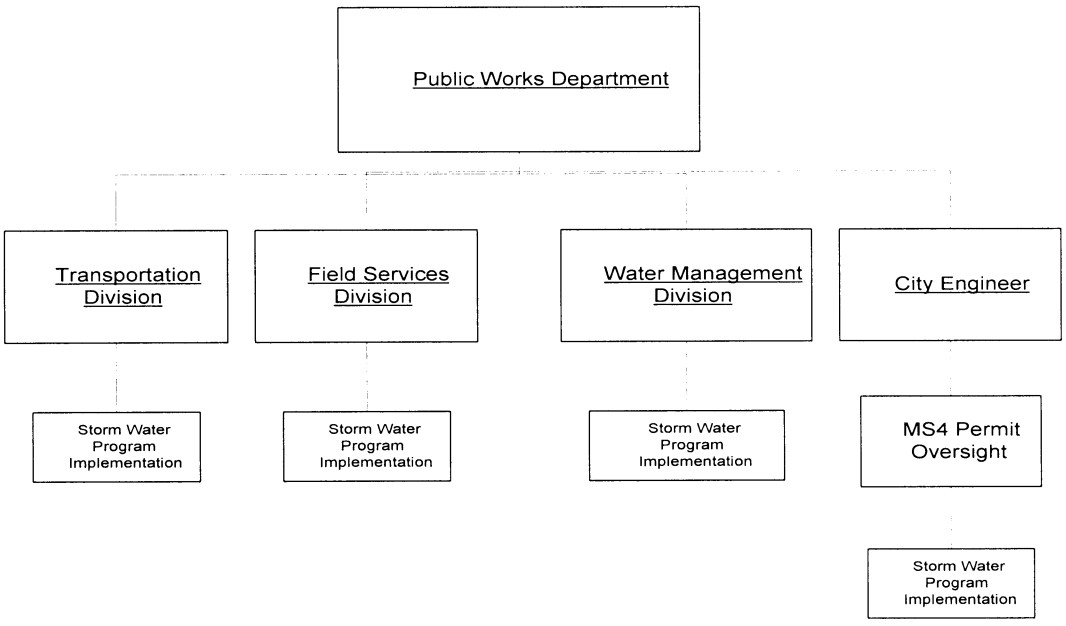
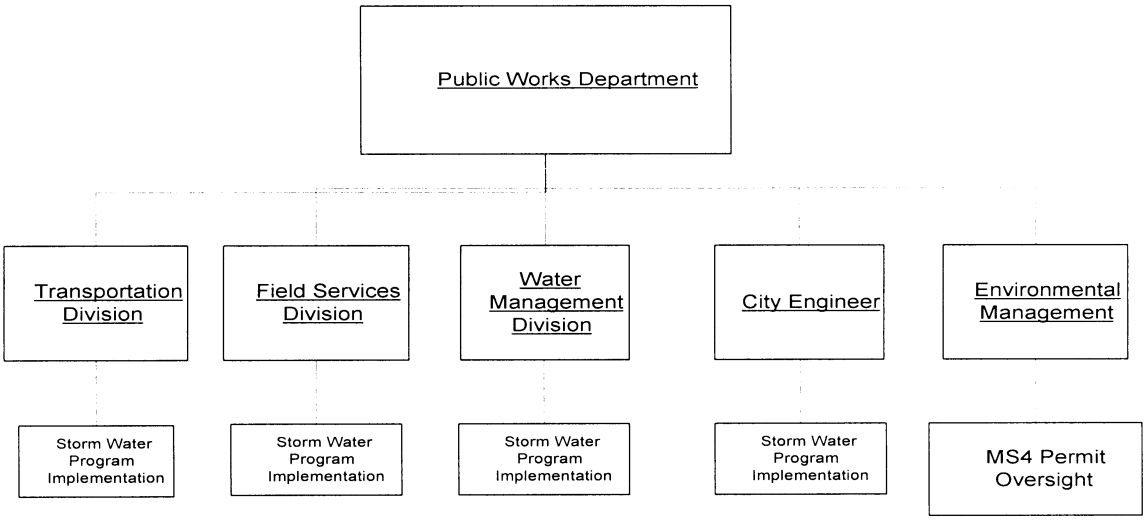


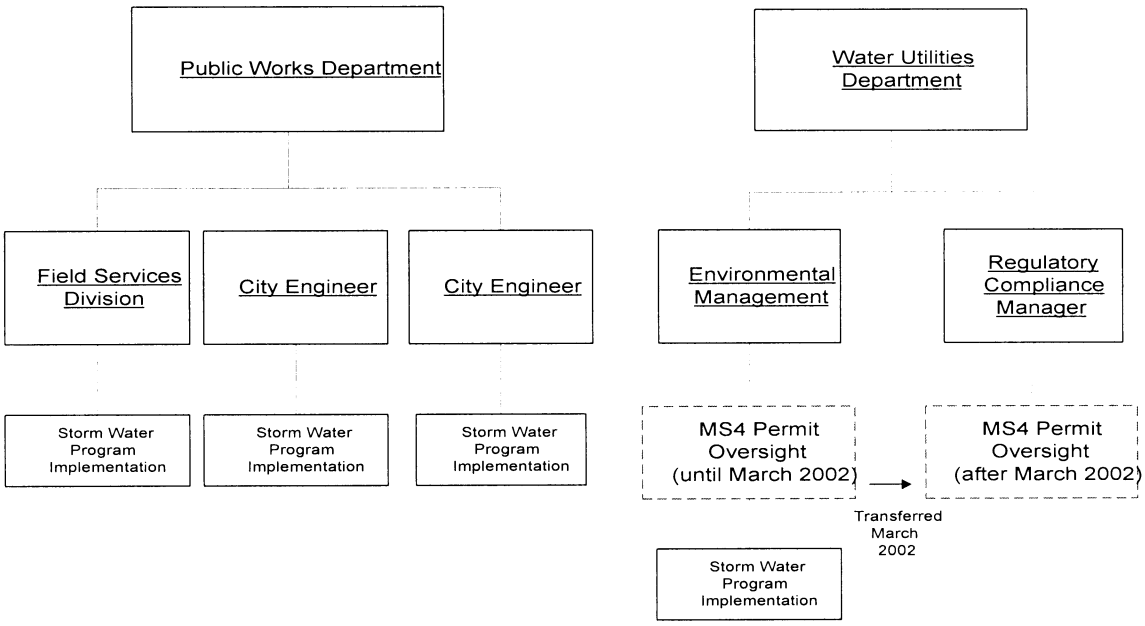
Figure 2: Permit Issuance to December 2000



Prior to December 2000, Tempe's water utilities functions (water and wastewater) were managed out of the Water Management Division within the Public Works Department. In December of 2000, the City established a Water Utilities Department as a separate department from Tempe's Public Works Department. At that time, Tempe's Environmental Management Division was moved from the Public Works Department to the Water Utilities Department because of the close association between water-related programs and environmental programs. Tempe's Environmental Management Division continued to maintain storm water reporting and compliance responsibilities, and inherited implementation responsibilities for those programs that were already implemented out of the Water Utilities Department, but many implementation responsibilities remained with Public Works Department divisions (figure 3).

In March, 2002, responsibility for compliance with Tempe's MS4 permit was transferred from the Environmental Management Division to the Water Utilities Department's Regulatory Compliance Manager as part of an effort to consolidate all water-related regulatory compliance responsibilities into one section within the Water Utilities Department (figure 3).

Figure 3 (After December 2000)



B. Program Assessment

After assuming responsibility for storm water programs in March 2002, Tempe's Regulatory Compliance Manager conducted a 6-month assessment of storm water program implementation status and program effectiveness. This assessment was conducted for several reasons, among them to re-evaluate storm water programs for the second permit term.

The following is an updated list, which first appeared in Tempe's 2001 – 2002 storm water annual report, summarizing the findings of Tempe's assessment. These findings indicate that Tempe's storm water management plan should be modified substantially for the second permit term to emphasize controls that best apply to, and can be most effectively implemented by, the City of Tempe.

1. Tempe's storm water program can be characterized as decentralized in the early years of Tempe's first MS4 permit term, especially in recent years due to organizational gaps between accountability and program implementation responsibilities. Where possible, MS4 permit oversight and storm water program implementation responsibilities should be centralized within one City department with a clear understanding of the intent and requirements of federal storm water regulations in order to ensure accountability. In addition, where it is not feasible to implement programs out of one department, mechanisms to ensure City-wide

accountability for storm water programs should be incorporated into Tempe's organizational structure. Such mechanisms could include program-specific inter-departmental certifications of commitment for the SWMP and certifications of program status for annual reports.

2. Tempe is a city with low growth and construction potential, and a large land base zoned for industrial uses. For this reason, Tempe's storm water management plan (SWMP) over the second permit term should place high emphasis on Tempe's industrial storm water inspection program and limit construction site controls to the implementation of City drainage and illicit discharge ordinances. The exception to this shift is in a defined area located in downtown Tempe, along Tempe Town Lake, and in Papago Park Center (see "Alternative Retention Criteria Area", Attachment D), where limitations on retention warrant a more aggressive approach to construction sites and other potential dischargers (see number 3). Tempe's water quality assessments do not identify any specific industrial sector that is impacting water quality, but Tempe suspects that many industries in Tempe could use assistance in complying with EPA's industrial general permit.

   Tempe did not implement a thorough and aggressive industrial inspection program over the first MS4 permit term. Tempe believes that a general shift in program emphasis and City resources from construction programs to industrial programs along with the establishment and implementation of detailed SWP3 inspection protocol could significantly reduce storm water pollution potential at industrial facilities.

3. Tempe's on-site retention ordinance is Tempe's most effective control measure, containing most of the rainfall which falls on Tempe, and accordingly limiting discharges of pollutants to waters of the United States. Within the area defined in Attachment D as the "Alternative Retention Criteria Area" (ARCA), however, strict implementation of Tempe's on-site retention ordinance has been difficult due to the character of pre-ordinance development downtown, the limited availability of land for retention along the Rio Salado corridor, and pre-permit drainage system investments and commitments made in the Papago Park Center area . The ARCA encompasses less than one square mile and less than 2.5% of Tempe's gross land area, and is bounded as follows:

   a. Downtown

      University Drive to the south, the Union Pacific Railroad to the west, the Rio Salado Parkway to the north, and College Avenue to the east wrapping around the Tempe Butte on the north/east side of the old railroad spur and including the property east of College Avenue known as the Arizona National Guard property.

   b. Rio Salado

On the south side of Tempe Town Lake, Rio Salado Parkway to the south, Tempe Town Lake to the north, the prolongation of Hardy Drive to the west, and the Karsten Golf Course at Arizona State University (ASU) to the east, and excluding all land owned by ASU. On the north side of Tempe Town Lake, the 202 freeway to the north, Tempe Town Lake to the south, and the southern prolongation of College Avenue to the east (the area known as the Tempe Town Lake Marina).

c. Papago Park Center

The 202 freeway to the south and Mill Avenue/Van Buren to the east excluding the area south of Curry and east of the Union Pacific railroad, and the Tempe city limits to the north and west.

The City estimates that different retention criteria coupled with more aggressive alternative BMPs in the ARCA would be equally protective of receiving surface waters.

4. Tempe should curtail its routine storm drain inspection program, and divert resources previously utilized for this program to Tempe's illicit discharge detection and elimination program. Tempe recognizes the need to be more aggressive in investigating potential illicit discharges and enforcing City ordinances prohibiting such discharges once they are identified, and to develop specific protocols for doing so. TV equipment and staff time previously used for system-wide inspections would be more effectively used to follow up on potential illicit discharges detected during dry weather screening activities.

5. Tempe may need a more aggressive public awareness program to alert the public to the implications of illicit discharges. This need may be partially met by Tempe's participation in activities and programs that are developed by the Storm Water Outreach for Regional Municipalities, or "STORM" group.

6. Tempe's water quality monitoring and assessment program does not reveal any significant differences in storm water quality between land use sectors. For this reason, it would be difficult to assess the effectiveness of targeted BMPs using water quality data. Tempe's current program could identify spills or illicit discharges if they occurred during storm events, but to date no such illicit discharges have been identified through Tempe's wet-weather monitoring program. Neither water quality results from Tempe's monitoring program nor the State of Arizona's 305(b) assessment indicates that storm water generated in Tempe is causing an exceedance of any Arizona water quality standard.

C. Proposed SWMP

In April 2002, Tempe's Water Utilities Department submitted a modified SWMP to EPA based on a very preliminary review of Tempe's existing SWMP and

programs. As a result of Tempe's comprehensive storm water program assessment, the findings of which are summarized above, and subsequent conversations with EPA and ADEQ, Tempe has developed this revised SWMP which Tempe proposes to implement over the duration of the second permit term. Tempe's revised plan proposes programs which target the largest land-use sectors and potential storm water pollutant sources within Tempe, establishes alternative retention criteria and BMPs for the ARCA, is restructured such that Tempe's Water Utilities Department is responsible for implementing a majority of storm water programs, focuses on those portions of Tempe's system which drain to waters of the United States, and incorporates mechanisms to increase accountability and cross-functionality between City departments and programs.

A new emphasis has been placed on Tempe's illicit discharge and industrial storm water programs. Additional City resources, including two dedicated storm water inspector positions, will be invested in these programs. Because of Tempe's low growth potential and on-site retention ordinance, Tempe's construction storm water program has been rolled into our illicit discharge program. Tempe has determined, for construction sites, that deterrence through education and enforcement of Tempe's illicit discharge ordinance is a much more effective approach than one mandating specific BMPs. Tempe has incorporated a construction inspection program into its SWMP for the ARCA which includes scheduled inspections of all construction sites for signs of illicit discharges as well as SWP3 audits for sites larger than 1 acre. Other more aggressive BMPs have also been proposed for the ARCA.

Another major change to Tempe's SWMP is the consolidation of program implementation responsibilities within Tempe's Water Utilities Department (WUD), where possible. Accordingly, several programs included in Tempe's first-term SWMP that are implemented by non-WUD City departments have been excluded from this SWMP, if the storm water pollution prevention benefits of those programs are incidental to the primary purpose of those programs, and if those programs would and will be implemented in the absence of the SWMP and MS4 permit requirements. In addition, several mechanisms have been incorporated into Tempe's SWMP to increase accountability for implementation of required programs. This SWMP now includes inter-departmental certifications to ensure that managers of City departments that are responsible for implementing storm water programs have each certified their department's commitment to implementing programs, and will certify the implementation status of programs in all annual reports. All certifications of program commitments made in this SWMP are included in Attachment C, and annual reports will contain similar certifications.

Each program section in this SWMP describes an existing or proposed Tempe storm water pollution control program, proposed performance measures for that program, and information proposed to be reported in annual storm water reports. Each program description also summarizes program changes between Tempe's first and second term permits. Tempe's proposed storm water monitoring program is discussed in section III, and a tabular summary of proposed storm water management and monitoring programs, proposed performance measures,

and itemized annual report information is included as Attachment A.

D. Tempe MS4 Area

Consistent with 40 CFR § 122.26(b)(8)(i) and A.A.C. R18-9-A901(17)(1), programs described in this SWMP apply to municipal separate storm sewers that are owned and operated by the City of Tempe. Tempe's MS4 does not include storm sewers that are owned by other private or public entities such as Arizona State University (ASU). ASU is a categorical "small municipal separate storm sewer system" as defined in A.A.C. R18-9-A901(27)(c), and is regulated separately by ADEQ under the Phase II storm water regulations. A map of ASU property excluded from Tempe's MS4 area is included in Attachment D. ASU's storm drain system will grow in the future as ASU acquires and develops property within Tempe.

II. MANAGEMENT PROGRAM

A. Commercial and Residential Areas

1. Drainage System Maintenance

Tempe completed inspections of 47.7 miles of storm drains, or more than 29% of Tempe's entire drainage system of 161.7 miles, during fiscal years 1997 – 1998, 1998 – 1999, and 1999 – 2000. This is well above the 20% Tempe was required to inspect during the first 5-year permit term. The total time invested in the City's storm drain inspection program over the first permit term was approximately 1,568 man-hours, or 39 man-weeks.

Inspections of drains over the first permit term identified several areas in need of cleaning due to the accumulation of dirt and mud over time, but no pipe reaches were identified where significant debris commonly accumulates as a result of individual storm events, or which prevent storm drains from functioning properly. As a result of Tempe's assessment of time committed to this program over the first permit term compared to results yielded, Tempe proposes to discontinue its routine storm drain inspection program for the second MS4 permit term outside of the ARCA. Discontinuing our routine storm drain inspection program outside of the ARCA will allow Tempe to target clearly identifiable portions of our system in need of maintenance, and will free up staff and closed-circuit TV (CCTV) equipment to be used as part of Tempe's more aggressive illicit discharge detection program (see section II(B)).

Within the ARCA, Tempe proposes to implement a more aggressive catch basin inspection and cleaning program. At the beginning of the second permit term, all catch basins within the ARCA will be inspected at the end of calendar quarters when representative storm events (0.2" or greater) occur. If, after the first calendar year of catch basin inspections within the ARCA, no significant accumulation of debris is observed during these quarterly inspections, inspection frequency will be reduced to annually. In addition, the City will work with special events coordinators to establish a presence at events that involve the closing of City streets in order to prevent or mitigate the accumulation of debris in catch basins during events. The City's presence will include outreach, observations during events, and catch basin inspections. Catch basins will be cleaned as needed after events.

<u>Summary of Program Changes</u>

Tempe will discontinue its routine comprehensive storm drain inspection program. Within the ARCA, Tempe will implement its catch basin inspection and cleaning program as described above.

Performance Measures and Responsible City Departments (Proposed to be incorporated into Permit)

Tempe's Water Utilities Department will inspect all catch basins within the ARCA at frequencies prescribed in this SWMP, and clean them as necessary. In addition, catch basins will be inspected and cleaned, as described in this SWMP, after special event street closures. All catch basin inspection and cleaning activities will be documented in logs and made available to ADEQ upon request.

Annual Report Information

Program-specific certification of implementation status by the Tempe Water Utilities Manager (documented results of redevelopment area catch basin inspections and cleaning activities will be provided upon request).

2. New Development and Redevelopment

Article IV of Chapter 12 of the Tempe City Code (Code), attached as Attachment E(1), requires all new development and redevelopment to be designed to retain runoff from the 100-year storm event on-site. This ordinance will be modified to address circumstances in the ARCA by requiring development and redevelopment to provide on-site retention for the 2-year design storm within this area. The 2-year requirement may be waived within the ARCA subject to approval of equivalent on-site pollutant removal BMPs by the Water Utilities Manager under Article VI of Chapter 12, Storm water Pollution Control (Attachment E(2)). Approval of such BMPs would be subject to performance conditions and ongoing City inspections to insure that they continue to achieve required pollutant removal rates.

In addition, developers may opt to obtain their own NPDES permit to discharge storm water, exempting them from City on-site retention requirements as they relate to water quality. In certain unique circumstances, requiring on-site retention may result in environmental degradation. For example, if a developable site contains contaminated soil, there may be a greater potential for aquifer contamination resulting from on-site retention than surface water contamination resulting from discharge off-site. Where retention may result in environmental degradation due to site-specific circumstances, Tempe may allow development within or outside of the ARCA without applying retention requirements, but only after consultation with ADEQ.

The reduction in retention requirements in the ARCA from the 100-year to the 2-year event represents a 65% reduction in the total volume of retention required for future development and redevelopment. This still represents a substantial reduction in storm water discharge volumes and pollutant loads over time. Tempe's Engineering Division estimates that

this ordinance change will result in an insignificant change in pollutant load reduction because of the high proportion of pollutants contained in the "first flush" during storm events when the 2-year storm is contained on-site.

In addition, Tempe's Water Utilities Department will implement several BMPs within the ARCA, in addition to those implemented City-wide, to aggressively target potential pollutant sources in the ARCA. These programs include an area-wide catch basin inspection and cleaning program, a scheduled construction site inspection program, and an escalated illicit discharge deterrence, detection, and elimination program including increased field screening frequencies, area-wide restaurant inspections, and storm water pollution prevention partnerships with various downtown Tempe and Rio Salado merchant and stakeholders' groups. Each of these area-specific programs is described in the respective sections of this SWMP.

To enforce Tempe's on-site retention ordinance, the City's Development Services Department will not issue a grading permit, building permit, or a certificate of occupancy to an owner/developer until notification from the City Engineer is received indicating that a drainage plan, and on-site grading and drainage improvements, are in compliance with Article IV, Chapter 12 of the Tempe City Code. In addition, the City Engineer will not issue this notification to the Development Services Department unless a project provides the required retention, or unless the project is in the ARCA and the Water Utilities Manager has approved alternative on-site pollutant removal BMPs. Sections 12-71 and 12-73 of Tempe's on-site retention ordinance (Attachment E(1)) contain the administrative requirements that will ensure implementation of this program.

Summary of Program Changes

- Modification of Tempe's on-site retention and storm water pollution prevention ordinances specifying that developers in the ARCA will be required to provide retention for the 2-year design storm, or obtain approval of on-site pollutant removal BMPs from the Water Utilities Manager.

Performance Measures and Responsible City Departments (Proposed to be Incorporated into Permit)

Tempe's Development Services and Public Works Departments will implement and enforce Tempe's on-site retention ordinance as described in this SWMP.

Annual Report Information

- Certification by the Development Services Manager that no grading or building permit was issued to an owner/developer in Tempe without first receiving notification from the City Engineer indicating that the

owner/developer submitted a drainage plan, and that the City Engineer determined that the plan was consistent withTempe's on-site retention ordinance.

- Certification by the Development Services Manager that no certificate of occupancy was issued without notification from the City Engineer indicating that constructed on-site grading and drainage improvements are in compliance with Tempe's on-site retention ordinance.
- Certification from Tempe's Public Works Manager that the City Engineer did not approve any grading and drainage plan that was not in compliance with Tempe's on-site retention ordinance.
- permits or approvals will be provided to ADEQ upon request.

3. Public Streets Maintenance

a. Street Sweeping

The City's Streets Section within the Public Works Department administers the City's Street Sweeping Program. The schedule for arterial street sweeping is approximately once every nine to twelve days. Local streets are swept approximately once per month.

b. Routine and Emergency Street Maintenance Projects

In addition to capturing debris which commonly accumulates on City streets, Tempe's street sweeping frequency, compared with the frequency of significant rainfall in Tempe, is adequate to ensure that any debris that might remain on streets after routine and emergency street maintenance projects does not become a significant source of pollutants in storm water. Nevertheless, all City contracts for construction projects, including street maintenance projects, will contain standard language requiring contractors to ensure that all excess materials and debris are disposed of in a manner that prevents the discharge of any construction materials to Tempe's streets or storm drains. All street construction projects, whether private or City-contracted, are also subject to Tempe's illicit discharge ordinance which prohibits the discharge of non-storm water material to a City storm drain, including construction debris.

c. Uncontained Trash Pickup

The City's Field Services Division within the Public Works Department administers the Uncontained Trash Pickup Program. Trash that will not fit into a standard City residential refuse container is collected on a monthly basis. During our first MS4 permit term, Tempe included our uncontained trash program as part of our SWMP and reported quantities of uncontained trash collected in our annual storm water report. While these numbers provide a useful measure of program activity, the City feels that

the benefit of storm water pollution prevention is incidental to the primary goals of the uncontained trash program, and that quantities of pollutants kept out of storm drains can not be extrapolated from quantities of uncontained trash collected.

For these reasons, Tempe is proposing to exclude the uncontained trash pickup program from our SWMP, though the program will continue to be implemented in its current form as part of the City's basic sanitary services. This exclusion is consistent with Tempe's effort to consolidate required storm water programs under the authority of Tempe's Water Utilities Manager where possible.

Summary of Program Changes

All programs implemented under Tempe's first MS4 permit term will remain in effect. However, Tempe's uncontained trash program will not be included in Tempe's SWMP or permit as a storm water program requirement. Tempe's street sweeping progam and Tempe's commitment to require storm water BMPs in all City construction contracts will be included as requirements.

Performance Measures and Responsible City Departments (Proposed to be Incorporated into Permit)

The City does not feel that performance measures can be established based on quantities collected from street sweeping operations because only collection frequencies are within the control of the City. The only performance measures that should be considered for incorporation into Tempe's MS4 permit are those related to the minimum frequency of street sweeping, and those related to required language in all City construction contracts. Tempe's Public Works Manager will ensure that street sweeping will occur at specified frequencies and that all City construction contracts will contain standard language requiring contractors to ensure that all excess materials and debris are disposed of in a manner that prevents the discharge of any construction materials to Tempe's streets or storm drains.

Annual Report Information

The following information will be reported in the City's annual storm water report:

- Certifications by Tempe's Public Works Manager that street sweeping occurred at specified frequencies and that all City construction contracts contained standard language requiring contractors to ensure that all excess materials and debris are disposed of in a manner that prevents the discharge of any construction materials to Tempe's streets or storm drains.
- An estimate of tons of debris collected in street sweepers (reported to

estimate pollutant removal, but not a performance measure).

4. Flood Management Projects

Article II of Chapter 12 of the Tempe City Code was established to protect against flood losses by restricting or prohibiting structural changes to the flood plain which could exacerbate the effects of flood waters. Article II does not directly address water quality impacts because it places limits on flood plain development rather than authorizing control projects. Any structural flood control projects within Tempe are coordinated with the Flood Control District of Maricopa County (FCDMC), but such projects are unlikely in the future due to reduced storm water flows resulting from the City's on-site retention requirements. The Salt River is completely channelized through Tempe. The FCDMC environmental program was established to provide guidance to minimize adverse environmental impacts due to District activities, and to ensure that the planning, construction, operation and maintenance of flood control projects consider environmental factors and comply with federal and state environmental regulatory requirements.

Program Changes

None

Performance Measures

None

Annual Report Information

None

5. Municipal Landfills and Waste Storage Facilities

There are no operating municipal landfills or municipal waste disposal sites within the City of Tempe. Tempe has not identified any closed facilities which have the potential to contaminate storm water runoff.

Program Changes

None

Performance Measures

None

Annual Report Information

None

6. Pesticides, Herbicides and Fertilizers

a. City Fertilizer Applications

The Parks Maintenance Section of Tempe's Field Services Division applies fertilizer to City parks during the growing season using calibrated broadcast spreaders. Application rates are based on recommendations from the University of Arizona's Turf Department. Soil and tissue analyses are periodically used to confirm or modify application rates. Currently some parks and the City golf courses can inject liquid fertilizers through programmable irrigation controllers. When fertilizer is applied in this manner it is done in small applications over several days to reduce or eliminate chemical run-off. In some turf areas aeration methods are used which allow for better infiltration of water, fertilizers, chemicals, and soil amendments.

b. City Pesticide Applications

The Arizona Structural Pest Control Commission regulates the commercial use and application of pesticides and herbicides. The State program requires certification of pesticide applicators and sets annual training requirements. All pesticides approved under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) must be applied using EPA-approved best management practices. The Field Services Division is staffed with licensed applicators who are responsible for monitoring the application rates for pesticides and herbicides and ensuring compliance with EPA-approved specimen labels during applications conducted at City facilities. Chemical application records are stored in a database maintained by the Pest Control Section within the Field Services Division of the Public Works Department.

Because the City's application of pesticides and herbicides is regulated under FIFRA, and EPA-approved BMPs must be employed, Tempe believes that inclusion of these activities and BMPs in the City's MS4 permit and SWMP would be duplicative regulation. Tempe proposes to exclude pesticide and herbicide applications from this SWMP because BMPs developed and required under FIFRA provide adequate protection against storm water pollution. In addition, Tempe has not historically detected pesticides in Tempe storm water. The exclusion of this measure from Tempe's SWMP is also consistent with Tempe's effort to consolidate required storm water programs under the authority of Tempe's Water Utilities Manager where possible.

c. Residential Nutrient Sources Public Education Program

The City of Tempe owns and maintains several recreational lakes within the City for various designated uses, including partial and

full body contact recreation, aquatic wildlife, and fish consumption. While Tempe's urban lakes have historically attained all designated uses, controlling nutrient levels and associated algae growth in Tempe's lakes have proved to be the biggest water quality challenges for Tempe in managing its recreational waters.

In recognition of these challenges, and the fact that residential fertilizer misapplication and animal waste in runoff can result in excessive nutrient loads to receiving water bodies, Tempe is proposing to develop and implement a pilot public education program to address residential nutrient sources as part of its second term MS4 permit. Tempe's proposed program would consist of:

1. Establishing the pilot project area;

2. Identifying background nutrient (specifically phosphorous) concentrations in storm water runoff from the pilot project area;

3. Developing and implementing public education measures in the target area;

4. Monitoring and assessing changes in nutrient concentrations in storm water runoff from the project area after program implementation.

Tempe's proposed pilot project would be implemented in a limited, established, exclusively residential area to minimize the possibility that non-residential nutrient sources such as industry or construction would confound study results. The goal of the project would be to assess the effectiveness of a comprehensive public education program related to residential nutrient sources. If the pilot program is determined to be effective, it could be implemented on a City-wide basis during Tempe's third MS4 permit term. Pilot project "deliverables" would be incorporated into Tempe's second MS4 permit term as performance measures.

Program Changes

Maintain City facility fertilizer application BMPs and exclude City pesticide application BMPs from the storm water program. Tempe's pilot public education project targeting nutrient sources in residential areas would be a new program.

Performance Measures and Responsible City Departments (Proposed to be Incorporated into Permit)

The City's turf maintenance program is fully implemented and has not significantly changed since its inception. The only appropriate

performance measure for incorporation into Tempe's MS4 permit is the continuation of turf maintenance best management practices by Tempe's Public Works Department as described in this SWMP.

Appropriate performance measures for Tempe's proposed pilot public education program targeting residential nutrient sources include:

1. Establish target area, develop educational resources and program, and collect background nutrient data within two years of the date of permit issuance.

2. Implement pilot program and collect data over third and fourth years of second permit term.

3. Analyze data and prepare report assessing program effectiveness by comparing nutrient data in project area with pre-project data and with non-project area residential nutrient concentration data prior to reapplication deadline for third term permit.

Tempe's public education program will be implemented by the Water Utilities Department.

Annual Report Information

- Certification by the Public Works Manager that BMPs described in this SWMP were used in applying fertilizer to City facilities.
- Certification by the Water Utilities Manager that Tempe's residential nutrient source public education program was implemented consistent with the SWMP.
- Summary of program development and implementation status for pilot public education program.

B. Illicit Discharge Deterrence, Detection and Elimination

All illicit discharge, deterrence, detection and elimination programs described in this section are the responsibility of the Water Utilities Manager and, accordingly, certification of program status will be provided by the Water Utilities manager in annual reports.

1. Deterrence

Section 12-125 of the Tempe City Code (Attachment E(2)) prohibits non-storm water discharges, unless categorically exempt, to the City's storm drains. One of the biggest obstacles to eliminating illicit discharges to the City's storm drain system is a lack of understanding among certain categories of commercial and retail facilities with regard to what activities constitute a violation of Tempe's storm water ordinance. These categories of facilities are not subject to EPA's multi-sector general permit, and in several cases consist of hundreds of individual sites. Accordingly, they will not be inspected as part of Tempe's industrial facility inspection program (see section II(C)), but will be targeted with an aggressive program designed to make facility owners and managers aware of the implications of discharging non-storm water materials to Tempe's storm drains. The program will also increase awareness of best management practices (BMPs) that may be implemented to prevent illicit discharges.

The following categories of facilities will be targeted under Tempe's illicit discharge deterrence program:

a. Restaurants

Information will explain Tempe's storm water ordinance and specifically address pavement and sidewalk washing, mop water, and grease trap overflows.

b. Mobile Pavement Wash Operations

Information will address containment of pavement and sidewalk wash water outside of storm drains when detergents are used.

c. Mobile Carpet Cleaners

Information will emphasize Tempe's prohibition of illicit discharges to storm drains. Tempe will target Tempe carpet cleaning businesses, but like mobile pavement wash operations, these businesses may be located in neighboring municipalities and discharge into Tempe's storm drain system after doing business in Tempe. We are ready to cooperate with ADEQ in a state-wide

effort to reach these and other mobile businesses with information on state and federal storm water requirements.

d. Automobile Service Facilities and Retail Gasoline Stations

Information will emphasize best management practices to isolate potential pollutants in runoff from these facilities.

e. Facilities Subject to Tempe's Pretreatment Ordinance

Information will emphasize Tempe's ordinance prohibiting non-storm water discharges to Tempe's storm drains.

For each facility within each of these business categories, Tempe will develop and directly distribute the above-described information either by mail or in person. In addition, where possible, Tempe will identify trade organizations for each category of facility and convey information to such organizations through written material or presentations.

In the ARCA, Tempe will develop partnerships with the Downtown Tempe Community, Inc. (DTC), the Mill Avenue Merchants Association (MAMA), and the (Rio Salado Enhanced Services Commission) to increase owners' and tenants' awareness of the City's storm water regulations and to explore storm water BMPs appropriate for the area.

Tempe will follow its deterrence program by inspecting facilities that fall within the five categories above for signs of illicit discharges when such facilities are inspected under other Water Utilities Department programs such as Tempe's pretreatment and grease trap inspection programs. In the ARCA, Tempe will conduct annual inspections of all facilities within these categories. In addition, Tempe storm water inspectors will conduct random "drive-by" inspections outside of the ARCA of other listed facilities for illicit discharges when inspectors are in route to conducting scheduled inspections at other facilities. Such drive-by inspections will consist of a scan of property perimeters for signs of prohibited discharges. Semi-annual on-site follow-up inspections will be conducted at those facilities where illicit discharges have been detected in the past.

Tempe believes that incorporating our proposed illicit discharge deterrence program into our SWMP for Tempe's second MS4 permit term will significantly reduce the number of prohibited discharges from these facilities to Tempe's storm drains, and that Tempe's detection and elimination efforts, described below, will be an effective means of addressing any remaining prohibited discharges.

Program Changes

Implementation of Tempe's illicit discharge deterrence program, which will target categorical facilities with category-specific illicit discharge and BMP information; annual inspection of all facilities in categories (a)

through (e), above, in the ARCA; inspections of those categorical facilities that are inspected under other Water Utilities Department regulatory programs; and "drive-by" inspections of categorical facilities in-route to routine industrial inspections.

Performance Measures (Proposed to be Incorporated into Permit)

Tempe's Water Utilities Department will implement our proposed Illicit Discharge Deterrence Program as described in this SWMP, including development and distribution of written information to target categorical facilities within 18 months of permit issuance.

Annual Report Information

- Certification of program implementation status by Tempe's Water Utilities Manager.
- Status of illicit discharge deterrence program, including examples of outreach information and lists of facilities or trade organizations contacted.

2. Field Screening

a. Frequency

The City of Tempe screens all "major outfalls", as defined in 40 CFR 122.26 (d)(1)(iv)(D) on an annual basis, far more frequently than the 20% of major outfalls required to be inspected under Tempe's first term MS4 permit. For Tempe's second term permit, the City is also proposing to conduct semi-annual follow-up screenings for major storm drains where prohibited discharges were previously suspected but sources of discharges were not identified. Screenings are typically completed in the early spring when rainfall, temperature and moisture are lowest, but may be conducted at any time in dry weather conditions. In addition, Tempe will conduct quarterly inspections of outfall SR-04 and SR-18, which drain the ARCA south and north of the Salt River, respectively. Attachment F describes all of Tempe's "major outfalls".

b. Screening Protocol

For each outfall, the following information is recorded in an individual screening log:

(1) General Information:

- Time since last rain
- Quantity of last rain
- Watershed use

- Outfall description
- Outfall structure
- Estimated flow rate (if any)

(2) Physical/Chemical Observations

If flow is observed at an outfall, the following parameters will be observed or field tested:

Parameter	Test	Trigger
Color	visual	Off-color
Odor	smell	Chemical, gas, or sulphur odor
Clarity	visual	Turbid
Floatables	visual	Presence of solid or liquid floatables (e.g., oil sheen)
Residue/Deposit stains at outfall	visual	Presence
Vegetation/ Biological Growth	visual	Significant presence, or present but dead
pH	field	< 6.5 or >9
(T) Chlorine	field	Water quality standard violation for receiving water body
Detergents/ Surfactants	field	Presence

Program Changes

Increase dry-weather screening frequency from 20% of outfalls per year to 100% per year with semi-annual follow-up screenings for outfalls where unresolved prohibited discharges are detected and quarterly screenings forSR-04 and SR-18.

Performance Measures (Proposed to be Incorporated into Permit)

Tempe's Water Utilities Department will implement field screening frequency and protocol as described in this SWMP.

Annual Report Information

- Certification of program implementation status by Tempe's Water Utilities Manager.
- An annual report of dry-weather screening results/observations.

3. Investigation

If any of the "trigger" conditions described in subsection B(1) indicate the presence of a prohibited discharge, City storm water inspectors will physically "trace" the prohibited discharge upstream. The following

protocol will be used to trace prohibited discharges to a source:

a. Successive storm drain access points (catch basins, manholes) upstream of the outfall will be inspected for flow at the rate of every ¼ mile or the next access point, whichever is greater, until no flow is identified.

b. Properties located along last run in which flow is identified will be inspected for illicit discharges or connections by inspectors.

c. If visual inspections do not result in the detection of illicit discharges or connections in the last wet run, CCTV equipment will be utilized to locate the source(s) of the flow.

d. Analytical sampling may be conducted at the outfall or in the storm drain to help assess the source by identifying pollutants with specific industries according to Exhibit 2 of EPA's 1999 NPDES Multi-Sector Storm Water General Permit Monitoring Guidance.

In addition to conducting investigations as a follow-up to dry-weather screening, Tempe's Water Utilities Department has employees in the field for industrial storm water inspections, pretreatment inspections, water wasting complaint responses, hazardous materials response, water distribution system sampling, and water distribution and sewer collection system maintenance. These field personnel are the "eyes and ears" of Tempe's illicit discharge detection program, and will be trained to report any sign of illicit storm drain discharges to Tempe's storm water inspectors. Tempe's storm water hotline and web-based illicit discharge reporting form are also maintained to allow Tempe residents to report any sign of illicit discharges to a storm drain. Storm water inspectors will follow up on any reports from field staff or residents to determine if a prohibited discharge is taking place.

Program Changes

Uniform implementation of specific investigation procedures when prohibited discharges are detected at outfalls, including physical "tracking" of discharges to source and use of CCTV equipment; training of all Water Utilities Department field staff on what constitutes a prohibited discharge, and on what action to take when a prohibited discharge is identified.

Performance Measures (Proposed to be Incorporated into Permit)

Tempe's Water Utilities Department will uniformly implement investigation procedures when any of the triggers identified in the field screening protocol is present at an outfall. In addition, Tempe will train all WUD field personnel on identifying illicit discharges, and will investigate all staff and citizen reports of potential prohibited discharges.

Annual Report Information

- Certification of program implementation status by Tempe's Water Utilities Manager.
- A description of investigative steps taken in each case where prohibited discharges were suspected; results of illicit discharge investigations (resulting from dry-weather screening and field inspections), including a list of prohibited discharges identified.

4. Construction Site Inspections

During Tempe's first MS4 permit term, Tempe's construction storm water program requirements, as described in Tempe's permit and in Tempe's SWMP, included routine construction site inspections and reviews of construction site storm water pollution prevention plans (SWP3s), to determine consistency with EPA's general NPDES permit for construction activity. Because the City is landlocked, however, and very little previously undeveloped land is available for development, construction activity in Tempe is generally limited to small land parcels, most of which are not subject to the general NPDES permit under both the Phase I and Phase II criteria. In addition, Tempe's ordinance requiring on-site retention for all new development and significant redevelopment generally results in initial site grading for on-site retention prior to the commencement of major construction activity, thus minimizing the possibility of site runoff and the need for additional structural BMPs.

Over the 5-year duration of Tempe's first MS4 permit term, only 22 construction sites were large enough to be subject to the construction general NPDES permit. With Phase II sites included, first-term NPDES-applicable construction sites would have numbered 93, or less than 19 sites larger than 1 acre per year. During our second permit term, Tempe expects this number to be even lower as Tempe fills in and larger sites become unavailable for development.

The numbers presented provide no justification for a construction inspection program that focuses on NPDES-applicable construction sites. Conducting audits of construction sites to assess compliance with SWP3s on a City-wide basis yields little benefit in terms of wet-weather runoff in Tempe. For this reason, Tempe is proposing to incorporate its construction storm water program into its illicit discharge program in order to address the only true sources of pollutant discharges from construction sites in Tempe: intentional illicit discharges and the tracking of mud and materials off construction sites and into City rights-of-way. Tempe will implement a construction inspection program in the ARCA which will include a review of SWP3s, where applicable.

Tempe's proposed construction storm water program consists of enforcing our illicit discharge and materials tracking ordinances, the latter of which prohibits the tracking of sediment or other materials off-site by vehicles (Tempe City Code 19-50 (Attachment E(3)), and will include the

following measures:

a. Tempe will implement its on-site retention ordinance as described in section II(A)(2) of this SWMP. This ordinance indirectly addresses wet-weather discharges from construction sites, as sites are generally graded consistent with this ordinance prior to commencement of construction.

b. All construction sites in Tempe, regardless of size, will be inspected for illicit discharges at least once during construction using the "drive-by" approach described in section (B)(1), above. Construction sites in the ARCA will be inspected for illicit discharges using a walk-through procedure, and SWP3s will be reviewed for consistency with the Arizona general permit for construction storm water discharges, where applicable. Construction inspections will be conducted by storm water inspectors in the WUD rather than construction inspectors in the City's Public Works Department, as was the case under Tempe's first-term permit. This change is consistent with Tempe's effort to consolidate required storm water programs under the authority of the Water Utilities Manager.

c. Similar to all other illicit discharges, Tempe field staff will be trained to report all signs of illicit discharges from construction sites to Tempe storm water inspectors.

Violations of illicit discharge and materials tracking ordinances at construction sites will be subject to the same enforcement procedures as other illicit discharges.

Program Changes

Tempe will replace the first-term construction site and SWP3 inspection program for NPDES-applicable sites with Tempe's routine construction site illicit discharge inspection program for all Tempe construction sites outside of the ARCA. Within the ARCA, Tempe will continue walk-through inspections and SWP3 reviews. All new development and redevelopment will be required to comply with Tempe's on-site retention ordinance. For the purposes of this SWMP and Tempe's MS4 permit, construction site operators will no longer be required to submit NOIs to Tempe as a condition of project approval or permit issuance.

Performance Measures (Proposed to be Incorporated into Permit)

Tempe's on-site retention ordinance is not addressed in this section because it is addressed in the "New Development and Redevelopment" section of this SWMP. Tempe's Water Utilities Department will implement our proposed inspection program for illicit discharges and tracked materials at construction sites as described in this SWMP.

Annual Report Information

- Certification of program implementation status by Tempe's Water Utilities Manager.
- A list of construction sites larger than 1 acre in Tempe, and results of SWP3 reviews for sites in the ARCA, for the year.
- Investigations and enforcement actions taken for illicit discharges at construction sites will be reported.

5. Enforcement

When a specific discharge to a storm drain is determined to be from a source that is not explicitly exempt under section 12-125 of the Tempe City Code, enforcement action will be taken uniformly using the following enforcement escalation policy:

a. If no illicit discharges have been identified previously at a facility, a facility owner/operator will be given a written warning and will be provided with information/guidance on complying with Tempe's storm water ordinance. Such facilities will be scheduled for follow-up inspection within 30 days and for regular semi-annual inspections.

b. If illicit discharges have been previously identified at a facility, a Notice of Violation (NOV), including a schedule for compliance, will be issued if prohibited discharges have not been discontinued upon reinspection, or if additional prohibited discharges are identified. All NOVs will require, at a minimum, written responses from violators within 10 days consistent with section 12-146 of Tempe's City Code.

c. Escalated enforcement actions may include cease and desist orders, consent orders, civil penalties, and criminal prosecution.

Program Changes

Uniform implementation of prohibited discharge enforcement escalation policy.

Performance Measures (Proposed to be Incorporated into Permit)

Tempe's Water Utilities Department will uniformly implement the enforcement escalation policy described in the SWMP when the source of a prohibited discharge is identified.

Annual Report Information

- Certification of program implementation status by Tempe's Water Utilities Manager.
- A list of prohibited discharges identified and enforcement actions taken.

- A status report of all enforcement actions, including enforcement actions that were unresolved at the end of the previous fiscal year.

6. Preventative Measures

a. Spill Prevention and Response Program

The Tempe Fire Department provides emergency response services for incidents involving hazardous materials. Storm water protection is a critical part of emergency response procedures and is included as part of the City's emergency response training. The Tempe Fire Department's Hazardous Materials Policy 208.01 (Attachment G) addresses containment of hazardous materials as a critical component of spill response procedures.

Because the benefit of storm water pollution prevention is incidental to the primary hazardous materials spill response goal of public health protection (proper response clearly implies containment), Tempe is proposing to exclude this program as a required measure under Tempe's second permit term. This exclusion would also be consistent with Tempe's effort to consolidate required storm water programs under the authority of the Water Utilities Manager.

b. Public Outreach and Reporting

In addition to Tempe's proposed pilot public education program described in subsection II(A)(6)(c), Tempe will implement the following public outreach measures to inform Tempe residents of Tempe's illicit discharge prohibition and to promote public reporting of illicit discharges through Tempe's storm water hotline and web-based reporting form.

i. Tempe will publish annual articles in its City newsletter, Tempe Today, informing Tempe residents that discharges of non-storm water materials into Tempe's storm drains are a violation of the Tempe City Code and subject to civil and criminal enforcement action, and informing residents of Tempe's storm water hotline and web-based reporting form for reporting illicit discharges to storm drains.

ii. Tempe will label approximately 1,500 City storm drain access points with a notice indicating that discharges to storm drains are prohibited.

iii. Tempe is a participating member of the newly formed regional public outreach group, Storm Water Outreach for Regional Municipalities (STORM), and will utilize this vehicle to convey regional messages to the public regarding storm water pollution prevention. Although specific programs have not yet been developed, this group

intends to develop radio spots, billboards, movie trailers, and other mechanisms for reaching the public on a regional basis. Tempe's participation in this project will consist of $2,500 annually in addition to in-kind services to support regional storm water outreach programs.

c. Potable water Discharge BMPs

As a potable water distribution system operator, Tempe must occasionally discharge potable water to the City's storm drain system as a result of water main breaks and in order to maintain water quality within Tempe's system. Discharges of potable water are categorically exempt from Tempe's discharge prohibition ordinance. The only pollutant of concern that is present in drinking water, either potable or hyper-chlorinated, is total chlorine residual. Chlorine levels in drinking water violate only the state's aquatic and wildlife standard for perennial or effluent dependent water bodies. If potable water system discharges travel for any significant distance though storm drains prior to reaching receiving water bodies, the chlorine residual dissipates to non-detectable levels.

Under Tempe's second term MS4 permit, Tempe will implement the following BMPs to ensure that potable water system discharges to Tempe's storm drain system do not result in the violation of state water quality standards:

i. when chlorine is added to potable water during operation, maintenance, or repair of Tempe's potable water distribution system, all discharge will be dechlorinated if the chlorine is added and the discharge occurs within ¼ mile of a perennial water of the state.

Program Changes

Implementation of public outreach and reporting measures, including annual articles in Tempe's newsletter, labeling of storm drains, and participation in regional STORM group activities. These programs will substitute for the McKemy Middle School project implemented during Tempe's first-term MS4 permit, which will continue to be implemented during Tempe's second permit term. That program will not be incorporated into Tempe's SWMP because the storm water component of that program is ancillary to the program's focus on water quality in Tempe's urban lakes. Tempe's spill prevention and response program will remain in effect and will be implemented by the Tempe Fire Department, but will be excluded from this SWMP.

Tempe will implement BMPs described in this SWMP for the discharge of water from Tempe's potable water distribution system to Tempe storm drains.

Performance Measures (Proposed to be Incorporated into Permit)

Tempe's Water Utilities Department will implement the following public outreach measures related to illicit discharges:

a. Publish an article, at least annually, in Tempe's monthly newsletter, Tempe Today, describing Tempe's storm water regulations prohibiting discharges to Tempe's storm drains, and providing Tempe's storm water hotline number and the address for Tempe's web-based illicit discharge reporting form.

b. Label 1,500 Tempe storm drain access points with signs indicating that non-storm water discharges to Tempe's storm drains are violations of City ordinance (specific language to be developed). Storm drain access points will be labeled at a rate of at least 300 per year.

c. Participate in Storm Water Outreach for Regional Municipalities (STORM) group programs and activities.

Tempe's Water Utilities Department will implement BMPs for potable water system discharges to City storm drains as described in this SWMP.

Annual Report Information

- Certification of program implementation status by Tempe's Water Utilities Manager.
- Copies of all storm water-related articles published in Tempe Today during the year.
- The status of Tempe's storm drain labeling program, including the number of storm drain access points labeled during the year.
- Activities of the Storm Water Outreach for Regional Municipalities (STORM) group, including a description of all public outreach measures implemented by the group during the year.

C. Industrial Facility Inspection and Compliance Assistance Program

Tempe's first term MS4 permit, either directly or by reference to Tempe's October, 1996 storm water management plan, required Tempe to maintain a priority industrial facility list based on storm water pollution potential, to inspect facilities on this list that were also subject to Tempe's pretreatment regulations on an annual basis, and to inspect all other listed facilities at a rate of 20% per year for the duration of the permit. For each facility inspected, Tempe was required to assess site storm water pollution potential, look for evidence of prohibited discharges to Tempe's storm drains, and review the maintenance and implementation of a storm water pollution prevention plan (SWP3). Tempe was required to document, and report to EPA, observed non-compliance with a facility's NPDES permit or SWP3, if required at a facility.

In recognition of the City's proportionately high percentage of land zoned for industrial uses (17%), Tempe is proposing to implement an intensified industrial facility inspection program over our second MS4 permit term that includes more frequent inspections of more categories of facilities, a "compliance assistance" component which will help facilities comply with the multi-sector general permit (MSGP), and annual reporting to ADEQ of Tempe's assessment of facility compliance status.

All industrial program activities described in this section are the responsibility of the Water Utilities Manager and, accordingly, certification of program status will be provided by the Water Utilities manager in annual reports.

1. Industrial Facilities List

Tempe will maintain, and update annually, a list of all facilities within Tempe that fall within any of the 10 categories of facilities that are subject to the MSGP under 40 CFR 122.26(b)(14)(i) through (ix) and (xi) (construction sites are excluded from this program because they are subject to the construction general permit, and Tempe will provide lists of all sites larger than 1 acre to ADEQ under annual reporting for illicit discharges (subsection (B)).

Program Changes

Tempe is expanding the list of industrial facilities to be inspected as part of our industrial storm water program to include all industrial facilities within Tempe that fall under the 10 specified categories in 40 CFR 122.26(b)(14) (all facilities subject to the MSGP; construction sites excluded).

Performance Measures (Proposed to be Incorporated into Permit

Tempe's Water Utilities Department will provide annual updates of Tempe's industrial facilities list as specified in SWMP.

Annual Report Information

- Certification of program implementation status by Tempe's Water Utilities Manager.
- Updated industrial facilities list, indicating whether facility drains to a water of the U.S. or City retention.

2. Inspection Frequency

Tempe will inspect each facility on the list identified in subsection (1) on an annual basis, *if* the facility is located in a drainage area which drains to waters of the United States. Facilities that drain to City retention will be inspected at a rate of once every 5 years. Any facility on Tempe's list that has submitted a No Exposure Certification (NEC) and, in Tempe's assessment, appears to be compliant with the NEC requirements, will subsequently only be inspected every 5 years. Twenty percent of all facilities that are inspected every 5 years will be inspected during each year of the second permit term. Any facility that, in Tempe's assessment, is not compliant with MSGP requirements, or that has violated Tempe's illicit discharge ordinance, will be inspected at least every 6 months until the facility is determined to be compliant, but follow-up inspections will not commence until the second year of the permit term (a first-year grace period will be given after initial inspection or compliance assistance visit to make improvements).

Program Changes

Increase in inspection frequency from once every five years (20% per year) to annually for MSGP-applicable facilities that drain to waters of the United States; addition of 6-month follow-up inspections for non-compliant facilities after the second annual second-term inspection.

Performance Measures (Proposed to be Incorporated into Permit)

Tempe's Water Utilities Department will inspect MSGP-applicable facilities that drain to waters of the United States annually; Tempe will inspect MSGP-applicable facilities that drain to City retention every 5 years; MSGP-applicable facilities that have submitted, and comply with, the no-exposure certification will be inspected every 5 years upon a Tempe determination of no-exposure; Facilities determined by Tempe to be non-compliant with MSGP requirements will be re-inspected at least every 6 months, except for the first year after the permit is issued, until compliant.

Annual Report Information

- Certification of program implementation status by Tempe's Water Utilities Manager.
- The last date of inspection for each facility will be included in the list

submitted pursuant to subsection (1), along with the approximate date of next inspection.

3. Inspection Protocol

a. Exposure Assessment

If a facility has submitted a no-exposure certification form to ADEQ or EPA, or if the facility has submitted neither a NOI nor a NEC to ADEQ or EPA, industrial storm water inspectors will conduct a site inspection to assess exposure (see section II of Attachment H). The facility will be determined to be:

i. NEC-compliant: facility will be scheduled for re-inspection in 5 years;

ii. NEC-eligible, but NEC must be submitted to be compliant: Inspector will leave EPA guidance material on no-exposure certification and advise owner or operator to submit NEC upon reviewing guidance and verifying compliance; Facility will be asked to submit copy of NEC to the City at same time NEC is submitted to ADEQ, at which time facility status will be changed from "NEC-eligible" to NEC-compliant in Tempe records. Facility will be scheduled for re-inspection in 5 years;

iii. NEC non-compliant: Industrial storm water inspectors will advise owner or operator that specific measures must be taken to comply with the NEC. EPA guidance on NEC will be left with the owner or operator and the facility will be scheduled for re-inspection in 6 months; or

iv. NEC non-eligible: Inspectors will advise facility owner or operator that a SWP3 must be developed and a NOI must be submitted for the facility to be compliant. Inspector will provide owner or operator with a copy of the MSGP, EPA SWP3 and BMP summary guidance, an example of generic SWP3 format, and EPA guidance for MSGP monitoring.

b. MSGP Compliance

If a facility has submitted a notice of intent (NOI) for coverage under the MSGP, industrial storm water inspectors will review the facility's SWP3 for compliance with MSGP requirements (see section III of Attachment H) and will conduct a site inspection to assess SWP3 implementation status (see section IV of Attachment H). The facility will be determined to be:

i. MSGP-compliant: The facility will be scheduled for re-

inspection in one year if the facility drains to a water of the United States, and 5 years if the facility drains to City retention.

ii. MSGP non-compliant: Inspectors will advise the facility owner or operator of SWP3 revisions and BMP measures needed to comply with the MSGP. Inspectors will leave owner or operator with EPA guidance on SWP3 development, industrial BMP implementation, and MSGP monitoring, where applicable, and facility will be scheduled for re-inspection in 6 months.

iii. SWP3-compliant with a failure to implement BMPs as described in SWP3: Inspector will advise the facility owner or operator of inconsistencies between SWP3 and facility operation and the facility will be scheduled for re-inspection in 6 months.

c. Illicit Discharges or Connections

Each facility will also be inspected for illicit discharges or connections, and violations of Tempe's storm water ordinance will be enforced consistent with subsection (B)(5) of this section.

Program Changes

Implementation of specific inspection protocol, which will applied uniformly for all industrial facility inspections.

Performance Measures (Proposed to be Incorporated into Permit)

Implementation of Industrial inspection protocol by Tempe's Water Utilities Department as described in this SWMP.

Annual Report Information

- Certification of program implementation status by Tempe's Water Utilities Manager.
- The list of facilities with dates inspected, submitted pursuant to subsections C(1) and C(2), will include one of the following compliance codes for each facility:

(NC) NEC-Compliant
(NE) NEC-Eligible
(NL) NEC Non-Eligible
(NN) NEC Non-Compliant
(MC) MSGP-Compliant
(MN) MSGP Non-Compliant
(IN) Failure to Implement SWP3

Inspection reports will be submitted as appendices to Tempe's annual storm water report for all facilities coded (NL), (NN), (MN), or (IN).

4. Inspector Training

Tempe's dedicated storm water inspectors will be trained on MSGP and related SWP3 requirements upon program approval, and will be provided with annual refreshers.

Program Changes

The addition of training requirement and frequency in Tempe's SWMP.

Performance Measures (Proposed to be Incorporated into Permit)

Tempe's dedicated storm water inspectors in the Water Utilities Department will meet training requirements as described in this SWMP.

Annual Report Information

- Certification of program implementation status by Tempe's Water Utilities Manager.
- Tempe will make training records available to ADEQ upon request.

III. MONITORING PROGRAM

On November 22, 2002, U.S. EPA headquarters issued a memorandum to EPA regional offices on the subject of wasteload allocations and water quality-based effluent limitations (WQBELs) for storm water discharges to impaired water bodies. In this November 22 memo, EPA stated that, for storm water discharges to impaired waters, "EPA expects that most WQBELs for NPDES-regulated municipal and small construction storm water discharges will be in the form of BMPs, and that numeric limits will be used only in rare circumstances", explaining that "storm events that are highly variable in frequency and duration…are not easily characterized", and that "only in rare cases will it be feasible or appropriate to establish numeric limits". EPA's memo was issued in reference to storm water discharges to impaired water bodies with wasteload allocations, but would seem to apply equally to storm water discharges to receiving waters that attain water quality standards.

All Tempe storm water outfalls discharge to waters that are attaining Arizona surface water quality standards. Accordingly, Tempe's storm water monitoring program during Tempe's first MS4 permit term was adopted from Tempe's part 2 NPDES permit application, which established "field screening points as representative of the commercial, residential, and industrial land use activities of the drainage area contributing to the system" (40 CFR § 122.26(d)(2)(iii)(A)). During Tempe's first permit term, water quality monitoring was conducted at these field screening points, as approved by EPA.

Consistent with EPA's November 22, 2002 guidance stating that "(municipal) storm water discharge effluent limitations should be expressed as BMPs", Tempe is proposing a new water quality monitoring plan which will assess the effectiveness of BMPs over the duration of Tempe's second MS4 permit term. Tempe is proposing to change the monitoring program implemented during our first permit term because first-term monitoring failed to show any significant differences in water quality between storm events and between drainage areas that represent different land uses. First-term monitoring also did not indicate that storm water discharges in Tempe violated Arizona surface water quality standards (see section III of Tempe's fiscal year 2001 – 2002 annual storm water report).

Tempe's proposed monitoring program for the second MS4 permit term, along with Tempe's attainment status with performance measures in section II of this SWMP, will help assess the effectiveness of Tempe's storm water programs so that such programs may be modified during or after Tempe's second permit term to best prevent storm water pollution. Tempe's storm water monitoring program contains three components that will help Tempe and ADEQ assess program effectiveness:

A. Commercial and Residential Areas

The only commercial or residential area program for which water quality monitoring will help Tempe assess program effectiveness is Tempe's proposed Residential Fertilizer Application Public Education Program (see section II(A)(6)). For this program, Tempe proposes to identify two monitoring locations. One location will be an outfall to a water of the state that drains the pilot project area for Tempe's proposed public education program. The other location will be an outfall to a water of the state that drains a control residential area. Water quality data from the project area outfall will be compared with that collected at the control area outfall, and with pre-project data from the pilot area collected prior to BMP implementation, to assess program effectiveness. Samples will be collected during representative storm events (0.2") and will be analyzed for nitrate and total phosphorous. Specific sampling locations will be designated and prepared for sampling within 90 days of issuance of Tempe's second-term permit.

B. Illicit Discharge Deterrence, Detection, and Elimination

Monitoring for this program will consist of sampling field parameters at outfalls as part of Tempe's dry-weather screening program (see section II(B)(2). In addition to annual visual and field monitoring for color, odor, clarity, floatables, pH, chlorine, and detergents/surfactants, Tempe will conduct semi-annual follow-up monitoring at each outfall where prohibited discharges were previous suspected but sources of discharges were not identified. If the source of an illicit discharge cannot be identified through physical investigations, grab samples will be collected, and analytical sampling will be conducted at the outfall where the prohibited discharge was suspected for the following pollutants:

- BOD
- COD
- TSS
- Arsenic
- Aluminum
- Ammonia
- Cadmium
- Copper
- Cyanide
- Iron
- Lead
- Magnesium
- Mercury
- Nitrate+Nitrite N
- Phosphorous
- Selenium
- Silver
- Zinc

The results of analytical monitoring will help Tempe identify industries that may be illegally discharging to Tempe's storm drains.

C. Industrial Facility Inspection and Compliance Assistance Program

In order to assess the effectiveness of our industrial storm water program, Tempe proposes two forms of monitoring:

1. The first industrial monitoring component does not involve independent monitoring by Tempe, but the compilation of visual and analytical data from each industrial facility subject to the MSGP which discharges to a water of the U.S. Tempe has proposed, in section II(C), to annually inspect each facility that is subject to the MSGP and that discharges to a water of the U.S. During these inspections, Tempe will collect the results of quarterly visual monitoring at each facility, and will collect the results of analytical monitoring from those facilities that are required to monitor. Tempe will compile this data for submittal to ADEQ with Tempe's annual storm water report, along with an assessment of findings. Tempe's assessment will include a comparison of facility MSGP compliance status and water quality data.

2. Tempe's second industrial storm water quality monitoring component involves the maintenance of current monitoring station TD-03, a station that was established during Tempe's first permit term to assess a predominately industrial drainage area. Tempe will monitor this location for the pollutants listed in subsection (B) above during representative (0.2") storm events. Representative composite samples will be collected for the first two >0.2" rainfall events for each of the summer (May 1-October 31) and winter (November 1 -April 30) seasons.

ATTACHMENT A:

TEMPE STORM WATER MANAGEMENT AND MONITORING SUMMARY

ATTACHMENT A: TEMPE STORM WATER MANAGEMENT AND MONITORING PROGRAM SUMMARY

Program	Requirement	Proposed Performance Measures	Annual Report Information
Commercial and Residential Areas Program	Drainage System Maintenance	• Implement catch basin inspection and cleaning program in ARCA as described in the SWMP	• Water Utilities Manager certification of program implementation status.
	New Development and Redevelopment	• Implement and enforce Tempe's on-site retention ordinance for new development and redevelopment as described in the SWMP, including modified retention criteria for ARCA.	• Development Services Manager certification of program implementation status. • Public Works Manager certification of program implementation status. (grading and drainage permits and related documentation available upon request)
	Public Streets Maintenance	• Adherence to street sweeping frequencies described in the SWMP. • Inclusion of language, in all City construction contracts, requiring contractors to ensure that excess construction materials will be disposed of such that they will not enter City storm drains .	• Estimate of amount of debris collected in street sweepers annually (in tons). • Public Works Manager certification of program implementation status.
	Pesticides, Herbicides & Fertilizers	• Continue to implement best management practices described in the SWMP in fertilizer applications at City facilities. • Implement Pilot Residential Nutrient Source Public Education program as described in the SWMP, including: - establish target area, develop educational resources, and collect background nutrient data within 2 years of permit issuance, - implement program over 3rd and 4th years of permit term, and - submit a report assessing program effectiveness prior to the reapplication deadline for the 3rd permit term.	• Public Works Manager certification of program implementation status (City fertilizer application BMPs) (records available upon request). • Program development and implementation status report for pilot public education program. • Water Utilities Manager certification of program implementation status (Residential Nutrient Source Public Education program)

Program	Requirement	Proposed Performance Measures	Annual Report Information
Illicit Discharge Deterrence, Detection and Elimination Program	Deterrence	• Implementation of deterrence program as described in the SWMP, including development and distribution of written information to target categorical facilities within 18 months of permit issuance.	• Program status, including examples of outreach information distributed and a list of facilities and trade organizations contacted. • Water Utilities Manager certification of program implementation status
	Field Screening	• Implementation of field screening protocol as described in the SWMP.	• A report describing the results of dry-weather screening, including a summary of results of screenings at each outfall. • Water Utilities Manager certification of program implementation status
	Investigation	• Implementation of investigative procedures as described in the SWMP when any of the triggers identified in the field screening protocol are present at an outfall. • Investigation of all staff or citizen reports of potential prohibited discharges. • Training of all Tempe Water Utilities Department field personnel on identifying illicit discharges and reporting to storm water inspectors.	• A description of investigative steps taken when prohibited discharges were suspected as a result of outfall screening. • Results of illicit discharge investigations resulting from both dry-weather screening and field identification. • A list of prohibited discharges identified during the year. • Water Utilities Manager certification of program implementation status
	Construction Sites	• Implementation of inspection program for illicit discharges from construction sites and tracked material, and SWP3 review for applicable sites in the ARCA, as described in the SWMP.	• A list of construction sites in Tempe > 1 acre during the year. • Illicit discharges from construction sites will be reported under "investigation" section. • Water Utilities Manager certification of program implementation status
	Enforcement	• Uniform implementation of enforcement escalation policy described in the SWMP when the source of a prohibited discharge is identified.	• A list of prohibited discharges identified and enforcement actions taken during the year, including enforcement actions that were unresolved at the end of the previous year. • Water Utilities Manager certification of program implementation status

Program	Requirement	Proposed Performance Measures	Annual Report Information
Illicit Discharge Deterrence, Detection and Elimination Program, cont.	Preventative Measures (Public Outreach)	• Annual publication of article in Tempe Today describing Tempe's storm water regulations and providing Tempe's storm water hotline number and address for web-based illicit discharge reporting form. • Label at least 300 Tempe storm drain access points per year with a notice indicating that non-storm water discharges are prohibited. • Participation in STORM public outreach programs and activities.	• Copies of all storm water-related articles published in Tempe Today during the year. • The status of Tempe's storm drain labeling program, including the number of access points labeled during the year. • Activities of the STORM group, including a description of all public outreach measures implemented by the group during the year. • Water Utilities Manager certification of program implementation status
Industrial Facility Inspection and Compliance Assistance Program	Industrial Facilities List	• Develop and update annually a list of industrial facilities in Tempe that fall under the categories specified in 40 CFR 122.26(b)(14)(i) through (ix) and (xi).	• Updated industrial facilities list indicating last date of inspection, approximate date of next inspection, and latest compliance status code as described in the SWMP. • Inspection reports for non-compliant facilities as described in the SWMP. • Water Utilities Manager certification of program implementation status
	Inspection Frequency	• Inspect facilities that drain directly to waters of the U.S. on an annual basis; • Inspect facilities that drain to City retention every 5 years; • Inspect facilities that are compliant with the NEC every 5 years after being assessed as "compliant"; and • Inspect any facility assessed as MSGP or NEC "non-compliant" every 6 months after the first year of the permit term, consistent with the SWMP.	
	Inspection Protocol	• Inspect facilities, and assess MSGP compliance for each facility, using the protocol described in the SWMP.	
	Inspector Training	• Annual training for Tempe's dedicated storm water inspectors.	• None (training records available upon request). • Water Utilities Manager certification of program implementation status

Program	Requirement	Proposed Performance Measures	Annual Report Information
Monitoring Program	Commercial and Residential Areas	• Implement monitoring program for Pilot Residential Fertilizer Application Public Education Program as described in the SWMP, including establishment and preparation of monitoring locations for sampling within 90 days of permit issuance.	• Water quality monitoring results will be submitted with annual program status reports.
	Illicit Discharge Program	• Implement field screening monitoring program as described in the SWMP, including monitoring for the specific pollutants described in the plan.	• Water quality monitoring results will be submitted with the annual report of dry-weather screening results.
	Industrial Program	• Compile and assess water quality monitoring results from each industrial facility inspected under this program as described in the SWMP. • Representative sampling at monitoring station TD-03, which was established during the first permit term, as described in the SWMP.	• All data collected from industrial facilities inspected, along with an assessment of data. • Water quality monitoring results from monitoring station TD-03.

ATTACHMENT B:

DEPARTMENT-SPECIFIC PROGRAM IMPLEMENTATION RESPONSIBILITIES AND PERFORMANCE MEASURES

ATTACHMENT B: DEPARTMENT-SPECIFIC PROGRAM IMPLEMENTATION RESPONSIBILITIES AND PERFORMANCE MEASURES

WATER UTILITIES DEPARTMENT

- Catch basin inspection and cleaning program in ARCA
  - inspect all catch basins in ARCA within 30 days after calendar quarters in which storm events equal to or greater than 0.2" occurred
  - inspect catch basins along City streets following special events for which those streets are closed
  - clean debris from catch basins on an as-needed basis
  - document and maintain logs of all catch basin inspections and cleaning activities

- Residential nutrient sources public education program
  - establish target area, develop educational resources and program, and collect background nutrient data within 2 years of the date of permit issuance
  - implement pilot program and collect data over third and fourth years of the second permit term
  - analyze data and prepare report assessing program effectiveness by comparing nutrient data in project area with pre-project data, and with non-project area nutrient concentration data, prior to the reapplication deadline for Tempe's third permit term

- Illicit discharge deterrence program
  - within 18 months of permit issuance, develop and distribute category-specific information on Tempe's illicit discharge prohibition to all restaurants, mobile pavement wash operations, mobile carpet cleaners, auto service facilities and gas stations, and facilities subject to Tempe's pretreatment ordinance
  - inspect all facilities that fall within the above categories for signs of illicit discharges when facilities are inspected under other WUD inspection programs such as pretreatment and grease trap programs
  - in the ARCA, inspect all facilities that fall within the above categories for signs of illicit discharges on an annual basis
  - outside the ARCA, conduct random "drive-by" inspections of categorical facilities for signs of illicit discharges in route to conducting scheduled inspections at other facilities
  - conduct semi-annual follow-up inspections of those facilities where illicit discharges have been detected in the past
  - in the ARCA, develop partnerships with the DTC, MAMA, and Rio Salado Enhanced Services Commission to increase owners' and tenants' awareness of Tempe's illicit discharge prohibition, and to discuss storm water BMPs

- Field screening program for illicit discharges
  - annual dry-weather screening of all major outfalls to waters of the United States for signs of illicit discharges
  - semi-annual follow-up screening for major storm drains where prohibited discharges were previously suspected but sources of discharge were not identified
  - quarterly dry-weather screenings of outfalls SR-04 and SR-17
  - documentation of all screening results, including all general and physical/chemical criteria described in the SWMP

- Investigation of suspected illicit discharges
  - when "trigger" conditions are present at outfalls, trace illicit discharge to the source
    1) inspect successive storm drain access points until no flow is identified
    2) inspect properties along the last wet segment

3) utilize CCTV equipment and analytical sampling, where necessary, if inspections alone are not successful at identifying source
- train all WUD field staff to detect illicit discharges and report them to storm water inspectors for follow-up
- maintain storm water hotline and web reporting form for public reporting of illicit discharges
- follow-up on all public and field staff reports of potential illicit discharges
- document all investigative procedures and the results of all investigations

- Construction site inspection program
  - conduct drive-by inspections of all construction sites outside of the ARCA for signs of illicit discharges or tracking of materials off of construction sites
  - conduct walk-through inspections of construction sites in the ARCA for signs of illicit discharges, and review SWP3s for consistency with AZPDES permit requirements, where applicable
  - train all WUD field staff to identify illicit discharges from construction sites and report to storm water inspectors

- Illicit discharge enforcement
  - issue written warnings and guidance documents for first-offenders, with follow-up inspections in 30 days
  - issue notices of violation, including compliance schedules, for repeat offenders, including minimum requirement of written response within 10 days
  - take escalated enforcement action as necessary to eliminate discharge

- Public outreach on illicit discharges
  - annual storm water article in Tempe Today reminding customers of Tempe's illicit discharge prohibition
  - label approximately 1,500 City storm drain access points over the term of the permit with notice of Tempe's illicit discharge prohibition
  - participate in the Storm Water Outreach for Regional Municipalities (STORM) public outreach programs and activities

- Industrial facility inspection and compliance assistance
  - maintain, and update annually, a list of all categorical 40 CFR 122.26(b)(14)(i) through (ix) and (xi) facilities in Tempe
  - conduct inspections of all listed facilities:
    1) annually for facilities in areas that drain to waters of the U.S., if a facility has not been determined to be no-exposure certification compliant
    2) once every five years for facilities that drain to City retention, or other facilities that have been determined to be no-exposure certification compliant, at a rate of 20% of all of these facilities per year for the term of the permit
    3) semi-annually for MSGP non-compliant facilities or facilities that have previously violated Tempe's illicit discharge ordinance, until the facility is assessed as MSGP-compliant
  - inspect facilities using the protocol and inspection checklist included in the SWMP and attachments
  - provide training and annual refreshers to all industrial storm water inspectors on MSGP and related SWP3 requirements

- Water Quality Monitoring
  - Conduct monitoring as described in the SWMP to assess the effectiveness of pilot residential nutrient public education program, illicit discharge program, and industrial program

PUBLIC WORKS DEPARTMENT

- On-site retention ordinance for new development and redevelopment
  - issue no drainage permit or notification of drainage plan approval for developments outside of the ARCA unless a drainage plan includes on-site or off-site retention of the 100-year design storm
  - issue no drainage permit or notification of drainage plan approval for developments within the ARCA unless:
    1) a drainage plan includes on-site or off-site retention for the 2-year design storm, or
    2) notification from the Water Utilities Manager has been received approving on-site pollutant-removal BMPs

- Street sweeping program
  - arterial street sweeping approximately once every seven days
  - local street sweeping approximately once per month
  - maintain records and report quantities of debris collected in street sweepers annually (in tons)

- BMPs for routine and emergency street maintenance projects
  - include language in all City construction projects requiring contractors to ensure that all excess materials and debris are disposed of in a manner that prevents the discharge of any construction material to Tempe's streets or storm drains

- BMPs in applying fertilizer to City parks and facilities
  - use application rates based on recommendations from the University of Arizona's Turf Department
  - periodic use of soil and tissue analyses to confirm or modify application rates
  - when injecting liquid fertilizers through programmable irrigation controllers, use small applications over several days to reduce or eliminate runoff

DEVELOPMENT SERVICES DEPARTMENT

- On-site retention ordinance for new development and redevelopment
  - issue no grading permit, building permit, or certificate of occupancy without first receiving notification from the City Engineer that a project is in compliance with Tempe's on-site retention ordinance

- Construction site inspection program
  - maintain a list of all construction sites in Tempe larger than 1 acre, along with dates of permit issuance

ATTACHMENT C:

DELEGATION OF SIGNATORY AUTHORITY, CERTIFICATION OF SWMP, AND DEPARTMENTAL CERTIFICATIONS OF PROGRAM COMMITMENTS

ATTACHMENT C: DELEGATION OF SIGNATORY AUTHORITY, CERTIFICATION OF SWMP, AND DEPARTMENTAL CERTIFICATIONS OF PROGRAM COMMITMENTS

40 CFR 122.22(b) states that "All reports required by permits, and other information requested by the Director shall be signed by (a principal executive officer or ranking elected official) or by a duly authorized representative of that person". The regulation further states that a person or position is a "duly authorized representative" if a principal executive officer or ranking elected official delegates signatory authority in writing to a person or position "having responsibility for the overall operation of the regulated facility or activity….or an individual or position having overall responsibility for environmental matters".

In Tempe, the Water Utilities Manager has responsibility for overall environmental matters, but does not have responsibility for the overall operation of all activities incorporated into Tempe's SWMP (see SWMP Introduction). For this reason, Tempe has developed the following delegation, signatory, and certification structure to best address signatory requirements under 122.22(b) and to best ensure accountability:

1) Tempe's City manager has designated Tempe's Water Utilities Manager as his duly authorized representative for MS4 permit compliance;
2) Tempe's Water Utilities Manager has certified this SWMP and will certify annual reports as the permit's signatory; and
3) The 3 department managers responsible for overall operation of regulated facilities or activities have provided certified statements of commitment to implement programs for which they are responsible, and will provide certifications of program implementation status in annual reports.

The designation of duly authorized representative, SWMP certification, and certified statements of commitment to implement programs are included in this attachment.

Tempe

City of Tempe
P. O. Box 5002
31 East Fifth Street
Tempe, AZ 85280

www.tempe.gov

(insert date)

Arizona Department of Environmental Quality
Attn: Chris Varga, Surface Water Permits Manager
1110 W. Washington Street, MC 5415B-3
Phoenix, AZ 85007

Re: Designation of Duly Authorized Representative for Tempe Storm Water Programs and Reports

Dear Mr. Varga:

The purpose of this letter is to designate Tom Gallier, Tempe's Water Utilities Manager, as my duly authorized representative for storm water programs required under Tempe's municipal separate storm sewer system (MS4) permit. All application materials, reports, and other information required by Tempe's permit or requested by ADEQ will be signed by Tempe's Water Utilities Manager on my behalf. Please feel free to contact me at (480) 350-8884, or Tom Gallier at (480) 350-2625 if you have any questions.

Sincerely,

Will Manley
Tempe City Manager

SWMP Certification

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

_____ _____

W. Thomas Gallier — Date

Tempe Water Utilities Manager

Certification of Program Commitment
Water Utilities Manager

I certify that I have reviewed the attached City of Tempe Storm Water Management Plan (SWMP), dated (insert final date), and that I am familiar with all of the responsibilities of the Water Utilities Department described in the plan. I certify that all of the Water Utilities Department program implementation responsibilities listed in Attachment B of this plan, as detailed in Sections (II) and (III) of the SWMP, will be fulfilled under my direction or supervision in accordance with a system designed to assure that qualified personnel properly implement required programs as described in the SWMP.

_____ _____

W. Thomas Gallier — Date
Tempe Water Utilities Manager

Certification of Program Commitment
Public Works Manager

I certify that I have reviewed the attached City of Tempe Storm Water Management Plan (SWMP), dated (insert final date), and that I am familiar with all of the responsibilities of the Public Works Department described in the plan. I certify that all of the Public Works Department program implementation responsibilities listed in Attachment B of this plan, as detailed in Sections (II) of the SWMP, will be fulfilled under my direction or supervision in accordance with a system designed to assure that qualified personnel properly implement required programs as described in the SWMP.

_____ _____

Glenn R. Kephart Date
Tempe Public Works Manager

Certification of Program Commitment
Development Services Manager

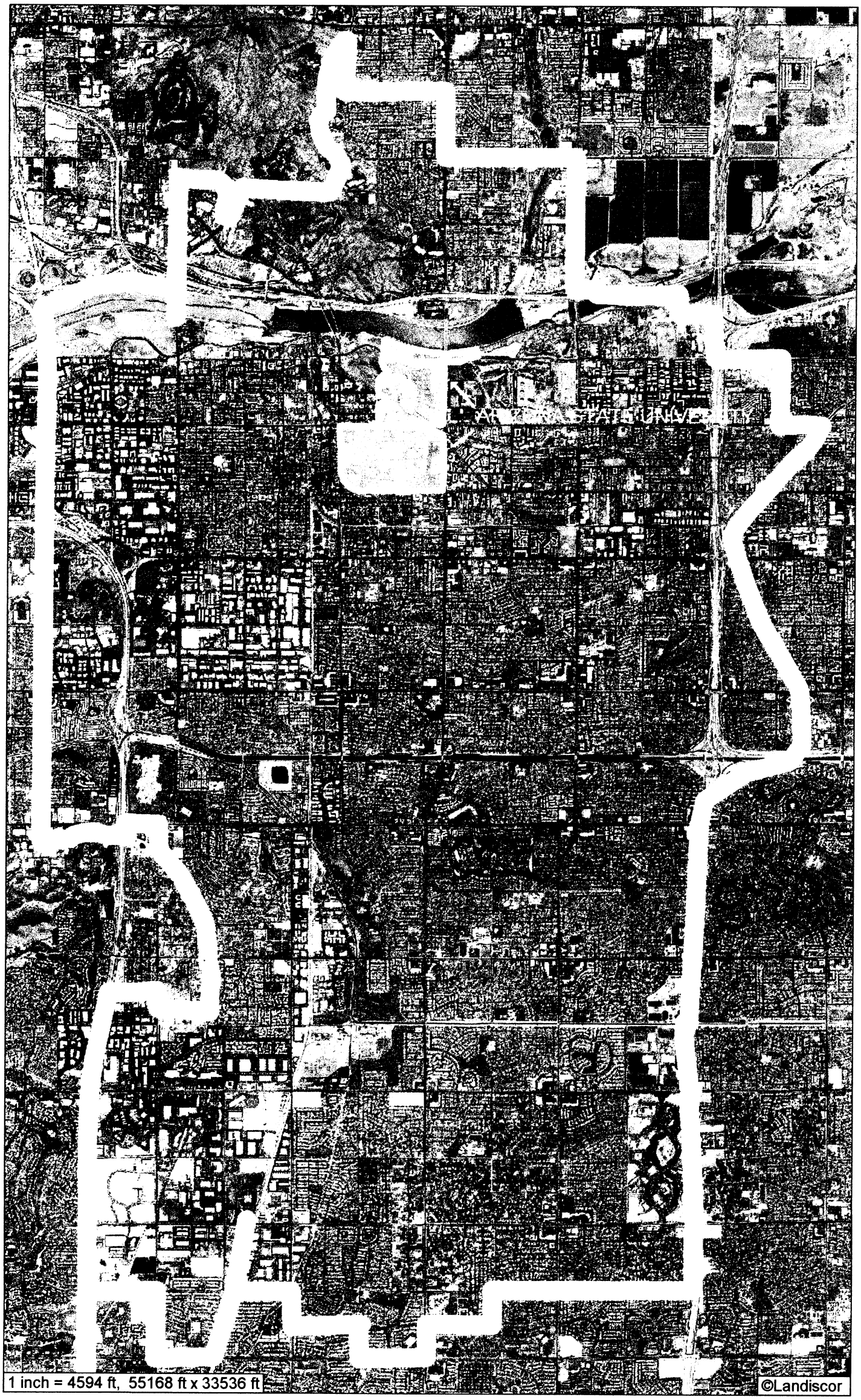
I certify that I have reviewed the attached City of Tempe Storm Water Management Plan (SWMP), dated (insert final date), and that I am familiar with all of the responsibilities of the Development Services Department described in the plan. I certify that all of the Development Services Department program implementation responsibilities listed in Attachment B of this plan, as detailed in Sections (II) of the SWMP, will be fulfilled under my direction or supervision in accordance with a system designed to assure that qualified personnel properly implement required programs as described in the SWMP.

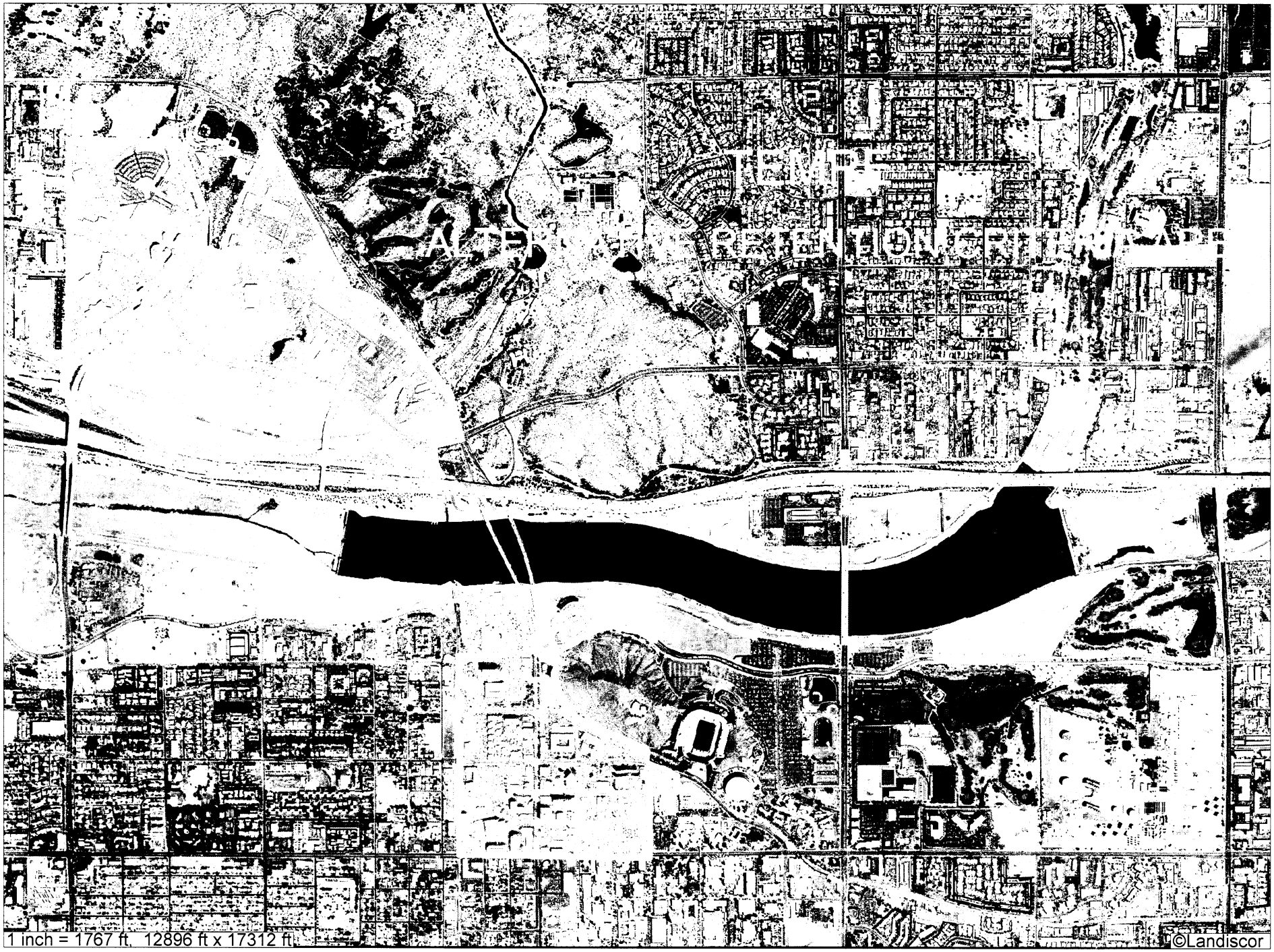
_____ _____

Melanie Hobden Date
Development Services Manager

ATTACHMENT D:

TEMPE MS4 MAPS INDICATING SERVICE AREA AND ALTERNATIVE RETENTION CRITERIA AREA


1 inch = 4594 ft, 55168 ft x 33536 ft
©Landiscor


1 inch = 1767 ft, 12896 ft x 17312 ft
©Landiscor

ATTACHMENT E:

MODIFIED ORDINANCES

(1) CHAPTER 12, ARTICLE IV: STORM WATER RETENTION

DIVISION 1. GENERALLY

Sec. 12-56. Purpose.

The purpose of this article is to require the owner/developer of each lot, plot or parcel of land within the city, outside of the Alternative Retention Criteria Area, to provide storage of sufficient volume to hold the total runoff from the one-hundred year design storm falling on that lot, plot or parcel of land and on adjacent street and alley rights-of-way, except arterial streets. In the Alternative Retention Criteria Area, the owner/developer is required to provide storage of sufficient volume to hold the total runoff from the two year design storm unless storm water pollution best management practices have been approved by the water utilities manager under section 12-127(b). The owner/developer shall not be required to provide storage for runoff from land other than his own.
(Code 1967, § 29A-1; Ord. No. 93.03, 2-11-93)

Sec. 12-57. Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Alternative Retention Criteria Area means the following areas:

1. The area bounded by the north right-of-way of the 202 freeway west of the Union Pacific Railroad and west of Mill Avenue (north of Washington/Curry Road) and by the city limits on the north and west.
2. On the south side of Tempe Town Lake, the area bounded by the north right-of-way of Rio Salado Parkway, the south bank of the Tempe Town Lake, the north prolongation of Hardy Drive, and the Karsten Golf Course at ASU, and excluding Arizona State University-owned property. On the north side of Tempe town lake, the area bounded by the south right-of-way of the 202 freeway, the north bank of the Tempe town lake, and the southern prolongation of College Avenue.
3. The area bounded by the north right-of-way of University Drive, the Union Pacific Railroad, the south right-of-way of Rio Salado Parkway, the west right-of-way of College Avenue and wrapping around the Tempe Butte on the north and east side of the old railroad spur, and the property east of College Avenue known as the Arizona National Guard property.

AZPDES Permit means an Arizona Pollutant Discharge Elimination Permit issued by the Arizona Department of Environmental Quality.

Building floor elevation means the finished floor elevation in feet above mean sea level of the lowest floor, including basement, of a building. Building floor elevations shall be related to the city datum.

Building pad elevation means the elevation in feet above mean sea level of the material on which the floor slab directly rests.

Drainage plan means that certain plan on which are shown the locations, dimensions and elevations of proposed storm water storage areas.

One-hundred-year storm means a storm that has one-percent chance of occurring, in accordance with criteria established by the city engineer.

On-site storage means storage on public or private property or any combination thereof, but not on public street or alley right-of-way.

Retention means total storage, without overland relief, of flows generated during the design storm.

Two-year storm means a storm that has fifty-percent chance of occurring, in accordance with criteria established by the city engineer.
(Code 1967, § 29A-2; Ord. No. 93.03, 2-11-93)

Sec. 12-58. Repealed. Ord. No. 93.03, 2-11-93.

Sec. 12-59. Violations.

(a) Violators of this article shall be notified in writing by the city engineer. The notice, which shall be sent by certified mail, shall state specifically the nature of the violation and request that it be corrected. If a violation is not corrected within thirty (30) days after notice, the city engineer shall promptly hand over all pertinent facts to the city attorney with a request for prosecution under the provisions of this article.

(b) Any persons violating any of the provisions of this article shall be guilty of a misdemeanor and punishable as set forth in § 1-7 of this code.
(Code 1967, § 29A-4)

Sec. 12-60. Exceptions

The requirements of this article may be waived at the discretion of the City Engineer if:

(a) an individual AZPDES permit for storm water discharges directly from a development to waters of the United States has been issued to the owner/developer by the Arizona Department of Environmental Quality, or

(b) the Water Utilities Manager, in consultation with the Arizona Department of Environmental Quality, determines that retention will result in environmental degradation, and that alternatives to retention will effectively limit pollutant discharges to waters of the United States.

Secs. 12-61—12-70. Reserved.

DIVISION 2. ADMINISTRATION

Sec. 12-71. Generally.

(a) The city engineer is hereby designated as the enforcing officer of this article and is hereby authorized and directed to formulate the procedures and criteria necessary to carry out its intent.

(b) The development services department shall not issue a grading or building permit until receipt of notification from the city engineer that a drainage plan has been approved in accordance with this article.

(c) The development services department shall not issue a certificate of occupancy until receipt of notification from the city engineer that construction has been completed in substantial compliance with the approved drainage plan or that subsequent completion has been guaranteed by other means acceptable to the city.
(Code 1967, § 29A-5; Ord. No. 93.03, 2-11-93; Ord. No. 97.20, 4-10-97)

Sec. 12-72. Appeals.

The city engineer is charged with the responsibility for administration and interpretation of this article. Any person who is dissatisfied or aggrieved by any decision of the city engineer may appeal such decision by filing written notice of appeal with the city clerk. Such notice of appeal shall be forwarded to the city council at its next regularly scheduled meeting, at which time a date will be set for hearing on the appeal. The decision of the city council on the appeal shall be final.
(Code 1967, § 29A-6)

Sec. 12-73. Drainage permits.

(a) No person may fill or substantially alter the surface of any lot, plot or parcel of land without first having obtained a drainage permit from the city engineer.

(b) Prior to issuing a drainage permit, the city engineer shall require the owner/developer to submit for approval a drainage plan showing existing and proposed grades with calculations showing the volume of storage required and provided. Such plans and calculations shall be prepared under the direction of a professional engineer registered in the State of Arizona, except as hereinafter provided.

(c) Where the permittee is the owner of a platted residential lot and where the work is to be done only on such lot, plans and calculations prepared by a professional engineer will not be required. The property owner shall submit a sketch showing the proposed work. The city engineer is authorized to assist the property owner in preparing such a sketch and making any computations which may be required.

(d) No drainage permit shall be issued by the city engineer until receipt of notification from the development services department that the grading shown on the drainage plan has been approved.

(e) No drainage permit shall be issued by the city engineer in the Alternative Retention Criteria Area for developments that do not provide retention storage volume for at least the two-year design storm until receipt of notification from the water utilities department that storm water pollution best management practices have been approved in accordance with section 12-127(b).

(f) All drainage permits required by the provisions of this article shall be issued by the city engineer. Permits will be issued only upon approval of a drainage plan and payment of fees. (see Appendix - Drainage Permit Fees)

(g) The owner/developer will provide construction staking.

(h) The city will inspect and accept the work, including material testing necessary to determine that the work is done in accordance with the requirements of the city engineer.

(i) Prior to acceptance of the work, the owner/developer shall furnish a reproducible copy of the approved drainage plan containing a certificate, signed by a professional engineer or land surveyor registered in this state, certifying that the improvements were constructed in accordance with the approved plan. As-built plans will not be required from owners of properties developed under subsection (c) of this section.

(Code 1967, § 29A-7; Ord. No. 93.03, 2-11-93; Ord. No. 97.20, 4-10-97)

Secs. 12-74—12-85. Reserved.

DIVISION 3. STANDARDS AND SPECIFICATIONS

Sec. 12-86. On-site storage.

(a) On-site storage may be provided in any of the following ways:

(1) Individual storage;

(2) Central storage; or

(3) Combination storage.

(b) Individual storage shall consist of providing adequate storage volume for the design storm on a lot, plot or parcel of land for all water falling on the lot, plot or parcel of land. Storage volume shall also be provided for adjacent streets and alleys, except for arterial streets. In single-family residential zones, the maximum depth of water in the storage area at design storm shall be eight (8) inches, unless otherwise approved by the city engineer. In all other zoning categories, the maximum depth of water at design storm shall be three (3) feet.

(c) Central storage shall consist of providing adequate storage volume for the appropriate design storm in one or more central basins to handle the runoff from more than one lot, plot or parcel of land. The maximum depth of water in the storage area at design storm shall be three (3) feet, unless otherwise approved by the city engineer.

(1) The owner of the property on which the central storage basin is to be located shall grant a right to use such property for drainage purposes. Such grant shall be made by means of a document which shall be approved by the city attorney and recorded in the office of the county recorder and which shall contain the following provisions:

a. A legal description of the property to be used for storage purposes;

b. A legal description of the property which is permitted to drain to the basin;

c. A statement that the owner is responsible for the construction and maintenance of the basin in accordance with standards established by the city engineer;

d. A statement that no buildings or structures may be constructed within the basin;

e. A statement that the property shall be used for storm water storage so long as it is required in the opinion of the city engineer; and

f. Such other provisions as are deemed by the city attorney to be necessary to effectuate the provisions of this article.

(2) In lieu of the requirements contained in subparagraph (c)(1), the owner may dedicate the property to be used for central storage to the city for public use for basins greater than five (5) acres. Such dedication shall become effective only upon acceptance by the city council. As conditions precedent to the acceptance of a dedication, the city council may require the owner to comply with the following conditions:

a. Grading of the basin in accordance with standards established by the city engineer;

b. Construction of dry wells as necessary to dispose of nuisance water;

c. Seeding to provide ground cover;

d. Construction of flood irrigation or sprinkler systems; and

e. Such other construction as the city council may deem necessary to the proper public use of the property.

Upon the acceptance of the dedication by the city council and completion of any required construction, the city will assume responsibility for the operation and maintenance of the property and all facilities thereon.

(d) Combination storage shall consist of providing adequate storage volume for the design storm by a combination of individual and central storage. All requirements and conditions outlined in subsections (b) and (c) of this section shall apply.
(Code 1967, § 29A-8; Ord. No. 93.03, 2-11-93)

Sec. 12-87. Building floor elevations.

(a) The minimum building floor elevation shall be ten (10) inches above the design high water elevation for the design storm or the outfall of the lot, whichever is higher, in the case of individual or combination storage.

(b) In the case of central storage, the minimum building floor elevation shall be ten (10) inches above the outfall of the lot.

(c) The owner/developer shall have the option of floodproofing, in a manner acceptable to the city engineer, to the minimum building floor elevation.

(d) The provisions of this section shall not apply to any existing building or structure, nor to an expansion of less than twenty-five percent (25%) in floor area to an existing building or structure; but in no case shall the floor elevation of the extension be below the existing floor of the habitable space.

(e) Prior to occupying any building or structure constructed under the provisions of this article, the owner/developer shall submit to the city engineer a certificate, signed by a professional engineer or land surveyor registered in this state, giving the actual building pad elevation as constructed.
(Code 1967, § 29A-9; Ord. No. 93.03, 2-11-93)

Secs. 12-88—12-100. Reserved.

(2) CHAPTER 12, ARTICLE VI: STORM WATER POLLUTION CONTROL

DIVISION 1. GENERAL PROVISIONS

Sec. 12-115. Purpose and policy.

(a) This article sets forth requirements for the control of pollutants that are or may be discharged to the public storm drain system. The purpose is to improve the quality of storm water discharges and to enable the city to comply with all applicable state and federal laws, including but not limited to, the Clean Water Act (33 United States Code § 1251 et seq.), the National Pollutant Discharge Elimination System Regulations (40 Code of Federal Regulations Part 122), and the Arizona Pollutant Discharge Elimination System Regulations (Arizona Administrative Code, Title 18, Chapter 9, Article 9). The objectives of this article are:

(1) To reduce the discharge of pollutants from our public storm sewer system into receiving waters, waterways, and groundwater;

(2) To control the discharge to the public storm drain system resulting from spills, dumping, or disposal of materials other than storm water;

(3) To enable the city to comply with the conditions of its National Pollutant Discharge Elimination System storm water permit or Arizona Pollutant Discharge Elimination System storm water permit;

(4) To prevent discharges that could cause or contribute to damage to the public storm drain system;

(5) To promote the proper management of hazardous materials and other wastes to prevent their discharge into the public storm drain system;

(6) To reduce pollutants in storm water to the maximum extent practicable; and

(7) To protect the public health and the environment.

(b) This article establishes discharge prohibitions; authorizes the identification of controls to reduce the discharge of pollutants that may be required; provides for necessary inspections, monitoring, compliance, and enforcement activities; and establishes administrative review procedures.
(Ord. No. 98.34, 08-13-98)

Sec. 12-116. Administration.

Except as otherwise provided herein, the water utilities manager shall administer,

implement, and enforce the provisions of this article. Any powers granted to or duties imposed upon the water utilities manager may be delegated by the water utilities manager to other city personnel, but remain the responsibility of the water utilities manager.
(Ord. No. 98.34, 08-13-98; Ord. No. 2001.17, 7-26-01)

Sec. 12-117. Abbreviations.

The following abbreviations, when used in this article, shall have the designated meanings:

ADEQ – Arizona Department of Environmental Quality
AZPDES – Arizona Pollutant Discharge Elimination System
CFR - Code of Federal Regulations
EPA - United States Environmental Protection Agency
NPDES - National Pollutant Discharge Elimination System
(Ord. No. 98.34, 08-13-98)

Sec. 12-118. Definitions.

Unless a provision explicitly states otherwise, the following terms and phrases, as used in this article, shall have the meanings hereinafter designated:

Arizona Department of Environmental Quality, or ADEQ, means the state agency charged with primary enforcement of the federal Clean Water Act.

AZPDES storm water permit means an Arizona Pollutant Discharge Elimination System permit issued by the ADEQ which authorizes the discharge of *storm water* pursuant to the Clean Water Act § 402.

Alternative Retention Criteria Area means the following areas:

1. The area bounded by the north right-of-way of the 202 freeway west of the Union Pacific Railroad and west of Mill Avenue (north of Washington/Curry Road) and by the city limits on the north and west.
2. On the south side of Tempe Town Lake, the area bounded by the north right-of-way of Rio Salado Parkway, the south bank of the Tempe Town Lake, the north prolongation of Hardy Drive, and the Karsten Golf Course at ASU, and excluding Arizona State University-owned property. On the north side of Tempe town lake, the area bounded by the south right-of-way of the 202 freeway, the north bank of the Tempe town lake, and the southern prolongation of College Avenue.
3. The area bounded by the north right-of-way of University Drive, the Union Pacific Railroad, the south right-of-way of Rio Salado Parkway, the west right-of-way of College Avenue and wrapping around the Tempe Butte on

the north and east side of the old railroad spur, and the property east of College Avenue known as the Arizona National Guard property.

City means the City of Tempe.

Clean Water Act means the Federal Water Pollution Control Act, as amended, 33 United States Code § 1251 et seq.

Manager means the water utilities manager who is hereby charged with certain duties and responsibilities by this article, or other city personnel designated by the water utilities manager to act on his/her behalf.

NPDES storm water permit means a National Pollutant Discharge Elimination System permit issued by the EPA which authorizes the discharge of *storm water* pursuant to the Clean Water Act § 402.

Person means any individual, partnership, co-partnership, firm, company, corporation, limited liability company, association, joint stock company, trust, estate, governmental entity, or any other legal; or their legal representatives, agents, or assigns. This definition includes all federal, state, and local governmental entities.

Pollutant means any solid, liquid, gaseous, or other substance that can alter the physical or chemical properties of water including, but not limited to: fertilizers, solvents, sludge, petroleum and petroleum products, solid waste, garbage, biological materials, radioactive materials, sand, dirt, animal wastes, acids, and bases.

Pollution means the presence of a pollutant(s) on land or in storm water.

Premises means any building, lot, parcel, real estate, or land or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

Public storm drain system means all or any part of the storm drains, ditches, pipes, graded areas, and gutters located within public easements, public rights-of-way, public parks, streets, roads, highways, common areas, or required onsite retention areas, or publicly owned real property that are used for collecting, holding, or conveying storm water.

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 can cause pollution.

Storm water means any flow occurring during or following any form of natural precipitation and resulting from such precipitation.
(Ord. No. 98.34, 08-13-98; Ord. No. 2001.17, 7-26-01)

Secs. 12-119 to 12-124. Reserved.

DIVISION 2. PROHIBITIONS AND CONTROLS TO REDUCE THE DISCHARGE OF POLLUTANTS IN STORM WATER

Sec. 12-125. Prohibitions of non-storm water discharges to the public storm drain system; exemptions.

(a) Unless expressly authorized or exempted by this article, no person shall cause or allow the release to a public right-of-way or public storm drain system of any substance that is not composed entirely of storm water.

(b) Unless expressly authorized or exempted by this article, no person shall use, store, spill, dump, or dispose of materials in a manner that those materials could cause or contribute to the addition of pollutants to storm water.

(c) The following discharges are exempt from the prohibition set forth in subsections (a) and (b) of this section provided they are not significant sources of pollutants to Waters of the United States:

(1) The prohibition on discharges shall not apply to any discharge regulated under a NPDES or AZPDES permit issued to the discharger under the authority of the EPA or ADEQ, respectively.

(2) The prohibition on discharges shall not apply to any discharge that is eligible for coverage under a general NPDES or AZPDES permit issued under the authority of EPA or ADEQ, respectively.

(3) Discharges caused by a person from any of the following activities:

a. Water line flushing and other discharges from drinking water sources;

b. Lawn watering;

c. Irrigation water;

d. Diverted stream flow;

e. Rising groundwater;

f. Uncontaminated groundwater infiltration;

g. Uncontaminated pumped groundwater;

h. Foundation and footing drains;

i. Water from crawl space pumps;

j. Air conditioning condensation and evaporative cooler run-off;

k. Natural springs;

l. Individual residential car washing;

m. Flows from riparian habitats and wetlands, as those areas are designated under applicable federal and state laws;

n. Dechlorinated swimming pool discharges;

o. Flows resulting from fire fighting activities or fire system testing and maintenance;

p. Dust control watering; or

q. Any other activity that is exempted under the City's NPDES or AZPDES storm water permit.

(d) No person shall discharge to a publicly owned right-of-way or the public storm drain system any exempted discharge under subsection (c) paragraph 2 of this section if the water utilities manager identifies and provides written notice to the person that the discharge has the potential to be a source of pollutants to receiving waters, waterways, or groundwater.

(e) No person shall discharge to the public storm sewer system where such a discharge would result in or contribute to a violation of the NPDES or AZPDES storm water permit issued to the city, either separately considered or when combined with other discharges. Liability for any such discharge shall be the responsibility of the person causing or responsible for the discharge.

(f) No person shall establish, use, maintain, or continue any connection to the public storm sewer system which has caused or will likely cause a violation of this section. Any connection that was permitted or authorized by a governmental entity with jurisdiction and authority, will be discontinued upon thirty (30) days written notice by the water utilities manager to: (a) the last known address of the owner of the property and by posting on the property; or (b) the person maintaining the connection. This prohibition is retroactive and shall apply to any connection that was made in the past, regardless of whether it was made under a permit or other authorization, or whether it was permissible under the law or practices applicable or prevailing at the time of the connection.
(Ord. No. 98.34, 08-13-98; Ord. No. 2001.17, 7-26-01)

Sec. 12-126. Cleanup and notification requirements.

(a) As soon as any owner or operator has actual or constructive knowledge of any release which may result in pollutants or discharges that are not in compliance with this article entering the public storm drain system, such person shall promptly take all necessary steps to ensure the discovery of the source and extent and proceed with containment and cleanup of such release.

(b) In addition to the requirements contained in subsection (a) of this section, such person shall notify the water utilities manager of the release in both of the following manners:

(1) By telephone within twenty-four (24) hours or by 12:00 noon of the next work day if knowledge is received on a weekend or holiday; and

(2) In writing within three (3) days of receiving knowledge of the release.
(Ord. No. 98.34, 08-13-98; Ord. No. 2001.17, 7-26-01)

Sec. 12-127. Practicable best management practices.

(a) All persons owning or operating facilities or engaged in activities which will or may reasonably be expected to result in pollutants entering the public storm drain system or affecting the public storm drain system, shall undertake all practicable best management practices identified by the water utilities manager to minimize such pollutants. Such measures shall include the requirements imposed by all of the following:

(1) This chapter;

(2) Chapter 33, Article VI (Water Wasting); § 29-20 (discharge of water from private premises); and § 19-50 (hauling waste fill or waste excavation material);

(3) Any written guidelines which may be developed or referenced for general use by the water utilities manager.

(b) All owners/developers of lots, plots, or parcels of land in the Alternative Retention Criteria Area who do not provide storage of sufficient volume to hold the total runoff from the two-year design storm shall provide on-site pollution prevention best management practices which will provide storm water pollutant removal or prevention equivalent to that which would be achieved using on-site storage. Best management practice plans shall be submitted to the water utilities manager for approval prior to construction.

(c) If a practicable best management practice is required by the water utilities manager, the person receiving the notice of such a requirement may petition the water utilities manager to reconsider the application of the practicable best management practice to the facility or the activity. The written petition must be received within ten

(10) working days setting forth any reasons and proposed alternatives. The water utilities manager will act within thirty (30) days on the request.
(Ord. No. 98.34, 08-13-98; Ord. No. 2001.17, 7-26-01)

Sec. 12-128. Construction sites.

(a) Any person performing construction shall use all practicable best management practices identified by the water utilities manager to minimize pollutants and sediment from leaving the construction site. This is in addition to what may be required in § 19-50 (hauling waste fill or waste excavation material) of the Tempe City Code. At a minimum, the person shall do both of the following:

(1) Not cause or contribute to a violation of § 12-125; and

(2) Comply with any written guidelines which may be developed or referenced for general use by the water utilities manager.

(b) If a practicable best management practice is required by the water utilities manager, the person receiving the notice of such a requirement may petition the water utilities manager to reconsider the application of the practicable best management practice to the construction activity. The written petition must be received within ten (10) working days setting forth any reasons or proposed alternatives. The water utilities manager will act within thirty (30) days on the request.
(Ord. No. 98.34, 08-13-98; Ord. No. 2001.17, 7-26-01)

Secs. 12-129 to 12-134. Reserved.

DIVISION 3. COMPLIANCE MONITORING

Sec. 12-135. Inspection and sampling; right of entry.

(a) Upon presentation of credentials and at all reasonable or necessary hours, all authorized employees of the city shall have access to all premises and to all records pertaining to those premises for purposes of ensuring compliance with this article. Inspection, interviewing, copying, sampling, photographing, and other activities conducted on the premises shall be limited to those which are reasonably needed by the city in determining compliance with the requirements of this article. All persons shall allow such activities under safe and nonhazardous conditions with a minimum of delay.

(b) In addition to those activities described in subsection (a) of this section, authorized city employees shall engage in monitoring necessary to ensure compliance with this article. The water utilities manager may establish on premises such devices as the water utilities manager reasonably determines are necessary to conduct sampling or metering operations. Such devices shall be installed so as to minimize the impact on the owner and occupant of the premises. During all inspections as provided in subsection (a) of this section, authorized city employees may take any samples necessary to aid in the

pursuit of the inquiry or in the recordation of the activities on the premises.

(c) The water utilities manager may order any person engaged in any activity or owning or operating on any premises which may cause or contribute to discharges of pollutants to the public storm drain system in violation of this article to undertake such monitoring activities and analyses and furnish such reports as the water utilities manager reasonably may specify. The costs of such activities, analyses, and reports shall be borne by the recipient of the order.

(d) If the water utilities manager has been refused access to any premises, and is able to demonstrate probable cause to believe that there may be a violation of this article, or that there is a need to inspect, interview, copy, photograph or sample as part of an inspection and sampling procedure of the city designed to determine compliance with the requirements of this article or any related laws or regulations, or to protect the environment and the public health, safety and welfare of the community, then the water utilities manager may seek issuance of a search warrant from the municipal court of the city. The water utilities manager may, in addition, obtain an "inspection warrant" pursuant to chapter 34 of this code.
(Ord. No. 98.34, 08-13-98; Ord. No. 2001.17, 7-26-01)

Secs. 12-136—12-144. Reserved.

DIVISION 4. ENFORCEMENT

Sec. 12-145. Purpose.

The purpose of this division is to ensure compliance with practicable best management practices required by the water utilities manager, to cease/discontinue pollutant discharges, to provide for civil penalty actions in municipal court, or to institute actions through the city attorney in the appropriate court for civil or criminal enforcement of this article.
(Ord. No. 98.34, 08-13-98; Ord. No. 2001.17, 7-26-01)

Sec. 12-146. Notice of violation.

When the water utilities manager finds that any person has violated, or continues to violate, any provision of this article, or any related laws or regulations, the water utilities manager may serve upon that person a written notice of violation. The person, within ten (10) working days of the receipt of this notice, must provide in writing to the water utilities manager an explanation of the violation and a plan for the satisfactory correction and prevention thereof, to include specific actions to be taken by the person in violation to prevent subsequent violations. Submission of this plan in no way relieves the person of liability for any violations in the notice or that occurred before or after receipt of the notice of violation nor limits the water utilities manager's authority to take further enforcement actions. Nothing in this section shall limit the authority of the water utilities manager to take any action, including emergency actions or any other enforcement

action, without first issuing a notice of violation. In appropriate situations the water utilities manager may notify the person orally either in person or by telephone prior to, and in some cases in lieu of, written notification.
(Ord. No. 98.34, 08-13-98; Ord. No. 2001.17, 7-26-01)

Sec. 12-147. Consent orders; best management practice.

The City 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. Such documents will include specific action to be taken by the person to correct the noncompliance within a time period specified by the document, including an identification and description of the best management practices and measures to utilize in implementing the order. Such documents shall have the same force and effect as any other orders issued under this article and shall be judicially enforceable.
(Ord. No. 98.34, 08-13-98; Ord. No. 2001.17, 7-26-01)

Sec. 12-148. Cease and desist orders.

(a) When the water utilities manager finds that a person has violated, or continues to violate, any provision of this article or any related laws or regulations, or that the person's past violations are likely to recur, the water utilities manager may issue an order to the person directing them to cease and desist all such violations and direct the person to:

(1) Immediately comply with all requirements; and

(2) Take such appropriate remedial or preventive action as may be needed to properly address a continuing or threatened violation.

(b) Issuance of a cease and desist order shall not be a bar against, or a prerequisite for, taking any other action against the person. A person's failure to comply with an order of the water utilities manager issued pursuant to this division shall constitute a violation of this article.
(Ord. No. 98.34, 08-13-98; Ord. No. 2001.17, 7-26-01)

Sec. 12-149. Civil penalties.

(a) In addition to any other enforcement authority contained in this article, the ~~water utilities manager~~ City may issue a civil citation to any person who has violated, or continues to violate, any provision of this article or any related laws or regulations. The form of the citation shall be established by the City Attorney.

(b) If the defendant fails to appear as directed on the citation, the court upon request of the City, shall enter a default judgment for the amount of the fine indicated for the violation charged, together with a default penalty not to exceed fifty dollars ($50).

(c) The civil penalty for violating this article shall be an amount not to exceed three hundred dollars ($300).

(d) All civil hearings under this article before the Tempe Municipal Court shall be informal and without a jury, except that testimony shall be given under oath or affirmation. The Rules of Evidence do not apply, except for any rules or statutes relating to privileged communications. If the allegation in the citation is denied, the City is required to prove the violation by a preponderance of the evidence. The court is authorized to make such orders as may be necessary or appropriate to fairly and efficiently decide the case at hand. An appeal from the judgment of the court may be taken in the same manner as civil traffic appeals.
(Ord. No. 98.34, 08-13-98; Ord. No. 2001.17, 7-26-01; Ord. No. 2002.35, 8-8-02)

Sec. 12-150. Injunctive relief.

When the water utilities manager finds that a person has violated, or continues to violate, any provision of this article or any related laws or regulations, or that the person's past violations are likely to recur, the City may petition the Superior Court of Arizona, Maricopa County, through the city attorney for the issuance of a temporary or permanent injunction, as appropriate, which restrains or compels the specific performance of any order, or other requirement imposed by this article on activities of the person. The City may also seek such other action as is appropriate for legal or equitable relief.
(Ord. No. 98.34, 08-13-98; Ord. No. 2001.17, 7-26-01)

Sec. 12-151. Criminal prosecution.

A person who willfully or negligently violates any provision of this article, or any related laws or regulations shall, upon conviction, be guilty of a class one misdemeanor, punishable by a fine of not more than two thousand five hundred dollars ($2,500) per violation, per day, or imprisonment for not more than six (6) months, or both.
(Ord. No. 98.34, 08-13-98)

Sec. 12-152. Remedies non-exclusive.

The remedies provided for in this article are not exclusive. Each day's noncompliance constitutes a new violation. The City may take any, all or any combination of these actions against a noncompliant person.
(Ord. No. 98.34, 08-13-98; Ord. No. 2001.17, 7-26-01)

(3) SECTION 19-50: HAULING WASTE FILL OR WASTE EXCAVATION MATERIAL

(a) It shall be unlawful to haul or cause to be hauled, except by special permit, waste fill or waste excavation material on the streets and highways within the city when the quantity of waste fill or waste excavation material to be hauled exceeds five thousand (5,000) cubic yards for the project or when the duration of the haul is more than ten (10) working days. Written application for a special permit and the issuance of a special permit will be processed by the city engineer, who will place upon the special permit such conditions as may be reasonably necessary to prevent creation of a nuisance or hazard to the public. Such conditions may include, but not be limited to:

(1) Designation of specific routes to be used;

(2) Designation of specific haul hours or days;

(3) Designation of specific locations of access to and from public right-of-way;

(4) Provision for safety precautions such as the use of barricades, warning or traffic signs, flagmen or police officers for traffic control;

(5) Assumption of responsibility to remove any spillage of waste fill or waste excavation material from streets or sidewalks or to pay the city twice the cost of removal; or

(6) Any violation of the terms or conditions of the permit shall be sufficient grounds for the city engineer to revoke the permit.

(b) Notwithstanding the provisions of paragraph (a) above, it shall be unlawful to cause or allow fill, excavated material, construction debris, mud, dirt, rock, sand, gravel, concrete or asphalt to be spilled, dumped or tracked onto public streets, alleys or sidewalks.

(c) The city council by resolution will set the fee to be charged by the city engineer for the special permit for hauling waste fill or waste excavation material in the city.

(d) Any person who owns, leases or occupies property in connection with which fill, excavated material, construction debris, mud, dirt, rock, sand, gravel, concrete or asphalt is hauled or caused or allowed to be spilled, dumped or tracked onto public streets, alleys or sidewalks shall be subject to any penalty authorized by this chapter, by Article VI of Chapter 12, or the general penalty provision of the city code, § 1-7.

(e) Any person who contracts to do construction work on property in connection

with which fill, excavated material, construction debris, mud, dirt, rock, fill, gravel, concrete or asphalt is hauled or caused or allowed to be spilled, dumped or tracked onto public streets, alleys or sidewalks shall be subject to any penalty authorized by this chapter, by Article VI of Chapter 12, or the general penalty section of the city code, § 1-7. (Ord. No. 88.13, 6-9-88)

ATTACHMENT F:

DESCRIPTION OF MAJOR TEMPE STORM DRAIN OUTFALLS TO WATERS OF THE U.S.

Salt River Outfalls

- **SR-11**

  SR-11 is a 66-inch outfall located approximately 20 yards west of McClintock Road on the south bank of Tempe Town Lake (TTL). SR-11 is accessible by foot or bike. Storm water run-off from SR-11 is upstream of Tempe Town Lake.

- **SR-10**

  SR-10 is a 36-inch outfall located approximately 20 yards west of McClintock Road, on the south bank of TTL and is part of the same concrete structure as SR-11. SR-10 is accessible by foot or bike. Storm water run-off from SR-10 is upstream of Tempe Town Lake.

- **SR-08**

  SR-08 is a 66-inch outfall located approximately 130 yards east of Tempe Town Lake's eastern dam, on the south bank. SR-08 is accessible by foot or bike. Storm water run-off from SR-08 is upstream of Tempe Town Lake.

- **SR-07**

  SR-07 is a 66-inch outfall located approximately 150 yards west of the Rural Road Bridge, on the south bank. SR-07 is accessible by foot or bike. Storm water run-off from SR-07 can be discharged directly into Tempe Town Lake and can be by-passed to the south bank interceptor.

- **SR-04**

  SR-04 is a 108-inch outfall located 25 yards west of the downstream dam structure for Tempe Town Lake (south bank). SR-04 is accessible by foot or bike. Storm water run-off from SR-04 is downstream of Tempe Town Lake.

- **SR-03**

  SR-03 is a 36-inch outfall located 385 yards east of the Priest Road Bridge on the south bank of the Salt River. SR-03 is accessible by foot or bike. Storm water run-off from SR-03 is downstream of Tempe Town Lake.

- **SR-02**

SR-02 is a 36-inch outfall located 250 yards east of the Priest Road Bridge on the south bank of the Salt River. SR-02 is accessible by foot or bike. Storm water run-off from SR-02 is downstream of Tempe Town Lake.

- **SR-01**

SR-01 is a 42-inch outfall located 20 yards west of the Priest Road Bridge on the south bank of the Salt River. SR-01 is accessible by foot or bike. Storm water run-off from SR-01 is downstream of Tempe Town Lake.

- **SR-16**

SR-16 is a 96-inch outfall located 50 yards west of the Priest Road Bridge on the north bank of the Salt River. SR-16 is accessible by foot or bike. Storm water run-off from SR-16 is downstream of Tempe Town Lake.

- **SR-17**

SR-17 is a 36-inch outfall located one and one-half tenths of a mile east of the Priest Road Bridge on the north bank of the Salt River. SR-17 is accessible by foot or bike. Storm water run-off from SR-17 is downstream of Tempe Town Lake.

- **SR-18**

SR-18 is a 102-inch outfall located two-tenths of a mile west of Tempe Town Lake's western dam on the north bank. SR-18 is accessible by foot or bike. Storm water run-off from SR-18 is downstream of Tempe Town Lake.

- **SR-19**

SR-19 is a 66-inch outfall located 24 yards east of the Southern Pacific Railroad Bridge on the north bank of the Salt River. This outfall discharges directly to TTL (Tempe Town Lake). The outfall structure is completely underwater.

- **SR-20**

SR-20 is a 48-inch outfall located between the north and south bound lanes of the Mill Avenue Bridges on the north bank of TTL. This outfall discharges directly to the TTL. The outfall structure is completely underwater.

- **SR-21**

SR-21 is a twin 8- by 8-foot outfall structure located three-tenths of a mile west of the Rural Road Bridge on the north bank of TTL. This outfall discharges directly to the TTL. The outfall structure is completely underwater.

- **SR-22/22A**

  SR-22/22A is a twin 48-inch outfall structure located two-tenths of a mile west of the Rural Road Bridge on the north bank of TTL. This outfall discharges directly to the TTL. The outfall structure is partially underwater.

- **SR-23**

  SR-23 is a 42-inch outfall located six yards west of the Rural Road Bridge on the north bank of TTL. This outfall discharges directly to TTL. The outfall structure is completely underwater.

- **SR-24**

  SR-24 is a twin 8- by 8-foot outfall structure for the Miller Drain and is located 35 yards south and 40 yards east of TTL Well #3 on the north bank of TTL. This outfall discharges directly to TTL. The outfall structure is completely underwater.

Tempe Drainage Ditch

The Tempe Drainage Ditch has a large drainage area that encompasses a major portion of East Tempe. At 52nd Street, the "ditch" transitions from closed conduit(s) to an open channel, concrete lined aqueduct, which discharges to the Salt River just north of University Road and Interstate 10, in the City of Phoenix. Drainage into the "ditch" from laterals includes connections to the HoHoKam Expressway and the City of Phoenix drainage area. Irrigation tail water as well as NPDES-permitted discharges from the Tempe Kyrene Water Reclamation Plant and the SRP K-7 Generating Station keeps the ditch flowing year-round.

- **TD-03**

  TD-03 is a 4- by 8-foot outfall located on the north bank of the Tempe Drainage Ditch on the east side of 48th Street, at the point just east of where the Tempe Drainage Ditch flows under the HoHoKam Expressway.

- **TD-02**

  TD-02 is approximately 200 yards west of 52nd Street, on the north side of the ditch.

Indian Bend Wash

Indian Bend Wash is a tributary of the Salt River. Indian Bend Wash (IBW) begins in North Scottsdale and discharges into the Salt River at the head of Tempe Town Lake.

- **IB-01**

  IB-01 is a 42-inch outfall that is located 65 yards south of McKellips Road on the east bank of IBW.

- **IB-02**

  IB-02 is a 36-inch outfall that is located two and one-half tenths of a mile south of McKellips Road on the east bank of IBW behind the Malibu Grand Prix.

- **IB-03**

  IB-03 is a 42-inch outfall located four-tenths of a mile south of McKellips Road on the east bank of IBW, right behind Big Surf.

- **IB-04**

  IB-04 is a 36-inch outfall located 45 yards north of Curry Road behind Gold Tech Industries, on the east bank of IBW.

- **IB-05**

  IB-05 is a 48-inch outfall located 36 yards south of Curry Road on the east bank of IBW.

- **IB-06**

  IB-06 is a 48-inch outfall located at the southeast corner of the 202 Bridge over IBW at Tempe Town Lake. This outfall collects the storm water run-off from the 202 Freeway on the north side. This outfall structure will discharge directly into Tempe Town Lake.

- **IB-07**

  IB-07 is a 48-inch outfall located 65 yards south of McKellips Road on the west bank of IBW.

- **IB-08**

  IB-08 is a twin 36-inch outfall located two and one-half tenths of a mile south of McKellips Road, at the southeast corner of the City of Scottsdale Service Yard on the west bank of IBW.

- **IB-09**

  IB-08 is a 54-inch outfall located a half-mile south of McKellips Road on the west bank of IBW, at Weber Drive and Indian Bend Wash

- **IB-10**

  IB-10 is a 36-inch outfall located 30 yards north of the Curry Road Bridge on the west side of IBW.

- **IB-11**

  IB-11 is a 36-inch outfall located 130 yards south of Curry Road on the west bank of Indian Bend Wash.

- **IB-12**

  IB-12 is a 48-inch outfall located 50 yards north of the 202 at approximately Gilbert Drive, on the west side of Indian Bend Wash. This outfall structure will discharge directly into Tempe Town Lake.

Kiwanis Park

Kiwanis Park (KP) is an urban lake that receives storm water run-off from the residential area to the east. The lake is normally supplied with Salt River Project canal water.

- **KP-01**

  KP-01 is a 48-inch outfall located midpark on the north side of the lake, off of All American Way.

ATTACHMENT G:

TEMPE FIRE DEPARTMENT HAZARDOUS MATERIALS POLICY

Tempe Fire Department Policies and Procedures

Hazardous Materials

208.01

Rev 6-10-91

This plan provides a basic philosophy and strategic plan for hazardous materials situations. All Tempe Fire Department policies and procedures, unless superseded by a specific part of this plan, remain in effect for hazardous materials incidents.

Hazardous materials incidents encompass a wide variety of situations including fires, spills, transportation accidents, chemical reactions, explosions, and similar events. Hazards involved may include toxicity, flammability, radioactivity, corrosives, explosives, health hazards, chemical reactions, and combinations of factors. This plan provides a general framework for handling a hazardous materials incident, but does not address the specific tactics or control measures for particular incidents.

Every incident presents the potential for exposure to hazardous materials and the products of combustion of an ordinary fire may present severe hazards to personnel safety.

Adequate situation evaluation is critical. If the wrong decision is made, personnel can easily become part of the problem instead of part of the solution. Any emergency response effort must favorably change or influence the outcome. If the outcome cannot be favorably changed, personnel must withdraw, evacuate endangered civilians, and protect exposures if possible.

This procedure is specifically applicable to known hazardous materials incidents, but it does not reduce the need for appropriate safety precautions at every incident. The use of full protective clothing and SCBA whenever appropriate and the utilization of all Tempe Fire Department policies and procedures on a continuing basis is the starting point for this plan.

ALARM

Alarm will attempt to obtain any and all information from the person reporting a hazardous materials incident. The information should, if possible, include material name and/or type, amount and size of container(s), problem (leak, spill, fire, etc.), and dangerous properties of the materials. The incident taker should stay on the telephone with the caller to gain additional information after giving the call to the dispatcher.

Any additional information shall be relayed to responding units after dispatch.

If the call comes from a person with particular knowledge of the hazardous situation, that person should be instructed to meet and direct the arriving units. Alarm will relay that person's location to responding units.

Alarm will dispatch the appropriate hazardous materials assignment companies to all reported hazardous materials incidents.

Alarm will obtain the prevailing wind speed and direction from the Airport Tower and advise responding units.

FIRST ARRIVING UNIT

The first arriving officer will establish Command and begin a size-up. The first unit must consciously avoid committing itself to a dangerous situation. When approaching, slow down or stop to assess any visible activity taking place. Evaluate effects of wind, topography, and location of the situation.

Command will establish level II staging for other responding units. Staged companies must be in a safe location, taking into account wind, spill flow, explosion potential, and similar factors in any situation. The DOT guidebook, NFPA reference materials for MSDSs available to them should be used to establish a safe distance for staging. Units must stage in a safe location taking into account wind, spill flow, explosion potential, and similar factors in any situation.

SIZE-UP

Command must make a careful size-up before deciding on a commitment. It may be necessary to take immediate action to make a rescue or evacuate an area, but this should be done with an awareness of the risk to Fire Department personnel and taking advantage of available protective equipment.

The objective of the size-up is to identify the nature and severity of the immediate problem and gather sufficient information to formulate a valid action plan. A hazardous materials incident requires a cautious and deliberate size-up.

Command must avoid premature commitment of companies and personnel to potentially hazardous locations. Proceed with caution in evaluating risks before formulating a plan and keep uncommitted companies at a safe distance. In many cases, evaluation by Hazardous Incident Response Team members before committing is the safest approach.

Command must identify a hazardous area based on potential danger, taking into account materials involved, time of day, wind and weather conditions, location of the incident, and degree of risk to unprotected personnel. Take immediate action to evacuate and/or rescue persons in critical danger if possible, providing for the safety of rescuers first.

The major problem in most cases is to identify the type of materials involved in a situation and the hazards presented before formulating a plan of action. Look for labels, markers, DOT identification numbers, NFPA diamond, and shipping papers, refer to pre-fire plans and ask personnel at the scene (plant management, responsible party, truck drivers, fire department specialist). Utilize reference materials carried on apparatus and have Alarm contact other sources for assistance in sizing-up the problem (Chemtrec, other agencies, fire department specialists, manufacturers of materials, etc.). Refer to the Tempe Fire Department Hazardous Materials Reference List, located in Battalion-7, C-73, E-72, EP-76, HM-72, and Alarm.

ACTION PLAN

Based on the initial size-up and any information available, Command will formulate an action plan to deal with the situation.

Most hazardous materials are intended to be maintained in a safe condition for handling and use through confinement in a container or protective system. The emergency is usually related to the material escaping from the protective container or system and creating a hazard on the exterior. The strategic plan must include a method to control the flow or release, get the hazardous material back into a safe container, neutralize it, allow it to dissipate safely, or coordinate proper disposal.

The specific action plan must identify the method of hazard control and identify the resources available and/or required to accomplish this goal. It may be necessary to select one method over another due to the unavailability of a particular resource or to adopt a "holding action" to wait for needed expertise, equipment, or supplies.

As a general policy, the Hazardous Incident Response Team will be assigned to any situation involving direct contact with hazardous materials.

At all incidents involving hazardous materials, a Safety Sector will be established. The Safety Sector will monitor

all activities to ensure that procedures are conducted in a safe manner. The Safety Sector will intervene and stop any operation that is being performed in an unsafe manner. Upon intervening into any operation, the Safety Sector will advise Command of the situation.

The action plan must provide for:

. An assigned Safety Sector officer.

. Safety of citizens.

. Safety of firefighters.

. Evacuation of endangered area if necessary, or sheltering in place if practical.

. Control of situation.

. Stabilization of hazardous materials, and or disposal or removal of hazardous material.

Avoid committing personnel and equipment prematurely or "experimenting" with techniques and tactics. Many times it is necessary to evacuate and wait for special equipment or specialty help.

CONTROL OF HAZARDOUS AREA

A hazardous materials incident has three zones associated with the scene. There is the Hot Zone, Warm Zone, and the Cold Zone.

Hot Zone

The Hot Zone is the area in which personnel are potentially in immediate danger from the hazardous condition. This is established by Command and controlled by the Fire Department. Access to this area will be rigidly controlled and only personnel with proper protective equipment and an assigned activity will enter. All companies will remain intact in designated staging areas until assigned. Personnel will be assigned to monitor entry and exit of all personnel from the Hot Zone. The Hot Zone should be geographically described to all responding units and identified with hazard tape, if possible. (A Lobby Control Sector may be established to control access to the Hot Zone and maintain an awareness of which personnel are working in the area.)

Responsibility for control of personnel in this zone includes not only Fire Department personnel, but any others who may wish to enter the Hot Zone (police, press, employees, tow truck drivers, ambulance personnel, etc.). COMMAND IS RESPONSIBLE FOR EVERYONE'S SAFETY.

Warm Zone

The Warm Zone is the larger area surrounding the Hot Zone in which a lesser degree of risk to personnel exists. All civilians would be removed from this area. The limits of this zone will be enforced by the Police Department based on distances and directions established in consultation with Command. The area to be evacuated depends on the nature and amount of the material and type of risk it presents to unprotected personnel (toxic, explosive, etc.). In the Warm Zone certain activities may take place, such as contamination reduction, site survey, etc. All personnel in the Warm Zone will wear appropriate level of personal protective equipment for the hazards present.

In some cases, it is necessary to completely evacuate a radius around a site for a certain distance (i.e., potential explosion).

In other cases, it may be advisable to evacuate a path downwind where toxic or flammable vapors may be

carried (and control ignition sources in case of flammable vapors).

NOTE: When toxic or irritant vapors are being carried downwind, it may be most effective to keep everyone indoors with windows and doors closed (sheltering in place) to prevent contact with the material instead of evacuating the area. In these cases, companies would be assigned to patrol the area assisting citizens in shutting down ventilation systems and evacuating persons with susceptibility to respiratory problems.

Cold Zone

The Cold Zone is the area outside of the limits of the Warm Zone. All other incident activities, including Command, should be located in the Cold Zone. All non-essential personnel, staged companies, and the public should be in the Cold Zone.

USE OF NON-FIRE DEPARTMENT PERSONNEL

In some cases, it may be advantageous to use non-Fire Department personnel to evaluate hazards and perform certain functions for which they would have particular experience or ability.

When such personnel are outfitted with breathing apparatus, chemical suits, etc., they must be made aware of the functions, limitations, and safety precautions necessary in their use. Fire Department personnel with the necessary protective equipment must closely monitor and/or accompany such personnel for safety.

Command is responsible for the safety of all personnel involved in any incident and all incident management decisions.

SPECIAL CONSIDERATIONS

General Factors to Consider

Due to the wide variety of situations Fire Department personnel may encounter in dealing with hazardous materials, these considerations will not attempt to provide specific guidelines on any one individual chemical or situation and are not listed in any priority.

It is imperative that the first arriving Fire Department unit determine what hazardous material(s) is involved and how much prior to taking action to stabilize the incident.

Call for additional resources.

Entering the scene to make positive identification may be a considerable risk. The danger of explosions, leaking gas, and poisoning may be great.

Action taken prior to determining the product involved may be totally wrong and may severely compound the problem.

Transportation emergencies are often more difficult than those at fixed locations. The materials involved may be unknown, warning signs may not be visible, or obscured by smoke and debris, the driver may be killed or missing. Department of Transportation hazardous materials marking systems are inadequate because some hazardous materials in quantities up to 1000 lbs. do not require a placard. There may be combinations of different hazard classifications involved with only a "dangerous" placard showing.

The DOT placarding system only identifies a primary hazard classification for most hazardous materials. All hazardous materials have secondary hazards which are generally not indicated by placards.

At the termination of an incident, ensure that all of the necessary information is collected for use during a critique of the incident. As soon as practical, a critique of every hazardous materials incident will be

scheduled and conducted in accordance with federal OSHA regulation 29 CFR 1910.120.

The following items may be significant to consider at any hazardous materials incident. (Not all will be significant at any particular incident.)

Cooling Containers

a. Obtain adequate water supply, use large GPM hose streams or stang guns.

b. Apply heavy streams to vapor space are above the tank's liquid line.

c. Use unmanned streams.

d. Use natural barriers to protect personnel.

Remove Uninvolved Materials

a. These actions should only be done after a complete site safety plan has been established by Command in conjunction with HIRT officers.

b. Move individual containers.

c. Move tank cars away from flame.

d. Cool containers before moving.

Stop the Leak

a. Use water spray to approach leak.

b. Close valves when safe to do so.

c. Do not apply water to chlorine containers - it will make the leak worse.

Apply Diluting Spray or Neutralizing Agent, As Appropriate

a. Dilute water-soluble liquids such as ammonia, chlorine, LPG (no water on chlorine tanks).

b. Use water with caution on some materials.

Construct Dams, Dikes, or Channels

a. Direct running liquid away from exposures.

b. Control run-off from corrosive or toxic materials.

c. Use sand or dirt.

d. Keep product out of sewer, storm systems, canals, or other waterways.

Remove Ignition Sources

a. Start downwind.

b. Eliminate all sources of heat, spark, friction.

c. These actions need to be accomplished in conjunction with the proper technical advice.

Call for additional resources when their need is only anticipated. The actions taken by the fireground commander in the first few minutes of an incident affects the outcome more than any other single factor.

Alarm has the Tempe Fire Department Hazardous Materials Reference List of personnel and organizations which may be helpful during a hazardous materials emergency.

These include:

1. Fire Department personnel with particular experience or knowledge.

2. State of Arizona Department of Environmental Quality Emergency Response Unit.

3. Authorities in charge of landfills and dumps where hazardous materials may be disposed.

4. Commercial chemical experts with experience in handling and disposing of most common chemicals.

5. Pesticide consultants and disposal teams with equipment to clean-up agricultural chemical spills.

6. State of Arizona Department of Public Safety, Commercial Vehicle Safety Specialists (CVSS) for transportation incidents.

7. Railroad information numbers.

8. Tank truck companies with defueling capability (in case carrier involved in incident has none).

9. Radioactivity and military weapons emergency contacts.

10. Arizona State University chemical experts who can provide advice and information.

ATTACHMENT H:

INDUSTRIAL FACILITY INSPECTION CHECKLIST

Tempe

STORM WATER
INDUSTRIAL FACILITY INSPECTION FORM

I. BASIC INFORMATION

Facility Name:	Business Type/Activity:
Address:	SIC or MSGP Category:
Contact Name:	Phone:
Mailing Address:	Fax:
Owner Name:	Phone:
Mailing Address:	Fax:

(a) Notice of Intent Submitted? Yes [ ] No [ ] (if yes, skip to section III; if no, answer question (b) and complete section II)

(b) No Exposure Certification Submitted? Yes [ ] No [ ]

II. EXPOSURE ASSESSMENT / CHECKLIST

Are any of the following materials or activities exposed to precipitation, now or in the forseeable future?

Material / Activity	Y	N	Notes
1. Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial equipment remain and are exposed to storm water?			
2. Materials or residuals on the ground or in storm water inlets from spills/leaks?			
3. Materials from past industrial activity?			
4. Materials handling equipment (except adequately maintained vehicles)?			
5. Materials or products during loading/unloading or transporting activities?			
6. Materials or products stored outdoors (except final products intended for outside use [e.g., new cars] where exposure to storm water does not result in the discharge of pollutants?			
7. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers?			
8. Materials or products handled/stored on roads or railways owned or maintained by the discharger?			
9. Waste Material (except waste in covered, non-leaking containers [e.g., dumpsters])?			
10. Application or disposal of process wastewater (unless otherwise permitted)?			
11. Particulate matter or visible deposits of residuals from roof stacks and/or vents not otherwise regulated (i.e., under an air quality control permit) and evident in the storm water outflow?			

- If all questions in section (II) were answered "no" and questions (a) and (b) in section (I) were both answered "no", facility is NEC-eligible (NE).
- If all questions in section (II) were answered "no", and question (b) in section (I) was answered "yes", facility is NEC-compliant (NC)
- If any question in section (II) was answered "yes", and site conditions may be modified to comply with NEC, facility is NEC non-compliant (NN)
- If any question in section II was answered "yes" and condition cannot be modified to comply, facility is NEC non-eligible (NL)

III. MSGP COMPLIANCE ASSESSMENT

(a) STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REVIEW

SWPPP Requirement	Y	N	Notes
4. Storm Water Pollution Prevention Team			
5. Site Description/Map			
6. Summary of Potential Pollutant Sources/ Exposed Materials			
4. Spill Plan (SPCC plan may satisfy this requirement)			
12. Summary of Sampling Data			
a. quarterly visual inspections			
b. analytical sampling (if required)			
13. Description of Storm Water Controls (BMPs)			
14. Description of Maintenance Activities for Structural BMPs			
15. Description of Non-Storm Water Discharges			
16. Endangered Species Documentation			
17. Historic Places Documentation			
18. Copy of Multi-Sector Permit			
19. Comprehensive Annual Site Compliance Evaluation Procedures and Results			
20. SWPPP Up to Date and Certified?			

III. (b) SITE INSPECTION

Activity	Status
1. Site Description and Pollutant Sources Inventory Up to Date and Accurate?	
2. Illicit Discharges/Connections?	
3. SWPPP Contol Measures/BMPs Implemented?	
a. good housekeeping measures	
b. minimize exposure	
c. preventative maintenance	
d. spill prevention and response	
e. facility inspections	
f. employee training	
g. sediment and erosion control	
h. management of runoff	
i. other	

(c) Status

MSGP-Compliant _____
MSGP Non-Compliant _____
Failure to Implement SWPPP _____

IV. OTHER NOTES:

V. SIGNATURES

City of Tempe Investigator	Date
Facility Representative	Date