

# STORM WATER ANNUAL REPORT

JULY 1999 – JUNE 2000



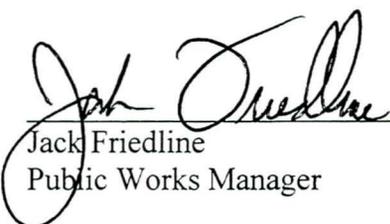
*City of Mesa, Arizona*

*NPDES Permit Number AZS000004*



**CITY OF MESA**  
*Great People, Quality Service!*

# Storm Water Report Certification

Recommended By:   
Jack Friedline  
Public Works Manager

Date 9-19-00

"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."

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# Introduction

## Drainage System Maintenance

### BMP #1: Retention Basin Maintenance

#### Description:

Mesa has developed a detention/retention maintenance program that includes litter and sediment removal from City owned basins. Privately owned detention/retention basins in the City of Mesa are required to be regularly maintained by their owner.

#### Implementation Status:

Privately owned detention/retention basins in the City of Mesa are maintained by their owners. The City requires this upkeep by issuing a drainage covenant when a plat is recorded. Enforcement of the covenant is handled by the City on a complaint or hazard basis.

The City of Mesa's Parks and Recreation Department (Parks) is responsible for conducting regular maintenance on City-owned detention/retention basins. Parks has contracted an outside company to manage the collection and disposal of any debris or trash that accumulates in the basins. Basin areas are cleaned daily and any debris that has accumulated behind or inside retention grates is removed weekly. In addition, any sediment that is collected in the basins is removed under the direction of the Street Maintenance Department (Streets Department).

Parks has divided the city into eight zones. This provides the most efficient management of the large number of basins. At the start of the 1999/2000 reporting year, three Parks personnel were responsible for overseeing contractor activities. This changed to four personnel starting in May 2000. At a minimum, the oversight included visually examining each basin on a weekly basis and certifying that contaminants were not present. Inspections were documented in a monthly report that was submitted to the Environmental Programs Division (EPD). Appendix A includes an example of a Parks inspection report and a map detailing the division of zones including a list of all basins.

As mentioned above, the Streets Department oversees the removal of sediment from retention basins. When needed, they hire an outside contractor to vacuum out sediment. At the end of each month, they submit an inspection report to the EPD describing cleaning activities. In the 1999/2000 reporting year, sediment was removed from 13 basins. Appendix B includes an example of a Streets Department inspection report and a map detailing the division of districts. Note that the inspection report includes other storm water related activities. The Streets Department is responsible for managing several storm water BMPs and consequently prepares one monthly report.

The City of Mesa's Municipal Storm Water Permit #AZS000004 (Permit) went into effect on July 16, 1997 per the Environmental Protection Agency's (EPA) letter dated June 16, 1997. One requirement of the Permit is to prepare and submit an annual report to the Arizona Department of Environmental Quality (ADEQ) and the EPA regarding the status of Permit activities. This document is Mesa's third storm water annual report and covers the period from July 1, 1999 through June 30, 2000.

As required by regulation at 40 CFR 122.42(c), this report includes the following information:

- 1) The status of implementing the components of the storm water management program that are established as permit conditions;
- 2) Proposed changes to the storm water management programs that are established as permit conditions;
- 3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v);
- 4) A summary of data, including monitoring data, that is accumulated throughout the reporting year;
- 5) Annual expenditures and budget for year following each annual report;
- 6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and
- 7) Identification of water quality improvements or degradation.

Mesa's Permit and Storm Water Management Program (SWMP) are defined by the following documents:

- 1) Mesa's Storm Water Part I Permit Application,
- 2) Mesa's Storm Water Part II Permit Application,
- 3) Permit No. AZS000004,
- 4) Fact Sheet dated January 15, 1997, and
- 5) City of Mesa Letter to Eugene Bromley dated October 25, 1996.

The SWMP describes the measures or Best Management Practices (BMP) that the City of Mesa (City) uses to protect storm water quality. The following is a list of the BMPs that have been established as part of Mesa's Permit:

- |         |                                     |
|---------|-------------------------------------|
| BMP #1) | Retention Basin Maintenance         |
| BMP #2) | Storm Drain Maintenance             |
| BMP #3) | Street Sweeping Program             |
| BMP #4) | Development and Drainage Guidelines |

- BMP #5) Cooperation with the Flood Control District on Flood Management Projects
- BMP #6) Household Hazardous Waste (HHW) Collection Program for Pesticides, Herbicides and Fertilizers
- BMP #7) Public Education on Pesticides, Herbicides and Fertilizers
- BMP #8) Rescreening of Major Outfalls
- BMP #9) Street Maintenance Spill Response
- BMP #10) Hazardous Materials Response Team (HAZMAT)
- BMP #11) Illicit Discharge Public Education
- BMP #12) HHW Program for used oil and toxics
- BMP #13) Support of Auto Part Store Oil Collection
- BMP #14) Oversight of Industrial Facilities
- BMP #15) Oversight of Construction Projects

A summary of the status of BMPs is shown below in Table A-1. Sections B, C, D and E of this report explain in detail the implementation status of each BMP.

Table A-1  
BMP Implementation Status

BMP	Description	Implementation Status
#1	Retention Basin Maintenance	Implemented
#2	Storm Drain Maintenance	Implemented
#3	Street Sweeping Program	Implemented
#4	Development and Drainage Guidelines	Implemented
#5	Cooperation with the Flood Control District on Flood Management Projects	Implemented
#6	Household Hazardous Waste (HHW) Collection Program for Pesticides, Herbicides and Fertilizers	Implemented
#7	Public Education of Pesticides, Herbicides and Fertilizers	Brochure to be completed during first permit term.
#8	Rescreening of Major Outfalls	Implemented
#9	Street Maintenance Spill Response	Implemented
#10	Hazardous Materials Response Team (HAZMAT)	Implemented
#11	Illicit Discharge Public Education	Implemented
#12	HHW Program for used oil and toxics	Implemented
#13	Support of Auto Part Store Oil Collection	Implemented
#14	Oversight of Industrial Facilities	Inspections Implemented. Procedure Under Development.
#15	Oversight of Construction Projects	Inspections Implemented. Procedure Under Development.

# **Implementing Status of the Storm Water Management Program**

**Residential and Commercial Activities**

## Drainage System Maintenance, cont.

### BMP #2: Storm Drain Maintenance

#### Description:

Mesa has developed a program that removes debris and sediment from catch basins and storm drains as necessary.

#### Implementation Status:

The Streets Department is responsible for managing the cleaning of storm drains and vector cleaning of pump sites. The three-district system for managing the basins, as described in the 1998/1999 annual report, has been eliminated due to the implementation of Council Districts in Mesa. Storm drain maintenance activities are also included in the previously mentioned monthly inspection reports (Appendix B). The following table is a summary of cleaning and inspection activities for the 1999/2000 reporting year.

Table B-1  
Summary of Storm Drain/Pump Site Cleanings

Month/Year	Number of Times Storm Drains/Pump Sites Were Cleaned and/or Inspected
July 1999	55,955
August	8,348
September	4,308 plus 4 wet wells
October	24 plus 1 wet well
November	4 plus 2 wet wells
December	0
January 2000	0
February	1 wet well
March	5,918
April	2 wet wells
May	1 wet well
June	546
<b>Total</b>	<b>75,103 plus 11 wet wells</b>

## Maintenance of Public Streets, Roads and Highways

### BMP #3: Street Sweeping Program

#### Description:

Mesa has developed a comprehensive street sweeping program consisting of approximately weekly sweeping of arterial roads and approximately monthly sweeping of other public streets and municipal parking lots.

#### Implementation Status:

The Streets Department is responsible for managing the regular street sweeping of arterial, residential and collector streets. In the 1999/2000 reporting year, an outside contractor was used to sweep arterials approximately once a week and assist with the sweeping of a few residential and collector streets. In addition, the City of Mesa personnel sweep residential and collector streets approximately once every five weeks. The Streets Department monthly report includes a section detailing the number of centerline miles swept (Appendix B).

Table B-2  
Summary of Street Sweeping Activities

Month/Year	Arterial Streets Centerline Miles Swept	Residential/Collector Streets Centerline Miles Swept
July 99	780	668
August 99	948	925
September 99	861	872
October 99	804	968
November 99	1000	696
December 99	804	956
January 2000	895	895
February 2000	801	900
March 2000	665	1016
April 2000	801	824
May 2000	1000	884
June 2000	804	952
Total	10,163	10,556

## Controls for New Development and Significant Redevelopment

### **BMP #4:     Development and Drainage Guidelines**

#### Description:

Mesa has adopted comprehensive development and drainage guidelines that require new and significant redevelopment to provide detention/retention basins to store rainfall from a 100 year, 2-hour storm.

#### Implementation Status:

This BMP is an established requirement in the City of Mesa for all construction projects. The retention guidelines are detailed in the Engineering and Design Standards section of the Second Edition of the Engineering Procedure Manual. The manual and this requirement have been in effect since December of 1990. Copies of the manual can be obtained from the City of Mesa's Building Inspections/Development Services Department.

## Flood Management Projects

### **BMP #5: Cooperation with the Flood Control District**

#### Description:

The Flood Control District of Maricopa County owns and operates all Flood Control structures in Mesa. The Flood Control District has an ongoing program to evaluate receiving water impacts due to their projects. All future projects will be examined to assess their impact on receiving waters.

#### Implementation Status:

All Flood Control District flood management projects within the City of Mesa are submitted to Engineering Design for review prior to initiation. During the 1999/2000 reporting period, there were two projects submitted: Four Basins along CAP Canal and the Elliot Road Detention Basin and Outfall Channel.

The District, at the request of the City of Mesa, initiated the "East Mesa Area Drainage Master Study" in which several projects were identified to mitigate flooding in the City and areas of unincorporated Maricopa County. The Four Basins project was identified as a high priority during that study. Construction of the Central Arizona Project (CAP) Canal included the concentration of storm water flows from the northeastern portion of the watershed into several pipes or overchutes installed by the Bureau of Reclamation to pass the flows from one side of the Canal to the other. This concentration of flows has resulted in flooding of downstream improvements at the overchute locations. Basins are nearing completion downstream of four of the overchute locations to capture the flow and meter it out to the existing natural washes or channels. Basin sizes vary from 6 to 11 acres. Construction is scheduled to be completed in reporting year 2000/2001.

The Elliot Road Detention Basin and Outfall Channel was also identified as a high priority project in the "East Mesa Area Drainage Master Study." The basin is near the intersection of Elliot Road and the Crismon Road Alignment, and the channel extends from the Crismon Road Alignment to west of Ellsworth Road. Detention Basin and Outfall Channel design has been put on hold and construction is not anticipated until 2002.

An Area Drainage Master Study is currently being prepared for the Spook Hill area. The plan should be completed by mid 2001. If construction is undertaken, it will most likely begin in mid 2003.

There are a number of additional projects and plans that depend on funding. These projects will be discussed in future annual reports as they progress.

## Controls for Pesticides, Herbicides and Fertilizers

### **BMP #6: Household Hazardous Waste Collection Program**

#### Description:

The City of Mesa holds a household hazardous waste (HHW) collection day approximately once a year. This event is advertised in the local newspaper, through utility bills, on the City Cable Channel and on signs to encourage residents to bring in their household wastes for disposal. This event is advertised as the proper way to dispose of all unused pesticides, herbicides and fertilizers.

#### Implementation Status:

The City of Mesa's Solid Waste Division is responsible for planning and conducting the annual HHW event. They hire an outside contractor to manage the collection and disposal of the various hazardous wastes that are brought in including pesticides and fertilizers. After the event each year, Solid Waste prepares a report summarizing the day's activities. The last event occurred on March 4, 2000. Appendix C includes a copy of the event report.

Beginning in January 2000, the City of Mesa implemented a Battery, Latex Paint and Tire (BLT) collection event. The Solid Waste Division holds the event once a month with support from Environmental Programs. Any hazardous waste that is brought to the event, other than batteries, latex paint and tires, is disposed of by an outside contractor.

### **BMP #7: Public Education Program**

#### Description:

The City of Mesa will perform public education on correct property application methods of pesticides, herbicides and fertilizers. The information will emphasize the effects on receiving waters of improper application.

#### Implementation Status:

The Environmental Programs Division is in the process of developing an educational brochure on Pesticides, Herbicides and Fertilizers. The brochure will be distributed at local nurseries and stores that sell plants and/or pesticides, herbicides and fertilizers. The brochure will be completed during Mesa's first permit term which expires in 2002.

# **Implementing Status of the Storm Water Management Program**

## **Control of Illicit Connections and Illegal Dumping to the Storm Drain**

## Illicit Discharge Control Program

### BMP #8: Rescreening of Major Outfalls

#### Description:

The permittee shall implement an ongoing program to reevaluate major outfalls for illicit discharges. At a minimum, this program shall include rescreening of each major outfall once during the five-year term of the permit. Twenty percent of the outfalls shall be screened in each year. The screening procedure shall be as set forth at 40 CFR 122.26(d)(1)(iv)(D).

The permittee shall prohibit non-storm water discharges into the MS4. To comply with this requirement, the permittee shall implement the above field-screening program and shall eliminate illicit discharges that are located.

#### Implementation Status:

As shown by "Appendix E" of the Part I permit application, the City of Mesa identified 33 major storm water outfalls in 1992. A copy of that "Appendix E" has been included in Appendix D of this document. Of those 33 outfalls, 10 exhibited dry weather flow, 13 had evidence of recent flow, and 10 had no evidence of recent flow. One of the 33 outfalls, which was located at the intersection of Brown Road and the alignment of Dobson Road, was destroyed during the construction of the 202 (Red Mountain) Freeway and no longer exists.

To date, a total of 13 outfalls have been rescreened/sampled. During the 1999/2000 reporting year 19 outfalls were visited on June 15, 2000. The outfall at Kingsborough Retention Basin was not examined since tools were not available to access the discharge point. Of the remaining 18 outfalls, none exhibited dry weather flow, so rescreening/sampling was not possible. Appendix D identifies which outfalls were visited and includes pictures of the dry conditions. Through year three of the Permit, no illicit discharges have been identified through the rescreening process.

If samples had been obtainable, analysis would have been performed in accordance with 40 CFR Part 136. A HACH Storm Water Test Kit and standard laboratory equipment were available to test for Free Copper, Total Copper, Complexed Copper, Phenols, Turbidity, Chlorine, Detergents, oil sheen and surface scum. The kit also included a digital pH meter capable of readings to the nearest 0.1.

## Spill Prevention and Response

**BMP #9: City Street Maintenance Program**

Description:

Small spills and spills of non-hazardous material within the public right-of-way are contained and cleaned by the City of Mesa Street Maintenance Department.

Implementation Status:

Clean up activities performed by Street Maintenance are described in the monthly summary reports previously discussed in BMP #1. The following table lists the number and types of spills that have been cleaned up during the 1999/2000 reporting year:

Table C-1  
Summary of Street Maintenance Spill Response\*

	Auto Fluids	Concrete	Solid Waste (Hyd. Fluid)	Other	Total
July 1999	19	9	6	1	35
August	14	10	6	7	37
September	8	6	10	0	24
October	13	12	6	1	32
November	11	8	1	0	20
December	12	8	8	2	30
January 2000	14	13	0	2	29
February	14	9	3	1	27
March	14	14	2	0	30
April	13	13	2	3	31
May	20	11	1	1	33
June	13	16	3	1	33
Totals	165	129	48	19	361

\* Appendix B includes a sample monthly report.

The Environmental Programs Division works in conjunction with several city departments to remove and properly dispose of additional materials as they are identified throughout the City. These materials are often found in Mesa's alley system where businesses or residents have abandoned them. During the 1999/2000 reporting year, Environmental Programs responded to approximately 77 storm water related cases. This response prevents polluting materials from becoming a storm water threat.

## Spill Prevention and Response (continued)

### **BMP #10: Hazardous Material Response Team**

#### Description:

The City of Mesa's Fire Department operates a hazardous material response team that responds to unknown or potentially hazardous spills. They then coordinate cleanup to minimize the spread of any pollutant.

#### Implementation Status:

HAZMAT responses occur anywhere from 10 to 30 times a month and vary significantly from incident to incident. From July 1999 through June 2000 the HAZMAT team responded to approximately 154 environmental related calls. Before leaving a scene, the HAZMAT team makes sure that necessary disposal arrangements have been or are being made. The Fire Department maintains a MULTCESS database to document specific incident details.

## Public Awareness and Reporting

### BMP #11: Public Education Program

#### Description:

Public Education Materials are developed covering significant aspects of the Storm Water Management Program. These materials are distributed through direct mailings, local newspapers, the City of Mesa Cable Channel, handouts and brochures in public access areas.

#### Implementation Status:

In the 1999/2000 reporting year, public education was conducted for several SWMP components. These included the HHW and BLT events, the Construction Site Inspection Program, and Management of Used Oil and Toxics.

As described in BMPs #6 & #12, the Solid Waste Division advertised the 2000 HHW event and the five BLT events in local newspapers, utility bills, on the Internet and in a news release. Copies of the advertisements can be found in Appendix F. In addition to this advertising, educational information was distributed at the HHW event. Specifically, a brochures entitled "Natural Recipes for Home and Garden" and "Household Hazardous Waste Program" were given out. Appendix F includes a copy of each. The information distributed at the HHW event was designed to educate the public on ways to reduce the amount of hazardous waste they generate.

In June of 1998, a storm water package describing the Construction General Permit (including a copy of the Federal Register 2/17/98) was prepared by Environmental Programs. That package also includes local contact information and Mesa's Storm Water Ordinance. A copy of the package is attached in Appendix E. During 1999/2000, the information package was updated and distributed to contractors through Mesa's Building Inspections Department and to other contractors as needed.

In 1998/1999, the education program was expanded to include general environmental assistance. During this period, Mesa began advertising its Environmental Hotline on local television channel 11. The ad provides a telephone number for residents to call with any environmental concern. The Environmental Programs Division manages the line and is available to handle calls 24 hours a day, 7 days a week.

## Management of Used Oil and Toxics

### **BMP #12: Household Hazardous Waste Collection Program**

#### Description:

The City of Mesa holds a HHW collection day approximately once a year. This event is advertised in a number of ways to encourage residents to bring in their household wastes for disposal. This event is advertised as one of the proper ways to dispose of used oil and toxic materials.

#### Implementation Status:

The description of BMP #6 provides details about the HHW event from March 2000 and the five BLT events. Each of these events is advertised as described in BMP #11. The "Household Hazardous Waste Program" brochure (Appendix F) provides disposal options for used oil. The Solid Waste Division developed the brochure, which provides useful information about the proper management of HHW and advertises the annual collection event. The brochure is located in several places throughout Mesa including the public library, the City Plaza building, two service centers and other areas. A copy of the brochure is included in Appendix F.

In addition to the brochure, Mesa's HHW and BLT events are advertised in local newspapers, utility bills and on the Internet. Appendix F also includes examples of these advertisements.

### **BMP #13: Support of Auto Part Store Oil Collection**

#### Description:

Used oil is collected by local auto part stores. This no cost collection is periodically advertised and is encouraged by the City.

#### Implementation Status:

The City of Mesa has developed an information page that lists the various stores that collect used oil and toxics. During the second reporting year of the permit, the City continued to mail out the information page in specific enforcement situations. Appendix G contains an example of the letter and information that is mailed out.

Both the Environmental Programs Division and the Solid Waste Division receive phone calls each month regarding the disposal of HHW, including used oil and toxics. Callers are advised of Mesa's HHW and BLT events and are given information as to where used oil, batteries and anti-freeze may be recycled in the interim.

# **Implementing Status of the Storm Water Management Program**

## **Industrial Facilities (BMP #14)**

**BMP #14: Industrial Facilities**Description:

The final permit requires Mesa to maintain, and update annually, a list of the following facilities that are located within the jurisdiction of the City: municipal landfills (operating and closed); hazardous waste treatment, storage and disposal facilities; and industrial facilities (from those listed at 40 CFR 122.26(b)(14)) which are subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986, and other industrial facilities which the City believes may be discharging significant quantities of pollutants into the MS4.

The final permit also requires the City to include on the list non-industrial sources or categories of sources that the City believes may discharge significant quantities of pollutants. In addition, the final permit requires a general assessment by the City regarding the individual facilities, or categories of facilities, which are believed to be the most significant sources of pollutants in storm water runoff.

Implementation Status:

Mesa is still in the process of developing a comprehensive Inspection Procedure Manual (Manual). When complete, the Manual will describe the details of the inspection process including program goals, pre-inspection activities, SWPPP review, onsite inspection, reporting methodology and enforcement options. The Manual is currently in draft form and will be finalized during the first permit term.

The table on the following page is Mesa's up-to-date industry list. The list has been compiled as required above. The Section 313 industries were obtained from the State Emergency Response Commission. Additional facilities were taken from two Maricopa County Local Emergency Planning District lists: Sites with Extremely Hazardous Substances (EHS) and Additional Sites with Hazardous Chemicals.

Table D-1  
Industrial Inspection List

Facility (SIC Code)	Address
TRW Vehicle Safety, Site 1 ( 3714)	4051 North Higley Road
TRW Vehicle Safety, Site 2 (3714)	11202 East Germann Road
Boeing Corporation ( 3721)	5000 East McDowell Road
Talley Defense Systems Plant 1 (3483)	4551 East McKellips Road
Talley Defense Systems Plant 2 (3483)	4111 North Higley Road
Talley Defense Systems Plant 3 (3483)	3520 North Greenfield Road
Talley Defense Systems Plant 4 (3483)	4301 North Higley Road
Motorola Incorporated (3674)	2200 West Broadway Road
Rosarita Foods (2032)	310 South Extension Road
Mastercraft Cabinets Inc. (2434)	305 South Brooks Circle
Ultra Installations (3087)	220 South Mulberry Street
Dur-o-wall Incorporated (4226)	213 South Alma School Road
Anodizing of Mesa (3471)	1064 West Birchwood Street
SWD Urethane (3086)	539 South Drew Street
Jan's Iron Works Incorporated (3599)	1125 South Center Street
American Metals Co., Inc. (5093)	740 West Broadway Road
Mesa Fully Formed Co. (3281)	1111 South Lewis Street
Desert Oak Manufacturing (2426)	640 West McKellips Road
Atlas Roofing (3086)	222 South Date Street
F&L Auto Works (5015)	120 South Extension Road
Aztec Materials (1442)	3250 East Lehi Road
Ted Levine Drum Company (7699)	303 South Serrine Street
Arizona Foam and Spray (3086)	539 South Drew Street
American Recycling (5093)	360 South Center Street
The Door Mill (2431)	908 East Impala Street
Sunward Materials (1442)	1901 North Alma School Road
Korral Kool Incorporated (3444)	564 East Juanita Avenue, Unit 6
A-1 Auto Wreckers (5012)	2201 North Country Club Drive
Semflex Incorporated (3679)	5550 East McDowell Road
Able Steel Fabricators	4150 East Quartz Circle
Olin Microelectronics Materials	6550 S. Mountain Rd.
Special Devices Inc.	3431 N. Reseda Cir.
American Ice Company	43 W. 6 <sup>th</sup> Ave.
MGC Pure Chemicals American (2899)	6560 S. Mountain Rd.
Polytek Southwest	11400 East Pecos Road
United Metro Materials Plant #15	Dobson Rd. and McKellips Rd.
United Metro Materials Plant #17	Higley Rd. N. of McDowell Rd.

Inspections have begun or been performed on highlighted industries.

# **Implementing Status of the Storm Water Management Program**

**Construction Projects (BMP #15)**

**BMP #15: Construction Projects**Description:

All construction projects must be permitted through the Building Inspection Division. Priority for inspection will be given to sites with steep topography and significant offsite flows.

Through the City's inspection program of construction sites covered by the Construction General Permit, the City will review SWPPPs to assist the permittee in ensuring compliance with the objectives of the City's SWMP. SWPPPs may be reviewed prior to or during inspections. The permittee shall also take appropriate actions to ensure compliance with local authorities and the City's storm water management program.

Implementation Status:

As described in BMP #14, the City of Mesa is still in the process of developing a comprehensive Inspection Procedure Manual (Manual). When complete the Manual will describe the details of the inspection process including program goals, pre-inspection activities, SWPPP review, onsite inspection, reporting methodology and enforcement options. In the first annual report, it was anticipated that the Manual would be completed during the 1998/1999 reporting period. The Manual is currently in draft form and will be finalized during the first permit term.

For construction sites covered by the NPDES Construction General Permit, the City of Mesa has developed a permitting approach which requires owners and operators to file a copy of their Notice of Intent (NOI) with the City in order to receive a building permit. As NOIs are received, the Building Inspection Division forwards the forms to the EPD. Environmental Programs then enters the NOI information into a database to track storm water permitted projects. As of June 30, 2000, the database had information on over 195 projects in Mesa. Appendix I includes a summary report of these projects. The database will be used as the basis to prioritize site inspections.

# **Assessment of Effectiveness of Best Management Practices**

**Summary of Enforcement Actions, Inspections,  
and Public Education**

The Environmental Programs Division is responsible for coordinating the City's storm water program. During the first reporting year of the municipal permit, Mesa took several steps to develop and implement an inspection program. In order to have enough staff to operate properly, two Environmental Technicians were hired. Two of the responsibilities of the technicians are to perform storm water and particulate pollution (dust) inspections. Development of the written part of the program is in draft form and will be completed during the first permit term.

Since dust coming off construction sites poses a storm water problem when sediment settles to the ground, these two types of inspections will typically be performed simultaneously. As described in BMPs #14 & 15, Environmental Programs is currently developing a comprehensive inspection manual. While the manual is being developed, inspections are being performed primarily on a complaint or as necessary basis.

Tables F-1 and F-2 below list the industrial and construction inspections that have been conducted from July 1, 1999 through June 30, 2000. Many of the construction inspections have been conducted in response to dust or track-out complaints. The last column of Table F-2 tells how many times each site was visited to better describe where the focus of enforcement activities took place. Table F-3 summarizes the public education that has taken place during the reporting year.

Table F-1  
Summary of Industrial Inspections

Facility	Address	SIC Code	Inspection Date
Mastercraft Cabinets Inc.	305 South Brooks Circle	2434	12/10/2000
Jan's Iron Works, Inc.	1125 South Center Street	3599	3/21/2000
American Metals Co., Inc.	740 West Broadway Road	5093	3/16/2000
Ultra Installations	220 South Mulberry Street	3087	11/30/2000
Dur-o-Wall Inc.	213 South Alma School Road	4226	12/03/2000
Desert Oak Manufacturing*	640 West McKellips Road	5093	NA

- This company is no longer in business.

Table F-2  
Summary of Construction Inspections

Major Cross Streets	Initial Inspection Date	Number of Site Visits
Broadway & Higley	July 1999	2
Broadway & Maple	July 1999	1
McKellips & Harris	July 1999	1
McDowell & Recker	July 1999	1
Southern & Lindsay	July 1999	1
McKellips & Gilbert	July 1999	3
US 60 & Stapley	August 1999	1
7th Street & Country Club	August 1999	3
McDowell & Val Vista	August 1999	1
McKellips & Higley	August 1999	1
McKellips & Higley	August 1999	1
McDowell & Greenfield	August 1999	1
Baseline & Stapley	August 1999	1
Brown & Lindsay	September 1999	3
Brown & 40th	September 1999	1
Main Street & Val Vista	September 1999	1
Guadalupe & Dobson	September 1999	1
Southern & Gilbert	September 1999	1
Southern & Val Vista	September 1999	1
McDowell & Higley	September 1999	1
Southern & Higley	September 1999	1
Broadway & Greenfield	September 1999	1
Baseline & Hawes	September 1999	1
8th Ave & Stapley	September 1999	1
Baseline & Crismon	October 1999	1
Main Street & 54th	October 1999	1
McKellips & Higley	October 1999	1
Main Street & Gilbert	October 1999	2
Guadalupe & Hawes	October 1999	1
McKellips & Center	October 1999	4
Brown & Greenfield	October 1999	1
US 60 & Country Club	October 1999	1
Southern & Stapley	October 1999	1
Guadalupe & Sossaman	October 1999	1
8th Avenue & Extension	October 1999	1
Guadalupe & Alma School	October 1999	1
Adobe & Signal Butte	October 1999	1
Main Street & Lindsay	November 1999	1
Broadway & Crismon	November 1999	1
Baseline & Stapley	November 1999	1
Thomas & Power	November 1999	3

Major Cross Streets	Initial Inspection Date	Number of Site Visits
Keating & Dobson	November 1999	1
Main Street & 48th Street	November 1999	1
6th Street & Center	November 1999	2
Thomas & Power	November 1999	1
McKellips & Greenfield	November 1999	1
Baseline & Stapley	November 1999	1
Guadalupe & Sossaman	November 1999	4
Main Street & 54th	November 1999	1
McKellips & Higley	November 1999	1
Southern & Meridian	November 1999	1
University & 110th	November 1999	1
McLellan & Center	November 1999	1
Pepper & Extension	November 1999	1
Southern & Meridian	November 1999	1
Thomas & Recker	November 1999	1
Broadway & Lindsay	November 1999	9
Hampton & Higley	November 1999	1
University & Horne	December 1999	1
Main Street & 56th Street	December 1999	1
Broadway & Lindsay	December 1999	1
McDowell & Val Vista	December 1999	1
Brown & Ellsworth	December 1999	1
Adobe & Signal Butte	December 1999	2
Baseline & Sossaman	December 1999	2
Brown & Mesa Drive	December 1999	1
Southern & Crismon	December 1999	1
McKellips & Greenfield	December 1999	1
McKellips & Harris	December 1999	1
Princess & Ellsworth	December 1999	1
University & Lindsay	January 2000	1
Inverness & Stapley	January 2000	1
Brown & Center	January 2000	1
Broadway & Hawes	January 2000	1
Southern & Country Club	January 2000	1
McLellan & Higley	February 2000	1
Broadway & Signal Butte	February 2000	1
Medina & Hawes	February 2000	1
Broadway & Sossaman	February 2000	1
US 60 & Sossaman	February 2000	1
6th Street & Center	February 2000	1
McKellips & Val Vista	February 2000	1
Broadway & Power	February 2000	1
McKellips & Higley	February 2000	1

Major Cross Streets	Initial Inspection Date	Number of Site Visits
Broadway & Country Club	February 2000	1
Southern & Superstition Springs	March 2000	3
Broadway & Sossaman	March 2000	1
Broadway & Higley	March 2000	1
Thomas & Power	March 2000	1
McKellips & Mesa Drive	April 2000	1
Main Street & Dobson	April 2000	2
McKellips & Stapley	April 2000	3
McDowell & Val Vista	April 2000	1
Hermosa Vista & Val Vista	April 2000	2
Main Street & Horne	May 2000	1
US 60 & Higley	June 2000	1
Brown & Mesa Drive	June 2000	1

Table F-3  
Summary of Public Education Activities

Subject	Type	Where	Date
Household Hazardous Waste Collection Day	Advertisement	Mesa Tribune Arizona Republic E. Mesa Independent	2/26, 3/1 & 3/4/00 2/26, 3/1 & 3/4/00 2/29/00
Household Hazardous Waste Collection Day	Advertisement	Solid Waste Truck Signs	January – February 2000
Household Hazardous Waste Collection Day	Website Ad	Mesa's Web Page	January through March 2000
Household Hazardous Waste Collection Day	News Release	Various Sources	3/3/99
Household Hazardous Waste Collection Day	Open Line	Utility Bills	February 2000
Household Hazardous Waste	Brochure	City Offices, Library	All Year
Batteries, Latex Paint and Tire (BLT) Event	Advertisement	Arizona Republic	1/14/00, 2/18/00, 4/14/00, 5/19/00, 6/16-17/00
Batteries, Latex Paint and Tire (BLT) Event	Utility Bill	Across Back Fence	12/99 & 3/00
Batteries, Latex Paint and Tire (BLT) Event	Website Ad	Mesa's Web Page	January 2000 through June 2000
Natural Recipes for Home and Garden	Brochure	At HHW Event & at BLT Event	1/15/00, 2/19/00, 3/4/00/ 4/15/00, 5/20/00, 6/17/00
Household Hazardous Waste, Used Oil and Toxics, BLT Event	Telephone	Solid Waste & Environmental Programs as calls are received	All Year
Pesticides, Herbicides and Fertilizers	Brochure	Nurseries, Lawn and Garden Suppliers	To be Distributed in 1 <sup>st</sup> permit term

# **Assessment of Effectiveness of Best Management Practices**

## **Summary of Sampling Data**

## Sampling Data

### Sampling Stations

Five (5) separate storm water-sampling stations were established in Mesa as part of the Part I Permit Application, with each station representing a different land use. These five (5) land uses are representative of overall land use throughout the City including:

- |    |                                 |          |
|----|---------------------------------|----------|
| 1. | Older Single Family Residential | (MESA 1) |
| 2. | New Single Family Residential   | (MESA 2) |
| 3. | Industrial                      | (MESA 3) |
| 4. | Mobile Home Park                | (MESA 4) |
| 5. | Commercial                      | (MESA 5) |

### Sample Events

Two (2) samples were collected from two (2) separate storms in reporting year 1999-2000. Both storms occurred during the summer "monsoon" season (July, August, and September) which typically has short duration, high intensity storms. There were no winter storms (October through March) that are typically of longer duration and low intensity (although there may be short periods of high intensity during the storm).

Both of the sampled storms were representative. The criteria used for a "representative" summer storm has been established as 0.24 to 0.72 inches of rainfall with a corresponding duration of 2.4 to 7.2 hours; winter storm criteria is 0.22 to 0.66 inches of rainfall with a corresponding duration of 5.9 to 17.7 hours. Table G-2 presents the monitoring data from the representative storm events that occurred from July 1999 through June 2000. The table only reports data for the 26 contaminants identified in the Permit.

Some analysis for additional contaminants was performed for each of the above storms. That data is presented in Appendix H of this report. This data has not been used or interpreted in any way in this report. It is merely being presented as required by 40 CFR 122.41(b)(2).

### Sample and Analysis

Sampling and analysis is the sole responsibility of the Flood Control District of Maricopa County (FCD) under an inter-governmental agreement with the City of Mesa. Sampling was conducted using five (5) automatic sampling stations that were maintained by the FCD. Bolin Laboratories performed all sampling analysis during the 1999/2000 reporting period.

## Calculation of Pollutant Loading

### Event Mean Concentration (EMC)

To continually revise the estimate of pollutant loading, representative storm data is used to calculate an Event Mean Concentration (EMC) for each of the 26 pollutants identified in the Permit. Table G-2 presents the EMC data. Sampling data that was below detection limits has been recorded as "ND" (Non-Detect). To calculate the EMCs, zero is used for each "ND" value. The EMC is a simple average computation.

$$\text{EMC} = \frac{\text{Sum of Sampling Data}}{\text{\# of Data Points}}$$

### Runoff Volumes by Drainage Area

In the 1997/1998 annual report, citywide runoff coefficients were adjusted to account for land development since the submission of the Part II Permit Application in 1993. That data will continue to be used for this report. Table G-3 presents the land use data and estimated runoff volumes for each drainage basin in Mesa. The following formula was used to determine the runoff volumes from each drainage basin.

$$V = \frac{P(CF)(WC)(A)}{12}$$

- V= Annual volume discharged from drainage basin (acre-feet).
- P= Annual precipitation (7.41 inches/year used).
- CF= Correction factor that adjusts for storms where no runoff occurs (0.9 used).
- WC= Weighted average runoff coefficient from area served by outfall. Determined using percentages of individual land use from Part I mapping and the corresponding runoff coefficients determined during the testing program.
- A= Drainage basin area determined from Part I mapping (acres).

The following is a summary of estimated runoff volumes for each receiving body of water:

Table G-1  
Estimated Mesa Storm Water Runoff Volumes

Receiving Bodies of Water	Total Volume (acre-feet)
Total Volume to the Salt River	9927.72
Total Volume to the Gila River	3906.93
Total Volume to Other*	1389.53
<b>Total Runoff Volume</b>	<b>15224.18</b>

\* "Other" includes flows into SRP outfalls, the CAP canal and on-site retention.

Annual Pollutant Load Estimate

Pollutant load estimates were developed by the City of Mesa in accordance with the permit requirements. The twenty-six (26) pollutants required to be modeled are BOD, COD, Fecal Coliform, Fecal Streptococci, Total Dissolved Solids, Total Suspended Solids, Total Nitrogen, Total Ammonia plus Organic Nitrogen, Total Phosphorous, Dissolved Phosphorous, Oil and Grease, Cadmium, Copper, Lead, Zinc, Chromium, Mercury, Methylene Chloride, Toluene, DDE, Benzo (A) Pyrene, Chrysene, Fluroranthene, Indeno (1,2,3-CD) Pyrene, Pyrene, and (1,2,4) Tri-Chlorobenzene. Twenty-five (25) of the above constituents were analyzed directly, while Total Nitrogen is the sum of Total Kjeldahl Nitrogen, Nitrite and Nitrate.

The model used to estimate total pollutants discharged from the City of Mesa was the "simple method" as described in EPA's "Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems". This method involves calculating an event mean concentration (EMC) for each of the twenty-six (26) constituents identified in the Permit and multiplying it by a calculated runoff volume. The EMC is determined from representative storm sampling data and the runoff volumes are calculated for drainage basins by land use.

The following formula was used to determine the annual load of each pollutant for each drainage area.

$$L=(V)(C)(0.00135)$$

- L= Annual pollutant load (tons/year).
- C= Pollutant Event Mean Concentration determined from the sampling program (mg/L).
- (0.00135)= Converts units to tons.
- V= Annual volume discharged from drainage basin (acre-feet).

Annual Loading for each pollutant is shown on Table G-4.

## Table G-2 Representative Storm Data

Sampling Station Identification No.	Date	Agency Analyzing Sample	Storm Duration (min.)	Total Storm Rainfall (inch)	BOD5 (mg/l)	COD High Level (mg/l)	Fecal Coliform (CFU/100ml)**	Fecal Streptococci (CFU/100ml)**	TDS Solids Residue at 180 Deg. C Dissolved (mg/l)	TSS Residue Total at 105 Deg. C Suspended (mg/l)	Nitrogen No2 + No3 Total (mg/l as N)	TKN Nitrogen (mg/l as N)	Total Nitrogen (TKN+No2+No3) (mg/L)	Nitrogen Ammonia + Organic Total (mg/l as N)	Phosphorous Total (mg/l as P)	Phosphorous Dissolved (mg/l as P)	Oil and Grease Total Recoverable (mg/l)
MESA_1	03/07/94	WESTECH	612	0.24	100	220	1000	140	160	49	1.8	4.2	6	4.2	0.64	0.4	7
MESA_1	03/25/94	WESTECH	358	0.73	24	130	20000	20000	85	88	0.55	3.2	3.75	3.2	0.49	0.25	4.3
MESA_1	11/12/94	WESTECH	458	0.62	68	67	100000	88000	44	54	0.5	2	2.5	1.4	0.38	0.2	8.1
MESA_1	03/11/95	WESTECH	588	0.23	NM	NM	7600	63000	NM	NM	NM	NM	NM	NM	NM	NM	3.7
MESA_1	02/27/97	BOLIN	428	0.41	130	86	9000	23	78	96	0.8	3.06	3.86	3.06	0.33	0.42	ND
MESA_1	12/22/97	BOLIN	516	0.55	47	100	900	24000	52	57	0.7	1.56	2.26	1.56	0.79	0.36	ND
MESA_1	01/10/98	BOLIN	360	0.51	35	40	500	5000	50	706	0.4	2.86	3.26	2.86	0.24	0.29	NM
MESA_1	*09/23/1999	BOLIN	217	0.54	NM	65	NM	NM	53	202	0.71	1.66	2.37	1.66	0.48	0.16	NM
MESA_2	02/07/94	WESTECH	530	0.61	20	140	36000	1200000	120	16	0.51	1.8	2.31	1.8	0.49	0.25	ND
MESA_2	03/25/94	WESTECH	382	0.55	ND	56	300	400	100	19	0.53	2.3	2.83	2.3	1.5	1.1	ND
MESA_2	12/05/94	WESTECH	448	0.39	ND	83	NM	NM	79	18	0.67	16	16.67	15	0.81	0.78	ND
MESA_2	03/11/95	WESTECH	550	0.39	9.6	NM	ND	600	NM	NM	NM	NM	NM	NM	NM	NM	ND
MESA_2	03/13/96	DEL MAR	1027	0.31	11	73	30	33	200	16	0.65	0.5	1.15	0.68	0.61	0.61	NM
MESA_2	*7/9/1996	BOLIN	234	0.69	507	130	NM	1600	155	132	5.6	4.22	9.82	4.22	0.88	1.5	ND
MESA_2	*7/14/1996	BOLIN	199	0.37	5	91	160000	49	92	76	1.1	4.46	5.56	NM	0.62	0.39	ND
MESA_2	02/27/97	BOLIN	1008	0.56	16	59	160000	23	135	28	1.19	5.99	7.18	5.99	0.36	0.27	ND
MESA_2	02/04/98	BOLIN	474	0.63	42	38	16000	9000	69	43	0.33	1.4	1.73	1.4	1	0.47	ND
MESA_2	*07/31/1998	BOLIN	181	0.27	23	212	1600	240	172	150	0.1	1.8	1.9	2.94	1.5	0.8	ND
MESA_2	10/25/98	BOLIN	343	0.27	NM	154	NM	NM	123	102	NM	ND	NM	0.84	0.42	0.29	NM
MESA_3	02/07/94	WESTECH	626	0.5	28	85	2900	69000	120	22	0.69	3.3	3.99	3.3	2.5	2.3	1.6
MESA_3	12/05/94	WESTECH	492	0.41	35	110	NM	NM	160	25	0.75	2.4	3.15	2.4	0.26	0.16	5.9
MESA_3	02/13/95	WESTECH	576	0.34	NM	130	NM	NM	74	27	0.58	1	1.58	1	0.14	0.12	NM
MESA_3	*8/19/1995	WESTECH	172	0.67	ND	110	83000	1700	100	810	0.85	2.2	3.05	2.2	1.2	0.25	1200***
MESA_3	*7/25/1996	BOLIN	266	0.42	77	258	16000	5000	223	72	2.25	5.34	7.59	5.34	3.8	0.29	ND
MESA_3	01/13/97	BOLIN	628	0.44	83	37	160000	280	83	48	0.28	2.3	2.58	2.3	0.13	0.28	ND
MESA_3	12/21/97	BOLIN	742	0.39	NM	NM	NM	NM	NM	1.3	2.62	3.92	NM	NM	NM	NM	ND
MESA_3	01/10/98	BOLIN	366	0.49	28	44	170	160000	17	20	0.6	1.47	2.07	1.47	0.13	0.09	NM
MESA_3	*7/31/1998	BOLIN	185	0.76	24	155	16000	9000	116	196	0.8	1.1	1.9	30.8	0.8	0.3	ND
MESA_3	*8/15/1998	BOLIN	142	0.26	31	121	14000	2400	91	68	0.9	1	1.9	1.63	0.4	0.4	ND
MESA_3	02/04/99	BOLIN	368	0.23	5	102	340	NM	36	ND	NM	2.37	NM	2.37	0.11	0.39	ND
MESA_4	03/25/94	WESTECH	378	0.62	190	110	18000	11000	58	82	0.5	2	2.5	2	0.37	0.17	33
MESA_4	12/05/94	WESTECH	794	0.54	55	60	NM	NM	52	25	0.5	0.8	1.3	0.8	0.27	0.2	5.1
MESA_4	12/23/94	WESTECH	606	0.45	65	72	10000	5000	110	19	0.55	1.8	2.35	1.8	0.66	0.63	790***
MESA_4	01/04/95	WESTECH	546	0.23	31	86	400	100	110	27	0.68	1.4	2.08	1.4	0.23	0.12	5.4
MESA_4	03/05/95	WESTECH	356	0.38	8	32	4500	100	28	51	0.5	1.1	1.6	1.1	0.18	0.11	16
MESA_4	11/06/95	WESTECH	354	0.41	17	33	NM	NM	86	38	0.59	0.4	0.99	0.5	0.1	ND	6.9
MESA_4	03/13/96	DEL MAR	1112	0.39	96	170	1600	3000	100	36	0.59	2.2	2.79	2.05	0.19	0.19	5.5
MESA_4	*7/31/1998	DEL MAR	190	0.69	19	101	2400	14000	111	40	NM	1.1	NM	NM	ND	ND	ND
MESA_4	*8/15/1998	DEL MAR	146	0.24	85	180	160000	17000	153	59	1.5	1.7	3.2	1.7	0.6	0.5	ND
MESA_4	*07/14/1999	BOLIN	157	0.64	44	160	13000	5000	199	118	2.11	3.42	5.53	3.42	0.33	ND	ND
MESA_5	12/05/94	WESTECH	428	0.37	200	230	NM	NM	110	51	0.84	4.1	4.94	4.1	0.22	ND	30
MESA_5	01/25/95	WESTECH	368	0.49	47	170	4500	24000	130	400	0.5	1.9	2.4	1.9	0.42	0.1	9.5
MESA_5	03/05/95	WESTECH	384	0.24	90	110	34	49	72	37	0.5	2.7	3.2	2.7	0.33	0.15	14
MESA_5	03/11/95	WESTECH	646	0.27	83	220	2200	37000	110	200	0.64	2.2	2.84	2.2	0.32	0.14	ND
MESA_5	*8/19/1995	WESTECH	192	0.36	93	260	7400000	60000	170	120	1.9	4.4	6.3	4.4	1	0.68	1300***
MESA_5	03/13/96	DEL MAR	1004	0.41	124	82	900	1600	120	98	0.49	1.1	1.59	0.93	0.29	0.15	20
MESA_5	*7/25/1996	BOLIN	322	0.57	104	153	16000	90000	170	88	1.53	4.7	6.23	4.7	0.81	0.79	ND
MESA_5	10/25/98	BOLIN	430	0.36	NM	151	NM	NM	111	78	NM	NM	NM	NM	0.2	0.11	NM
Sum of Concentrations					2699.60	5276.00	8438874.00	1927337.00	4787.00	4707.00	39.06	119.13	154.72	141.62	27.53	17.16	176.00
EMC					64.28	117.24	228077.68	52090.19	106.38	104.60	0.93	2.65	3.68	3.37	0.61	0.38	4.76

BOLD - 1999/2000 Data

ND - Non Detect

NM - Not Measured

\* Signifies a Summer Representative Storm

\*\* Some Data was Recorded in MPN/100 mL which is equivalent to CFU/100 mL

\*\*\* This data falls outside of an acceptable range of standard deviation of error and was not used in the EMC calculation

**Table G-2  
Representative Storm Data**

Sampling Station Identification No.	Date	Cadmium Total Recoverable (ug/l as Cd)	Chromium Total Recoverable (ug/l as Cr)	Copper Total Recoverable (ug/l as Cu)	Lead Total Recoverable (ug/l as Pb)	Mercury Total Recoverable (ug/l as Hg)	Zinc Total Recoverable (ug/l as Zn)	P,P' DDE Total (ug/l)	Methylene Chloride Total (ug/l)	Benzo-A-Pyrene Total (ug/l)	Chrysene Total (ug/l)	Fluoranthene Total (ug/l)	Indeno (1,2,3-CD) Pyrene Total (ug/l)	Pyrene Total (ug/l)	1,2,4-Tri-Chlorobenzene Total (ug/l)
MESA_1	03/07/94	ND	ND	60	ND	ND	130	ND	ND	ND	ND	ND	ND	ND	NM
MESA_1	03/25/94	ND	ND	ND	ND	ND	180	ND	ND	ND	ND	ND	ND	ND	NM
MESA_1	11/12/94	ND	ND	ND	ND	ND	60	ND	NM	ND	ND	ND	ND	ND	NM
MESA_1	03/11/95	ND	ND	ND	ND	ND	80	ND	ND	ND	ND	ND	ND	ND	NM
MESA_1	02/27/97	5	ND	29	19	ND	160	ND	NM	ND	ND	ND	ND	ND	ND
MESA_1	12/22/97	0.46	3.8	14	6	ND	90	ND	NM	ND	ND	ND	ND	ND	ND
MESA_1	01/10/98	0.54	5.5	18	16	ND	150	ND	ND	ND	ND	ND	ND	ND	ND
<b>MESA_1</b>	<b>*09/23/1999</b>	<b>ND</b>	<b>9.3</b>	<b>17</b>	<b>7</b>	<b>ND</b>	<b>150</b>	<b>ND</b>	<b>NM</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>NM</b>
MESA_2	02/07/94	ND	ND	ND	ND	ND	80	ND	ND	ND	ND	ND	ND	ND	ND
MESA_2	03/25/94	ND	ND	ND	ND	ND	70	ND	ND	ND	ND	ND	ND	ND	ND
MESA_2	12/05/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NM	NM	NM
MESA_2	03/11/95	NM	NM	NM	NM	NM	NM	NM	ND	ND	ND	ND	ND	ND	ND
MESA_2	03/13/96	2.5	ND	ND	ND	ND	51	ND	ND	ND	ND	ND	ND	ND	ND
MESA_2	*7/9/1996	2	ND	21	12	ND	120	ND	NM	ND	ND	ND	ND	ND	ND
MESA_2	*7/14/1996	2	8	21	8	ND	90	ND	NM	ND	ND	ND	ND	ND	ND
MESA_2	02/27/97	2	ND	24	ND	ND	140	ND	NM	ND	ND	ND	ND	ND	ND
MESA_2	02/04/98	0.52	5.3	16	7	ND	80	ND	NM	ND	ND	ND	ND	ND	ND
MESA_2	*07/31/1998	ND	2.2	24	12	ND	180	ND	NM	ND	ND	ND	ND	ND	ND
MESA_2	10/25/98	0.32	4.4	28	7	ND	110	ND	NM	ND	ND	ND	ND	ND	ND
MESA_3	02/07/94	ND	ND	60	ND	ND	80	ND	ND	ND	ND	ND	ND	ND	ND
MESA_3	12/05/94	ND	ND	ND	ND	ND	130	ND	ND	ND	ND	ND	ND	ND	ND
MESA_3	02/13/95	ND	ND	ND	ND	ND	80	ND	NM	ND	ND	ND	ND	ND	ND
MESA_3	*8/19/1995	ND	ND	60	ND	ND	ND	NM	ND	ND	ND	ND	ND	ND	ND
MESA_3	*7/25/1996	10	ND	25	13	ND	130	ND	NM	ND	ND	ND	ND	ND	ND
MESA_3	01/13/97	8	ND	ND	11	ND	80	ND	NM	ND	ND	ND	ND	ND	ND
MESA_3	12/21/97	ND	ND	14	12	0.7	160	NM	NM	ND	ND	ND	ND	ND	ND
MESA_3	01/10/98	0.46	3.4	ND	6	ND	60	ND	NM	ND	ND	ND	ND	ND	ND
MESA_3	*7/31/1998	0.7	4.8	ND	16	ND	120	ND	NM	ND	ND	ND	ND	ND	ND
MESA_3	*8/15/1998	0.26	1.4	14	10	0.3	160	ND	NM	ND	ND	ND	ND	ND	ND
MESA_3	02/04/99	0.5	3.7	ND	8	ND	80	ND	ND	ND	ND	ND	ND	ND	ND
MESA_4	03/25/94	ND	250	60	ND	ND	130	NM	ND	ND	ND	ND	NM	NM	NM
MESA_4	12/05/94	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	ND	ND	ND	ND
MESA_4	12/23/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	ND
MESA_4	01/04/95	ND	ND	ND	ND	ND	50	ND	ND	ND	ND	ND	ND	ND	ND
MESA_4	03/05/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MESA_4	11/06/95	3	4	ND	ND	ND	150	ND	ND	ND	ND	ND	ND	ND	ND
MESA_4	03/13/96	ND	ND	ND	ND	ND	71	NM	ND	NM	ND	ND	ND	ND	ND
MESA_4	*7/31/1998	ND	1.6	ND	5	ND	90	ND	NM	ND	ND	ND	ND	ND	ND
MESA_4	*8/15/1998	0.51	1.5	18	9	ND	120	ND	NM	ND	ND	ND	ND	ND	ND
<b>MESA_4</b>	<b>*07/14/1999</b>	<b>0.7</b>	<b>10</b>	<b>ND</b>	<b>19</b>	<b>ND</b>	<b>80</b>	<b>ND</b>	<b>ND</b>	<b>NM</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>	<b>NM</b>
MESA_5	12/05/94	ND	ND	ND	ND	ND	130	ND	ND	ND	ND	ND	ND	ND	ND
MESA_5	01/25/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	ND	ND	4	ND
MESA_5	03/05/95	ND	ND	ND	ND	ND	90	ND	ND	ND	ND	ND	ND	ND	ND
MESA_5	03/11/95	ND	ND	ND	ND	ND	240	ND	ND	ND	ND	ND	ND	ND	ND
MESA_5	*8/19/1995	ND	ND	50	ND	ND	ND	NM	ND	ND	ND	ND	ND	ND	ND
MESA_5	03/13/96	ND	6.4	ND	22	ND	200	NM	ND	NM	NM	NM	NM	NM	NM
MESA_5	*7/25/1996	ND	5	36	18	ND	270	ND	NM	ND	ND	ND	ND	1.5	ND
MESA_5	10/25/98	0.52	17	30	11	ND	200	ND	NM	ND	ND	ND	ND	ND	ND
Sum of Concentrations		29.99	357.30	639.00	254.00	1.00	4932.00	0.00	0.00	0.00	5.00	0.00	0.00	7.50	0.00
EMC		0.64	7.60	13.60	5.40	0.02	104.94	0.00	0.00	0.00	0.12	0.00	0.00	0.19	0.00

**BOLD - 1999/2000 Data**

ND - Non Detect

NM - Not Measured

\* Signifies a Summer Representative Storm

\*\* Some Data was Recorded in MPN/100 mL which is equivalent to CFU/100 mL

\*\*\* This data falls outside of an acceptable range of standard deviation of error and was not used in the EMC calculation

**Table G-3  
Basin Area Data and Volumes**

Map Number*	Total Area (acres)	Residential (acres)	Agricultural (acres)	Commercial (acres)	Industrial (acres)	Undeveloped (acres)	Weighted "C"	Volume (acre/feet)	Outfall Point
1.1	634	503	0	0	131	0	0.41	144.46	Salt River
3.1	598	156	0	0	442	0	0.35	116.32	Salt River
3.2	620	434	0	136	50	0	0.41	141.27	ADOT
3.3	135	0	0	0	135	0	0.32	24.00	ADOT
3.4	240	240	0	0	0	0	0.43	57.35	SRP Canal
3.5	1737	890	0	509	338	0	0.39	376.48	ADOT
3.6	389	359	0	30	0	0	0.43	90.80	ADOT
4.1	1585	1183	170	0	232	0	0.37	325.92	Salt River
4.2	841	749	0	54	38	0	0.42	196.30	Salt River
4.3	1086	765	0	185	136	0	0.41	247.45	ADOT
4.4	1290	1202	0	88	0	0	0.43	308.27	Salt River
4.5	187	187	0	0	0	0	0.43	44.69	SRP Canal
4.6	120	120	0	0	0	0	0.43	28.68	SRP Canal
4.7	22	22	0	0	0	0	0.43	5.26	On-site Retention
4.8	34	34	0	0	0	0	0.43	8.13	SRP Canal
4.9	52	52	0	0	0	0	0.43	12.43	SRP Tile
4.10	4982	4353	0	591	38	0	0.42	1162.88	Salt River
4.11	1522	784	0	561	177	0	0.40	338.34	ADOT
4.12	965	725	0	130	110	0	0.41	219.88	ADOT
4.13	635	0	200	0	435	0	0.23	81.17	On-site Retention
4.14	1098	999	33	66	0	0	0.42	250.19	On-site Retention
4.15	192	192	0	0	0	0	0.43	45.88	SRP Canal
4.16	205	205	0	0	0	0	0.43	48.99	SRP Canal
4.17	14	0	0	14	0	0	0.38	2.96	On-site Retention
4.18	1522	1144	0	378	0	0	0.42	355.26	ADOT
4.19	229	187	0	42	0	0	0.42	53.45	ADOT
4.20	72	72	0	0	0	0	0.43	17.21	SRP Tile
4.21	76	59	0	17	0	0	0.42	17.74	On-site Retention
4.22	222	122	0	0	100	0	0.38	50.58	Salt River
4.23	2611	1999	535	77	0	0	0.35	507.87	ADOT
4.24	487	487	0	0	0	0	0.43	116.38	SRP Tile
4.25	24	19	0	5	0	0	0.42	5.02	On-site Retention
4.26	59	59	0	0	0	0	0.43	14.10	On-site Retention
4.27	615	610	0	5	0	0	0.43	146.97	SRP Tile
4.28	944	859	0	85	0	0	0.43	220.34	ADOT
4.29	824	628	0	196	0	0	0.42	192.33	ADOT
4.30	240	226	0	14	0	0	0.43	56.02	SRP Tile
4.31	71	53	0	18	0	0	0.42	16.57	SRP Tile
4.32	57	57	0	0	0	0	0.43	13.62	SRP Tile
4.33	859	682	31	146	0	0	0.41	195.73	ADOT
4.34	289	289	0	0	0	0	0.43	69.06	On-site Retention
5.1	1349	1014	335	0	0	0	0.34	254.90	ADOT
5.2	2673	2058	214	401	0	0	0.39	579.35	ADOT
5.3	509	465	0	44	0	0	0.43	118.81	ADOT
5.4	387	123	32	78	154	0	0.34	73.13	On-site Retention
5.5	95	95	0	0	0	0	0.43	22.70	ADOT
5.6	405	248	116	41	0	0	0.32	72.03	ADOT
5.7	270	54	149	67	0	0	0.21	31.51	On-site Retention
5.8	4741	1988	284	0	2469	0	0.35	922.18	Salt River

**Table G-3  
Basin Area Data and Volumes**

Map Number*	Total Area (acres)	Residential (acres)	Agricultural (acres)	Commercial (acres)	Industrial (acres)	Undeveloped (acres)	Weighted "C"	Volume (acre/feet)	Outfall Point
5.9	726	726	0	0	0	0	0.43	173.49	Salt River
5.10	1533	685	0	97	751	0	0.37	315.22	Maricopa Floodway
5.11	2282	1678	62	141	401	0	0.40	494.60	Maricopa Floodway
5.12	216	192	0	24	0	0	0.42	50.41	Maricopa Floodway
5.13	701	633	0	68	0	0	0.43	163.62	Maricopa Floodway
5.14	205	116	0	89	0	0	0.41	45.57	Maricopa Floodway
5.15	89	61	0	28	0	0	0.41	20.27	Maricopa Floodway
5.16	2109	1502	0	607	0	0	0.42	524.23	Maricopa Floodway
5.17	366	69	0	297	0	0	0.39	79.32	Maricopa Floodway
5.18	606	424	30	152	0	0	0.40	134.71	On-site Retention
5.19	459	335	0	60	0	64	0.39	99.48	ADOT
5.20	896	716	0	54	45	81	0.40	199.18	ADOT
5.21	941	791	0	47	28	75	0.41	219.64	ADOT
5.22	996	996	0	0	0	0	0.43	238.01	ADOT
5.23	444	0	89	0	0	355	0.17	41.95	ADOT
5.24	610	92	0	0	0	518	0.23	81.36	Maricopa Floodway
5.25	787	570	0	86	131	0	0.41	177.95	Maricopa Floodway
5.26	4076	4076	0	0	0	0	0.43	974.05	Spook Hill Dam
6.1	384	384	0	0	0	0	0.43	91.76	CAP Canal
6.2	882	882	0	0	0	0	0.43	210.77	ADOT
6.3	254	254	0	0	0	0	0.43	60.69	Maricopa Floodway
6.4	896	0	0	90	0	806	0.22	154.36	Maricopa Floodway
7.1	832	792	0	40	0	0	0.43	194.20	ADOT
8.1	1488	1245	0	72	171	0	0.41	339.05	ADOT
9.1	3796	1330	569	189	0	1708	0.27	569.60	Maricopa Floodway
9.2	3970	0	0	0	3970	0	0.32	706.02	Maricopa Floodway
9.3	1912	0	1912	0	0	0	0.05	53.12	Maricopa Floodway
10.1	2626	167	472	0	0	1987	0.19	277.28	Maricopa Floodway
10.2	601	0	0	0	0	601	0.20	66.80	Maricopa Floodway
10.3	1496	0	1346	0	150	0	0.08	66.51	Maricopa Floodway
<b>Grand Totals</b>	<b>75992</b>	<b>46467</b>	<b>6579</b>	<b>6119</b>	<b>10632</b>	<b>6195</b>		<b>15224.18</b>	

Runoff Volumes to Receiving Bodies	(in acre/feet)
Volume to Salt River	3400.40
Volume to Az. Dept. of Transportation	5553.27
Volume to Spook Hill Dam	974.05
<b>Total Volume to the Salt River</b>	<b>9927.72</b>
Volume to Maricopa County Floodway	3906.93
<b>Total Volume to the Gila River</b>	<b>3906.93</b>
Volume to Salt River Project	612.92
CAP Canal	91.76
On-site Retention	684.85
<b>Total Volume to Other</b>	<b>1389.53</b>
<b>Total Runoff Volume</b>	<b>15224.18</b>

\* Maps numbers used in this table correspond to maps submitted in the permit application process.

**Table G-4**  
**Pollutant Loading Data**

Pollutants	Annual Load on the Salt River (tons)	Annual Load on Gila River (tons)	Annual Load to Others (tons)	Total Annual Load (tons)
BOD5	861.51	339.04	120.58	1321.12
COD High Level	1571.30	618.37	219.93	2409.59
Fecal Coliform*				
Fecal Streptococci*				
TDS	1425.75	561.09	199.55	2186.39
TSS	1401.89	551.70	196.22	2149.81
Total Nitrogen (TKN+No2+No3)	49.32	19.41	6.90	75.63
Nitrogen Ammonia+Organic Total	45.17	17.77	6.32	69.26
PhosphorousTotal	8.18	3.22	1.14	12.54
Phosphorous Dissolved	5.09	2.00	0.71	7.81
Oil and Grease Total Recoverable	63.80	25.11	8.93	97.83
Cadmium Total Recoverable	0.0086	0.0034	0.0012	0.0132
Chromium Total Recoverable	0.1019	0.0401	0.0143	0.1562
Copper Total Recoverable	0.1823	0.0717	0.0255	0.2795
Lead Total Recoverable	0.0724	0.0285	0.0101	0.1110
Mercury Total Recoverable	0.0003	0.0001	0.0000	0.0004
Zinc Total Recoverable	1.4065	0.5535	0.1969	2.1568
P,P' DDE Total	0.0000	0.0000	0.0000	0.0000
Methylene Chloride Total	0.0000	0.0000	0.0000	0.0000
Benzo-A-Pyrene Total	0.0000	0.0000	0.0000	0.0000
Chrysene Total	0.0016	0.0006	0.0002	0.0025
Fluoranthene Total	0.0000	0.0000	0.0000	0.0000
Indeno (1,2,3-CD) Pyrene Total	0.0000	0.0000	0.0000	0.0000
Pyrene Total	0.0025	0.0010	0.0004	0.0039
1,2,4-Tri-Chlorobenzene Total	0.0000	0.0000	0.0000	0.0000

Notes:

\* Fecal Coliform and Fecal Streptococci units (CFU/100 ml) do not convert to actual weight, so load information is not recordable

# **Assessment of Effectiveness of Best Management Practices**

**Assessment of Water Quality Improvement**

The EPA issued Mesa its Municipal Storm Water Permit in 1997 to protect waters of the United States from pollutants. In order to achieve this goal, the Permit requires the City to implement a Storm Water Management Program comprised of BMPs. By issuing Mesa its Permit, the EPA has made the determination that implementation of the SWMP will lead to an improvement in surface water quality. However, in order to show an improvement, the program has to be compared to a baseline. This baseline is simply what the water quality would be like if the BMPs were not being implemented. The 1997/1998 annual report broke down several of the permit BMPs and described how Mesa's surface water quality would be degraded without them. This report contains that information and briefly describes 1999/2000 improvements.

### **BMP #1: Retention Basin Maintenance**

#### Baseline Water Quality

Retention basins are used extensively throughout Mesa to reduce the amount of sediment and solid waste in storm water flows. Under this BMP, an outside contractor is used to remove the sediment and trash as it collects in the basins. Since the City has been conducting these clean up activities for many years prior to the issuance of the MS4 Permit, baseline data is hard to establish. With the information available at this time, it can only be stated that without this BMP, trash and sediment would accumulate in basins and eventually pass through into the storm water flows.

#### Water Quality Improvement

While the City does not collect physical data on the amount of trash and sediment removed, we do keep records verifying that basins are indeed cleaned as required. These records/inspections insure that this BMP is implemented correctly and that the quality of Mesa's storm water is improved.

### **BMP #2: Storm Drain Maintenance**

#### Baseline Water Quality

Storm drains/catch basins are located throughout Mesa's storm drain system wherever an inlet or outlet occurs. These include the curb inlets where storm water enters underground piping and the inlets/outlets where the piping connects with retention basins. As identified in the implementation status section of this report, Street Maintenance is responsible for cleaning catch basins as necessary. As with the maintenance of retention basins, this BMP has been ongoing for many years. Through experience, the Streets Department has been able to estimate that 0.75 cubic feet of solid waste is collected on average from each drain cleaned. Using this number, and knowing that approximately 40,500 catch basins were cleaned during the 1997/1998 reporting year, it can be estimated that approximately 30,500 cubic feet of trash was removed from the storm water system.

$$40,500 \times 0.75 \approx 30,500$$

The 1997/1998 Storm Water Annual Report tried to relate rainfall volume to the amount of trash collected from catch basins. Rainfall totals from July 1998 through June 1999 did not substantiate that relationship. While the amount of rainfall declined, the amount of trash collected increased. It appears as though there are a number of additional factors that affect the amount of trash in the storm drain system, such as storm intensity and frequency. Nonetheless, for an average year with 7.41 inches of rain, Mesa will continue to assume that approximately 24,500 cubic feet of trash is in the storm drain system (prior to removal).

#### Water Quality Improvement

In the 1999/2000 reporting year, approximately 75,000 catch basins were cleaned out. Using the above estimate that 0.75 cubic feet of solid waste is collected on average from each drain cleaned, approximately 56,250 cubic feet of trash was collected from City of Mesa storm drains. The removal of this trash from the system is a direct improvement to surface water quality. Although the total volume of trash removed from the system will fluctuate from year to year, simply implementing the maintenance program will improve surface water quality each and every year.

$$75,000 \times 0.75 \approx 56,250$$

### **BMP #3: Street Sweeping Program**

#### Baseline Water Quality

Sediment and debris that collects on the paved streets in Mesa is removed via the street sweeping program. As described in the implementation section of this report, sweeping activities are categorized by street type: arterials, collectors and residential. Records are kept to document the amount of debris collected from sweeping. From these records, the Streets Department has determined that an average of 0.07 tons of debris is collected per residential/collector centerline mile swept and that 0.14 tons of debris is collected per arterial centerline mile swept. There was a total of 174.49 arterial centerline miles, 122.69 collector centerline miles and 703.71 residential centerline miles in Mesa during the 1997/1998 time frame. In order to estimate the amount of sediment and debris kept out of Mesa's storm flows in an average year, the following calculations are made:

$$\text{Ave. Arterial Load} = [(174.49 \text{ miles}) * (52 \text{ weeks})] * (0.14 \text{ tons/mile}) = 1270 \text{ tons}$$

$$\text{Ave. Resid. Load} = [(703.71 \text{ miles}) * (52 \text{ weeks}/5)] * (0.07 \text{ tons/mile}) = 512 \text{ tons}$$

$$\text{Ave. Collector Load} = [(122.69 \text{ miles}) * (52 \text{ weeks}/5)] * (0.07 \text{ tons/mile}) = 89 \text{ tons}$$

$$\text{Total} = 1872 \text{ tons}$$

Water Quality Improvement

During the 1999/2000 reporting year, 10,163 arterial centerline miles and 10,556 residential/collector miles were swept. Multiplying these numbers by 0.14 tons per mile and 0.07 tons per mile, respectively shows that 2162 tons of sediment and debris was removed by this BMP during the second year of the permit.

Actual Arterial Load = (10,163 miles) \* (0.14 tons/mile) = 1423 tons

+

Actual Resid. and Collector Load = (10,556 miles) \* (0.07 tons/mile) = 739 tons

Total = 2162 tons

**BMP #4: Development and Drainage Guidelines**

The development and drainage guidelines require on-sight retention of storm water flows from a 100 year, 2 hour storm event. Retention basins allow pollutants suspended in storm water flows to settle out before being discharged to the Salt or Gila Rivers. Therefore, the onsite retention requirement results in an improvement in storm water quality.

**BMP #6: Household Hazardous Waste Collection Program for Pesticides, Herbicides and Fertilizers**Baseline Water Quality

There is no way to quantify the amount of pesticides, herbicides and fertilizers that could be released into the storm sewer system if the Household Hazardous Waste (HHW) and the Battery, Latex Paint and Tire (BLT) events were not held. However, any material collected at the events is assumed to be a water quality improvement.

Water Quality Improvement

Appendix C of this report contains data from the HHW event held on March 4, 2000 and the five BLT events held in 2000. That data includes the quantities of wastes that were collected. Conducting the HHW and BLT events directly improves storm water quality by preventing collected wastes from entering the storm drain system.

**BMP #7: Public Education of Pesticides, Herbicides and Fertilizers**Baseline Water Quality

The primary focus of the public education program for pesticides, herbicides and fertilizers is to keep these products from harming the environment. Residents are told about the HHW events for disposal of unwanted product and at the same time are taught about effectively minimizing the amounts of product purchased and applied. Therefore,

the effectiveness of this BMP cannot be judged from the quantities received at the HHW event.

#### Water Quality Improvement

The educational brochures and HHW advertisements indirectly improve storm water quality. By teaching residents to apply less fertilizer and herbicides at more frequent intervals, less product will runoff during storm events.

### **BMP #8: Rescreening of Major Outfalls**

#### Baseline Water Quality

The rescreening of major outfalls is performed to identify any illicit discharges or connections that might exist. The City's Storm Water Ordinance prohibits illicit discharges. Therefore, when rescreening activities identify no illicit discharges, it is assumed that degradation of water quality is not occurring.

#### Water Quality Improvement

During the 1999/2000 reporting year, the rescreening of major outfalls did not identify any illicit discharges or connections. Therefore, the conclusion can be made that enforcement of the City storm water ordinance resulted in a storm water quality improvement.

### **BMP #9: Street Maintenance Spill Response**

#### Baseline Water Quality

The Street Maintenance Department cleans up small spills and spills of a non-hazardous nature that occur on City streets. These commonly include oil, gas, antifreeze, concrete and solid waste. By cleaning up these materials, Streets is directly improving surface water quality as these materials will not enter the storm drain.

#### Water Quality Improvement

As identified earlier in this report, a total of 361 small spills and spills of a non-hazardous nature were cleaned up. Storm water quality was improved by these clean up activities.

### **BMP #10: Hazardous Materials Response Team**

#### Baseline Water Quality

Similar to BMP #9, the Fire Department's HAZMAT team is responsible for containing large and hazardous spills. Once containment has been achieved, a non-city agency

typically cleans up the material. Again, water quality is improved by not allowing the material to enter the storm sewer system.

#### Water Quality Improvement

During the 1999/2000 reporting year, the HAZMAT team responded to approximately 154 environmental related calls. Many of these calls dealt with substances that if not contained could have ended up in surface water flows. Therefore, the daily implementation of this BMP improves storm water quality.

### **BMP #12: Household Hazardous Waste Program for used oil and toxics**

#### Baseline Water Quality

The household hazardous waste collection program makes it easy for residents to dispose of unwanted toxics and used oil. This helps ensure that materials are not illegally dumped and thus prevents collected wastes from entering the storm sewer system. Therefore, the collection of any material can be deemed to be a storm water quality improvement.

#### Water Quality Improvement

Appendix C of this report contains data from the HHW and BLT events held in 2000. That data details the quantities of wastes that were collected.

### **BMP #13: Support of Auto Part Store Oil Collection**

#### Baseline Water Quality

Many auto part stores in Mesa collect used oil for recycling. This convenient disposal option helps reduce the amount of used oil illegally dumped into the storm sewer system. Under this BMP, the City encourages residents to take their oil to these shops. If the City did not support these stores water quality would be degraded through an increase in illegal dumping.

#### Water Quality Improvement

As stated in the implementation section of this report, Solid Waste receives a number of calls each month regarding the disposal of used oil. Telling these people about the auto part stores leads to an indirect water quality improvement.

**BMP #14: Oversight of Industrial Facilities**Baseline Water Quality

Under this BMP, Mesa is responsible for overseeing/inspecting industrial facilities. The majority of these facilities are required to be covered under EPA's "NPDES Permit for Storm Water Discharges Associated with Industrial Activity". Under that permit, industries are prohibited from discharging pollutants. Mesa's role is simply to ensure that these companies do in fact have Permit coverage and that they do not or are not likely to discharge pollutants. Therefore, without the implementation of this BMP, it is possible that polluting discharges could occur thus degrading water quality.

Water Quality Improvement

In 1999/2000, Mesa met with several industries. At most of these meetings, site tours were conducted where potential polluting sources were identified. By implementing this BMP, illicit discharges may be identified and or prevented. However, of the facilities inspected during this reporting period, no illicit discharges were identified.

**BMP #15: Oversight of Construction Facilities**Baseline Water Quality

This BMP requires the City of Mesa to inspect construction projects subject to EPA's "NPDES Permit for Storm Water Discharges Associated with Construction Activities". During an inspection the City is supposed to verify that sediment or other pollutants are not leaving the construction site or are not likely to leave the site during a storm event. This type of oversight will reduce the amount of contaminated runoff, thus improving surface water quality.

Water Quality Improvement

In 1999/2000, Environmental Programs continued to inspect construction sites on a complaint basis. Contractors were routinely asked to clean up trackout and dust leaving the project site. These inspections directly improved storm water quality by removing sediment from the storm sewer system.

# **Proposed Changes to the SWMP**

The Storm Water Management Program (SWMP) detailed in Mesa's Municipal Storm Water Permit is the same program under which Mesa is currently operating. At this time, there are no significant changes to the Permit or the Best Management Practices.

Some information in the Permit has been updated since the submission of the Part I Permit Application in 1992. In the Part I, Mesa was broken down into a number of drainage basins. In order to calculate the amount of runoff from each basin, land use percentages were estimated. Over the past six years, Mesa has developed and land uses have changed. Therefore, in 1998 Mesa updated land development data. Table G-3 presents the 1998 revised figures.

# **Annual Expenditures**

**1999/2000 Reporting Period Expenditures**

**2000/2001 Reporting Period Proposed Budget**

## Storm Water Program Expenditures Fiscal Year 1999-2000

Monitoring Program	\$	48,783
Storm Drain Maintenance	\$	722,314
<ul style="list-style-type: none"> <li>• Repair of Damaged Facilities</li> <li>• Sediment Removal from Catch Basins</li> <li>• Clearing Debris from Inlet/Outlets</li> <li>• Regrading and Stabilizing Earthen Channels</li> <li>• Installation of Erosion Control Measures</li> <li>• Silt Removal from Retention Basins</li> </ul>		
Retention Basin Maintenance	\$	1,158,280
<ul style="list-style-type: none"> <li>• Regular Litter and Debris Removal</li> <li>• Turf Maintenance</li> <li>• Erosion Control and Bank Stabilization</li> <li>• Repair of Damaged Facilities</li> </ul>		
Street Cleaning	\$	1,085,187
<ul style="list-style-type: none"> <li>• Weekly Sweeping of Arterial Streets</li> <li>• Monthly Sweeping of Residential Streets</li> </ul>		
Emergency Response	\$	89,520*
<ul style="list-style-type: none"> <li>• Spill Clean-Up</li> <li>• Material Dumping Clean-Up</li> </ul>		
Household Hazardous Waste Management Program	\$	55,840
Administration, Inspection and Enforcement	\$	162,265
<ul style="list-style-type: none"> <li>• Annual Field Screening</li> <li>• Inspection of Industrial Sites</li> <li>• Preparation of Annual Program Summaries</li> <li>• Legal Actions</li> <li>• Public Information and Education</li> </ul>		
<hr/>		
Total Annual Expenditures	\$	3,322,189

\* The Mesa Fire Department does not currently break down the types of emergency response calls on an individual cost basis so this amount does not include budget information for Hazardous Materials Response conducted by the Fire Department's HAZMAT unit.

## Storm Water Program Proposed Budget Fiscal Year 2000-2001

Monitoring Program	\$	53,661
Storm Drain Maintenance	\$	742,630
<ul style="list-style-type: none"> <li>• Repair of Damaged Facilities</li> <li>• Sediment Removal from Catch Basins</li> <li>• Clearing Debris from Inlet/Outlets</li> <li>• Regrading and Stabilizing Earthen Channels</li> <li>• Installation of Erosion Control Measures</li> <li>• Silt Removal from Retention Basins</li> </ul>		
Retention Basin Maintenance	\$	1,508,525
<ul style="list-style-type: none"> <li>• Regular Litter and Debris Removal</li> <li>• Turf Maintenance</li> <li>• Erosion Control and Bank Stabilization</li> <li>• Repair of Damaged Facilities</li> </ul>		
Street Cleaning	\$	1,189,754
<ul style="list-style-type: none"> <li>• Weekly Sweeping of Arterial Streets</li> <li>• Monthly Sweeping of Residential Streets</li> </ul>		
Emergency Response	\$	117,819*
<ul style="list-style-type: none"> <li>• Spill Clean-Up</li> <li>• Material Dumping Clean-Up</li> </ul>		
Household Hazardous Waste Management Program	\$	81,500
Administration, Inspection and Enforcement	\$	382,400 **
<ul style="list-style-type: none"> <li>• Annual Field Screening</li> <li>• Inspection of Industrial Sites</li> <li>• Preparation of Annual Program Summaries</li> <li>• Legal Actions</li> <li>• Public Information and Education</li> </ul>		
<hr style="border: 1px solid black;"/>		
Total Annual Expenditures	\$	4,076,289

\* The Mesa Fire Department does not currently break down the types of emergency response calls on an individual cost basis so this amount does not include budget information for Hazardous Materials Response conducted by the Fire Department's HAZMAT unit.

\*\* The significant increase in proposed budget for 2000/2001 is due to an additional \$250,000 designated for sediment control

# **Parks Department Information**

*Sample Retention/Detention Basin  
Inspection Report*

**PARK/RETENTION BASIN INSPECTIONS  
ZONE 7 AND 8**

**RECEIVED**  
JUN 09 2000  
BY:

Month : May 00					
Retention Basin/ Park Name	Week Ending: 5/5	Week Ending: 5/12	Week Ending: 5/19	Week Ending: 5/26	Week Ending: 6/2
Alta Mesa Park	ok	ok	ok	ok	ok
Esenada Park	ok	ok	ok	ok	ok
Falcon Field Park	ok	ok	ok	ok	ok
Falcon Hill Park	ok	ok	ok	ok	ok
Gene Autry Park	ok	ok	ok	ok	ok
Pequeno Park	ok	ok	ok	ok	ok
Princess Park	ok	ok	ok	ok	ok
Red Mountain Park	ok	ok	ok	ok	ok
Summit Park	ok	ok	ok	ok	ok
Vista Monterey Park	ok	ok	ok	ok	ok
2016 N. Maple (701)	ok	ok	ok	ok	ok
462 N. Maple (702)	ok	ok	ok	ok	ok
601 N. Norfolk (703)	ok	ok	ok	ok	ok
564 N. Greenfield (704)	ok	ok	ok	ok	ok
552 N. Quail (705)	ok	ok	ok	ok	ok
4426 E. Adobe (706)	ok	ok	ok	ok	ok
4026 E. Brown (707)	ok	ok	ok	ok	ok
1634 N. Maple (708)	ok	ok	ok	ok	ok
1231 N. 48'th St. (709)	ok	ok	ok	ok	ok
839 N. Quail (710)	ok	ok	ok	ok	ok
5121 N. 48'th St. (709)	ok	ok	ok	ok	ok
6045 E. Encanto (712)	ok	ok	ok	ok	ok
6313 E. Gary (713)	ok	ok	ok	ok	ok
6023 E. Gary (713)	ok	ok	ok	ok	ok
6023 Ivy (714)	ok	ok	ok	ok	ok
6260 E. Orion (715)	ok	ok	ok	ok	ok
1831 N. 64'th St. (716)	ok	ok	ok	ok	ok
6434 E. McLellan (717)	ok	ok	ok	ok	ok
1628 N. 66'th St. (718)	ok	ok	ok	ok	ok
3211 N. Recker (719)	ok	ok	ok	ok	ok
2809 N. Kashmir (720)	ok	ok	ok	ok	ok
1315 N. 64'th St. (721)	ok	ok	ok	ok	ok
6015 E. Gary (722)	ok	ok	ok	ok	ok
6420 E. Brown (723)	ok	ok	ok	ok	ok
4213 E. Hackamore (724)	ok	ok	ok	ok	ok
525 N. Val Vista (725)	ok	ok	ok	ok	ok
2823 N. Saffron (726)	ok	ok	ok	ok	ok
3005 N. Sericin (727)	ok	ok	ok	ok	ok
2805 N. Ramada (728)	ok	ok	ok	ok	ok
2200 N. 64'th St. (729)	ok	ok	ok	ok	ok
553 N. Quail (730)	ok	ok	ok	ok	ok
6865 E. Jensen (801)	ok	ok	ok	ok	ok
1228 N. Terripin (802)	ok	ok	ok	ok	ok
1240 N. Sterling (803)	ok	ok	ok	ok	ok
7026 E. Brown (804)	ok	ok	ok	ok	ok
459 N. 81'st (805)	ok	ok	ok	ok	ok
8015 E. Enrose (806)	ok	ok	ok	ok	ok

**PARK/RETENTION BASIN INSPECTIONS  
ZONE 7 AND 8**

Month : May 00					
Retention Basin/ Park Name	Week Ending: 5/5	Week Ending: 5/12	Week 5/19	Week Ending: 5/26	Week Ending: 6/2
7600 E. University (807)	ok	ok	ok	ok	ok
9934 E. Quarterline (808)	ok	ok	ok	ok	ok
8045 E. Dover (809)	ok	ok	ok	ok	ok
515 N. Greenwood (810)	ok	ok	ok	ok	ok
713 N. Palo Verde (811)	ok	ok	ok	ok	ok
463 N. Calle Largo (812)	ok	ok	ok	ok	ok
715 N. Calle Largo (813)	ok	ok	ok	ok	ok
6804 E. Mallory (814)	ok	ok	ok	ok	ok
416 N Saint Claire ( 815 )	ok	ok	ok	ok	ok

Comments: Motor oil was found in the dumpster at the East mesa service center. Clean up took place and containment was 99% successful.

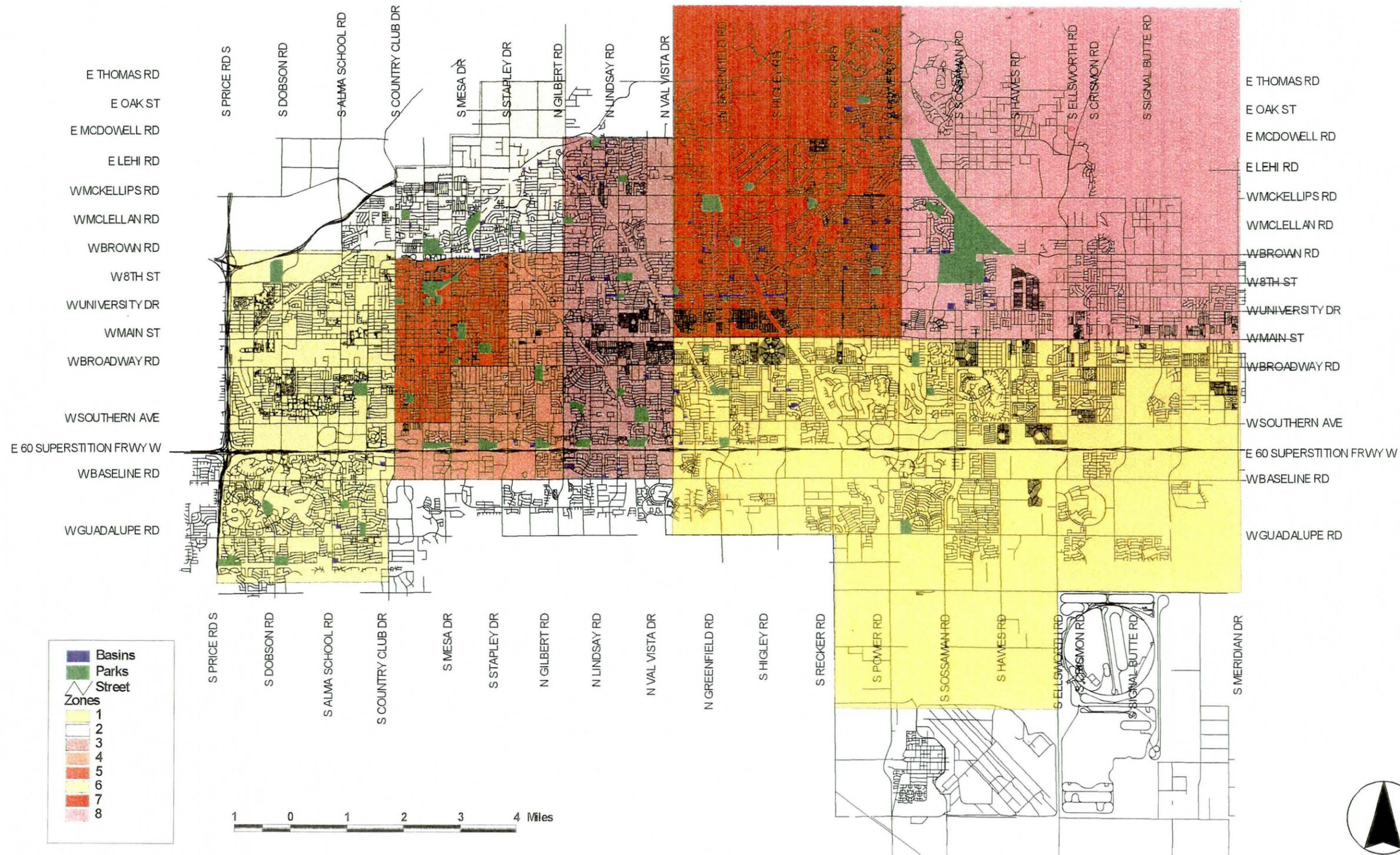
*This signature warrants that all Retention Basins/Parks have been inspected for removal of debris, litter, and other items which would potentially become contaminants in storm water as indicated in the above table. A check mark indicates that the basin was clean. Any contaminants removed are as described.*

  
Authorized Signature

  
Date

*Map of Retention/Detention  
Basin Zones*

# City of Mesa, Parks Districts and Basin Locations



*List of Parks and Retention Basins*

# ZONE RESPONSIBILITY CONTRACTORS

Effective Date: 08/31/00 9:06:18 AM

RECEIVED  
SEP 08 2000

<u>Zone: 1</u>	Art Landscaping Field Representative Renee-602-628-8768 Landscape Coordinator: Dave Tinguely	480-988-2982	Landscape 1 Sprinkler Contact: Jim-480-326-4315 Radio Call Number: 8110 Extension: 4137 Pager Number: 602-660-5388
<u>Zone: 2</u>	IDT Corporation Field Representative Dean Halaby-602-799-4303 Landscape Coordinator: Mark Bragg	480-829-8530	Landscape 2 Sprinkler Contact: Rosario-602-799-4305 Radio Call Number: 8218 Extension: 3778 Pager Number: 602-450-1127
<u>Zone: 3</u>	Petrini's Landscaping Field Representative Mike-602-725-5856 Landscape Coordinator: Dave Tinguely	480-990-1464	Landscape 3 Sprinkler Contact: John Radio Call Number: 8110 Extension: 4137 Pager Number: 602-660-5388
<u>Zone: 4</u>	IDT Corporation Field Representative Dean Halaby-602-799-4303 Landscape Coordinator: Monte Sever	480-829-8530	Landscape 4A Sprinkler Contact: Cody Hill-602-799-4308 Radio Call Number: 8240 Extension: 3716 Pager Number: 602-360-8095
<u>Zone: 5</u>	Bowen's Horticulture Services Field Representative Pete Marmas-(pager)602-202-4301, (mobile)602-721-2251 Landscape Coordinator: Monte Sever	480-829-1752	Landscape 5 Sprinkler Contact: Paul Olga-602-721-0121 Radio Call Number: 8240 Extension: 3716 Pager Number: 602-360-8095
<u>Zone: 6</u>	Petrini's Landscaping Field Representative Bubba-602-725-5856 Landscape Coordinator: Mark Bragg	480-990-1464	Landscape 6 Sprinkler Contact: Pedro-Landscape 6A Radio Call Number: 8218 Extension: 3778 Pager Number: 602-450-1127
<u>Zone: 7</u>	Bowen's Horticulture Services Field Representative Ron Scheurell Landscape Coordinator: Tracy Hanley	480-829-1752	Landscape 7 Sprinkler Contact: Radio Call Number: 8120 Extension: Pager Number:
<u>Zone: 8</u>	Bowen's Horticulture Services Field Representative Rod Woodford Landscape Coordinator: Gary Cullen	480-829-1752	Landscape 8 Sprinkler Contact: Radio Call Number: 8109 Extension: 4516 Pager Number: 602-868-5630



**ZONE RESPONSIBILITY CONTRACTORS FOR RC 245**

Effective Date: 08/31/00 9:06:30 AM

Work Order:   Park Name/Basin Number:   Address:   Acreage:   Cross Streets:

Zone Number:   2   District Administrator:   Terri Palmberg   West/Central District

Landscape Coordinator:   Mark Bragg   Extension Number:   3778

Pager Number:   602-450-1127   Radio Call Number:   8218

Contractor:   IDT Corporation   Contractor Number:   480-829-8530   Radio Call Number:   Landscape 2

Field Representative/Number:   Dean Halaby-602-799-4303

2133	Candlelight Park	1450 N Barkley	5.20	Barkley & Hackamore
2137	Park of the Canals	1710 N Home	31.30	Home & Inca
2140	Whitman Park	1740 N Grand	10.00	Grand & Inglewood
2148	Basin 201	155 W McLellan	0.95	McLellan & Grand (South)
2148	Basin 203	140 W Inglewood	0.77	Inglewood & Grand
2148	Basin 204	101 E Juniper	1.06	Juniper & Pima
2148	Basin 205	211 E Juniper	0.40	Juniper & Pasadena
2148	Basin 206	214 E Bates	0.26	Pasadena & Bates
2148	Basin 207	407 E Jensen	0.55	Mesa & Jensen
2148	Basin 208	214 E Ivy	0.32	Pasadena & Ivy
2148	Basin 209	1234 N Home	5.02	Grandview & Home
2148	Basin 210	821 E Inca	3.84	Home & Inca
2148	Basin 211	2050 N Lazona	1.67	Lazona & Krammer
2148	Basin 212	1414 E Leland	2.41	Lazona & Leland
2148	Basin 213	2421 N Harris	2.02	Harris & Hermosa Vista
2148	Basin 214	2560 N Gilbert Road	1.20	Gilbert & Kachina
2148	Basin 215	1862 E Jensen	0.82	Kachina & Jensen
2148	Basin 216	1800 E McLellan	1.21	McLellan & Forest
2148	Basin 217	1212 N Barkley	1.48	Brown & Barkley
2148	Basin 218	231 E Glencove	5.67	Glencove & Pasadena
2150	Basin 202-Centerpoint	153 W Indigo	0.75	McLellan & Grand (North)

Total Acres by Zone:   76.90

**ZONE RESPONSIBILITY CONTRACTORS FOR RC 245**

Effective Date: 08/31/00 9:06:31 AM

Work Order: Park Name/Basin Number:      Address:      Acreage: Cross Steets:

**Zone Number:** 3      **District Administrator:** Robert White      **East District**

**Landscape Coordinator:** Dave Tinguely      **Extension Number:** 4137

**Pager Number:** 602-660-5388      **Radio Call Number:** 8110

**Contractor:** Petrini's Landscaping      **Contractor Number:** 480-990-1464      **Radio Call Number:** Landscape 3

**Field Representative/Number:** Mike-602-725-5856

2337	Chaparral Park	1635 N Gilbert Road	6.20	Gilbert & Inca
2338	Countryside Park	1120 S 32nd Street	28.10	Southern & 32nd
2339	Harmony Park	3065 E Holmes Avenue	17.50	32nd & US 60
2340	Hermosa Vista Park	2237 N Lindsay Road	7.45	Leonora & Lindsay
2341	Kingsborough Park	2311 E Holmes Avenue	14.00	24th St & US 60
2342	Los Alamos Park	2840 E Covina Street	9.80	Covina & Lindsay
2343	Meadowgreen Park	812 S Roca	6.60	Pueblo & Lindsay
2344	Mountain View Park	845 N Lindsay Road	17.79	Adobe & Lindsay
2345	Sheepherders Park	2455 E McDowell Road	6.50	McDowell & E of Gilbert
2346	Silvergate Park	960 S Briar	10.00	Enid & Briar
2354	Basin 301	2616 E Northridge	1.61	26th & Northridge
2354	Basin 302	2161 E Norcroft	1.52	Norcroft & 22nd
2354	Basin 303	2425 N Rose	0.79	Rose & Hermosa Vista
2354	Basin 304	2400 E Menlo	1.35	24th & Hermosa Vista
2354	Basin 305	2430 N Kristen	1.78	26th & Hermosa Vista
2354	Basin 306	2236 E Leonora	3.51	Leonora & Rosa
2354	Basin 307	2201 N 24th Street	1.53	24th & N of Leonora
2354	Basin 308	2223 N Gilbert Road	0.64	Krammer & Gilbert
2354	Basin 309	2621 E Kenwood	1.31	Glenview & Kenwood
2354	Basin 310	1713 N 24th Street	0.78	24th & Ivyglen
2354	Basin 311	1116 S 38th Street	0.83	Gary & Glencove
2354	Basin 312	2205 E Fountain	0.39	22nd & Fountain
2354	Basin 313	812 N Ashbrook	0.41	Adobe & Ashbrook
2354	Basin 314	2416 E Adobe	1.56	Adobe & 24th
2354	Basin 315	844 N Yale	4.09	Adobe & Yale
2354	Basin 316	3135 E Ellis	1.63	Loma Vista & Ellis
2354	Basin 317	1045 N Miramar	3.31	Miramar & Fountain
2354	Basin 318	1111 N 35th Street	0.56	35th & Fairbrook
2354	Basin 319	2011 E Downing	0.57	Gilbert & Downing
2354	Basin 320	602 N Lindsay Road	7.55	Decatur & Yale
2354	Basin 321	402 N Creston	0.80	University & Creston
2354	Basin 322	544 N Val Vista Drive	6.36	Citrus Cove & Caballero
2354	Basin 323	3443 E Caballero	0.55	Miramar & Caballero
2354	Basin 324	2409 E Boston	1.57	Winterhaven & Boston
2354	Basin 325	3234 E Coralbell	2.40	32nd & Coralbell
2354	Basin 326	3416 E Coralbell	0.89	34th & Coralbell
2354	Basin 327	404 N Creston	1.60	Glenview & N of Pueblo
2354	Basin 328	2110 E Jacinto	4.47	Jacinto & Gilbert
2354	Basin 329	1938 S Glenview	2.05	Glenview & Baseline
2354	Basin 330	1840 S Fontana	2.84	Lindsay & N of Baseline
2354	Basin 331	2321 N Yale	0.28	Yale & Hermosa Vista
2354	Basin 332	2510 N Gentry	1.75	Gentry & Minton
2354	Basin 333	2408 N Acacia	0.74	Acacia & Hermosa Vista
2354	Basin 334	2769 E Lynwood Lane	0.31	Lynwood & N Winthrop
2354	Basin 335	2300 E Hermosa Vista	0.50	24th & Hermosa Vista

Total Acres by Zone: 186.77

**ZONE RESPONSIBILITY CONTRACTORS FOR RC 245**

**Effective Date: 08/31/00 9:06:33 AM**

**Work Order:** Park Name/Basin Number: Address: Acreage: Cross Steets:

**Zone Number:** 4 **District Administrator:** Terri Palmberg **West/Central District**  
**Landscape Coordinator:** Monte Sever **Extension Number:** 3716  
**Pager Number:** 602-360-8095 **Radio Call Number:** 8240

**Contractor:** IDT Corporation **Contractor Number:** 480-829-8530 **Radio Call Number:** Landscape 4A  
**Field Representative/Number:** Dean Halaby-602-799-4303

2134	Emerald Park	1455 S Harris Drive	16.20	Harris & US 60
2135	Heritage Park	1511 S Center Street	17.20	Mesa & US 60
2138	Reed Park	1631 E Broadway Road	19.00	Broadway & Williams
2139	Sherwood Park	1453 S Horne	22.00	Horne & US 60
2148	Basin 418	1562 E 8th Street	1.04	Adobe & Harris
2148	Basin 419	1817 E 1st Street	0.68	Guthrie & 1st St
2148	Basin 420	921 S Spur	1.23	El Moro & Spur
2148	Basin 421	1105 S Doran	1.41	Doran & S of Forge
2148	Basin 422	909 E 9th Drive	0.50	9th & Nevada Way
2148	Basin 423	1441 S Hobson	1.41	Hobson & Holmes
2148	Basin 424	1251 E Hilton	1.91	Hilton & E of Stapley
2148	Basin 425	1530 S Harris Drive	3.08	Harris & US 60

Total Acres by Zone:

**ZONE RESPONSIBILITY CONTRACTORS FOR RC 245**

Effective Date: 08/31/00 9:06:34 AM

Work Order:    Park Name/Basin Number:    Address:    Acreage:    Cross Steets:

**Zone Number:** 5                      **District Administrator:** Terri Palmberg                      **West/Central District**

**Landscape Coordinator:** Monte Sever

**Extension Number:** 3716

**Pager Number:** 602-360-8095

**Radio Call Number:** 8240

**Contractor:** Bowen's Horticulture    **Contractor Number:** 480-829-1752    **Radio Call Number:** Landscape 5 Services

**Field Representative/Number:** Pete Marmas-(pager)602-20

2157	Broadway Recreation Center	59 E Broadway Road	1.00	Broadway & E of Center
2158	Ellsworth Park	850 E 2nd Avenue	2.00	Horne & 2nd Ave
2159	Escobedo Park	514 N Hibbert	2.50	2nd & Hibbert
2160	Evergreen Park	328 W 5th Street	4.30	5th & Country Club
2161	Fitch Park	241 E 8th Street	15.00	Mesa & 8th St
2162	Gateway Park	315 E Main Street	1.00	Main & Mesa
2164	W/C Park Administration	125 N Hobson		Hobson & S of University
2165	Pioneer Park	526 E Main Street	15.50	Hobson & Main
2166	Porter Park	420 E 8th Street	2.70	8th & E of Mesa
2167	Guerrero Rotary Park	205 W 8th Avenue	8.50	8th & MacDonald
2168	Sirrime House	160 N Center Street	0.50	Center & 2nd St
2169	Stapley Park	360 S LeSueur	2.00	LeSueur & Udall
2170	Washington Park	44 E 5th Street	2.00	5th & Pima

Total Acres by Zone: 57.00

**ZONE RESPONSIBILITY CONTRACTORS FOR RC 245**

Effective Date: 08/31/00 9:06:34 AM

Work Order: Park Name/Basin Number: Address: Acreage: Cross Steets:

Zone Number: 6 District Administrator: Terri Palmberg West/Central District  
Landscape Coordinator: Mark Bragg Extension Number: 3778  
Pager Number: 602-450-1127 Radio Call Number: 8218

Contractor: Petrini's Landscaping Contractor Number: 480-990-1464 Radio Call Number: Landscape 6  
Field Representative/Number: Bubba-602-725-5856

2188	Carriage Lane Park	3140 S Carriage Lane	23.00	Carriage Lane & Canal
2189	Dobson Ranch Park	2363 S Dobson Road	10.00	Dobson & S of Baseline
2190	Kleinman Park	710 S Extension Road	23.00	Extension & 8th Ave
2191	Mesa Grande Ruins	1000 N Date	2.50	Date & Brown
2192	Palo Verde Park	3135 S Dobson Road	18.00	Dobson & Guadalupe
2193	Rancho Del Mar Park	745 W Guadalupe Road	11.00	Cherry & Guadalupe
2194	Riverview Park	2100 W 8th Street	48.00	8th & Dobson
2195	Woodglen Park	2342 S Beverly	8.00	Beverly & Medina
2203	Basin 601	3105 S Alma School Road	5.30	Alma School & Canal
2203	Basin 602	1145 W Nido	3.30	Spruce & Nido
2203	Basin 603	755 W Flower Avenue	1.77	Extension & Flower
2203	Basin 604	740 W Emerald	0.50	Emerald & Enid
2203	Basin 605	755 W Date	0.44	8th & Date
2203	Basin 606	1802 S Vineyard	3.40	Vineyard & Junaita

Total Acres by Zone: 158.21

**ZONE RESPONSIBILITY CONTRACTORS FOR RC 245**

Effective Date: 08/31/00 9:06:35 AM

Work Order: Park Name/Basin Number: Address: Acreage: Cross Steets:

Zone Number: 7 District Administrator: Robert White East District

Landscape Coordinator: Tracy Hanley

Extension Number:

Pager Number:

Radio Call Number: 8120

Contractor: Bowen's Horticulture Services Contractor Number: 480-829-1752 Radio Call Number: Landscape 7

Field Representative/Number: Ron Scheurell

0	Recker/Thomas Park Site	3600 N Recker Road	138.36	Thomas & Recker
2365	Alta Mesa Park	1910 N Alta Mesa Drive	8.20	Alta Mesa & S of McKellips
2366	Gene Autry Park	4125 E McKellips Road	46.80	McKellips & W of Greenfield
2367	Ensenada Park	951 N 64th Street	7.98	64th & S of Brown
2368	Falcon Field Park	4900 E McKellips Road	3.00	Fighter Aces & Falcon Field
2369	Pequeno Park	537 N Oakland	0.93	Contessa & W of Greenfield
2370	Princess Park	4461 E Princess Drive	6.49	Princess & E of Greenfield
2371	Summit Park	3342 N Sea Pines	10.25	Sea Pines & S of Virginia
2372	Vista Monterey Park	633 N Val Vista Drive	3.32	Val Vista & S of Adobe
2378	Basin 701	2016 N Maple	1.06	McKellips & Maple
2378	Basin 702	462 N Maple	0.46	Maple & N of Univeristy
2378	Basin 703	601 N Norfolk	6.70	Nassau & Covina
2378	Basin 704	564 N Greenfield Road	4.32	Ogden & Covina
2378	Basin 705	552 N Quail	6.64	Greenfield & Covina
2378	Basin 706	4426 E Adobe	2.53	Greenfield & Adobe
2378	Basin 707	4026 E Brown Road	2.66	Brown & 40th St
2378	Basin 708	1634 N Maple	2.20	McLellan & Maple
2378	Basin 709	1231 N 48th Street	3.25	Brown & 48th St
2378	Basin 710	839 N Quail	1.95	48th & Adobe
2378	Basin 711	5121 E Decatur	10.26	Higley & Decatur
2378	Basin 712	6045 E Encanto	4.00	Recker & Encanto
2378	Basin 713	6313 E Gary	0.66	Gary & Platina
2378	Basin 714	6023 E Ivy	4.68	McLellan & Recker
2378	Basin 715	6260 E Orion	1.76	Orion & E of Kashmir
2378	Basin 716	1831 N 64th Street	1.02	64th & Jensen
2378	Basin 717	6434 E McLellan	2.75	McLellan & 64th
2378	Basin 718	1628 N 66th Street	3.18	McLellan & 66th
2378	Basin 719	3211 N Recker Road	8.21	Recker & Preston
2378	Basin 720	2809 N Kashmir	0.40	Kashmir & McDowell
2378	Basin 721	1315 N 64th Street	0.65	64th & Tonto
2378	Basin 722	6015 E Gary	2.57	Gary & Recker
2378	Basin 723	6420 E Brown Road	8.59	Brown & 64th St
2378	Basin 724	4213 E Hackamore	1.58	Hackamore & Ogden
2378	Basin 725	525 N Val Vista Drive	4.01	Val Vista & N of University
2378	Basin 726	2823 N Saffron	1.43	Sericin & McDowell
2378	Basin 727	3005 N Sericin	0.71	Sericin & Palm
2378	Basin 728	2805 N Ramada	1.22	Ramada & McDowell
2378	Basin 729	2205 N 64th Street	5.42	64th St & Holly
2378	Basin 730	553 N Quail	4.11	Quail & N of Covina
2378	Basin 731	553 N 62nd Street	5.16	64th & N of Colby
2378	Basin 732	6205 E Hermosa Vista	0.50	62nd St & Hermosa Vista
2380	Quail Run Park	3400 N Greenfield Road	40.00	Greenfield & Virginia
3610	Valencia Groves Park	640 N Quail	5.17	Quail & Des Moines

Total Acres by Zone:

**ZONE RESPONSIBILITY CONTRACTORS FOR RC 245**

Effective Date: 08/31/00 9:06:36 AM

*Work Order:* Park Name/Basin Number:      *Address:*      *Acreage:* Cross Steets:

**Zone Number: 8      District Administrator: Robert White      East District**

**Landscape Coordinator: Gary Cullen      Extension Number: 4516**

**Pager Number: 602-868-5630      Radio Call Number: 8109**

**Contractor: Bowen's Horticulture Services      Contractor Number: 480-829-1752      Radio Call Number: Landscape 8**

**Field Representative/Number: Rod Woodford**

2390	Falcon Hill Park	7420 E Ivyglen	22.15	Jensen & Sterling
2391	Red Mountain Park	7745 E Brown Road	120.00	Brown & Sun Valley
2402	Basin 801	6865 E Jensen	1.35	Jensen & E of Power
2402	Basin 802	1228 N Terrpin	2.82	Brown & Terrpin
2402	Basin 803	1240 N Sterling	7.77	Brown & Sterling
2402	Basin 804	7026 E Brown Road	2.05	Brown & 70th
2402	Basin 805	459 N 81st Street	4.23	81st & N of University
2402	Basin 806	8015 E Enrose	3.50	80th & Adobe
2402	Basin 807	7600 E University Drive	8.00	University & Sossaman
2402	Basin 808	9934 E Quarterline	1.50	Quarterline & Crismon
2402	Basin 809	8045 E Dover	2.50	80th & N of University
2402	Basin 810	515 N Greenwood	3.70	Greenwood & N of Universi
2402	Basin 811	713 N Palo Verde	4.31	Palo Verde & N of Basin 810
2402	Basin 812	715 N Calle Largo	4.20	S of Adobe off Calle Largo
2402	Basin 813	463 N Calle Largo	3.70	N of University off 80th St
2402	Basin 814	6806 E Mallory	2.23	Power & Mallory
2402	Basin 815	416 N St Claire	2.80	University & 110th St
2402	Basin 816	500 N Ellsworth	13.80	Ellsworth & N of University
2402	Basin 817	600 N 90th Street	10.15	Decatur & 90th St

Total Acres by Zone: 220.76

# **Street Maintenance Information**

# STORMWATER PROGRAM ACTIVITIES

## STREET MAINTENANCE

MONTH August

DATE 9-13-99

REMARKS / NOTES

RETENTION BASINS SEDIMENT REMOVAL	EA. <u>0</u>	SITES:
STORM DRAINS  CLEANING CATCH BASINS AND PUMP SITES	ARTERIAL/ COLLECTOR CATCH BASINS EA. <u>6,048</u>	
	RESIDENTIAL CATCH BASINS EA. <u>2,300</u>	
	PUMP SITE CLEANING EA. <u>0</u>	SITES:
STREET SWEEPING  CLEANING	ARTERIAL STREETS (CONTRACT) CL MILES <u>948</u> Res. Cont. <u>127</u> RESIDENTIAL / COLLECTOR STREETS CL MILES <u>798</u> (CITY FORCES)	
SPILL PREVENTION / RESPONSE  Non-Hazardous only	EA. <u>17</u>	SITES: Sanitation Trk. 6 Accident Cleanup 14 Paint Spills 6 Diesel Spill 1

# Household Hazardous Waste Reports

*2000 Household Hazardous Waste  
Collection Day Report*

## MEMO

TO: Jack Friedline  
THRU: Kari Kent  
FROM: Jennifer Means  
DATE: May 9, 2000  
RE: HOUSEHOLD HAZARDOUS WASTE COLLECTION DAY

### Purpose

The purpose of this report is to provide you information on the Household Hazardous Waste Collection Day, which was held March 4, 2000.

### Discussion

The City of Mesa held a one-day Household Hazardous Waste Collection event on March 4, 2000. The event was open from 8:00 a.m. to 2:00 p.m. and two sites were utilized; the 6th Street Service Center located at 320 E. 6th Street, and the East Mesa Service Center located at 6935 E. Decatur. The purpose of the program was to collect household hazardous materials from our residential customers.

In order to continue the multijurisdictional participation that was developed through the Household Hazardous Waste Grant awarded to the City of Mesa in 1996, residents from the Town of Gilbert, the City of Chandler and the Town of Queen Creek were invited to participate. Each jurisdiction will be billed a per car fee for the total number of cars that utilized the event.

Information on the event was distributed to the public through the February utility bill, Channel 11, truck signs on Solid Waste collection vehicles, the Arizona Republic, the Mesa Tribune, the East Mesa Independent, the City's Internet pages and fliers which were distributed to the libraries and City Hall. Our Solid Waste office personnel also disseminated information through our recycling hotline during working hours.

The City contracted with the firm of Philip Services Corporation for the 2000 event. Philip Services Corporation has been the City's contractor since 1997. The material collected was disposed of or processed through one of the following methods: incineration, disposal in a hazardous materials landfill, incinerated for energy recovery or recycled. The quantities of household hazardous wastes received are set forth in Table 1.

Each site was serviced by a combination of Mesa's Solid Waste personnel, volunteers from other City departments and outside companies such as TRW and Motorola. Additionally, the Mesa Fire Department and the Mesa Police Department provided on-site fire fighters and officers.

Outside vendors that were associated with the event included Barricade and Light, Arizona Tents and Events, Native New Yorker Restaurant, and Action Apparel. These organizations were utilized for equipment required at the sites, and shirts and refreshments for volunteers during the event.

Costs incurred from the event include contractor fees, disposal costs, labor, advertising, materials and supplies. Motorola donated supplies totaling \$5,000. These supplies included drums, safety glasses and gloves. The batteries that were collected were resold to a battery recycler and the credit is shown as an offset to costs incurred. The detailed breakdown of costs associated with the collection event is set forth in Table 2. These costs reflect only those incurred through the Solid Waste Division.

Approximately 865 vehicles passed through the event; 454 vehicles at the East Mesa Service Center and 411 vehicles at the 6th Street Service Center. Based on the costs associated with hosting the event and the number of vehicles utilizing the event, the per car fee is \$64.55. Therefore, the following amounts will be billed to the participating jurisdictions:

Jurisdiction	Number of Cars	Total Cost
Town of Gilbert	125	\$ 8,068.75
City of Chandler	4	258.20

The per car fee of \$64.55 represents an increase of approximately \$0.40 over the 1999 per car fee.

Improvements made or ongoing from last collection event:

- Solid Waste staff again contracted with Philip Services Corporation who is familiar with the sites and City staff. The Phoenix Office of Philip Services Corporation will be taking over responsibility for the event from the Southern California office.
- Good communication and coordination between City departments ensured that everyone knew their responsibilities pertaining to the event.
- New location for the East Mesa site was utilized to reduce concerns regarding overhead power lines and the bulking of flammable liquids.
- The City developed a new monthly collection event for automotive batteries, water based latex paint and automotive tires (BLT) thereby reducing the amount of waste delivered to the HHW event and providing residents with more frequent disposal opportunities.

Future Program efforts to be considered:

- Continue to work with other jurisdictions to hold joint events which allow for a greater outreach to residents.
- Continue to work with private companies to get greater participation.
- Ongoing education of residents to minimize the amount of hazardous materials generated through offering alternatives to HHW, promoting the proper disposal of items, and proper buying habits.

#### Summary

This event showed roughly a 43% decrease in participation from the 1999 event. This decrease could be associated with the implementation of the City's BLT Program which began in January 2000 and has provided service to over 300 residents.

It is very important for the City to provide disposal methods for residents with household hazardous wastes. City staff received positive feedback on the event from all individuals who participated. Continued improvement of the event and increased awareness are ongoing goals, which will make future events more efficient.

TABLE 1  
HOUSEHOLD HAZARDOUS WASTE QUANTITIES

	6th Street	EMSC	Total
Paint (gallons)*			1,500
Batteries			118
Tires - 40 yard rolloff			2
Hazardous Waste Drums			
Motor Oil	14	14	28
Antifreeze	1	3	4
Oxidizing Liquid	1	1	2
Organic Peroxides	1	1	2
Aerosol Flammables	8	4	12
Poisonous Gases	1		1
Caustic Liquids	3	1	4
Non RCRA Liquids	1	2	3
Corrosive Liquids	3	4	7
Compressed Gases	6	1	7
Toxic Flammable Liquids	11	6	17
Envir. Hazardous Substances	1	5	6
Aerosol Poisons	1	1	2
Flammable Solid	1	2	3
Flammable Liquid	6	3	9
Paints & Varnishes	52	48	100
Non RCRA Solids (oil filters)	1	1	2
Mercury	1	1	2
Lithium Batteries	1	1	2
Alkaline Batteries	2	1	3
Total Hazardous Drums	116	100	216

\* indicates estimated number

TABLE 2  
EVENT COSTS

Labor		\$ 1,285
Contractor Fees		13,290
Disposal of Material		33,860
Advertising		2,185
Materials/Supplies		5,835
Rental Equipment		2,745
T-Shirts		1,290
Refreshments		470
<b>Total 2000 Event Cost</b>		<b>\$ 60,960</b>
Battery Credit		120
Sponsor Contribution	Motorola	5,000
<b>Total Credits/Grants/Contributions</b>		<b>\$ 5,120</b>
<b>Net Cost to City</b>		<b>\$ 55,840</b>

numbers have been rounded to nearest \$5 increment

*Battery, Latex Paint and Tire (BLT)  
Event  
Waste Summaries*

## Battery, Latex Paint and Tire Event January 15, 2000

Event Location: Center Street Yard

Total Number of Vehicles: 121

### Materials Collected

Gallons of Latex Paint Collected: 630

Number of Batteries Collected: 67

Corrosive Liquid (Acidic): One 20-Gallon Drum

Oxidizing Solid: One 5-Gallon Lab Pack

Fuses: One 5-Gallon Lab Pack

Liquid Pesticides: One 30-Gallon Drum

Solid Pesticides: One 20 Gallon Drum

Paint Related Materials (Oil Based): One Cubic Yard Box

Non-Regulated Liquid: Four 55-Gallon Drums

Aerosol Cans: One 55-Gallon Drum

## Battery, Latex Paint and Tire Event February 19, 2000

Event Location: East Mesa Service Center

Total Number of Vehicles: 97

### Materials Collected

Latex Paint: 417 Gallons

Number of Batteries Collected: 63

Corrosive Liquid (Acidic): One 5-Gallon Lab Pack

Flammable Liquids: One 55-Gallon Drum

Liquid Pesticides: One 20-Gallon Drum

Paint Related Materials (Oil Based): One Cubic Yard Box

Non-Regulated Liquid: One 55-Gallon Drum

Aerosol Cans: One 30-Gallon Drum

**Battery, Latex Paint and Tire Event  
April 15, 2000**

Event Location: East Mesa Service Center

Total Number of Vehicles: 93

**Materials Collected**

Latex Paint: 385 Gallons

Number of Batteries Collected: 52

Flares: One 5-Gallon Bucket

Liquid Pesticides: One 5-Gallon Lab Pack

Paint Related Materials (Oil Based): One Cubic Yard Box

Non-Regulated Liquid: One 55-Gallon Drum

Aerosol Cans: One 20-Gallon Drum

## Battery, Latex Paint and Tire Event May 20, 2000

Event Location: Center Street Yard

Total Number of Vehicles: 100

### Materials Collected

Latex Paint: 507 Gallons

Number of Batteries Collected: 50

Fuses: One 5-Gallon Lab Pack

Oxidizing Solid: One 5-Gallon Lab Pack

Flammable Liquids: One 55-Gallon Drum

Toxic Solids: One 5-Gallons Lab Pack

Liquid Pesticides: One 20-Gallon Drum

Corrosive Liquid (Basic): One 5-Gallon Lab Pack

Corrosive Liquid (Acidic): One 20-Gallon Lab Pack

Paint Related Materials (Oil Based): One Cubic Yard Box

Non-Regulated Liquid: Four 55-Gallon Drums

Aerosol Cans: One 30-Gallon Drum

## Battery, Latex Paint and Tire Event June 17, 2000

Event Location: East Mesa Service Center

Total Number of Vehicles: 132

### Materials Collected

Latex Paint: 901 Gallons

Number of Batteries Collected: 62

Potassium Nitrate: One 5-Gallon Lab Pack

Sodium Hydroxide: One 5-Gallon Lab Pack

Flammable Liquids: Two 55-Gallon Drum

Compressed Gas Cylinders: 2

Liquid Pesticides: One 55-Gallon Drum

Corrosive Liquid (Acidic): One 5-Gallon Lab Pack

Paint Related Materials (Oil Based): One Cubic Yard Box

Non-Regulated Liquid: Two 55-Gallon Drums

Aerosol Cans: One 55-Gallon Drum

# **Rescreening of Major Outfalls**

*Dry Weather Screening Data*

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 08:55

**Outfall Type:** 84"

**Sampling Location:** University and the RWCD Canal.

**Dry Weather Conditions:**  
\_\_\_\_\_  
\_\_\_\_\_

**Flow:** None

**Sample #1**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
Y    N			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
Y    N			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



84" Outfall at University and the RWCD Canal

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 09:14  
\_\_\_\_\_

**Outfall Type:** 72" X 96" Box  
\_\_\_\_\_

**Sampling Location:** East of Main St. and the RWCD Canal.  
\_\_\_\_\_  
\_\_\_\_\_

**Dry Weather Conditions:**  
\_\_\_\_\_  
\_\_\_\_\_

**Flow:** None  
\_\_\_\_\_

**Sample #1**  
\_\_\_\_\_

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**  
\_\_\_\_\_

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



72" X 96" Box East of Main St. and the RWCD Canal

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 09:20  
\_\_\_\_\_

**Outfall Type:** 72"  
\_\_\_\_\_

**Sampling Location:** East of Higley and the RWCD Canal.  
\_\_\_\_\_  
\_\_\_\_\_

**Dry Weather Conditions:**  
\_\_\_\_\_  
\_\_\_\_\_

**Flow:** None  
\_\_\_\_\_

**Sample #1**  
=====

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
Y    N			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**  
=====

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
Y    N			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



72" Outfall Located East of Higley Rd. and the RWCD Canal

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 09:42

**Outfall Type:** 42"

**Sampling Location:** East Maricopa County Floodway between Main St. and Broadway.  
\_\_\_\_\_  
\_\_\_\_\_

**Dry Weather Conditions:** Evidence of past flow.  
\_\_\_\_\_  
\_\_\_\_\_

**Flow:** None

**Sample #1**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
Y    N			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
Y    N			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



42" East Maricopa County Floodway between Main St. and  
Broadway

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 09:50  
\_\_\_\_\_

**Outfall Type:** Concrete lined channel.  
\_\_\_\_\_

**Sampling Location:** East Maricopa County Floodway and South of Broadway Rd.  
\_\_\_\_\_  
\_\_\_\_\_

**Dry Weather Conditions:**  
\_\_\_\_\_  
\_\_\_\_\_

**Flow:** None  
\_\_\_\_\_

**Sample #1**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Concrete Lined Channel East Maricopa County Floodway and South of Broadway Road

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 10:10

**Outfall Type:** 42"

**Sampling Location:** Southern and the Leisure World Golf Course.

**Dry Weather Conditions:**

**Flow:** None

**Sample #1**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:**



42" Outfall Southern and the Leisure World Golf Course

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 12:14

**Outfall Type:** Two 54" outfalls.

**Sampling Location:** Baseline and the RWCD (Superstition Springs Golf Course).  
\_\_\_\_\_  
\_\_\_\_\_

**Dry Weather Conditions:**  
\_\_\_\_\_  
\_\_\_\_\_

**Flow:** None

**Sample #1**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:** No pictures taken.  
\_\_\_\_\_  
\_\_\_\_\_

## NPDES Storm Water Program Dry Weather Screening

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
 \_\_\_\_\_

**Date:** 06/15/00  
**Time:** 12:25

**Outfall Type:** 66"

**Sampling Location:** Greenfield and Pueblo (Greenfield Park).

**Dry Weather Conditions:**

**Flow:** None

**Sample #1**

Color	Odor	Free Copper	Detergents
Y    N	Turbidity	Total Copper	Phenols
Oil Sheen	Chlorine	Complexed Copper	pH
Surface Scum	Chlorine	Complexed Copper	pH

**Sample #2**

Color	Odor	Free Copper	Detergents
Y    N	Turbidity	Total Copper	Phenols
Oil Sheen	Chlorine	Complexed Copper	pH
Surface Scum	Chlorine	Complexed Copper	pH

**Notes:**



66" Outfall Greenfield and Pueblo (Greenfield Park)

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 12:45

**Outfall Type:** 36"

**Sampling Location:** Pueblo and 37<sup>th</sup> St.  
\_\_\_\_\_  
\_\_\_\_\_

**Dry Weather Conditions:** Trickle  
\_\_\_\_\_  
\_\_\_\_\_

**Flow:** Not measurable.

**Sample #1**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



36" Outfall Pueblo and 37<sup>th</sup> St.

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 12:59

**Outfall Type:** 60"

**Sampling Location:** Lindsey and Pueblo (Meadowgreen Park).  
\_\_\_\_\_  
\_\_\_\_\_

**Dry Weather Conditions:**  
\_\_\_\_\_  
\_\_\_\_\_

**Flow:** None

**Sample #1**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
Y    N			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
Y    N			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:** Outfall covered with steel grating.  
\_\_\_\_\_  
\_\_\_\_\_



60" Outfall Lindsey and Pueblo (Meadowgreen Park)

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 13:25

**Outfall Type:** 48"

**Sampling Location:** Jacinto and Gentry.  
\_\_\_\_\_  
\_\_\_\_\_

**Dry Weather Conditions:** Evidence of recent flow.  
\_\_\_\_\_  
\_\_\_\_\_

**Flow:** Not measurable

**Sample #1**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:**  
\_\_\_\_\_  
\_\_\_\_\_



48" Outfall Jacinto and Gentry

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 13:30

**Outfall Type:** 72"

**Sampling Location:** Hilton and Hall (Emerald Park).

**Dry Weather Conditions:**

**Flow:** None

**Sample #1**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:** Reevaluate next year.



72 " Outfall Hilton and Hall (Emerald Park)

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 14:01  
\_\_\_\_\_

**Outfall Type:** 48"  
\_\_\_\_\_

**Sampling Location:** Spruce and Nido.  
\_\_\_\_\_  
\_\_\_\_\_

**Dry Weather Conditions:**  
\_\_\_\_\_  
\_\_\_\_\_

**Flow:** None  
\_\_\_\_\_

**Sample #1**  
\_\_\_\_\_

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**  
\_\_\_\_\_

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



48" Outfall Spruce and Nido

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 14:10

**Outfall Type:** 42"

**Sampling Location:** Beverly and Medina (Woodglen Park)  
\_\_\_\_\_  
\_\_\_\_\_

**Dry Weather Conditions:** Trickle  
\_\_\_\_\_  
\_\_\_\_\_

**Flow:** Not measurable.

**Sample #1**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



42" Outfall Beverly and Medina (Woodglen Park)

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 14:26

**Outfall Type:** 24"

**Sampling Location:** Noche de Paz and Naranja  
\_\_\_\_\_  
\_\_\_\_\_

**Dry Weather Conditions:** Outfall submerged below level of lake. Sampling not possible.  
\_\_\_\_\_  
\_\_\_\_\_

**Flow:** \_\_\_\_\_

**Sample #1**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y    N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



24" Outfall Noche de Paz and Naranja

# NPDES Storm Water Program Dry Weather Screening

Sampling Team: Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

Date: 06/15/00  
Time: 14:45

Outfall Type: 30"

Sampling Location: Longmore and the ADOT channel.

Dry Weather Conditions: Standing water no flow from outfall.

Flow: None

## Sample #1

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

## Sample #2

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



30" Outfall Longmore and the ADOT Channel

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 15:13

**Outfall Type:** Unknown

**Sampling Location:** Broadway and the Tempe Canal.  
\_\_\_\_\_  
\_\_\_\_\_

**Dry Weather Conditions:** Outfall into Tempe Canal. Canal flow prevents sampling.  
\_\_\_\_\_  
\_\_\_\_\_

**Flow:** \_\_\_\_\_

**Sample #1**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y N</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Oil Sheen</u>			
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y N</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Oil Sheen</u>			
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**NPDES Storm Water Program  
Dry Weather Screening**

**Sampling Team:** Scott Bouchie  
Lee Mendelzon  
\_\_\_\_\_

**Date:** 06/15/00  
**Time:** 15:46

**Outfall Type:** 54"

**Sampling Location:** Horne and Grandview.

**Dry Weather Conditions:**

**Flow:** None

**Sample #1**

<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Sample #2**

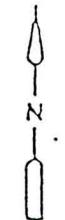
<u>Color</u>	<u>Odor</u>	<u>Free Copper</u>	<u>Detergents</u>
<u>Y N</u>			
<u>Oil Sheen</u>	<u>Turbidity</u>	<u>Total Copper</u>	<u>Phenols</u>
<u>Surface Scum</u>	<u>Chlorine</u>	<u>Complexed Copper</u>	<u>pH</u>

**Notes:**

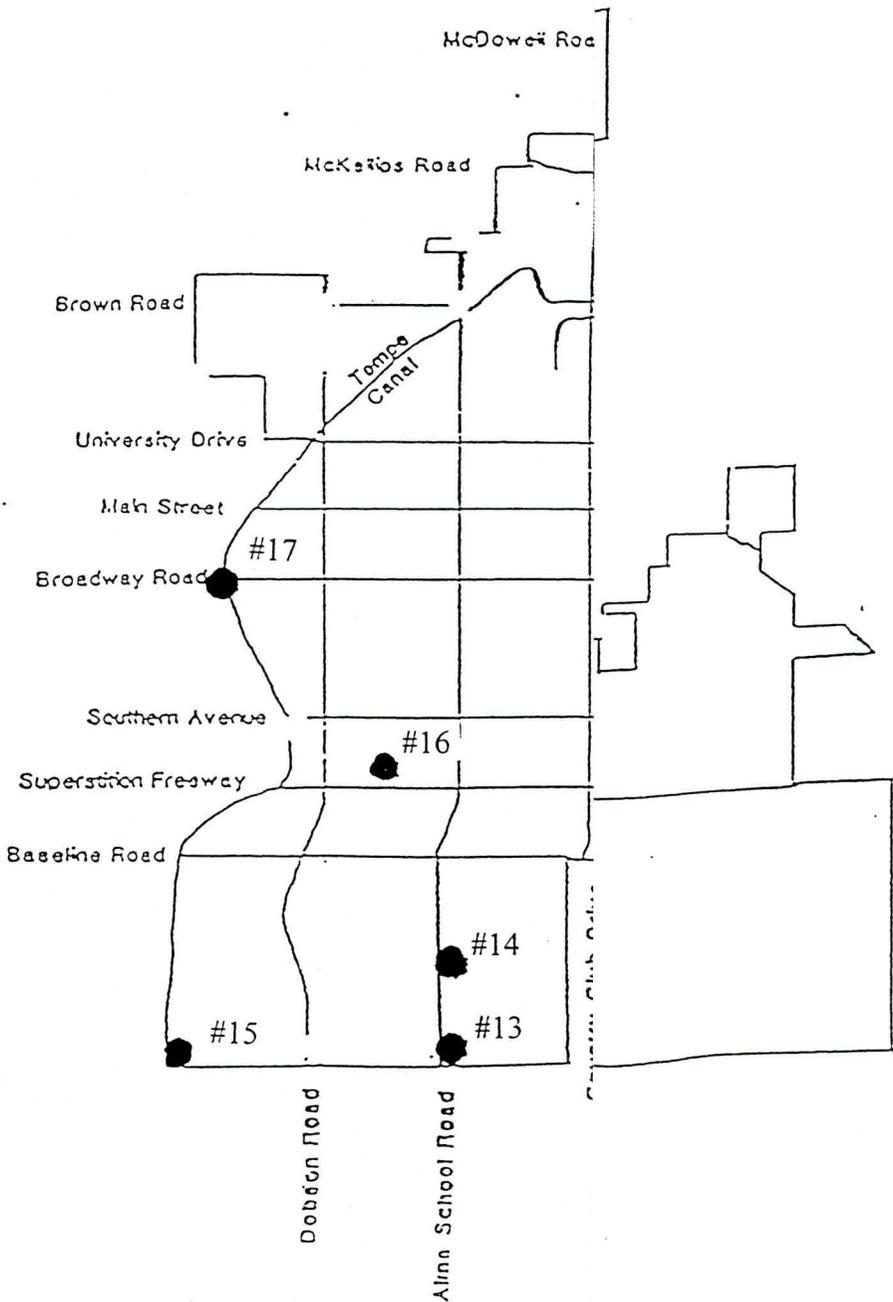


54" Outfall Horne and Grandview

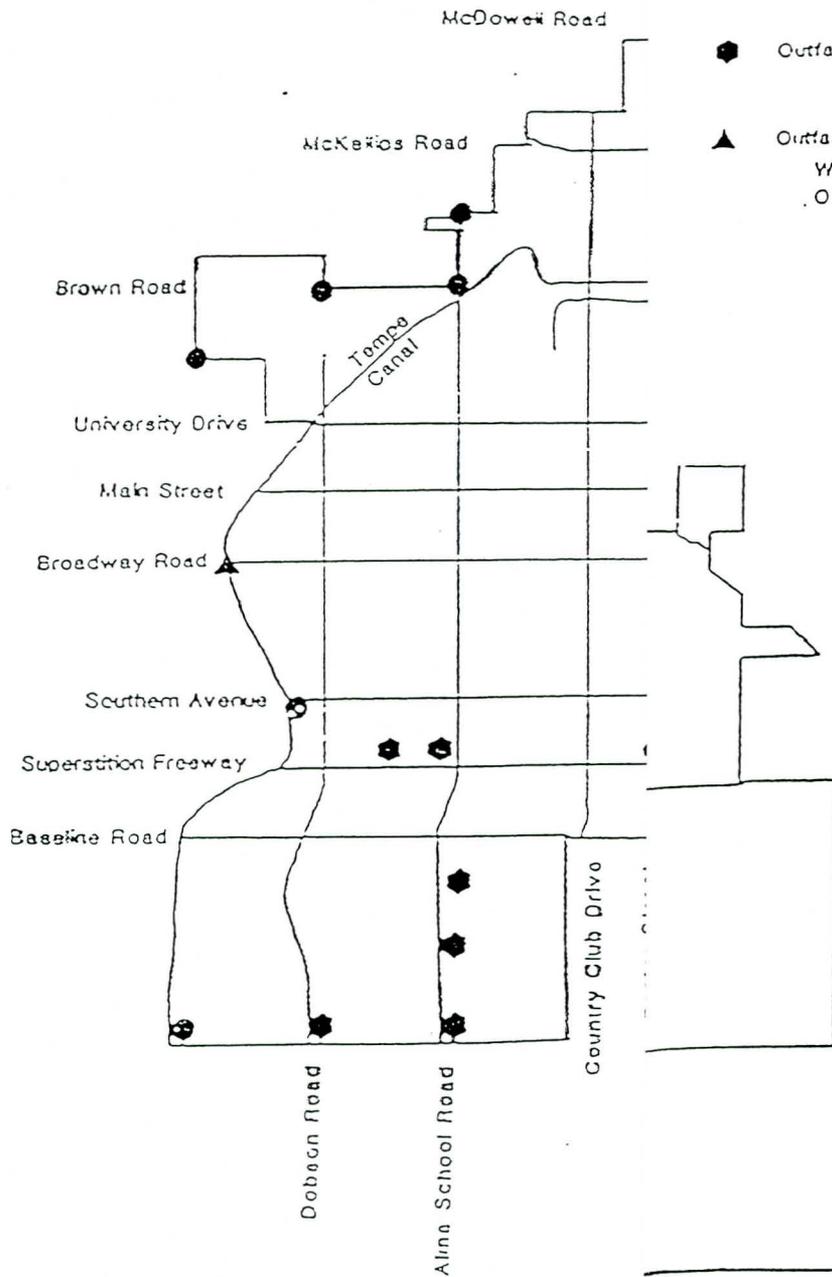
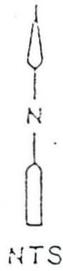
*Map of 2000 Surveyed Outfalls*



NTS



*Map of 1992 Surveyed Outfalls*



- Outfall Exhibiting Dry Weather Flow
- ◆ Outfall With Evidence of Recent Flow
- ▲ Outfall Not Exhibiting Either Dry Weather Flow or Evidence of Recent Flow

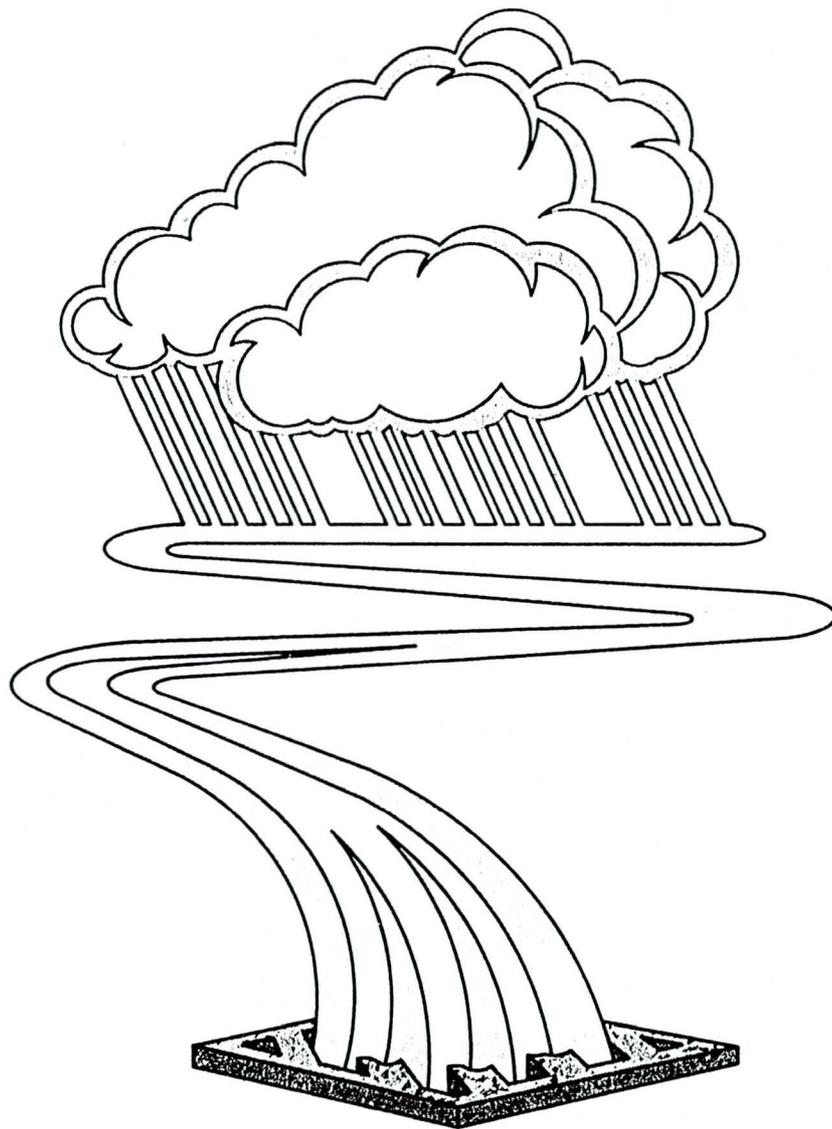
**CDM**

environmental engineers, scientists,  
planners & management consultants

## EXHIBIT E

*Dry Weather Sampling  
Test Kit Manual*

# STORM WATER TEST KIT MANUAL



## CONTENTS

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## WARNING

The chemicals in this kit may be hazardous to the health and safety of the user if inappropriately handled. Read all warnings carefully before performing the test and use appropriate safety equipment.

## MATERIAL SAFETY DATA SHEETS AND LABELS

As part of good laboratory practice, please familiarize yourself with reagents used in these procedures. Read all product labels and material safety data sheets for all chemicals before using them. Please use appropriate safety equipment.

## INTRODUCTION

Environmental Protection Agency (EPA) studies indicate storm water runoff carries pollutants to nearby lakes, rivers and streams. In an effort to protect receiving waters, the EPA issued regulations\* in November 1990 which apply to both municipalities and industrial storm water discharges.

Part 1 of the NPDES\*\* application requires municipalities to do field screening using grab samples collected from dry weather flows. These samples will be analyzed for pH, total chlorine, total phenols, total copper, and detergents.

This kit combines the direct-reading, battery operated Pocket Pal pH Tester and four, easy-to-read color discs. The Storm Water Field Screening test kit includes the instruments, reagents and apparatus for monitoring all 5 of the necessary tests complete in a durable carrying case.

Parameter	Range	# of Tests	Type of Test	Incremental Accuracy
pH	0-14	†	Ion-selective electrode	0.1 pH
Chlorine, Total	0-3.5 mg/L	100	DPD	0.1 mg/L
Copper, Total	0-5 mg/L	100	Bicinchoninate Hydrosulfite Reduction	0.1 mg/L
Phenol	0.5, 0-1	100	4-aminoantipyrine	0.1 mg/L 0.05 mg/L
Detergents	0-1 mg/L	32	Toluidine Blue-O	0.05 mg/L

With this kit, the analyst can obtain information for efficient management and control of storm water discharges.

\*Federal Register, November 16, 1990.

\*\*National Pollutant Discharge Elimination System  
†approximately 5000 tests with each battery set

# TOTAL CHLORINE

**Range: 0-3.5 mg/L Total Chlorine (Cl<sub>2</sub>)**

To ensure accurate results please read carefully before proceeding.

Rinse viewing tubes thoroughly before conducting the test. The powder does not have to dissolve completely to obtain correct results.

## PROCEDURE

1. Fill a color viewing tube to the lower edge of frosted area (5 mL) with clear water and place it in the left top opening of the comparator (untreated sample, Figure 1).
2. Fill the other viewing tube to the lower edge of frosted area (5 mL) with the water sample to be tested.
3. Open one DPD Total Chlorine Reagent Powder Pillow. Add the contents of the pillow to the test sample. Let stand for three minutes, but not more than six minutes, to let the color develop. Place the sample in the right top opening of the comparator (prepared sample, Figure 1).
4. Hold the comparator up to a light source such as a window the sky or a lamp and view through the openings in front. Rotate the disc until a color match is obtained. Read the mg/L total chlorine (Cl<sub>2</sub>) through the scale window.

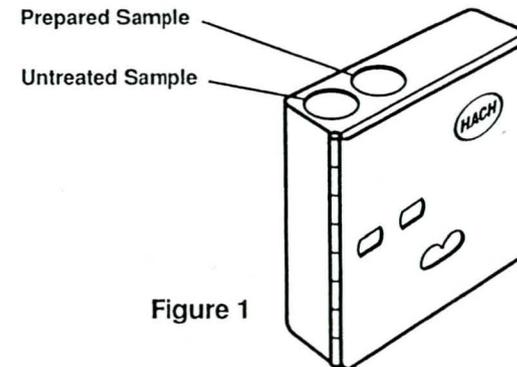


Figure 1

## REPLACEMENTS

Cat. No.	Description	Unit
14076-99	DPD Total Chlorine Reagent Powder Pillows	pk/100
936-00	Clippers	each
1732-00	Color Comparator	each
46600-04	Color Viewing Tube & Cap	pk/4
21988-00	DPD Chlorine Disc, 0-3.5 mg/L	each
46600-14	Stopper for Color Viewing Tube	pk/4

# TOTAL COPPER

## Range: 0-5 mg/L Total Copper (Cu)

To ensure accurate results please read carefully before proceeding.

This procedure tests for free or complexed copper. Free copper refers to any free or weakly chelated copper ion in solution. Complexed (chelated) copper is tightly bound, as in Cu (EDTA). Free copper plus complexed copper gives the total dissolved copper.

High concentrations of cyanide will inhibit color development. If the cyanide concentration is greater than 2 mg/L, add three drops of Formaldehyde Solution, Cat. 2059-36, to the prepared sample after completing Step 3. Wait three minutes before reading the mg/L free copper in Step 6. The Formaldehyde Solution is not part of this kit but may be ordered from Hach Company. See Replacements.

## PROCEDURE

1. Rinse both color viewing tubes several times with the water to be tested. Fill both tubes to the 5-mL mark with the water sample.
2. Open one Free Copper Reagent Powder Pillow (red pillow). Add the contents of the pillow to one of the tubes.
3. Stopper the tube and invert several times to mix. If free copper is present, a purple color will develop. Allow at least two minutes before completing Steps 4 through 6.
4. Insert the prepared sample tube from Step 3 into the right top opening of the color comparator (prepared sample, Figure 1).
5. Insert the tube of untreated water sample into the left top opening of the color comparator (untreated sample, Figure 1).
6. Hold the comparator up to a light source such as the sky, a window or lamp and view through openings in front. Rotate disc to obtain a color match. Read the mg/L free copper through the scale window. Record the value obtained.

7. To determine the amount of total dissolved copper present in the sample add the contents of one Hydrosulfite Reagent Powder Pillow (clear pillow) to the sample tube prepared in Step 3. This is the sample tube in the right opening of the color comparator.

8. Stopper the tube and invert several times to mix. Allow at least two additional minutes before completing Step 9.

9. Replace the tube in the right top opening of the color comparator. Hold the comparator up to a light source and rotate the color disc to obtain a match. Read the mg/L total dissolved copper (free plus complexed copper) through the scale window.

10. The amount of complexed copper can be determined by subtracting the amount of free copper present in the sample (results from Step 6) from the amount of total copper present in the sample (results from Step 9).

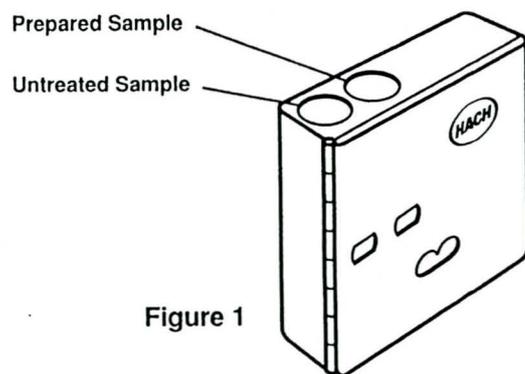


Figure 1

## REPLACEMENTS

Cat. No.	Description	Unit
21824-66	Reagents for Total Copper	pk/50
936-00	Clippers	each
1730-06	Color Viewing Tube	pk/6
1731-06	Stopper for viewing tube	pk/6
1732-00	Color Comparator	each
14212-00	Copper Color Disc	each
129-37	Copper Standard Solution 10 mg/L	118 mL(4 oz) MDB*
	(not included in kit)	
272-28	Demineralized Water	118 mL(4 oz)
	(not included in kit)	
2059-36	Formaldehyde	15 mL(1/2 oz) SCDB**
	(not included in kit)	

It is suggested that reagent accuracy be checked periodically using a reliable standard such as Copper Standard Solution 10 mg/L, Cat. 129-37. Prepare a 2 mg/L copper solution by adding 1 mL of the Copper Standard Solution to a sample tube and dilute to the 5-mL mark with Demineralized Water, Cat. 2872-28. Follow the test kit instructions Steps 1-6 to determine the free copper value of the standard. Copper Standard Solution and Demineralized Water are not included in this kit but may be ordered from Hach Company. *See Replacements.*

\*Marked Dropping Bottle

\*\*Self-contained Dropping Bottle

# DETERGENTS

## Range: 0-1 mg/L Detergents

To ensure accurate results please read carefully before proceeding.

### PROCEDURE

1. Fill one of the test tubes to the upper mark (20 mL) with the water to be tested.
2. Add 12 drops of Detergent Test Solution and shake to mix.
3. Add chloroform to the lowest mark (5 mL) on the test tube. (Chloroform is heavier than water and will sink.) Stopper, shake vigorously for 30 seconds and let stand for one minute to allow the chloroform to separate.
4. Using the draw-off pipet, remove the water from the tube and discard.
5. Refill the test tube to the upper mark with the Wash Water Buffer and, using the draw-off pipet, remove the Wash Water Buffer and discard. This step washes away the remaining water sample.
6. Refill the test tube to the upper mark with the Wash Water Buffer, stopper and shake vigorously for 30 seconds. See Notes for turbid samples.  
Let stand for one minute to allow the chloroform to separate.
7. Insert the test tube containing the prepared sample in the right opening of the color comparator.
8. Fill the other test tube with demineralized water and place it in the left opening of the comparator.
9. Hold the comparator up to a light, such as the sky, a window or a lamp, and view through the two openings in the front. Rotate the Detergents Color Disc until a color match is obtained. Read the ppm Detergents (LAS and/or ABS) from the scale window.
10. If the color is darker than the highest reading on the color disc, dilute the original sample 20-to-1 by adding 1 mL of sample to the test tube (using the plastic dropper filled to the top, or 1-mL mark) and filling the test tube to the upper mark (20 mL) with demineralized water. Repeat Steps 2 through 9 and multiply the results by 20.

### NOTES

If the water sample is turbid, the chloroform layer must be filtered after Step 6, using the procedure given below.

- a. Place a small ball (about the size of a large pea) of glass wool in the filter thimble.
- b. Using the draw-off pipet to remove the chloroform, filter the chloroform through the glass wool and into the extra test tube.
- c. Proceed with Step 7.

The kit includes a sufficient amount of Wash Water Buffer for 32 tests. Also included are Detergent Test Solution and Chloroform for approximately 90 tests.

### REPLACEMENTS

Cat. No.	Description	Unit
14299-00	Demineralizer Bottle	each
1059-37	Detergents Test Solution	118 mL (4 oz) MDB*
999- <del>11</del> <sup>49</sup>	Wash Water Buffer Solution	473 mL (pt)
14458-49	Chloroform, ACS grade	500 mL
1732-00	Color Comparator	each
2221-00	Detergents Color Disc, 0-1 mg/L	each
1736-06	Color Viewing Tube, with 5- & 20-mL marks	pk/6
14480-01	Stopper, for color viewing tube	pk/6
1786-00	Bulb, for pipet	each
2218-00	Glass Tube, for draw-off pipet	each
14197-05	Dropper, glass, 0.5 & 1.0 marks	pk/5
512-00	Filtering Thimble	each
565-10	Test Tube	pk/10
2520-74	Glass Wool	5 g

\*Marked dropping bottle

# pH

## USING POCKET PAL™ pH TESTER

**Range: 0-14 pH units**

To ensure accurate results please read carefully before proceeding.

### PROCEDURE

1. Slide the on/off switch to on. The switch is located on top of the Pocket Pal.
2. Remove protective cap from the bottom.
3. Immerse the bottom of the Pocket Pal 1.0 to 1.5 inches (2.5-3.8 cm) into the sample. See Note A on how to calibrate and verify the accuracy of the Pocket Pal.
4. Using the Pocket Pal, gently stir the sample for several seconds. After stirring and when the digital display stabilizes, read the pH value. See Note B.
5. Rinse the bottom of the Pocket Pal and replace the protective cap. Follow Note C for longer life.

### NOTES

- A. Before using the Pocket Pal and for periodic calibration, prepare a pH 7.00 buffer solution. Use the Pocket Pal to read pH. If necessary adjust with a small screwdriver through the hole in the back to a 7.0 reading. The Pocket Pal is now calibrated (See Figure 1).
- B. Large differences in pH readings may be caused by a dry electrode or run-down batteries. To improve performance, dip to immersion level in tap water for a few minutes at least once a week.
- C. Place several drops of water in the protective cap to prevent the glass bulb from drying out. This will provide a faster response time and a longer Pocket Pal life.

### BATTERY REPLACEMENT:

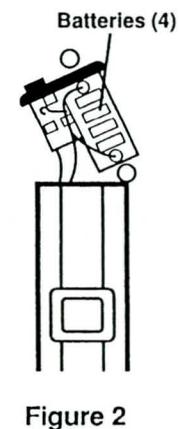
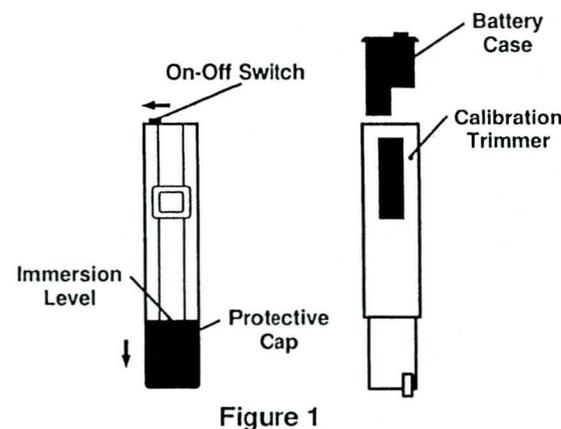
1. Remove the case top from the Pocket Pal. **Caution: Do not over extend the attached wires (See Figure 2).**
2. Replace the four batteries (positive terminals up) with Eveready E675E, Duracell RM 675 or equivalent. A package of 4 batteries is available from Hach Company (order catalog number 23678-00).

### SPECIFICATIONS

**Range:** 0.0 - 14.0 pH  
**Resolution:** 0.1 pH  
**Accuracy:**  $\pm 0.2$  pH  
**Operating Temperature:** 0-50 °C  
**Battery Life:** 1000 hours continuous use

### WARRANTY

Hach Company warrants this product against defective materials or workmanship for six months from date of shipment. Warranty does not apply to batteries nor degradation of electrode due to normal use. Not recommended for use in presence of heavy metals or in liquids over 50 °C.



# PHENOLS

## Range: 0-1 mg/L Phenols

To ensure accurate results please read carefully before proceeding.

### PROCEDURE

**1.** Assemble the color comparator. If the anticipated concentration is between 0 and 1 mg/L, assemble with both the Long Path Viewing Adapter and the phenols color disc installed. See Figure 1. If the concentration is expected to require the 0-5 mg/L range, omit the adapter.

*Note: If the sample is turbid, it may be necessary to filter the sample as described in Steps a and b to accurately determine a color match in the comparator. Figure 2 illustrates how to assemble the filter assembly components. If filtering is not needed, proceed to Step 2.*

- a.** Install a 0.45 micron filter disc in the filter holder. Be sure the holder is well tightened after installation. Filter discs are packaged with blue papers separating them.
- b.** Fill the 30-cc syringe with the turbid sample and attach the filter holder to the syringe with a twisting motion. Use the filtered sample in Step 4.
- 2.** Fill two plastic color viewing tubes to the line nearest the top with sample.
- 3.** Add the contents of one EDTA Reagent Powder Pillow to each viewing tube. Cap each tube and mix until the powder is dissolved.
- 4.** Add 15 drops of Hardness 1 Buffer Solution to each viewing tube. Cap the tubes and mix.
- 5.** Place one of the tubes into the left opening in the top of the color comparator.
- 6.** To the other tube, add the contents of one Phenol Reagent Powder Pillow (Nonextraction). Cap the tube and mix until powder is dissolved. Then add the contents of one Potassium Persulfate Powder Pillow for Phosphonate. Cap and mix until the powder is dissolved.

**7.** Place the sample tube treated in Step 6 into the right opening in the top of the comparator. Remove the caps from both tubes.

**8.** Hold the comparator so that light shines down through the tubes from the top if the adapter is installed or from the back if the adapter is not installed. See Figure 3. Rotate the disc to match the colors in the color matching windows. Read the mg/L phenols from the scale window. If measuring without the Long Path Viewing Adapter, multiply the reading by five.

*Note: If the color of the sample is too red to make a color match with the Long Path Viewing Adapter installed, repeat the procedure without the adapter.*

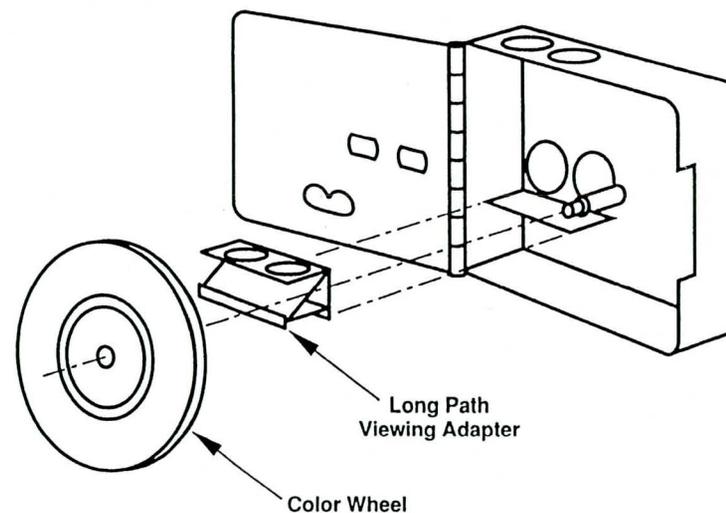


Figure 1

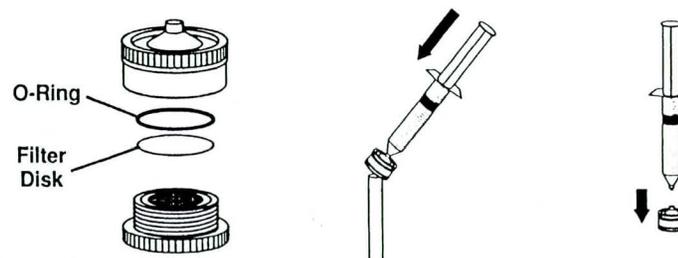


Figure 2

# **Public Education Package for Construction Projects**



## STORM WATER PERMIT COMPLIANCE

Dear Building Permit Applicant:

As of July 1, 1998, a copy of your Notice of Intent (NOI) to obtain coverage under EPA's Storm Water Construction General Permit (CGP) must be submitted to the City of Mesa Building Inspections Division prior to the issuance of your building permit. The EPA permit is required for any site disturbing more than five (5) acres of land. Attached is information to assist you in complying with this requirement.

- a) Informational brochure explaining the "Storm Water Requirements for Construction Activities",
- b) A copy of the Notice of Intent and Notice of Termination forms, and
- c) A copy of Mesa's "Storm Water Pollution Control" Ordinance.

The City of Mesa Environmental Programs Division (EPD) will be conducting inspections at construction sites and investigating citizen complaints to enforce compliance.

Please contact the EPD at 644-3435 if you need compliance assistance.

Sincerely,

Environmental Programs Division



**Storm Water Requirements**

**For**

**Construction Activities**

*Compliance Guide*

*to*

*EPA's*

*National Pollutant Discharge Elimination System (NPDES)  
General Permit For Storm Water Discharges  
from Construction Activities*

August 1998

## Introduction

All construction activities that disturb five acres or more of land are required to apply for a National Pollutant Discharge Elimination System (NPDES) storm water pollution control permit from the Environmental Protection Agency (EPA). Construction projects that individually disturb less than five acres but are part of a larger common plan of development that will collectively disturb more than five acres are also required to apply for the NPDES stormwater permit. In 1992 the EPA issued the first permit covering construction activity. That permit expired in September 1997. The new permit, which is currently in effect, includes significant changes from the original permit that affect developers, contractors and the City of Mesa.

This informational packet has been prepared by the Environmental Programs Division to assist contractors and owners to understand and comply with the NPDES stormwater permit requirements. The packet provides information and standards for private and public construction projects within the City of Mesa that are covered by the NPDES regulations.

## Definitions

Throughout this packet the reader will find references to specific terms that may or may not be familiar. To understand the process and goals of the storm water program, these terms are listed below with definitions. Please note that some definitions have been paraphrased for readability.

Best Management Practices (BMPs) means schedules of activities, prohibition of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage.

Final Stabilization means that either:

- (1) all soil disturbing activities at the site have been completed and a uniform perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent measures (such as the use of riprap, gabions, or geotextiles) have been employed; or
- (2) for individual lots in residential construction, final stabilization may be achieved by the homebuilder establishing stabilization as specified above or the homebuilder establishing temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner; or
- (3) for land used for agricultural purposes, final stabilization may be obtained by returning the disturbed land to its preconstruction agricultural use.

NPDES is an acronym for the National Pollutant Discharge Elimination System. NPDES is the national program for administering and regulating Sections 307, 318, 402 and 405 of the Clean Water Act (CWA).

Notice of Intent (NOI) is a formal notice to the EPA seeking coverage under the Construction General Permit. The NOI provides information about the permittee, location of the discharge, type of discharge, and certifies that the permittee will comply with certain specified conditions.

Notice of Termination (NOT) is a notice to the EPA that coverage under the Construction General Permit is being terminated. The NOT provides information about the permittee, location of the site, and certifies that certain conditions specified in the General Permit have been met.

Operator is defined as:

(1) any party associated with a construction project that has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or

(2) any party that has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a storm water pollution prevention plan for the site or other permit conditions.

Storm Water Pollution Prevention Plan (SWPPP) is a plan consisting of a series of planning, design, construction, and inspection phases and activities which characterizes the site, selects actions to prevent pollution of storm water and implements these actions to prevent pollution of storm water discharges.

## **City of Mesa's Storm Water Program**

The City of Mesa was issued a municipal storm water permit by the EPA in July of 1997. To obtain this permit, Mesa had to develop and implement a number of programs (Best Management Practices) to prevent the contamination of storm water flows. One of these programs was to inspect construction projects. In order to implement an effective inspection program, the City of Mesa passed a storm water ordinance #2774. The ordinance is located in Section 8-5 of the City Code and has been included as an attachment to this package. This ordinance allows the City of Mesa to issue citations for illegal discharges.

In addition to the ordinance, Mesa requires contractors to obtain coverage under the CGP and submit a copy of the NOI to the City before a Building Permit is issued (on NPDES Projects). The City will input the NOI information into a database that will be used to schedule inspections.

Storm water inspections will involve reviewing the NOI and SWPPP and evaluating the implementation of the SWPPP. If deficiencies are identified that are not corrected, enforcement actions may be implemented.

## **Who Must Apply for Permit Coverage?**

Construction projects that disturb 5 or more acres of land or are part of a larger common plan of development are subject to the permitting requirements. From these projects, the EPA has determined that the operator(s) that has operational control of a site must submit an NOI. As described above, there are two types of operators. On a typical project, this would require both the owner/developer and the contractor to submit an NOI.

## **Goals**

The goals of the NPDES general permit for storm water discharges associated with construction activities are to:

- reduce erosion,
- minimize sedimentation,
- eliminate discharge of non-storm water pollutants, and
- prevent the discharge of storm water and non-storm water pollutants.

## **General Permit Requirements**

There are many compliance requirements in the Construction General Permit that apply to either the contractor or the owner. The following are some of the major permit requirements:

- Endangered Species Certification,
- Filing of a Notice of Intent (NOI),
- Preparation of a Storm Water Pollution Prevention Plan (SWPPP),
- Implementation of Best Management Practices (BMPs), and
- Filing of a Notice of Termination (NOT).

## **Endangered Species Certification**

To receive coverage under the Construction General Permit (CGP), applicants must assess the potential effects of their storm water discharge-related activities on listed endangered or threatened species and their critical habitat. To make this assessment, applicants must follow the steps outlined in Addendum A of the CGP, which begins on page 7917 of the Tuesday, February 17, 1998 Federal Register. The U.S. Fish and Wildlife Service may be contacted for assistance with this process at (602) 640-2720.

## **Notice of Intent (NOI) Requirements**

The NOI is a short document prepared by the Contractor or Owner and mailed at least 48 hours prior to the start of construction to the EPA, the Arizona Department of Environmental Quality and the City of Mesa's Environmental Programs Division. The NOI serves as a notice to the EPA that

the SWPPP is complete and construction is about to begin. A section of the NOI certifies that the construction project will not impact any endangered species or critical habitat as explained above. A blank NOI form is attached to this information package.

### **Storm Water Pollution Prevention Plan (SWPPP) Requirements**

The SWPPP is the main tool the Contractor or Owner uses to meet the goals of the required permit. The specific requirements of the SWPPP are contained on page 7867, Part IV, of the February 17th, 1998 Federal Register. The SWPPP is the site-specific plan developed by the Contractor or Owner to reduce erosion, minimize sediment transfer and prevent the discharge of pollutants. The specific requirements of this plan are in the EPA regulations attached to this packet. The SWPPP is prepared prior to the start of construction and is to be maintained and revised throughout the project as conditions change or new BMPs are employed. The City, Arizona Department of Environmental Quality and/or the EPA may request a copy of the SWPPP.

### **Best Management Practices**

In developing the SWPPP, the Developer or Contractor is required to identify practices that will be followed during construction. These practices are the basis for complying with the goals of the program. Approved BMPs are contained in two documents: the "Drainage Design Manual for Maricopa County Arizona, Volume III, Erosion Control" which is available from the Flood Control District of Maricopa County; and EPA's "Storm Water Management for Construction Activities" (EPA 832-R-92-005) available from the National Center for Environmental Publications Information at 1-800-490-9198.

### **Notice of Termination (NOT) Requirements**

Permittees must submit a completed Notice of Termination (NOT) within 30 days after one or more of the following conditions have been met:

- final stabilization has been achieved on all portions of the site for which the permittee was responsible, or
- another operator/permittee has assumed control over all areas of the site that have not been finally stabilized, or
- for residential construction only, temporary stabilization has been completed and the residence has been fully transferred to the homeowner.

Compliance with the permit is required until a NOT has been submitted. The permit terminates at midnight of the day the NOT is signed. A blank NOT form is also attached to this information package.

## Where to Submit Your NOI and NOT

EPA  
Storm Water Notice of Intent (4203)  
USEPA  
401 M. Street, SW  
Washington, D.C. 20460

City of Mesa  
Environmental Programs  
P.O. Box 1466  
Mesa, AZ 85211

Arizona Department of Environmental  
Quality  
3033 N. Central  
Phoenix, AZ 85012

| Quality

## Contact Numbers

City of Mesa (Lee Mendelzon)	1-602-644-3435
NPDES Storm Water Hotline (National Number)	1-800-245-6510
Environmental Protection Agency (Eugene Bromley)	1-415-744-1906
Arizona Department of Environmental Quality (Robert Wilson)	1-602-207-4574
U.S. Fish and Wildlife Service 2321 W. Royal Palm Road, Suite 103 Phoenix, AZ 85021-4951	1-602-640-2720

## Further Information

Information is also available on the internet at EPA's Office of Wastewater Management web site at:  
<http://www.epa.gov/owm/cgp.htm>

DES  
FORM



United States Environmental Protection Agency  
Washington, DC 20460

Notice of Intent (NOI) for Storm Water Discharges Associated with  
CONSTRUCTION ACTIVITY Under a NPDES General Permit

Submission of this Notice of Intent constitutes notice that the party identified in Section I of this form intends to be authorized by a NPDES permit issued for storm water discharges associated with construction activity in the State/Indian Country Land identified in Section II of this form. Submission of this Notice of Intent also constitutes notice that the party identified in Section I of this form meets the eligibility requirements in Part I.B. of the general permit (including those related to protection of endangered species determined through the procedures in Addendum A of the general permit), understands that continued authorization to discharge is contingent on maintaining permit eligibility, and that implementation of the Storm Water Pollution Prevention Plan required under Part IV of the general permit will begin at the time the permittee commences work on the construction project identified in Section II below. IN ORDER TO OBTAIN AUTHORIZATION, ALL INFORMATION REQUESTED MUST BE INCLUDED ON THIS FORM. SEE INSTRUCTIONS ON BACK OF FORM.

I. Owner/Operator (Applicant) Information

Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
Address: \_\_\_\_\_ Status of Owner/Operator:   
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

II. Project/Site Information

Project Name: \_\_\_\_\_  
Project Address/Location: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_ County: \_\_\_\_\_

Is the facility located on Indian Country Lands?  
Yes  No

Has the Storm Water Pollution Prevention Plan (SWPPP) been prepared? Yes  No

Optional: Address of location of SWPPP for viewing  Address in Section I above  Address in Section II above  Other address (if known) below:

SWPPP Address: \_\_\_\_\_ Phone: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Name of Receiving Water: \_\_\_\_\_

Month Day Year      Month Day Year  
Estimated Construction Start Date      Estimated Completion Date

Estimate of area to be disturbed (to nearest acre): \_\_\_\_\_

Estimate of Likelihood of Discharge (choose only one):

- 1.  Unlikely      3.  Once per week      5.  Continual
- 2.  Once per month      4.  Once per day

Based on instruction provided in Addendum A of the permit, are there any listed endangered or threatened species, or designated critical habitat in the project area?

Yes  No

I have satisfied permit eligibility with regard to protection of endangered species through the indicated section of Part I.B.3.e.(2) of the permit (check one or more boxes):

(a)  (b)  (c)  (d)

III. 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 this 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.

Print Name: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_

**Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity to be Covered Under a NPDES Permit****Who Must File a Notice of Intent Form**

Under the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et seq.; the Act), except as provided by Part I.B.3 the permit, Federal law prohibits discharges of pollutants in storm water from construction activities without a National Pollutant Discharge Elimination System Permit. Operator(s) of construction sites where 5 or more acres are disturbed, smaller sites that are part of a larger common plan of development or sale where there is a cumulative disturbance of at least 5 acres, or any site designated by the Director, must submit an NOI to obtain coverage under an NPDES Storm Water Construction General Permit. If you have questions about whether you need a permit under the NPDES Storm Water program, or if you need information as to whether a particular program is administered by EPA or a State agency, write to or telephone the Notice of Intent Processing Center at (703) 931-3230.

**Where to File NOI Form**

NOIs must be sent to the following address:

Storm Water Notice of Intent (4203)  
USEPA  
401 M. Street, SW  
Washington, D.C. 20460

Do not send Storm Water Pollution Prevention Plans (SWPPPs) to the above address. For overnight/express delivery of NOIs, please include the room number 2104 Northeast Mall and phone number (202) 260-9541 in the address.

**When to File**

This form must be filed at least 48 hours before construction begins.

**Completing the Form**

OBTAIN AND READ A COPY OF THE APPROPRIATE EPA STORM WATER CONSTRUCTION GENERAL PERMIT FOR YOUR AREA. To complete this form, type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks (abbreviate if necessary to stay within the number of characters allowed for each item). Use one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions on this form, call the Notice of Intent Processing Center at (703) 931-3230.

**Section I. Facility Owner/Operator (Applicant) Information**

Provide the legal name, mailing address, and telephone number of the person, firm, public organization, or any other entity that meet either of the following two criteria: (1) they have operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or (2) they have the day-to-day operational control of those activities at the project necessary to ensure compliance with SWPPP requirements or other permit conditions. Each person that meets either of these criteria must file this form. Do not use a colloquial name. Correspondence for the permit will be sent to this address.

Enter the appropriate letter to indicate the legal status of the owner/operator of the project: F = Federal; S = State; M = Public (other than federal or state); P = Private.

**Section II. Project/Site Information**

Enter the official or legal name and complete street address, including city, county, state, zip code, and phone number of the project or site. If it lacks a street address, indicate with a general statement the location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for permit coverage to be granted.

The applicant must also provide the latitude and longitude of the facility in degrees, minutes, and seconds to the nearest 15 seconds. The latitude and longitude of your facility can be located on USGS quadrangle maps. Quadrangle maps can be obtained by calling 1-800 USA MAPS. Longitude and latitude may also be obtained at the Census Bureau Internet site: <http://www.census.gov/cgi-bin/gazetteer>.

Latitude and longitude for a facility in decimal form must be converted to degrees, minutes and seconds for proper entry on the NOI form. To convert decimal latitude or longitude to degrees, minutes, and seconds, follow the steps in the following example.

Convert decimal latitude 45.1234567 to degrees, minutes, and seconds.

- 1) The numbers to the left of the decimal point are degrees.
- 2) To obtain minutes, multiply the first four numbers to the right of the decimal point by 0.006.  $1234 \times .006 = 7.404$ .
- 3) The numbers to the left of the decimal point in the result obtained in step 2 are the minutes: 7'.
- 4) To obtain seconds, multiply the remaining three numbers to the right of the decimal from the result in step 2 by 0.06:  $404 \times 0.06 = 24.24$ . Since the numbers to the right of the decimal point are not used, the result is 24".
- 5) The conversion for 45.1234 = 45° 7' 24".

Indicate whether the project is on Indian Country Lands.

Indicate if the Storm Water Pollution Prevention Plan (SWPPP) has been developed. Refer to Part IV of the general permit for information on SWPPPs. To be eligible for coverage, a SWPPP must have been prepared.

Optional: Provide the address and phone number where the SWPPP can be viewed if different from addresses previously given. Check appropriate box.

Enter the name of the closest water body which receives the project's construction storm water discharge.

Enter the estimated construction start and completion dates using four digits for the year (i.e. 05/27/1998).

Enter the estimated area to be disturbed including but not limited to: grubbing, excavation, grading, and utilities and infrastructure installation. Indicate to the nearest acre; if less than 1 acre, enter "1." Note: 1 acre = 43,560 sq. ft.

Indicate your best estimate of the likelihood of storm water discharges from the project. EPA recognizes that actual discharges may differ from this estimate due to unforeseen or chance circumstances.

Indicate if there are any listed endangered or threatened species designated critical habitat in the project area.

Indicate which Part of the permit that the applicant is eligible with regard to protection of endangered or threatened species, or designated critical habitat.

**Section III. Certification**

Federal Statutes provide for severe penalties for submitting false information on this application form. Federal regulations require this application to be signed as follows:

For a corporation: by a responsible corporate officer, which means: (i) president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

For a partnership or sole proprietorship: by a general partner of the proprietor, or

For a municipality, state, federal, or other public facility: by either a principal executive or ranking elected official. An unsigned or undated NOI form will not be granted permit coverage.

**Paperwork Reduction Act Notice**

Public reporting burden for this application is estimated to average 3.7 hours. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Director, OPPE Regulatory Information Division (2137), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, D.C. 20460. Include the OMB control number on any correspondence. Do not send the completed form to this address.

NPDES  
FORM



United States Environmental Protection Agency  
Washington, DC 20460

**Notice of Termination (NOT) of Coverage Under a NPDES General Permit for Storm Water Discharges Associated with Industrial Activity**

Submission of this Notice of Termination constitutes notice that the party identified in Section II of this form is no longer authorized to discharge storm water associated with industrial activity under the NPDES program. ALL NECESSARY INFORMATION MUST BE PROVIDED ON THIS FORM.

**I. Permit Information**

NPDES Storm Water General Permit Number: \_\_\_\_\_

Check Here if You are No Longer the Operator of the Facility:

Check Here if the Storm Water Discharge is Being Terminated:

**II. Facility Operator Information**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_

**III. Facility/Site Location Information**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_

Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_ Quarter: \_\_\_\_\_ Section: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_

IV. Certification: I certify under penalty of law that all storm water discharges associated with industrial activity from the identified facility that are authorized by a NPDES general permit have been eliminated or that I am no longer the operator of the facility or construction site. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge storm water associated with industrial activity under this general permit, and that discharging pollutants in storm water associated with industrial activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this Notice of Termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

Print Name: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_

**Instructions for Completing Notice of Termination (NOT) Form**

**Who May File a Notice of Termination (NOT) Form**

Permittees who are presently covered under an EPA-issued National Pollutant Discharge Elimination System (NPDES) General Permit (Including the 1995 Multi-Sector Permit) for Storm Water Discharges Associated with Industrial Activity may submit a Notice of Termination (NOT) form when their facilities no longer have any storm water discharges associated with industrial activity as defined in the storm water regulations at 40 CFR 122.26(b)(14), or when they are no longer the operator of the facilities.

For construction activities, elimination of all storm water discharges associated with industrial activity occurs when disturbed soils at the construction site have been finally stabilized and temporary erosion and sediment control measures have been removed or will be removed at an appropriate time, or that all storm water discharges associated with industrial activity from the construction site that are authorized by a NPDES general permit have otherwise been eliminated. Final stabilization means that all soil-disturbing activities at the site have been completed, and that a uniform perennial vegetative cover with a density of 70% of the cover for unpaved areas and areas not covered by permanent structures has been established, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

**Where to File NOT Form**

Send this form to the the following address:

Storm Water Notice of Termination (4203)  
401 M Street, S.W.  
Washington, DC 20460

**Completing the Form**

Type or print, using upper-case letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions about this form, telephone or write the Notice of Intent Processing Center at (703) 931-3230.

**Instructions - EPA Form 3510-7  
Notice of Termination (NOT) of Coverage Under The NPDES General Permit  
for Storm Water Discharges Associated With Industrial Activity**

**Section I Permit Information**

Enter the existing NPDES Storm Water General Permit number assigned to the facility or site identified in Section III. If you do not know the permit number, telephone or write your EPA Regional storm water contact person.

Indicate your reason for submitting this Notice of Termination by checking the appropriate box:

If there has been a change of operator and you are no longer the operator of the facility or site identified in Section III, check the corresponding box.

If all storm water discharges at the facility or site identified in Section III have been terminated, check the corresponding box.

**Section II Facility Operator Information**

Give the legal name of the person, firm, public organization, or any other entity that operates the facility or site described in this application. The name of the operator may or may not be the same name as the facility. The operator of the facility is the legal entity which controls the facility's operation, rather than the plant or site manager. Do not use a colloquial name. Enter the complete address and telephone number of the operator.

**Section III Facility/Site Location Information**

Enter the facility's or site's official or legal name and complete address, including city, state and ZIP code. If the facility lacks a street address, indicate the state, the latitude and longitude of the facility to the nearest 15 seconds, or the quarter, section, township, and range (to the nearest quarter section) of the approximate center of the site.

**Section IV Certification**

Federal statutes provide for severe penalties for submitting false information on this application form. Federal regulations require this application to be signed as follows:

*For a corporation:* by a responsible corporate officer, which means: (i) president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

*For a partnership or sole proprietorship:* by a general partner or the proprietor; or

*For a municipality, State, Federal, or other public facility:* by either a principal executive officer or ranking elected official.

**Paperwork Reduction Act Notice**

Public reporting burden for this application is estimated to average 0.5 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, 2136, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460, or Director, Office of Information & Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

- (C) The Utilities Manager shall provide written notice and an opportunity to be heard to any person assessed an administrative penalty under this Section. Within fifteen (15) days of receipt of the notice, such person shall pay the penalty or file a written request for a hearing with the City Manager. If a hearing is held, the City Manager shall issue a written decision, and such decision shall be final. (2809/Reso. 6567)
- (D) The assessment of administrative penalties under this Section shall not limit the availability or imposition of other penalties, remedies, or sanctions under the law or this Chapter. (2809/Reso. 6567)

**8-4-30: VIOLATIONS; CIVIL AND CRIMINAL ACTIONS:**

The City Manager may request that the City Attorney commence criminal and/or civil action against any POTW user violating any requirement of this Chapter, including an action pursuant to A.R.S. §49-391 to enforce the collection of administrative penalties assessed under Section 8-4-29 of the Mesa City Code. (2809/Reso. 6567)

**8-4-31: ENFORCEMENT OF CHAPTER:**

- (A) The requirements of this Chapter are made for the benefit of the POTW users, for the protection of the POTW, and to protect the quality of effluent. Their enforcement shall in no case be willfully ignored by any City official or employee. (2809/Reso. 6567)
- (B) Upon written request from any person for an exemption from a requirement contained in this Chapter, the Utilities Manager may determine whether the requirement would cause a gross injustice to a particular POTW user and whether it is in the public interest to grant the exemption. The Utilities Manager shall explain in writing to the person seeking the exemption the ultimate determination granting or denying the request. Under no circumstances may an exemption be sought or granted from requirements imposed by applicable state and federal laws. (2809/Reso. 6567)

## CHAPTER 5

### STORM WATER POLLUTION CONTROL

#### SECTION:

- 8-5-1: Definitions  
 8-5-2: Illicit Discharges and Connections  
 8-5-3: Reduction of Pollutants in Storm Water  
 8-5-4: Inspections and Monitoring  
 8-5-5: Cleanup and Notification of Releases  
 8-5-6: Civil and Criminal Penalties  
 8-5-7: Abatement of Violations

**8-5-1: DEFINITIONS:**

- (A) The following terms used in this Chapter shall mean: (2774/Reso. 6528)

**CITY:** City of Mesa, Arizona. (2774/Reso. 6528)

**CITY ENGINEER:** The City Engineer of the City or authorized deputy, agent, or representative. (2774/Reso. 6528)

**CITY MANAGER:** The City Manager pursuant to Chapter 20 of Title 1 of the Mesa City Code or such other person as the City Manager may designate. (2774/Reso. 6528)

**CITY STORM SEWER SYSTEM:** Those facilities not part of a publicly owned treatment works within the City by which storm water may be conveyed to waters of the United States, including all roads, municipal streets, catch basins, curbs, gutters, ditches, channels, storm drains, and retention or detention basins. (2774/Reso. 6528)

**C.F.R. (CODE OF FEDERAL REGULATIONS):** Compilation of federal regulations promulgated under the C.W.A. and incorporated herein by reference. (2774/Reso. 6528)

**C.W.A. (CLEAN WATER ACT):** Federal Water Pollution Control Act, as amended, 33 United States Code §§1251 *et seq.*, incorporated herein by reference. (2774/Reso. 6528)

**E.P.A. (ENVIRONMENTAL PROTECTION AGENCY):** Federal agency charged with primary enforcement of the C.W.A. (2774/Reso. 6528)

**NPDES STORM WATER PERMIT:** A National Pollutant Discharge Elimination System Permit issued by the E.P.A. which authorizes the discharge of storm water pursuant to C.W.A. §402. (2774/Reso. 6528)

**PERSON:** Any individual, partnership, copartnership, firm, company, corporation, association, joint stock company, trust, state, municipality, Indian tribe, political subdivision of the state, federal government agency, or any other legal entity, including their legal representatives, agents, or assigns. (2774/Reso. 6528) .

**PREMISES:** Any building, facility, lot, parcel, real estate, or land or portion of land, whether improved or unimproved, and including adjacent sidewalks and parking strips. (2774/Reso. 6528)

**RELEASE:** Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, placing, leaching, dumping, or disposing of a pollutant into or on any land. (2774/Reso. 6528)

**STORM WATER:** Storm water runoff, snow melt runoff, and surface runoff and drainage. (2774/Reso. 6528)

- (B) Other terms used in this Chapter are defined in the applicable sections of the C.W.A. and the C.F.R. Summaries of those definitions are provided as follows: (2774/Reso. 6528)

**BEST MANAGEMENT PRACTICES:** Schedules of activities, prohibitions of practices, good housekeeping practices, pollution prevention practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to waters of the United States. (2774/Reso. 6528)

**DISCHARGE:** Any addition of any pollutant or combination of pollutants to waters of the United States from any point source. (2774/Reso. 6528)

**POINT SOURCE:** Any discernible, confined, and discrete conveyance, except agricultural discharges and return flows from irrigated agriculture. (2774/Reso. 6528)

**POLLUTANT:** Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water. (2774/Reso. 6528)

**PUBLICLY OWNED TREATMENT WORKS:** Any device or system used in the treatment of municipal sewage or industrial waste of a liquid nature which is owned by a state or municipality. (2774/Reso. 6528)

**WATERS OF THE UNITED STATES:** All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce. (2774/Reso. 6528)

**8-5-2: ILLICIT DISCHARGES AND CONNECTIONS:**

- (A) Unless expressly authorized or exempted by this Chapter, no person shall discharge, directly or indirectly, to the City storm sewer system. (2774/Reso. 6528)
- (B) Discharges regulated pursuant to an NPDES Storm Water Permit or other NPDES permit under the C.W.A. which is issued to the person who causes the discharge are authorized under this Chapter provided that the person is in full compliance with all requirements of such permit. (2774/Reso. 6528)
- (C) Unless identified by the City Engineer under Subsection (D) of this Section, the following discharges are exempt from the prohibition set forth in Subsection (A) of this Section: (2774/Reso. 6528)
1. Discharges composed entirely of storm water. (2774/Reso. 6528)
  2. Discharges caused by a person from any of the following activities: (2774/Reso. 6528)
    - (a) Water line flushing and other discharges from drinking water sources; (2774/Reso. 6528)
    - (b) Lawn watering; (2774/Reso. 6528)
    - (c) Irrigation water; (2774/Reso. 6528)
    - (d) Diverted stream flow; (2774/Reso. 6528)
    - (e) Rising groundwater; (2774/Reso. 6528)
    - (f) Groundwater infiltration containing no pollutants; (2774/Reso. 6528)
    - (g) Pumped groundwater containing no pollutants; (2774/Reso. 6528)
    - (h) Foundation and footing drains; (2774/Reso. 6528)
    - (i) Water from crawl space pumps; (2774/Reso. 6528)
    - (j) Air conditioning condensation and evaporative cooler runoff; (2774/Reso. 6528)

- (k) Natural springs; (2774/Reso. 6528)
- (l) Individual residential car washing; (2774/Reso. 6528)
- (m) Flows from riparian habitats and wetlands, as those areas are designated under applicable federal and state laws; (2774/Reso. 6528)
- (n) Dechlorinated swimming pool discharges; (2774/Reso. 6528)
- (o) Flows resulting from fire fighting activities; or (2774/Reso. 6528)
- (p) Dust control watering. (2774/Reso. 6528)
- (D) No person shall cause a discharge, directly or indirectly, to the City storm sewer system which is exempted under Subsection (C) of this Section if the City Engineer identifies and provides written notice to the person that the discharge from such person has the potential to be a source of pollutants to waters of the United States. (2774/Reso. 6528)
- (E) No person shall discharge, directly or indirectly, to the City storm sewer system where such discharge would result in or contribute to a violation of the NPDES 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, and the person shall defend, indemnify, and hold harmless the City in all administrative or judicial enforcement actions relating to such discharge. (2774/Reso. 6528)
- (F) No person shall establish, use, maintain, or continue any direct or indirect connection to the City's storm sewer system which has the potential to result in a violation of this Section. This prohibition is retroactive and shall apply to connections made in the past, regardless of whether they were made under a permit or other authorization or whether they were permissible under the law or practices applicable or prevailing at the time of the connection. (2774/Reso. 6528)

**8-5-3: REDUCTION OF POLLUTANTS IN STORM WATER:**

- (A) All persons owning or operating facilities or engaged in activities which will or may reasonably be expected to result in pollutants entering the City storm sewer system, either directly or indirectly, shall undertake all practicable best management practices identified by the City Engineer to minimize such pollutants. Such measures shall include the requirements imposed by all of the following: (2774/Reso. 6528)

1. This Section; (2774/Reso. 6528)
  2. The applicable NPDES Storm Water Permits; and (2774/Reso. 6528)
  3. Any written guidelines which may be developed or referenced for general use by the City Engineer. (2774/Reso. 6528)
- (B) No person shall throw, deposit, leave, maintain, keep, or permit to be thrown, deposited, left, maintained, or kept, except in appropriate containers or in lawfully established dumping grounds, any refuse, rubbish, garbage, or other discarded or abandoned objects, articles, and accumulations in or upon any street, alley, sidewalk, storm drain, inlet, catch basin, conduit, or other drainage structures, business place, or upon any public or private lot of land in the City so that the same becomes or could reasonably be expected to become a pollutant. (2774/Reso. 6528)
  - (C) Persons owning or operating a parking lot; gas station parking, storage, and loading areas; or similar premises which are exposed to rainfall shall clean those premises in a frequent and thorough manner so that storm water from such premises does not cause or contribute to a violation of Section 8-5-2. (2774/Reso. 6528)
  - (D) Any person performing construction shall use all practicable best management practices identified by the City Engineer to minimize pollutants and sediment from leaving the construction site. At a minimum, the person shall do both of the following: (2774/Reso. 6528)
    1. Not cause or contribute to a violation of Section 8-5-2; and (2774/Reso. 6528)
    2. Comply with any written guidelines which may be developed or referenced for general use by the City Engineer. (2774/Reso. 6528)
  - (E) Persons causing discharges who are required to submit to E.P.A. a notice of intent to comply with an NPDES Storm Water Permit shall provide a copy of such notice to the City Engineer prior to beginning the construction or operation of an industrial activity which would cause the discharge. (2774/Reso. 6528)

**8-5-4: INSPECTIONS AND MONITORING:**

- (A) Upon presentation of credentials and at all necessary hours, all authorized employees of the City shall have free access to all premises and to all records pertaining to those premises for purposes of ensuring compliance with this Chapter. Inspection, 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 Chapter and all applicable NPDES Storm Water Permit conditions. All persons shall allow such activities under safe and nonhazardous conditions with a minimum of delay. (2774/Reso. 6528)
- (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 Chapter and all applicable NPDES Storm Water Permit conditions. At the City's expense, the City Engineer may establish on premises such devices as the City Engineer 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, a City employee may take any samples necessary to aid in the pursuit of the inquiry or in the recordation of the activities on the premises. (2774/Reso. 6528)
- (C) The City Engineer may order any person engaged in any activity or owning or operating on any premises which may cause or contribute to discharges of storm water in violation of this Chapter or any applicable NPDES Storm Water Permit condition to undertake such monitoring activities and analyses and furnish such reports as the City Engineer reasonably may specify. The costs of such activities, analyses, and reports shall be borne by the recipient of the order. (2774/Reso. 6528)

**8-5-5: CLEANUP AND NOTIFICATION OF RELEASES:**

- (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 Chapter entering the City storm sewer system, such person promptly shall take all necessary steps to ensure the discovery of the source and extent and proceed with containment and cleanup of such release. (2774/Reso. 6528)

- (B) In addition to the requirements contained in Subsection (A) of this Section, such person shall notify the City Engineer of the release in both of the following manners: (2774/Reso. 6528)

1. By telephone within twenty-four (24) hours or by twelve (12:00) noon of the next work day if knowledge is received on a weekend or holiday; and (2774/Reso. 6528)
2. In writing within three (3) days of receiving knowledge of the release. (2774/Reso. 6528)

**8-5-6: CIVIL AND CRIMINAL PENALTIES:**

- (A) The City Manager may request that the City Attorney commence civil and/or criminal action pursuant to this Section against any person who violates any requirement of this Chapter or any applicable NPDES Storm Water Permit condition. (2774/Reso. 6528)
- (B) A person who violates any requirement of this Chapter or any applicable NPDES Storm Water Permit condition shall be subject to a civil penalty of not less than one hundred dollars (\$100.00) or more than ten thousand dollars (\$10,000.00) for each violation. Each day in which a violation continues shall constitute a separate offense. (2774/Reso. 6528)
- (C) A person shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not to exceed two thousand five hundred dollars (\$2,500.00) or by imprisonment in the City jail for a period not to exceed six (6) months or by both such fine and imprisonment for each of the following offenses: (2774/Reso. 6528)
1. Committing a violation of this Chapter or an applicable NPDES Storm Water Permit condition after previously having been found responsible for committing three (3) or more civil violations under this Section within a twenty-four- (24-) month period calculated using the dates of the commission of the offenses, whether by admission, by payment of the fine, by default, or by judgment after hearing; or (2774/Reso. 6528)
  2. Failing or refusing to provide evidence of the person's identity, including full name, residence address, and date of birth, to a duly authorized agent of the City upon request when such agent has reasonable cause to believe the person is committing or has committed a violation of this Chapter or an applicable NPDES Storm Water Permit condition. (2774/Reso. 6528)

- (D) In addition to or in lieu of all other available penalties, the City may revoke any permit, approval, or license to construct improvements to real property or operate a business in the City if the holder of such permit, approval, or license is found to be in violation of any requirement of this Chapter or any applicable NPDES Storm Water Permit condition. (2774/Reso. 6528)

**8-5-7: ABATEMENT OF VIOLATIONS:**

- (A) In addition to or in lieu of other penalties available under this Chapter, the City may serve a notice to abate upon any person engaged in any activity or owning or operating on any premises in violation of this Chapter or an applicable NPDES Storm Water Permit condition. (2774/Reso. 6528)
- (B) The notice to abate shall set forth all of the following information: (2774/Reso. 6528)
1. The period of time the person has to abate or correct the violation; (2774/Reso. 6528)
  2. Identification of the property in violation by street address, if known, and if unknown, then by book, map, and parcel number; (2774/Reso. 6528)
  3. Statement of the violation in sufficient detail to allow a reasonable person to identify and correct the violation; (2774/Reso. 6528)
  4. Reinspection date and time; (2774/Reso. 6528)
  5. Name, business address, and business telephone number of the City Engineer; (2774/Reso. 6528)
  6. A warning that if the violation is not corrected within the specified time, the City may abate the problem itself or by private contractor, assess the person for the cost of such abatement, and record a lien on the property for the assessment; and (2774/Reso. 6528)
  7. Appeal procedures. (2774/Reso. 6528)
- (C) If the person fails to comply with the abatement notice, the City may correct or abate the conditions subject to the notice if the City Engineer determines that those conditions constitute a significant hazard. If the City corrects or abates those conditions, the City Manager may prepare a verified statement as to the actual cost of correcting or abating the violation and serve the statement upon the person. (2774/Reso. 6528)

- (D) The person receiving a notice to abate or a statement of costs may appeal by submitting a written request to the City Manager within fifteen (15) days of receipt of the notice or statement. The hearing shall be held before the City Manager as soon as practicable after the filing of the request. The decision of the City Manager shall be final and binding. (2774/Reso. 6528)

- (E) The notice to abate and statement of costs shall run with the land. The City, at its sole option, may record a notice or statement with the Maricopa County Recorder and thereby cause compliance by an entity thereafter acquiring such property. When the property is brought into compliance, the City shall file a satisfaction of notice to abate with the Maricopa County Recorder. (2774/Reso. 6528)
- (F) If a situation presents an imminent hazard to life or public safety, the City may do any of the following without abiding by the thirty- (30-) day notice period applicable to Subsection (B) of this Section: (2774/Reso. 6528)
1. Issue a notice to abate; (2774/Reso. 6528)
  2. Act immediately to correct or abate the imminent hazard itself; or (2774/Reso. 6528)
  3. Commence an action in Superior Court to enjoin the person to abate the imminent hazard. (2774/Reso. 6528)

## CHAPTER 6

### PUBLIC NUISANCES AND PROPERTY MAINTENANCE

#### ARTICLE I

#### PURPOSE, SCOPE, DEFINITIONS, AND PROHIBITIONS

##### SECTION:

- 8-6-1: Purpose and Scope  
 8-6-2: Definitions  
 8-6-3: Public Nuisances Prohibited

##### 8-6-1: PURPOSE AND SCOPE:

- (A) The purpose of this Chapter is to define and prohibit public nuisances. (2568)
- (B) This Chapter shall apply to all land within the City of Mesa without regard to the use or occupancy or the date of acquisition, alteration, or improvement of such land. (2568)

##### 8-6-2: DEFINITIONS:

The following words, terms, and phrases, when used in this Chapter, shall have the meanings ascribed to them in this Section, except where the context clearly indicates a different meaning: (2568)

**ABANDONED OR JUNK VEHICLE:** Any vehicle that is partially or wholly dismantled, discarded, wrecked, on blocks or similar devices, stripped, or scrapped; or a vehicle with a deflated tire or tires or from which a wheel or tire has been removed; or any motor vehicle which is inoperable due to mechanical failure or mechanical disassembly or other reasons which may be evidenced by the absence of an unexpired license plate lawfully affixed or assigned thereto. (2568, 2824)

**AUTHORIZED PRIVATE RECEPTACLE:** A litter storage and collection receptacle as required and authorized in this Code. (2568)

**CIVIL HEARING OFFICER:** The Mesa Zoning Administrator within the Community Development Department or such other person as designated by the City Manager. (2568)

**GARBAGE:** An accumulation of spoiled or discarded animal or vegetable material resulting from the handling, preparation, cooking, or consumption of food for humans or animals, as well as other organic waste material subject to rapid decomposition. (2568)

**GRAFFITI:** An inscription or drawing carved or drawn on a stationary structure so as to be discernible from the public right-of-way and which degrades the beauty and appearance of property. (2568)

**GRASS:** Barnyard grass, bermuda grass, bluegrass, bromegrasses, crab grass, foxtail, johnson grass, ragweed, rye grass, wild oats, or hybrids thereof. (2824)

**HAZARD:** A condition that may cause personal physical harm. (2568)

**IMMINENT HAZARD:** A condition that presents an immediate likelihood for causing personal physical harm. (2568)

**IMPROVED PROPERTY:** Land on which buildings or other structures are located. (2568)

**INFESTATION:** The apparent presence of insects, rodents, or other pests. (2568)

**JUNK:** Items that in their present state are of little or no apparent economic value that are not confined within an industrial area in compliance with the Mesa Zoning Ordinance, such as an accumulation of the following materials: discarded or scrapped furniture; glass, metal, paper, or machinery parts; inoperative machinery or appliances; building material wastes; litter; or discarded or empty containers. Junk shall also include all types of solid waste described in Chapter 3 of Title 8 of the Mesa City Code. (2568)

**LAND:** All land in the City of Mesa, whether improved or unimproved. (2568)

**NOTICE TO ABATE:** A notice issued to a property owner or occupant concerning a violation of Chapter 18 of Title 8 of the Mesa City Code. (2568)

**OCCUPANT:** The person occupying or having custody of a structure or premises as a lessee or otherwise. (2568)

**OWNER:** The person indicated on the records of the Maricopa County Assessor or other official body as the owner of record of the property in question. (2568)

# **Household Hazardous Waste Public Education**

July 27, 2000

Mesa Resident  
[REDACTED]  
[REDACTED]

Dear Mesa Resident:

The City of Mesa has received complaints of improper disposal of used motor oil on your property. The improper disposal of used oil is generally bad for the environment.

Used motor oil and other automotive fluids can be recycled at many local automotive repair and supply stores at little or no cost. To assist you with properly disposing of used oil, we have attached to this letter a list of a few of the local automotive chains that will accept waste oil for proper disposal/recycling.

Please contact me at the address below or call me at 644-4653 if you have any questions related to this issue. Your cooperation in this effort is appreciated.

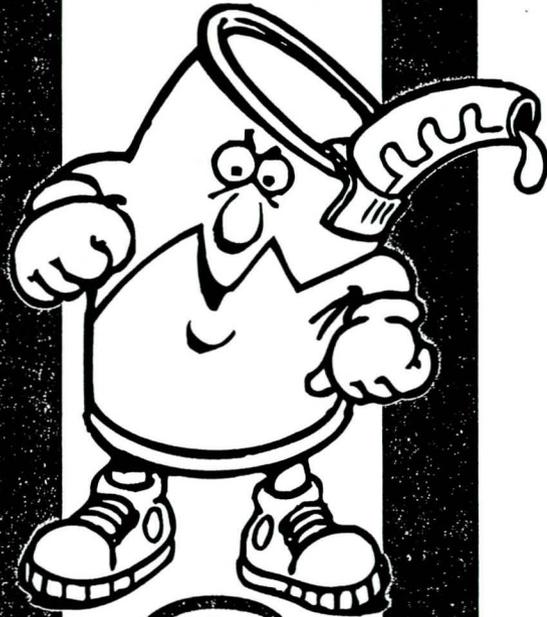
Sincerely,

Scott Bouchie  
Environmental Technician

ercl.675

*Household Hazardous Waste  
Educational Brochure #1*

# Household Hazardous Waste Program



"Committed to  
excellence  
In the delivery  
of Solid Waste Services."

Many of the items lying around the garage or underneath the kitchen sink are considered dangerous materials. It is estimated that the average American household contains ten to fifteen gallons of hazardous waste materials. Hazardous materials should not go into your trash container because they can harm trash collectors and create environmental problems. The City of Mesa's Solid Waste Division has created this brochure to educate residents on the proper use and disposal of hazardous materials.

## What are Household Hazardous Materials?

A material is considered hazardous if it is:

- TOXIC (can injure or kill if swallowed, inhaled or absorbed through the skin)
- FLAMMABLE (may explode or ignite, even when cool)
- CORROSIVE (can cause permanent tissue damage through contact)
- IRRITANT (can irritate or inflame the skin, eyes, nose, throat or lungs)

## Examples of Products Containing Hazardous Materials:

- CLEANERS
- PAINTS
- AUTOMOTIVE PRODUCTS
- MEDICINES/BEAUTY PRODUCTS
- POOL CHEMICALS
- PESTICIDES/HERBICIDES
- FERTILIZERS
- LIGHTER FLUIDS

### **Hazardous Results!**

Extra care is needed when disposing of household hazardous materials. The following is what can happen when products are not disposed of properly:

- Hazardous materials disposed of in a landfill seep into the ground and contaminate the soil and drinking water.
- Hazardous chemicals flushed down the drain may end up in nearby lakes and water ways.
- Chemicals used in spray can products can add to air pollution. Aerosols often contain dangerous chemicals which may cause cancer and nerve damage.
- Fluids dumped in trash, on the ground or into storm drains can end up in the drinking water supply.
- DON'T MIX products. Mixing products can cause an explosion or other dangerous chemical reactions. Always follow label instructions.
- Improper disposal of household hazardous materials can result in contamination and pollution, affecting humans, animals, and plants.

### **Safe, Environmentally Friendly Methods To Use And Dispose Of Household Hazardous Materials:**

- Use it up – This is a simple way to avoid creating waste. Many household products have a long shelf life and may still work well years after they were bought.
- Give it away – except for medicines and pesticides. Friends, neighbors or community organizations may be able to use products you no longer need.
- Recycle it – Many hazardous materials can be broken down and used to make

new products. For example, some service stations will accept used automotive oil, batteries and tires.

- Follow label instructions – Some products can safely be put out with the trash.
- Take part in household hazardous waste collection events.
- Look for other collection sites. There are many facilities that accept household hazardous materials year round.

Mesa residents can call the Solid Waste Division at (480) 644-2688 for more information regarding proper disposal methods, businesses that will accept household hazardous materials, and City collection events.

### **Solutions to Pollution**

For a complete listing of alternatives to household hazardous cleaning and garden products, call (480) 644-2222.



**SOLID WASTE DIVISION**  
P.O. Box 1466 • Mesa, AZ 85211-1466

Residential Services ..... (480) 644-2688  
Commercial Services ..... (480) 644-2744  
Recycling Hotline ..... (480) 644-2222  
Internet Address ..... <http://www.ci.mesa.az.us>

Services are subject to change (January, 2000)  
♻️ Printed on recycled paper.

*Household Hazardous Waste  
Educational Brochure #2*

## Using Plants to Protect Other Plants

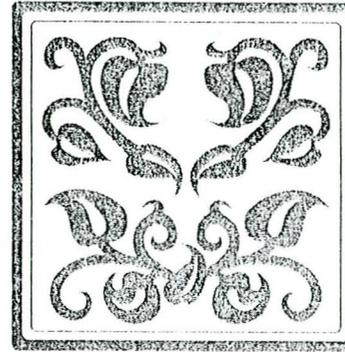
Protecting plants from unwanted insects by using other plants is the natural, chemical-free way to remove harmful insects from your garden. And you won't be eliminating all the beneficial bugs.

## Planting Practices

A certain relationship exists between plants, and between insects and plants. Companion planting is the usual name given to the practice of planting according to these relationships, but actually four different practices are involved:

- **Mixed**  
Planting several different plants together, as in nature, so that insects are confused by the multitude of "smells" and have more difficulty in finding the plant they prefer to eat and lay their eggs on.
- **Repellent**  
Certain plants such as marigolds, mints, and garlic are offensive to some insects and will deter them when planted near other plants.
- **Companion**  
Combinations of plantings produce crops that grow better and are healthier because of their proximity.
- **Trap**  
Lure plants are located near a plant that you want protected. Insects attack the lure plant which can then be hand-picked and destroyed.

# Natural Recipes for Home & Garden



A guide  
of helpful hints  
to make your  
home & garden  
environmentally friendly.



**CITY OF  
MESA**

*Great People, Quality Service!*

### **SOLID WASTE DIVISION**

Residential Services .... (480) 644-2688

Commercial Services .... (480) 644-2744

Recycling Hotline ..... (480) 644-2222

Internet Address

<http://www.ci.mesa.az.us>

 Printed on recycled paper. (1/00)

## Natural Recipes for a Pest-Free Garden

A beautiful and healthy garden is possible without the use of expensive and often hazardous chemicals.

- **All-purpose Insect spray**

- 1 garlic bulb
- 1 quart water
- 1 small onion
- 1 tbsp cayenne pepper
- 1 tbsp liquid soap (hand soap only)

Chop or grind garlic and onion, add cayenne and mix with water. Let stand 1 hour, then add liquid soap. Store in a covered jar in the refrigerator up to one week. Use as a spray wherever insects are causing a problem.

## Traps

- **Aphids**

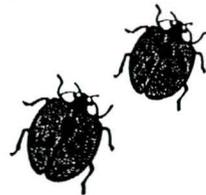
Use a 10" x 10" piece of masonite or other stiff material painted bright yellow and coated with petroleum jelly, place near susceptible plants.

- **Earwigs**

Place pieces of corrugated cardboard near plants which earwigs are attracted to (lettuce, flowers). Earwigs will hide in and under the cardboard. After a few days, collect in the morning and crush or drown.

- **Slugs & other squash bugs**

Lay out boards near affected plants; they will provide daytime shelter for nocturnal pests. Inspect daily and remove harmful insects.



## Animal Repellent Sprays

Use a spray on the plants and yard areas where these animals are causing problems.

- **Cats**

2 parts cayenne powder, 1 garlic, 3 parts dry mustard powder, 5 parts flour, add sufficient water

- **Dogs**

1 medium onion, 1 quart water, 1 tsp Tabasco sauce

- **Squirrels**

1/2 oz. Tabasco sauce, 1 tsp chile powder, 1 pint water, dash of dish soap

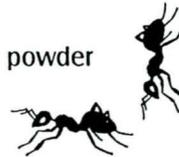
## Plants that naturally repel insects

Pest	Plant Repellant
Ant .....	mint, tansy, pennyroyal
Aphids .....	mint, garlic, chives, coriander
Bean leaf beetle ...	potato, onion, turnip
Codling moth .....	common oleander
Cucumber beetle .	radish, tansy
Flea beetle .....	garlic, onion, mint
Japanese beetle ...	garlic, larkspur, tansy, geranium
Leaf hopper .....	geranium, petunia
Mexican bean beetle .....	potato, onion, garlic, radish
Mice .....	onion
Slugs .....	prostrate rosemary, wormwood
Spider mites .....	onion, garlic, cloves, chives
Squash bug .....	radish, marigolds, tansy,
Stick bug .....	radish
Thrips .....	marigolds
Tomato hornworm.	marigolds, sage, borage
Whitefly .....	marigolds, nasturtium

## **Homemade Remedies Which May be Alternatives to Household Hazardous Products**

(As with other products used in your home, try these in small and inconspicuous areas first, and always follow manufacturers' cleaning recommendations on furniture, fixtures and carpets.)

- **All Purpose Cleaner**  
Mix one quarter cup of vinegar with one gallon of hot water. Keep on hand in spray bottle.
- **Abrasive Cleanser**  
Mix equal parts of salt and baking soda. Scrub with mixture and wet sponge. Rinse with all purpose cleaner and then with warm water.
- **Ant Repellents**  
Place chili power, talcum powder or powdered chalk at points of entry.
- **Bathroom Cleanser**  
Scrub area with baking soda and wet sponge. Rinse with all purpose cleaner.
- **Brass or Copper Polish**  
Mix one teaspoon salt, one tablespoon flour and enough vinegar to make a thick paste. Rub paste on surface and let dry completely. Rinse in warm soapy water, buff with clean soft cloth.
- **Drain Cleaner**  
Pour one quarter cup of baking soda down the drain: follow with one-half cup of vinegar. After "fizzing" stops, flush with boiling water.



- **Floor Cleaner**  
Mix one-half cup of white vinegar with one-half gallon of warm water.
- **Furniture Polish**  
Mix together one-half cup of lemon juice with one cup of mineral oil. Rub on wood furniture with soft cloth. A mixture of 3 cups olive oil and 2 cup vinegar can also be an effective polish, just rub on wood with a soft cloth.
- **Pet Stain Cleaner**  
Mix together one quarter cup of white vinegar and one quarter cup of liquid soap. Rub into stain and then blot. Rinse with warm water.
- **Silver Polish**  
Put a sheet of aluminum foil in the bottom of the sink and fill with two to three inches of warm water. Add one tablespoon each of salt and baking soda. Place silver in water, touching foil. Soak for one hour. Rinse in soapy water. Buff with soft, dry cloth.
- **Window Cleaner**  
Mix together three tablespoons of vinegar and one quart of hot water. Put in spray bottle. Spray on windows and glass. Wipe off with crumpled newspaper or a squeegee.
- **Oven Cleaner**  
Scour with baking soda and water. To prevent grease buildup, always clean spills as soon as the oven cools down.
- **Laundry Detergent**  
Try borax or baking soda. Add a few drops of vinegar to keep colors bright.

### Additional tips to help maintain a healthy, natural garden:

- Learn to identify insects and diseases so you'll be able to detect problems easily.
- Encourage natural enemies such as toads, birds, ladybugs and praying mantis, who will eat harmful bugs.
- Rotate crops to avoid a build-up of pests in any one area.



### Helpful Herbs and Flowers

When planning your next garden, experiment with these forms of natural plant protection. Notice that each plant provides its companion with a specific natural advantage. No doubt you will also come up with your own safe and effective combinations.

<b>Plant</b>	<b>Companion</b>	<b>Advantage</b>
<b>Basil</b>	Tomato	Improves growth and flavor, repels flies and mosquitoes
<b>Dill</b>	Tomato	Traps tomato hornworm
<b>Garlic</b>	Roses, Raspberries	Improves growth and health; deters Japanese beetle
<b>Lamb's Quarter</b>	Throughout garden, near corn	Trap for aphids
<b>Marigolds</b> <i>(smelly types like Mexican, African, French)</i>	Throughout garden	Discourages Mexican beetles, nematodes and other insects
<b>Mint</b>	Cabbage, Tomato	Improves health, flavor; deters white cabbage moth, ants, aphids and flea beetles.
<b>Nasturtium</b>	Radish, Cabbage, Cucurbits and under under fruit trees	Trap for aphids. Deters squash bugs, whitefly, striped pumpkin beetles and Colorado potato bug
<b>Wormwood</b>	In perennial border	Deters small animals and flea beetle and slugs

*Advertising for  
Household Hazardous Waste Day*

**Wanna pay  
1x not 2x  
for drinking  
water? Vote  
YES Mar 14.  
Dr. J 623-412-3955**

All prior ads placed in the Az. Rep. by Dr. Judd have been paid for by him, personally, as is this one.

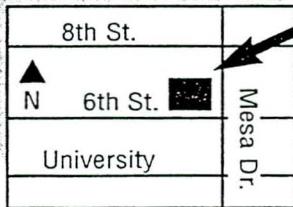
**Household Hazardous Waste  
and Small Appliance  
Collection Day**



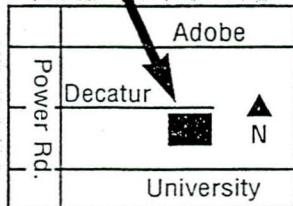
**March 4, 2000 • 8:00am-2:00pm**

City of Mesa, Town of Gilbert, and  
City of Chandler residents only.

**320 E. 6th St.**  
(Mesa Dr. North of University)



**Site Locations**



**6935 E. Decatur**  
(Power Rd. North of University)

**Note: Materials will not be  
accepted at the collection  
sites after 2:00pm.**

Materials that will not be accepted include  
55 gallon drums, large truck tires, commercial/industrial  
wastes, radioactive material, ammunition, or explosives.

For a list of acceptable items  
or additional information call the  
Recycling Hotline at (480) 644-2222.



*As Republic  
2/26/00  
3/1/00  
3/4/00*



**Household Hazardous Waste and  
Small Appliance Collection Day**

**MARCH 4, 2000**

**8:00AM - 2:00PM**

**City of Mesa, Town of Gilbert and  
City of Chandler residents only**

**NOTE: Materials will not be accepted at  
the collection sites after 2:00pm**

Materials that will not be accepted include 55 gallon drums, large  
truck tires, commercial/industrial waste,  
radioactive material, ammunition or explosives.

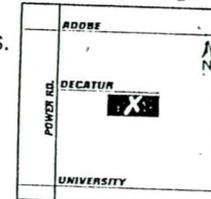
**For a list of acceptable  
items or additional  
information call the  
Recycling Hotline at  
(480) 644-2222**



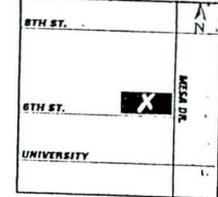
**CITY OF  
MESA**

*Great People, Quality Service!*

317734



6935 E. Decatur  
Power Rd. North of University



320 E. 6th St.  
Mesa Dr. North of University

tribune  
3/1/00  
3/4/00  
2/26/00

2-21

To: ~~Dan~~ George  
Hi!

Ad scheduled to run:

Tues. Feb. 29<sup>th</sup>  
E. Mesa Edition

Thanks!  
Marlene



# Household Hazardous Waste & Small Appliance Collection Day

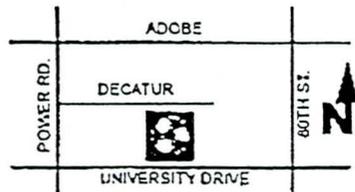
City of Mesa, Town of Gilbert and City of Chandler residents only

**MARCH 4th, 2000 • 8 A.M.-2 P.M.**

Site Locations:

**320 E. 6th Street**  
(Mesa Drive North of University)

**6935 E. Decatur**  
(Power Road North of University)



Note: Materials will not be accepted at the collection sites after 2 p.m.  
Materials that will not be accepted include 55 gallon drums, large truck tires, commercial / industrial waste, radioactive material, ammunition or explosives.

For a list of acceptable items or additional information call the Recycling Hotline at 480-644-2222



MARLENE VAVRECK  
Advertising Consultant

(480) 982-7799  
FAX (480) 671-0016

**INDEPENDENT**  
**NEWSPAPERS**  
201 W. Apache Trail, #708  
Apache Junction, AZ 85220

**AD PROOF**  
Copy and/or Corrections Approved by:  
Signature \_\_\_\_\_  
Date: \_\_\_\_\_

## *Solid Waste Division*

"Committed to providing excellence in the delivery of solid waste services"

► [Back to Solid Waste Division](#)

[Back to the Household Hazardous Waste Page](#)

### **\*Next Mesa Hosted Collection\***



**City of Mesa's  
Household Hazardous Waste  
& Small Appliance  
Collection Day  
March 4, 2000  
8:00 AM - 2:00 PM**

**City of Mesa, Town of Gilbert, and City of Chandler residents only**

#### **Site Locations:**

(Click Addresses for Maps)

[320 E. 6th St \(Mesa Dr. north of University\)](#)

[6935 E. Decatur \(Power Rd. north of University\)](#)

Note: Materials will not be accepted at the collection sites after 2:00 PM.

#### **Items that will be accepted**

paints	deodorizers
turpentine	polishes
adhesives	prescription drugs
cosmetics	pesticides
motor oil	pool chemicals
transmission fluid	gasoline
oil / fuel additives	automobile/household batteries
detergents	

automobile tires (limit 5) - rims will be accepted only if tire has been removed  
small metal appliances (i.e. toasters, blenders, garbage disposals)

## **Items that will not be accepted**

55 gallon drums of material  
large truck tires  
commercial / industrial waste  
radioactive material (call the Arizona Radiation Regulatory Agency at 255-4845)  
ammunition and explosives (call the Mesa Police Department at 480-644-2211)  
no commercial tires

## **General Information**

- Residents should be prepared to show their most recent refuse bill indicating the jurisdiction to which they pay refuse fees.
- Apartment complex residents will need to provide a name and address of the apartment complex in which they reside.
- There will be no fee charged to residents for this event.
- Residents are asked to remain in their vehicles when on the site. Please seal the material in its original container if possible and place in trunk or truck bed.

## **For more information on the collection event, please call your local jurisdiction.**

- City of Mesa           (480) 644-2222
- City of Chandler       (480) 782-3510
- Town of Gilbert       (480) 305-6437

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Questions or comments about this page? E-mail [waste\\_info@ci.mesa.az.us](mailto:waste_info@ci.mesa.az.us)

Last Updated : 08/31/2000 15:41:40

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# Holiday Closure

Residents' Day  
Feb. 21, City offices will be closed. Museums and libraries will be closed. Payables and refuse will not be collected. Please remember to have your tire at the curb by 6 a.m.

Drop off  
series, latex  
and tires  
BLT event

...dispose of  
omotive batteries and  
and water-based latex  
at the City's next BLT  
action event 8 a.m. -  
April 15 at the East  
a Service Center, 6935  
atur (Power, north  
University). For more  
ormation, call the  
yding Hotline at  
644-2222 or visit our  
web site at  
www.ci.mesa.az.us.



KARI KENT  
Solid Waste Administration  
RC 316, 350

# OpenLine

A Monthly Newsletter for City of Mesa Customers

Mayor  
Wayne Brown

Vice Mayor  
John Giles

Councilmembers  
Jim Davidson  
Keno Hawker  
Bill Jaffa  
Dennis Kavanaugh  
Pat Pomeroy

Open Line is published by

City of Mesa  
Public Information Office  
20 E. Main St. Suite 750  
Mesa, AZ 85211-1466

ph: 480.644.3770  
tdd: 480.644.2778  
fx: 480.644.2175

web: www.ci.mesa.az.us  
email: jamie\_brennen@ci.mesa.az.us



Printed on recycled paper

## Remember to vote in Mesa's primary election

The City of Mesa's March 14 Primary Election is just around the corner. Don't forget to cast your vote in the first Mesa election where councilmembers will be elected by district.

All Mesa voters will be voting for a new mayor, and Mesa citizens in districts 1, 2 and 3 will be voting for a new councilmember in their respective districts. Similarly, in 2002, voters in districts 4, 5 and 6 will elect councilmembers for their districts.

Candidates for the council seat in District 1 include Milton Lee and Claudia Walters. Vying for District 2 are Alex Finter, Jan Hibbard, Kathy Tolman and Mike Whalen. And, incumbent Dennis Kavanaugh will run for a second term in District 3 opposite Tim Owen.

Mayoral candidates include former Vice Mayor Pat Gilbert and Councilmember Keno Hawker. A third mayoral hopeful, write-in

Election continued on page 3

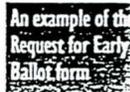
Request for Early Ballot  
Primary Election - March 14, 2000  
General Election (if required) - May 16, 2000

BALLOT REQUEST FOR:  
 Primary     General     Primary & General

Last Name	First Name	Middle Name	Jr/Sr/III
Street Address			Appt/Space #
City/Town		State	Zip Code

ADDRESS TO BE MAILED TO (IF DIFFERENT):  
 Primary     General     Primary & General

Street Address			Appt/Space #
City/Town		State	Zip Code
X	Date of Birth (for Verification)	Home Telephone No.	Business Telephone
X	Signature (elector who will VOTE the requested Early Ballot)		



## Mr. Luster: Man of the Year, City visionary

Charles K. Luster, City employee since 1957 and City Manager since 1979, retires March 1. He was named Mesa's 1999 Man of the Year. The following are excerpts from the award nomination of Mr. Luster by Mayor Brown and the City Council.

Charles K. Luster, City Manager of Mesa, has implemented policy during 10 mayoral terms, and he has guided the explosive growth of Mesa from a community of 15,000 residents over six square miles in the late 1950s to its thriving position today as Arizona's third-largest city with a population of 387,721 over 124 square miles.

He is respectfully called "Mr. Luster" by City staff, management, business and community leaders, and even councilmembers and mayors. Over the decades his workday usually has begun before sunrise and has ended after dark. He is known to show up at crime scenes at 2 a.m. and sometimes beats the police chief to major accidents.

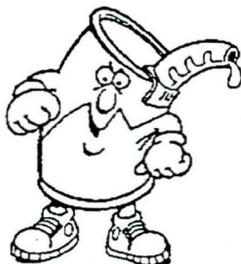


Charles K. Luster  
Mesa City Manager

Mr. Luster continued on page 3

## Prevent pollution, round up hazardous waste

Mesa is hosting a household hazardous waste and small appliance collection day for Mesa, Gilbert and Chandler residents 8 a.m. to 2 p.m., Mar. 4 at the Sixth Street Service Center, 300 E. Sixth St. (Mesa Drive north of University Drive) and the East Mesa Service Center, 6935 E. Decatur (Power Road north of University).



We are accepting residential household hazardous waste and small appliances only. Items include automobile and household batteries, automobile tires (limit five, please remove rims), paint, turpentine, adhesives, cosmetic items including nail polish and perfumes,

motor oil, transmission fluids, oil and fuel additives, cleaners such as detergents, pesticides and pool chemicals, toasters, blenders, garbage disposals and other small appliances. All liquids must be in five-gallon containers or smaller.

Non-acceptable items include explosives, radioactive materials, ammunition, 55-gallon drums of material, large truck tires, and commercial or industrial waste.

Drivers will be asked to present their most recent monthly utility statement. Apartment residents will be asked to provide the name and address of their apartment complex. Call (480) 644-2222 for more information.

## Confidentiality key to Census

Ever wonder if the information you give the Census Bureau is kept private?

Federal law mandates that individual records be held confidential for 72 years, and no one outside the Census Bureau can be given any information that would enable them to connect your answers with your name and address; not courts of law, credit companies, solicitors, police, military, IRS, FBI, immigration or welfare agencies. The Freedom of Information Act doesn't even grant access to your Census answers.

The law also says that before anyone at the Census Bureau sees your completed questionnaire, they must first be sworn to secrecy. Anyone violating this oath of secrecy is subject to a sizable fine and prison term.

Before beginning work for the



Census Bureau, all employees must pass a security and employment reference check. Additionally, the agency employs a host of safeguards, such as electronic barriers and secure telephone lines, to block outside access to any confidential information in Census Bureau computers.

After you return your form, it will be sent to one of the Census Bureau's four processing centers, where workers will scan it directly into computers that can read responses. Within 10 to 15 days, the form will be shredded. Your answers will be combined with those of others to produce statistical summaries.

## Mayor delivers historic State of City address

In January, Mayor Wayne Brown paid tribute to the quality services provided by Mesa's mayors, councilmembers, employees and citizens throughout the century in his annual State of the City address at the first City Council meeting of the year.

Along with highlighting Mesa's accomplishments both past and present, Mayor Brown also debuted the City's 1999 Annual Performance Report, *Closing the Century*, which offers a century-long retrospective on Mesa.

A full transcript of the speech is available on the City's web site at <http://www.ci.mesa.az.us>. To receive a copy of the 1999 Annual Performance Report, call (480) 644-3770.

*Election* continued from page 1

candidate Kirby Allan, also will be eligible to receive votes. As a write-in candidate, however, Allan's name will not appear on the ballot.

Additional items on the Primary ballot include an initiative to prohibit the addition of fluoride in City water; amending the City Charter concerning real estate tax, personal property tax and the City Council ethics code; repealing City sales tax on food and rental property; and considering the fire sprinkler referendum, a property maintenance code, home rule budget control and bond questions.

To request an early ballot, call the City Clerk's Office at (480) 644-2381. For additional information, log onto the City web site at [www.ci.mesa.az.us](http://www.ci.mesa.az.us).

On Election Night, watch the election results as they come in at Mesa's Election Central, upper level City Council Chambers, 57 E. First St., or on Mesa Channel 11.

*Mr. Luster* continued from page 1

He approaches volatile issues with integrity and fairness. He mentors employees, citizens and organizations. He is respected, respectful and honest.

His sense of humor is sly and infectious. His negotiation skills are artful. He shuns the spotlight on himself, even though one year he was named the most influential person in Mesa by a local newspaper, and he defers to those who work for him and those for whom he works. In a community that has had only three city managers over the last five decades, he is a stabilizing force in the demands of staggering growth.

He is grounded in reality while having a practical vision for our city in the new millennium. He gently guides the operations of 11 City departments, and he inspires the City's 3,000 employees and follows the recommendations of 25 citizen advisory boards and committees.

## Neighborhood Notebook

### Water Safety Instructors needed

If you enjoy working with kids, here's a "cool" way to earn some extra cash this summer. The Mesa Parks, Recreation and Cultural Division needs Water Safety Instructors to teach swimming lessons this June and July. WSI's must be 17 years old or older, and must complete 40 hours of training. Training classes start in March, and starting pay is \$8.53 per hour. Spanish-speaking instructors are especially needed. Call the Aquatics Office at (480) 644-2351 for more information.

### Electronic kiosks bring information to citizens

The City of Mesa has installed three electronic information kiosks throughout the city to provide citizens easy access to information about Mesa.

Called AccessMesa, the kiosks allow users to obtain information about a variety of topics including the City's web site; weather and real-time traffic reports; tourism; maps; community issues and affairs; transit; employment and elections.

The first of the three AccessMesa kiosks has been housed in the lobby of the Mesa City Plaza building, 20 E. Main St., since July 1998. The two remaining kiosks are located at Superstition Springs Mall, 6555 E. Southern Ave., and Fiesta Mall, 1445 W. Southern Ave.

"The project brings government directly to the citizens," said Councilmember Dennis Kavanaugh. "And, the installation of AccessMesa furthers the goal of universal access."

For more information on AccessMesa, contact the Public Information Office at (480) 644-3770.

He is an advocate of public safety, quality of life, a solid infrastructure, team efforts, continuous improvements, quality utilities and human services. He volunteers for human service agencies, such as preparing and serving food at Paz de Cristo, filling bowls at the annual Empty Bowls event and improving playground equipment at a Mesa elementary school.

He is the quintessential City Manager, and he embodies the City's motto of *Great People, Quality Service!*

He is Charles K. Luster, Mesa's 1999 Man of the Year.

### Schedule of Primary Election deadlines

Feb. 10 - Mar. 10, 2000  
Early voting for the Primary Election

Feb. 14, 2000  
Latest date to register to vote in the  
Primary Election

Feb. 29, 2000  
Latest date to file paperwork to  
run as a write-in candidate in the  
Primary Election

Mar. 3, 2000  
Latest date for City Clerk to mail  
sample ballots for Primary Election

Mar. 14, 2000  
Election Day

# Cubs Spring Training tickets on sale now

Don't miss your chance to get a preview of "Slammin" Sammy Sosa and the rest of the Chicago Cubs when Major League Baseball spring training returns to Mesa this March.

The friendly confines of Hohokam Stadium will be the setting for 14 Cubs' home games this spring, including a visit from the Arizona Diamondbacks, a night game against the Oakland A's and two meetings with their cross-town rivals, the White Sox. All day games start at 1 p.m.

Tickets can be purchased by phone through Dillard's at (480) 503-5555, or at the stadium box office, 9 a.m. to 4 p.m., Mon. through Fri., 1235 N. Center (just north of Brown Rd.).

## 2000 Chicago Cubs spring home schedule

Thurs., March 2	Intersquad game
Fri., March 3	Chicago White Sox
Sat., March 4	San Francisco Giants
Mon., March 6	Anaheim Angels
Wed., March 8	San Diego Padres
Thu., March 9	San Francisco Giants
Fri., March 10	Oakland A's (7 p.m.)
Sun., March 12	Arizona Diamondbacks
Wed., March 15	Milwaukee Brewers
Thu., March 16	Seattle Mariners
Sat., March 18	Chicago White Sox (split-squad)
Sun., March 19	Colorado Rockies
Mon., March 20	Milwaukee Brewers
Thu., March 23	Seattle Mariners

More information about Cubs' spring training in Mesa can be found at [www.cubspringtraining.com](http://www.cubspringtraining.com).

## Events and Exhibits

All area codes 480 unless otherwise indicated.

March 2, 9, 16, 30, Surviving In The Desert, 7 p.m., Main Library, 64 E. First St. A series of programs covering the dangers of the central Arizona desert. Free. 644-2207.

March 3, MacMovies, 7-10 p.m., Mesa Arts Center, 155 N. Center St. Film screening and discussion of "movies about creativity": High Art. Free. 644-2242.

March 4, Mesa Day Miniature Parade, 10-11 a.m., downtown Mesa. Annual miniature parade with floats, bands, dance troupes and antique cars. Free. 644-2351.

March 4, Mesa Day Festival, 11 a.m.-4 p.m., Pioneer Park, 526 E. Main St. Community festival featuring games, rides, crafts, entertainment and exhibits. Free (some rides and games will require a separate fee). 644-2351.

March 6, 20, City Council meeting, 5:45 p.m., Council Chambers, 57 E. First St. Broadcast live on Channel 11. Rebroadcast at 9 a.m. and 7 p.m. the following day. 644-3770.

March 6, ACT Workshop, 7 p.m., Main Library, 64 E. First St. Workshop provides tips for high schoolers taking the ACT. Free. 644-2705.

March 7, Tax Preparation Seminar, 7-8:30 p.m., Mesa Public Library, 64 E. First St. Learn what preparations to make when assembling records for you or your tax preparer. Discover deductible expenses for which you may be eligible. A certified financial planner and tax specialist share information and answer your questions. Free. For registration information, call 644-2207.

March 11, ACT Practice Test, 1 p.m., Main Library, 64 E. First St. Practice test for students. Actual scores will be available following the test. Free. 644-2705.

March 21, Drip Irrigation Workshop, 6:30-9 p.m. Learn how to design and install a water-saving drip irrigation system. Free. For more information or to register, call 644-3306.

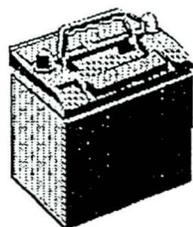
*Advertising for  
Battery, Latex Paint and Tire (BLT)  
Event*

## Solid Waste Division

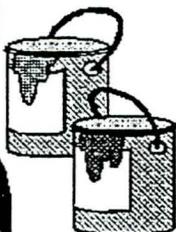
"Committed to providing excellence in the delivery of solid waste services"

► [Back to Solid Waste Division](#)  
[To the Household Hazardous Waste Page](#)

# Batteries, Latex Paint, and Tires



**Batteries (B)**



**Latex Paint (L)**



**Tires (T)**

## BLT Program

The BLT program is designed to help residents recycle **Batteries** (automotive), **Latex Paint** (water based), and **Tires** (automotive limit 5 no rims). We will be collecting **only** these items at the facilities listed. Collection events will be held on the third Saturday of each month on the dates listed.

Collections will be held at the facilities on listed days only. Hours of operation are 8:00AM to 12:00PM

### Center Street

2412 N. Center  
[See map](#)

September 16, 2000

November 18, 2000

\*\*\*\*\*

January 20, 2001

May 19, 2001

### East Mesa Service Center

6935 E. Decatur Rd.  
[See map](#)

October 21, 2000

December 16, 2000

\*\*\*\*\*

February 17, 2001

April 21, 2001

June 16, 2001

If you have any questions please call us at (480) 644-2222.

## 'Tis the season to Treecycle

Every year Valley cities haul away thousands of Christmas trees, reducing the life of local landfills. You can help our landfills and the environment by recycling your Christmas tree.

Mesa is operating Christmas tree drop-off sites 9 a.m. to 2:30 p.m., Jan. 1 and 8, 2000, and there is no charge to Mesa residents to recycle their Christmas trees.

Volunteers and City staff will be on hand to help you unload your tree. The trees will be chipped into mulch to be used for landscaping and erosion control.

If you are planning to recycle your Christmas tree, remember trees must be free of nails, stands, tinsel and flocking, so go for the natural look when you decorate.

Drop off locations are:

- Central Christian Church, 933 N. Lindsay
- East Mesa Service Center, 6935 E. Decatur

- East Mesa C
- K-mart, 144
- Mesa Service Center, 300 E. Sixth St.
- Reed Park, 1602 E. Broadway
- Red Mountain Community Church, 3400 N. Recker
- St. Timothy's Catholic Church, 1730 W. Guadalupe

Residents also can take trees directly to the Salt River Landfill at Gilbert Road and State Route 87 (Beeline Highway). The landfill is open 7 a.m. to 5 p.m. Monday to Saturday. Residents will need a current Arizona driver's license showing their Mesa address to avoid landfill fees.

If you want to have your tree picked up curbside, there is a \$5 bulk-item pick-up charge. Please call (480) 644-2688 to schedule a pick up. Donations of potted trees (five to six feet or larger) will be accepted at all Mesa Fire Stations.

If you have any questions, call the Recycling Hotline at (480) 644-2222 or visit our web page at [www.ci.mesa.az.us/waste](http://www.ci.mesa.az.us/waste). ▼

## Neighborhood Notebook

### Solid Waste Division announces arrival of BLT

Beginning Jan. 15, 2000, Mesa's Solid Waste Division will hold monthly collection events for batteries (automotive), latex paint (water based) and tires (automotive). BLT collections will be held on the third Saturday of each month at alternating City facilities (except in March due to the annual Household Hazardous Waste Collection event). The two alternating sites are the Center Street Storage Facility, 2412 N. Center St. (Center north of McKellips), and the East Mesa Service Center, 6935 E. Decatur (Power north of University).

The sites will be open for residential drop-off between 8 a.m. and noon. The location schedule for 2000 is:

Center Street Facility	East Mesa Service Center
Jan. 15	Feb. 19
May 20	April 15
July 15	June 17
Sept. 16	Aug. 19
Nov. 18	Oct. 18
	Dec. 16

Residents will be required to show their most recent City of Mesa bill. And, please remember, only automotive batteries, water-based latex paint and automotive tires (limit five, no rims) will be accepted. If you have any questions, call the Recycling Hotline at (480) 644-2222 or visit our Web site at [www.ci.mesa.az.us/waste](http://www.ci.mesa.az.us/waste). ▼

### Why is my tap water cloudy?

Ever pour a glass of water, and notice that it's not quite as clear as you'd like?

The water flowing from your tap may have a cloudy or milky appearance because millions of bubbles are released from the water system when one or more of the City's groundwater production wells is operated.

Generally, when this occurs, water poured into a glass first will become clear at the bottom, then as air bubbles rise and dissipate, the rest of the water becomes clear. At times, it may take several minutes for the dissolved air to completely disappear. Rest assured, the bubbles are harmless and not a health concern.

For more information on the City's drinking water supply, call the Water Quality Services Office at (480) 644-3481 or (480) 644-2885. ▼

### Clarification of utility rate revision

In the October 1999 issue of *Open Line*, the City included information on 1999-2000 utility rate changes. To minimize confusion, *Open Line* did not list base charges because many different base rates. Instead, the City focused on the amount of the utility increase.

For clarification, a base rate of \$8.20 will be assessed for residential water service in addition to the newly increased cost of \$1.46 per 1,000 gallons of water up to 12,000 gallons.

## Drop off batteries, paint and tires at *BLT* *WUUU*

Mesa's Solid Waste Division is holding monthly collection events for automotive batteries and tires, and water-based latex paint. BLT collections will be held the third Saturday of each month at alternating City facilities.

The two alternating sites are the Center Street Storage Facility, 2412 N. Center St. (Center north of McKellips) and the East Mesa Service Center, 6935 E. Decatur

(Power north of University). The sites will be open for residential drop off between 8 a.m. and noon.

Residents will be required to show their most recent City of Mesa bill. Only automotive batteries, latex paint and passenger tires (limit five, no rims) will be accepted. If you have any questions, call the Recycling Hotline at (480) 644-2222 or visit our web site at [www.ci.mesa.az.us](http://www.ci.mesa.az.us).

### —2000 BLT schedule—

#### Center Street Facility

May 20

July 15

Sept. 16

Nov. 18

#### East Mesa Service Center

June 17

Aug. 19

Oct. 21

Dec. 16

## Neighborhood Notebook

### Summer program brochure available

What are you doing this summer? Pick up a copy of Mesa's *Time Out* brochure to catch the latest listings of summer classes and activities. The Summer 2000 edition includes information on summer sports camps, day recreation programs, swimming lessons, pool schedules and aquatics programs, and exercise, outdoor and special interest classes.

### Mesa honored with national aquatics award

The City's Parks, Recreational and Cultural Division was awarded an Excellence in Aquatics Award by the National Recreation and Parks Association in March.

The award honors agencies and institutions that demonstrate excellence in planning and managing diversified aquatic services. One award is presented annually to cities in each of several population categories, and the City of Mesa was chosen the winner in the category of communities over 250,000 in population.

Among Mesa's most notable aquatic achievements is the operation of 12 pools including the Shepherd Aquatic Complex, Mesa's first multi-attraction facility.

For more information about the award, or Mesa Parks, Recreation and Cultural Division's aquatics programs, call (480) 644-2194, or log onto our web site at [www.ci.mesa.az.us](http://www.ci.mesa.az.us).

### Stand up and be counted

Census Day was April 1. Were you counted? The City of Mesa receives approximately \$275 per person, per year, in state and federal revenue, based on the Census numbers. The money is used to support a variety of programs including public transportation, homeless programs, emergency assistance, Head Start and senior citizen programs. If you haven't filled out your census form, please take a few minutes now to complete it and mail it back. It's not too late.

### Celebrate opening of canal bank multi-use path

Get ready to run, ride and roll. The first leg of Mesa's canal bank multi-use path system will be dedicated at 9:30 a.m., May 6 at the path's starting point on Center Street just north of Brown Road, and continuing east to Horne. The public is invited to participate in the games, activities, demonstrations and giveaways that also will take place 9 a.m.-noon.



Mayor Wayne Brown will preside over a brief ceremony, then break through a finish line that opens the path for walkers, joggers, bicyclists, skaters and wheelchairs. Admission is free. For more information, contact the Mesa Parks, Recreation and Cultural Division at (480) 644-2351.



# OpenLine

A Monthly Newsletter for City of Mesa Customers

March 2005

Mayor  
Wayne Brown

Vice Mayor  
John Giles

Councilmembers  
Jim Davidson  
Keno Hawker  
Bill Jaffa  
Dennis Kavanaugh  
Pat Pomeroy

Open Line is published by

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20 E. Main St. Suite 750  
Mesa, AZ 85211-1466

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web: [www.ci.mesa.az.us](http://www.ci.mesa.az.us)  
email: [jamie\\_brennen@ci.mesa.az.us](mailto:jamie_brennen@ci.mesa.az.us)

## Drop off batteries, latex paint and tires at BLT event

Remember... dispose of automotive batteries and tires, and water-based latex paint at the City's next BLT collection event 8 a.m.-noon, April 15 at the East Mesa Service Center, 6935 E. Decatur (Power, north of University).

Please bring only latex paint, automotive batteries and passenger tires (limit 5, no rims).

For more information, call the Recycling Hotline at (480) 644-2222 or visit our web site at [www.ci.mesa.az.us](http://www.ci.mesa.az.us).



Great People, Quality Service!



## HOT STUFF FOR COOL KIDS:

# Mesa offers great summer youth programs

Yes, it may only be March, but now is the time to start thinking about what you and your kids will be doing this summer. Get ready because registration for summer sports camps, day recreation programs, and arts camps and classes begins next month.

The information presented here is a preview only, and should not be used as a registration form. Watch for the summer issue of *Time Out*, the Community Services Department's quarterly program brochure, coming April 7. Registration forms for all programs will be included in that brochure.

Most programs take place in June and July; call the phone numbers listed for specific dates. Most programs are offered in both the Mesa Parks, Recreation and Cultural Division's East and West Districts (divided by Gilbert Road). Fee assistance for certain programs is available to those who qualify.

Note: MPRCD programs do not qualify as daycare programs for tax purposes.

### Day Recreation Programs

#### — Entering Kindergarten —

**Safety Town.** Program mixes education, socialization and fun together for a week of excitement. Activities include bicycle safety, water safety, D.A.R.E., and learning home phone numbers and addresses. Safety Town meets for one week, two hours per day. The program is free with pre-registration.

#### — Grades 1-6 —

**Kids In Action.** High-energy half-day program, at local elementary schools, features crafts, movies, games, guest speakers and special events.

Mon.-Thu., 9:30 a.m.-noon or 1-3:30 p.m. Eight-week session: \$50.

**Boredom Busters.** Action-packed afternoon program at local elementary schools, features swimming, games, crafts, guest speakers and special events. Mon.-Thurs., 1-5:30 p.m. Eight-week session: \$70.

**Summer Adventure Camp.** Fabulous full-day experience offers all of the activities of Boredom Busters above, plus daily swimming and weekly field trips. Mon.-Fri., 7 a.m.-6 p.m. \$70 per week.

**Kid Club.** Dynamite drop-in recreational program with supervised, structured activities, but kids are free to enter and leave as they choose. Mon.-Thurs., 1-5:30 p.m. Eight-week session: \$35.

**Youth Adventure Series.** Fantastic Friday program includes field trips to great places like Polar Ice and Goffland, plus bowling, swimming and pizza. Fri., 9 a.m.-5 p.m. \$20 per day (includes transportation).

#### — Grades 4-6 —

**Sports Plus.** Super sports program features team sports combined with movies and special guests. Mon.-Thurs., 1-5:30 p.m. Seven-week session: \$68.

#### — Grades 7-9 —

**G.R.E.A.T. Camp.** Great camp focuses on self-esteem building through recreation and educational activities, weekly field trips and swimming. Mon.-Thurs., 11:30 a.m.-2:30 p.m. Six-week session: \$20. Information: (480) 644-3341.

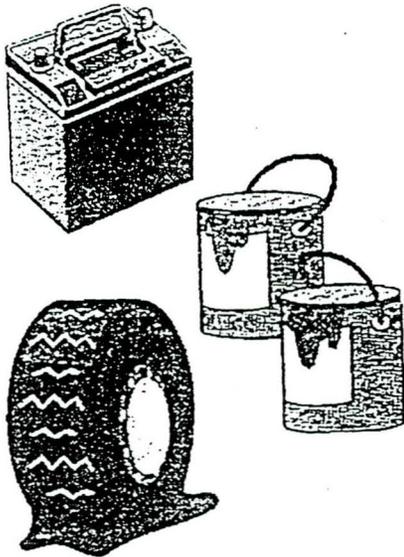
**Teens Summer Camp.** Amazing afternoon program includes sports, games, crafts, field trips and swimming. Mon.-Thurs., 1-5:30 p.m. Seven-week session: \$80. Information: (480) 644-3341.

**Counselors-In-Training.** For teens ages 14-16, program provides on-the-job training at summer recreation day camps. CITs assist staff in arts and crafts, games, special events. There is no fee for this program; for an application, call (480) 644-3682 (east) or (480) 644-3938 (west).

Summer continued on page 2

# **BLT** **PROGRAM**

**BATTERIES**  
**LATEX PAINT**  
**TIRES**



The City of Mesa is sponsoring a monthly collection of batteries, latex paint and tires.

The event will take place:

**CENTER STREET**  
**FACILITY**

**2412 N. Center**  
**(Center, North of**  
**McKellips)**

**Saturday,**  
**July 15th, 2000**  
**8:00am to 12:00pm**

For more information, please call the  
City of Mesa Recycling Hotline at  
**(480) 644-2222.**

## Batteries, Latex Paint and Tires (BLT) Program

The City's Solid Waste Division is proud to introduce the arrival of the NEW BLT Program! No, we're not talking about food. We're talking about those batteries, latex paints and tires which have been laying around on you patio or in your backyard. Starting January 15, 2000, the Solid Waste Division will be scheduling monthly collection events for Batteries (automotive), Latex Paint (water based) and Tires (automotive) (BLT). These items will be accepted for disposal on the third Saturday of each month at alternating City facilities, (except for March due to the annual Household Hazardous Waste Collection Event.) The two BLT sites are the Center Street Storage Facility located at 2412 N. Center Street (Center Street north of McKellips) and the East Mesa Service Center located at 6935 E. Decatur (Power Road north of University).

The sites will be open for residential drop-off between 8:00 am and 12:00 noon. The location schedule for 2000 is listed below:

<u>Center Street Yard</u>	<u>East Mesa Service Center</u>
2412 N. Center	6935 E Decatur Rd.
January 15, 2000	February 19, 2000
May 20, 2000	April 15, 2000
July 15, 2000	June 17, 2000
September 16, 2000	August 19, 2000
November 18, 2000	October 21, 2000

Residents will be required to show their most recent City of Mesa bill. Remember **ONLY** batteries (automotive),

## Transportation Alternative for Mesa Seniors

Transportation assistance is now available for Mesa Senior Citizens 65 and older! The Enabling Transportation program (ET) is designed for seniors who do not drive. Seniors can choose their volunteer driver from their neighborhood or friends, and can travel to approved destinations such as the grocery store, medical visits, church or synagogue, and any Mesa Senior Center.

ET directly reimburses eligible seniors 32 cents per mile. For more information on the ET program, contact (480) 962-5612 or stop by the Downtown Mesa Senior Center located at 247 N. Macdonald, or the Mesa Senior Center East, located at the Red Mountain Multigenerational Center, 7550 E. Adobe. ■

## NEW Mesa R' Camper Stor

A recently enacted ordinance requires homeowners to store their recreational vehicles, utility trailers and truck campers (of not greater than 30' in length) in a "buildable area" behind the front of the home or in the side yard. RVs taller than six feet that are stored in the side yard must be screened from the street by a six-foot high opaque fence.

Residents with questions can call the City's Code Compliance Division at (480) 644-2061, or check out the ordinance or the City's web site at [www.ci.mesa.az.us](http://www.ci.mesa.az.us) under "What's New." ■

## Interested in Improving Mesa's Housing Conditions?

There is committee that is currently meeting to create an Education, Recognition and Reward Program for improving housing conditions in Mesa, if you would like to participate, or would like further information, contact Karen Kurtz, Human Services Coordinator at (480) 644-2968. ■

## Celebrate Diversity

Involve your neighborhood in celebrating "Unity in Diversity" during a weekend-long millenium observance of Mesa's Martin Luther King holiday, Jan. 14-17, 2000: participate in the first-ever MLK parade!

In previous years, MLK Day has been celebrated with a march — but in 2000 it will become a full-blown parade, with musical groups, school and community marching units, and floats. Here's your chance to show your neighborhood's support for diversity and for the unity of our community, by entering a float or a marching group in the parade. The event will begin at 11 a.m. Monday, Jan. 17. The parade route will start at Hibbert and First Street downtown, then will proceed west on the north side of Main Street to Macdonald, north to First Street and east to the Mesa Community Center plaza.

For an application form to enter the parade, call the Mesa Parks, Recreation and Cultural Division, 480-644-2351. Entry deadline is Jan. 5, 2000.

Other MLK Celebration events include a candlelight service the evening of Jan. 14; a breakfast Jan. 17 featuring keynote speaker U.S. Civil Rights Commission chairperson Dr. Mary Frances Berry; and a festival with food, entertainment and vendors on the Community Center plaza from noon to 3 p.m. after the parade on Jan. 17. ■

# **Sample Letter for Support of Auto Part Store Oil Collection**



## Where to Take Used Oil

The City of Mesa encourages residents to dispose of used oil properly. Improper disposal of oil into the street, storm sewer, solid waste containers or alleyways is not only bad for the environment it is in violation of City Ordinance and Federal Law. Help keep Mesa clean by disposing of used oil in a responsible manner.

The following automotive stores accept used oil for proper disposal or recycling:

### Checker Auto Stores:

9124 E. Apache Trail, Mesa  
2750 E. Main, Mesa  
1021 E. Main, Mesa  
6360 E. Main, Mesa  
25 E. McKellips, Mesa  
215 W. University, Tempe  
85 E. Southern, Tempe  
1809 E. Baseline, Tempe

### Q-Lube:

1945 S. Country Club, Mesa  
2062 W. Guadalupe, Mesa  
1519 E. Main, Mesa  
2055 W. Main, Mesa  
765 S. Alma School, Mesa  
407 E. University, Mesa

### Auto Zone:

6215 E. Main, Mesa  
746 N. Country Club, Mesa  
845 S. Dobson, Mesa  
2129 W. Guadalupe, Mesa  
1705 E. Main, Mesa  
255 E. Southern, Mesa

### Pep Boys:

1233 S. Country Club, Mesa  
7715 E. Main, Mesa

If you have any questions, please contact the Environmental Programs Division at 644-3599.

Thank you for your cooperation.

# **Additional Sampling Data**

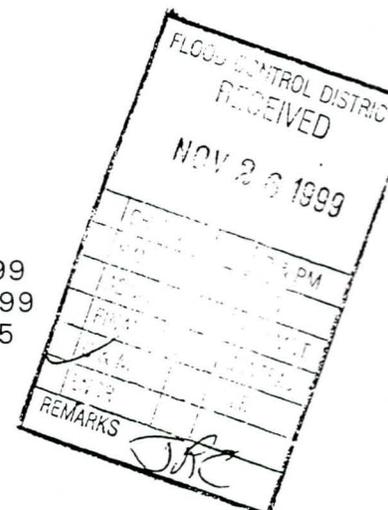


# Bolin Laboratories Inc.

17631 N. 25th Avenue • Phoenix, Arizona 85023  
(602) 942 8220 • FAX (602) 942 1050

Maricopa County Flood Control  
Environmental Branch  
2801 West Durango  
Phoenix, AZ 85009  
Attn: Julie Cox

Received: 9/24/99  
Reported: 11/16/99  
Invoice No: 059145



Project Name: Mesa NPDES

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
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Matrix: Storm Water  
 Sample No: 9909-08696-001  
 Sample ID: MIC092399 (Horne & 6th) Composite  
 Time Sampled: 18:00  
 Date Sampled: 9/23/1999

Chemical Oxygen Demand	EPA 410.4	65.	mg/L	20.	9/27/99
Total Dissolved Solids	SM 2540C	53.	mg/L		9/29/99
Solids, Total Suspended	EPA 160.2	202.	mg/L		9/28/99
Nitrogen as Ammonia	EPA 350.2	0.95	mg/L	0.03	10/06/99
Nitrogen as Nitrite	SM 4500-NO2 B	<0.1	mg/L	0.1	9/24/99
Nitrogen as Nitrate	CALC.	0.7	mg/L		9/24/99
Nitrate plus Nitrite	SM 4500-NO3 F	0.7	mg/L	0.1	9/30/99
Organic Nitrogen	CALCULATION	0.71	mg/L		9/30/99
Total Kjeldahl Nitrogen	EPA 351.3	1.66	mg/L	0.03	9/30/99
Total Phosphorous as P	EPA 365.3	0.48	mg/L	0.05	10/04/99
Total Phosphate	CALCULATION	1.5	mg/L		10/04/99
Phosphorus, Dissolved	EPA 365.3	0.16	mg/L	0.05	10/04/99
Metals Digestion for ICP	EPA 200.7				9/27/99
Metals Digestion for GFAA	SM 3030E				9/27/99
Cadmium	EPA 200.7	<0.005	mg/L	0.005	11/11/99
Copper	EPA 200.7	0.017	mg/L	0.015	11/11/99
Lead	SM 3113B	0.007	mg/L	0.005	11/03/99
Mercury	EPA 245.1	<0.0002	mg/L	0.0002	10/05/99
Zinc	EPA 200.7	0.15	mg/L	0.02	11/11/99
Filtration for Diss Metals					9/24/99
Cadmium, Dissolved	EPA 200.7	<0.005	mg/L	0.005	10/08/99
Copper, Dissolved	EPA 200.7	<0.015	mg/L	0.015	10/08/99
Lead, Dissolved	EPA 200.9	<0.005	mg/L	0.005	9/30/99
Mercury, Dissolved	EPA 245.1	<0.0002	mg/L	0.0002	10/05/99
Zinc, Dissolved	EPA 200.7	<0.02	mg/L	0.02	10/08/99
Calcium	EPA 200.7	13.	mg/L	1.	11/11/99
Magnesium	EPA 200.7	2.	mg/L	1.	11/11/99
Hardness, Total (Ca & Mg)	SM 2340B	40	mg/L	7.	11/11/99
4,4'-DDE	EPA 608	ND	ug/L	1.0	10/01/99
Extraction	EPA 608				9/29/99
Surrogate:	EPA 608				10/01/99
***Dibutylchlorendate	EPA 608	70	% Recovery		10/01/99



# Bolin Laboratories Inc.

17631 N. 25th Avenue • Phoenix, Arizona 85023  
(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water  
Sample No: 9909-08696-001

Time Sampled: 18:00  
Date Sampled: 9/23/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Benzo (a) pyrene	EPA 625	ND	ug/L	5.0	10/09/99
Chrysene	EPA 625	ND	ug/L	5.0	10/09/99
Fluoranthene	EPA 625	ND	ug/L	5.0	10/09/99
Indeno (1,2,3-cd) pyrene	EPA 625	ND	ug/L	5.0	10/09/99
Pyrene	EPA 625	ND	ug/L	5.0	10/09/99
Extraction	EPA 625				9/30/99
Surrogate:	EPA 625				10/09/99
***2-Fluorophenol	EPA 625	36.9	% Recovery		10/09/99
***d6-Phenol	EPA 625	28.8	% Recovery		10/09/99
***d5-Nitrobenzene	EPA 625	55.0	% Recovery		10/09/99
***2-Fluorobiphenyl	EPA 625	71.1	% Recovery		10/09/99
***2,4,6-Tribromophenol	EPA 625	114	% Recovery		10/09/99
***d14-Terphenyl	EPA 625	82.7	% Recovery		10/09/99
Chromium	EPA 200.8	0.0093	mg/L	0.0005	10/28/99
Chromium, Dissolved	EPA 200.8	0.0006	mg/L	0.0005	10/12/99

EPA Method 625 performed by Legend Technical Services, St.Paul MN, #AZ0557.

TKN & Ammonia analyzed by Aquatic Consulting, Tempe AZ. #AZ0003.

Total and Dissolved Chromium analyzed by ACZ Laboratories, Steamboat Springs CO, #AZ0102.

Report revised on 11/24/99 to correct the method reference for Total and Dissolved Chromium.

Stephanie Armas

Authorized Signatory  
ADHS License No.: AZ0004



# Bolin Laboratories Inc.

17631 N. 25th Avenue • Phoenix, Arizona 85023  
(602) 942 8220 • FAX (602) 942 1050

Maricopa County Flood Control  
Environmental Branch  
2801 West Durango  
Phoenix, AZ 85009  
Attn: Dave Gardner

Received: 7/14/99  
Reported: 9/03/99  
Invoice No: 057372

Project Name: Mesa

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Matrix:	Storm Water				
Sample No:	9907-06312-002				Time Sampled: 20:00
Sample ID:	Mesa #4 - Composite				Date Sampled: 7/14/1999
Chemical Oxygen Demand	EPA 410.4	160.	mg/L	100	7/26/99
Total Dissolved Solids	SM 2540C	199.	mg/L		7/19/99
Solids, Total Suspended	EPA 160.2	118.	mg/L		7/19/99
Nitrogen as Ammonia	EPA 350.2	1.31	mg/L	0.03	7/26/99
Organic Nitrogen	CALCULATION	2.11	mg/L		
Total Kjeldahl Nitrogen	EPA 351.3	3.42	mg/L	0.03	7/26/99
Total Phosphorous as P	EPA 365.3	0.33	mg/L	0.05	7/29/99
Total Phosphate	CALCULATION	1.0	mg/L	0.15	7/29/99
Metals Digestion for ICP	EPA 200.7				7/21/99
Metals Digestion for GFAA	SM 3030E				7/28/99
Copper	EPA 200.7	<0.015	mg/L	0.015	8/04/99
Lead	SM 3113B	0.019	mg/L	0.005	8/06/99
Mercury	EPA 245.1	<0.0002	mg/L	0.0002	7/23/99
Chromium	EPA 200.7	0.01 **	mg/L	0.01	8/24/99
Chromium, Dissolved	EPA M200.8	0.0032 ***	mg/L	0.0005	9/11/99
Cadmium, Dissolved	EPA 200.7	<0.005	mg/L	0.005	8/04/99
Copper, Dissolved	EPA 200.7	<0.015	mg/L	0.015	8/04/99
Lead, Dissolved	EPA 200.9	<0.005	mg/L	0.005	7/20/99
Mercury, Dissolved	EPA 245.1	<0.0002	mg/L	0.0002	7/28/99
4,4'-DDE	EPA 608	ND	ug/L	1.0	8/07/99
Extraction	EPA 608				7/16/99
Surrogate:	EPA 608				8/07/99
***Dibutylchloroendate	EPA 608	86	% Recovery		8/07/99
Fluoranthene	EPA 625	ND	ug/L	5.0	7/27/99
Pyrene	EPA 625	ND	ug/L	5.0	7/27/99
Benzo (a) anthracene	EPA 625	ND	ug/L	5.0	7/27/99
Chrysene	EPA 625	ND	ug/L	5.0	7/27/99
Indeno (1,2,3-cd) pyrene	EPA 625	ND	ug/L	5.0	7/27/99
Extraction	EPA 625				7/19/99
Surrogate:	EPA 625				7/27/99
d5-Phenol	EPA 625	27.0	% Recovery		7/27/99
** *2-Fluorophenol	EPA 625	34.0	% Recovery		7/27/99



# Bolin Laboratories Inc.

17631 N. 25th Avenue • Phoenix, Arizona 85023  
(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water  
Sample No: 9907-06312-002

Time Sampled: 20:00  
Date Sampled: 7/14/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
***d5-Nitrobenzene	EPA 625	62.2	% Recovery		7/27/99
***2-Fluorobiphenyl	EPA 625	61.8	% Recovery		7/27/99
***2,4,6-Tribromophenol	EPA 625	91.3	% Recovery		7/27/99
***d14-Terphenyl	EPA 625	81.0	% Recovery		7/27/99
pH	EPA 150.1	7.2	Std Unit		7/15/99
Nitrogen as Nitrite	SM 4500-NO2 B	<0.1	mg/L	0.1	7/15/99
Nitrate plus Nitrite	SM 4500-NO3 F	0.8	mg/L	0.1	7/15/99
Nitrogen as Nitrate	CALCULATION	0.8	mg/L		7/15/99
Phosphorus, Dissolved	EPA 365.3	<0.05	mg/L	0.05	7/29/99
Sulfate, Dissolved	EPA 300.0	28.5	mg/L	30	7/28/99
Cadmium	SM 3113B	0.0007	mg/L	0.0002	8/06/99
Calcium	EPA 200.7	21.	mg/L	1.	8/04/99
Magnesium	EPA 200.7	3.	mg/L	1.	8/04/99
Hardness, Total (Ca & Mg)	SM 2340B	64	mg/L	7.	8/04/99
Zinc	EPA 200.7	0.08	mg/L	0.02	8/04/99
Nickel	EPA 200.7	0.02**	mg/L	0.01	8/24/99
Nickel, Dissolved	EPA 200.7	0.02**	mg/L	0.01	8/24/99
Zinc, Dissolved	EPA 200.7	0.07	mg/L	0.02	8/08/99

EPA Method 625 performed by Legend Technical Services, St.Paul MN, #AZ0557.

TKN & Ammonia analyzed by Aquatic Consulting, Tempe AZ. #AZ0003.

EPA Method 608 analyzed by Alpha Analytical, Sparks, NV. #AZ0467.

\*\*Metals analyzed by Aquatic Consulting, Tempe AZ. #AZ0003.

\*\*\*Metals analyzed by ACZ Laboratories, Steamboat Springs CO. #AZ0102.

*Stephanie Armaso*

Authorized Signatory  
ADHS License No.: AZ0004



# Bolin Laboratories Inc.

17631 N. 25th Avenue • Phoenix, Arizona 85023  
(602) 942 8220 • FAX (602) 942 1050

Maricopa County Flood Control  
Environmental Branch  
2801 West Durango  
Phoenix, AZ 85009  
Attn: Dave Gardner

Received: 7/14/99  
Reported: 9/03/99  
Invoice No: 057372

Project Name: Mesa

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Matrix:	Storm Water				
Sample No:	9907-06312-001			Time Sampled: 20:00	
Sample ID:	Mesa #4 - Grab			Date Sampled: 7/14/1999	
Biochemical Oxygen Demand	EPA 405.1	<44. F	mg/L		7/15/99
Coliform, Fecal (MPN)	SM 9221D	13000	MPN/100ml	20	7/14/99
Fecal Streptococcus	SM 9230B	5000	MPN/100ml	20	7/14/99
Oil & Grease	EPA 413.1	<5.0	mg/L	5.0	7/29/99
Dichloromethane	EPA 624	ND	ug/L	50	7/28/99
Toluene	EPA 624	ND	ug/L	20	7/28/99
Surrogates:	EPA 624				7/28/99
***Pentafluorobenzene	EPA 624	88	% Recovery		7/28/99
***1,2-dichloroethane-d4	EPA 624	82	% Recovery		7/28/99
***4-bromofluorobenzene	EPA 624	72	% Recovery		7/28/99
***1,2-dichlorobenzene-d4	EPA 624	101	% Recovery		7/28/99
Temperature, Field		28.	Degrees C		7/14/99
pH, Field		8.0	Std Unit		7/14/99

F = The oxygen depletion for the BOD seed was outside laboratory acceptance criteria. The associated GGA check standard was acceptable. Data is considered valid.

Stephanie Armas

Authorized Signatory  
ADHS License No.: AZ0004

# **NPDES Construction Projects Database**

# Construction NOIs

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
Shea Homes, LP	10400 South Higley Road	8/20/98	7/15/00	196
Acacia Credit Fund 5-A, L.L.C.	8560 East Guadalupe Road	4/15/98	5/27/98	160
Pulice Construction, Inc.	SR101L - McKellips Road	6/17/96	12/31/97	160
Las Palmas Parks	NW Corner of Guadalupe & Ellsworth	11/10/97	11/10/98	153
Del Webbs Coventry Homes Co.	Brown Road and Lindsay Road	9/8/97	9/8/99	149
Stardust Development, Inc.		1/30/98	1/30/99	133
A.R. Development L.L.C.	2401 South Lansing	12/1/97	12/31/98	120
A.R. Development L.L.C.	2121 South Lansing	12/1/97	12/31/98	120
Communities Southwest	SEC of E. Baseline Rd & S. Ellsworth	12/1/97	12/31/98	120
Maracay Homes	8000 East McKellips Road	8/1/99	8/1/00	120
Ryland Homes				107

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
Pulice Construction, Inc.	Thomas Road and Power Road	10/1/92	11/1/92	101
Chi Construction Company	Baseline Road and Sossaman	8/8/93	12/31/98	100
Pulte Home Corporation	2605 North Ellsworth Road	9/1/98	9/1/00	89
Arizona Dept of Transportation	Pima Red MountainTi Phase IV NP52	3/30/98	8/5/99	76
Vestar Development LLC	1645 South Stapley Road	12/14/98	10/1/99	75
Lennar Communities Dev., Inc.	Meridian Road and Adobe Road	5/19/97	2/19/98	71
Hancock Homes		3/16/94	3/31/97	66
Red Mountain Industrial Park	5756 East McDowell Road	8/1/99	10/31/99	65
Greystone Homes		6/1/97	12/1/98	61
Greystone Homes		6/1/97	12/1/97	61
Standard Pacific Homes of Arizona	1341 North 86th Street	5/1/99	5/1/00	60
Pulice Construction, Inc.	Greenfield and Main	10/1/92	11/1/92	56

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
Sonoran Desert Holdings, L.L.C.	2715 North Ridgecrest	12/1/99	12/1/00	56
City of Mesa Environmental	7550 East Adobe Road	10/1/97	10/1/98	55
Target General, Inc.	7550 East Adobe Road	10/1/97	10/1/98	55
Pulte Home Corporation - Phx	Preston - East of Recker Road	12/15/92	1/1/98	53
Hancock Homes	Baseline/Crismon	4/18/97	4/18/00	52
FAB Management Corp.	10550 East Baseline Road	10/5/95	12/29/95	51
Pulice Construction, Inc.	7501 Superstition Springs Blvd.	8/15/93	3/15/94	51
Pulte Home Corporation	9350 East McKellips Road	2/24/98	2/24/00	50
Red Mountain Ranch, Inc.		10/28/91	10/28/94	50
Sonoran Desert Holdings, L.L.C.	7955 East Las Sendas Mountain Drive	7/1/00	7/1/01	49
Sonoran Desert	3360 North Ridgecrest	10/29/99	10/29/00	48
Sonoran Desert Holdings, L.L.C.	3755 North Ridgecrest	6/1/00	6/1/01	48

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
Pulte Home Corporation	9350 East McKellips Road	3/1/97	3/1/99	46
Sonoran Desert Holdings, L.L.C.	7866 East Eagle Crest	10/29/99	10/29/00	44
Coz Oaks, L.L.C.	Brown and Lindsay	6/21/94	11/5/94	43
Hunter Contracting Co.	6910 East Ray Road	8/10/98	6/30/99	43
Richmond American Homes, Inc.	McKellips and Terripin	9/1/92	12/31/94	43
Continental Homes, Inc.	Baseline Road - East of Power Road	2/1/94	12/31/99	42
Able Asphalt & Sealcoating	NWC of Superstition Springs & US 60	10/23/96	11/13/96	40
Arizona Tapping Industry	NWC of Superstition Springs & US 60	5/15/96	9/1/96	40
Montezuma Paving Company, Inc.	NWC of Superstition Springs & US 60	5/15/96	9/1/96	40
Pulte Home Corporation - Phx	Preston - East of Recker Road	7/1/91	9/30/96	40
RDG Holdings, Inc.	East of NEC Power Road and Brown Road	1/15/93	12/15/93	40
Temcon Concrete Construction	NWC of Superstition Springs & US 60	10/3/96	10/23/96	40

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
The Groundskeeper	NWC of Superstition Springs & US 60	10/6/96	12/18/96	40
The Westcor Company II L.P.	NWC of Superstition Springs & US 60	5/15/96	9/1/96	40
Utility Construction Company	NWC of Superstition Springs & US 60	11/1/96	12/31/96	40
Mesa Public Schools	10100 East Adobe Road	1/12/00	1/12/01	39
Pulice Construction, Inc.	Baseline - Guadalupe	6/9/97	11/30/98	38
Pulice Construction, Inc.	Baseline - Guadalupe	6/9/97	11/30/98	38
Richmond American Homes, Inc.	Starvalley and Santiago	6/1/86	2/28/93	38
Executive Homes, Inc.	Recker Road and McLellan Road	1/1/85	3/30/93	37
City of Mesa Environmental	Gilbert Rd and Southern Avenue	4/22/99	3/14/00	36
CSW Contractors, Inc.	Gilbert Road and Southern Avenue	4/22/99	3/14/00	36
Hancock Homes		9/12/94	9/30/97	36
Pulice Construction, Inc.	7199 Superstition Springs Blvd.	8/15/93	3/15/94	36

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
Ryland Homes	11520 East University Drive	7/1/97	1/30/00	36
Devcon Enterprises	1229 South Power Road	4/17/95	4/30/96	33
Sonoran Desert Holdings, L.L.C.	NWC of East Eaglecrest/Las Sendas Mountain Dr	2/1/00	2/1/01	33
Communities Southwest	10404 East Southern Avenue	10/15/96	10/15/97	32
Parkwood Ranch LLC	10404 East Southern Avenue	9/10/97	3/1/98	32
Richmond American Homes	2715 South 96th Street	9/12/99	12/31/02	32
Stardust Development, Inc.		1/30/98	1/30/99	32
A.R. Development L.L.C.	2715 South 96th Street	12/1/97	12/31/98	31
A.R. Development L.L.C.	2115 South Lansing	12/1/97	12/31/98	31
Communities Southwest	SEC of E. Baseline Rd & S. Ellsworth	12/1/97	12/31/98	31
Sonoran Desert Holdings, L.L.C.	7605 East Eaglecrest Drive	8/1/00	8/1/01	31
A.R. Development L.L.C.	2420 South Crismon Road	8/1/99	8/1/00	30

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
City of Mesa Environmental	Alma School & Guadalupe Roads	5/25/99	11/27/99	30
Achen-Gardner, Inc.	Ellsworth Road to Meridian Road	5/3/93	10/30/93	29
A.R. Development L.L.C.	9540 East Neville Avenue	12/1/97	12/31/98	28
Communities Southwest	SEC of E. Baseline Rd & S. Ellsworth	12/1/97	12/31/98	28
Fulton Homes Corp.	Sossaman Road North of Southern Avenue		8/15/93	28
Pulice Construction, Inc.	1203 Superstition Springs Blvd.	8/15/93	3/15/94	28
A.R. Development L.L.C.	2730 South 96th Street	12/1/97	12/31/98	27
A.R. Development L.L.C.		12/1/97	12/31/98	27
A.R. Development L.L.C.	2156 South Lansing	8/1/99	8/1/00	27
A.R. Development L.L.C.	2035 South Lansing	8/1/99	8/1/00	27
Communities Southwest	SEC of E. Baseline Rd & S. Ellsworth	12/1/97	12/31/98	27
Communities Southwest	SEC of E. Baseline Rd & S. Ellsworth	12/1/97	12/31/98	27

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
Communities Southwest	SEC of E. Baseline Rd & S. Ellsworth	12/1/97	12/31/98	27
Hancock Homes	Broadway/Ellsworth	2/18/97	2/18/00	27
J. Banicki Construction, Inc.		6/23/97	8/1/97	27
Maracay Homes, Inc.	9844 East Southern Avenue	9/1/98	9/1/99	27
Sonoran Desert Holdings, L.L.C.	8022 East Las Sendas Mountain Drive	9/1/00	9/1/01	27
A.R. Development L.L.C.	9810 East Neville Avenue	12/1/97	12/31/98	26
City of Mesa Environmental	310 East 6th Street	12/3/98	6/5/00	26
Foresite Design & Construction	300 East 6th Street	3/8/99	6/5/00	26
Hunter Contracting Company	100 North Center	5/12/97	11/12/97	26
Pulte Home Corporation - Phx	Clearview and Superstition Springs	1/20/92	1/1/98	26
Sonoran Desert Holdings, L.L.C.	4110 North Terra Mesa	6/1/00	6/1/01	26
A.R. Development L.L.C.	Ellsworth and Baseline	8/1/99	8/1/00	25

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
Hancock Homes	Gilbert/McKellips	2/21/97	2/21/00	25
Maracay Home Corporation	3440 East Southern, Unit 1062	8/1/92	8/1/94	25
A.R. Development L.L.C.	2501 South Lansing	12/1/97	12/31/98	24
A.R. Development L.L.C.	2220 South Crismon Road	8/1/99	8/1/00	24
A.R. Development L.L.C.	9767 East Navarro	8/1/99	8/1/00	24
Communities Southwest	SEC of E. Baseline Rd & S. Ellsworth	12/1/97	12/31/98	24
Communities Southwest	10404 East Southern Avenue	10/15/96	10/15/97	24
Pinnacle Builders	Higley and Southern Avenues	3/1/90	3/1/93	24
Torino Construction	1849 South Power Road	8/19/97	8/19/98	24
A.R. Development L.L.C.	2322 South Lansing	12/1/97	12/31/98	23
A.R. Development L.L.C.	2235 South Lansing	12/1/97	12/31/98	23
Communities Southwest	SEC of E. Baseline Rd & S. Ellsworth	12/1/97	12/31/98	23

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
Communities Southwest	SEC of E. Baseline Rd & S. Ellsworth	12/1/97	12/31/98	23
Richmond American		6/1/96	12/1/96	23
Richmond American	32nd Street and US 60	10/1/97	10/1/99	23
Communities Southwest	10404 East Southern Avenue	10/15/96	10/15/97	22
Fulton Homes Corp.	72nd Street North of Southern Avenue	10/1/92	10/1/93	22
Hunter Contracting Co.	5154 East Roadrunner	6/21/99	10/21/99	22
Pulice Construction, Inc.	McKellips Road - Country Club Drive	7/7/97	5/7/98	22
Pulice Construction, Inc.	McKellips Road to Country Club Drive	7/7/97	5/31/98	22
A.R. Development L.L.C.	2320 South Lansing	12/1/97	12/31/98	21
Communities Southwest	SEC of E. Baseline Rd & S. Ellsworth	12/1/97	12/31/98	21
RW Harris Builders Inc	SEC Quarterline Rd. and 105th Street	6/20/99	5/1/00	21
D.P. Homes, Inc.	West of Higley Road - South of Broadway	1/30/93	4/30/99	20

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
Hancock Homes	Crismon/Southern	2/7/97	2/7/00	20
Hancock Homes	NE Corner of McDowell and Ramada	9/3/96	9/3/99	20
Maracay Homes	SWC of Norwood Street & Ridgecrest Street	6/1/99	6/1/00	20
Maracay Homes Corporation	6540 East Star Valley Road	6/1/92	3/1/94	20
Fairfield Holdings	SWC of 8th Street and May Street	6/1/98	10/1/99	19
Communities Southwest	10404 East Southern Avenue	10/15/96	10/15/97	18
Del Webb's Coventry Homes Construction		7/15/93	7/15/98	18
Pinnacle Builders	5505 East McLellan	1/1/92	2/28/93	18
Red Mountain Ranch		9/1/92	9/1/95	18
Communities Southwest	10404 East Southern Avenue	10/15/96	10/15/97	17
Achen Gardner, Inc.		7/31/98	1/13/99	16
Communities Southwest	10404 East Southern Avenue	10/15/96	10/15/97	16

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
Parkwood Ranch LLC	10404 East Southern Avenue	9/10/97	3/1/98	16
Richmond American Homes	10231 East Broadway Road	10/1/99	10/1/01	16
Sonoran Desert Holdings, L.L.C.	Approx. 500' North of Las Sendas Mountain Drive	6/1/00	6/1/01	16
A.G. Spanos Construction, Inc.	1361 South Greenfield Road	1/1/97	1/1/98	15
City of Mesa Engineering	400 North Country Club Drive	4/20/92	11/15/92	15
Communities Southwest	10404 East Southern Avenue	10/15/96	10/15/97	15
Continental Homes, Inc.	Mesa Drive and Inglewood Street	1/15/00	1/1/05	15
Executive Homes, Inc.	Alta Mesa Drive and McLellan Road	1/1/85	1/30/93	15
The Spanos Corporation	1361 South Greenfield Road	5/27/97	5/28/98	15
City of Mesa Engineering	Ellsworth Road to McKellips Road	6/1/98	10/31/98	14
Mark Development Corp.	6745 East Superstition Springs Blvd.	12/5/94	2/28/96	14
Nesbitt Contracting Co., Inc.	Ellsworth Road to McKellips Road	6/1/98	10/31/98	14

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
Park West Development Company	SW Corner of Main and Alma School	2/1/96	9/30/96	14
Hunter Contracting Company	Recker Road - McDowell to McKellips	5/4/93	10/4/93	13
Richmond American Homes	10266 East Coral Bell Avenue	10/1/99	10/1/01	13
Sonoran Desert Holdings, L.L.C.	7145 East Eaglecrest Drive	1/1/00	1/1/01	13
Western Communities Group	Lindsay Road & Superstition Freeway	10/1/96	10/1/97	13
Inland Empire Builders	South Side of Broadway Rd, East of Higley Rd	1/1/99	1/1/00	12
Inland Empire Builders, Inc.	2433 West Main Street	7/21/98	4/21/99	12
Mesa Public Schools	615 South Cheshire Drive	7/1/98	7/1/99	12
P.B. Bell & Associates, Inc.	NW Corner of Power and Guadalupe Roads	4/1/00	8/1/01	12
Pierson Construction Corp.	Baseline Rd/Signal Butte Rd/Ellsworth Rd/Pecos	6/9/97	12/9/97	12
Pierson Construction Corporation	Baseline Rd/Signal Butte Rd/Ellsworth Rd/Pecos	6/9/97	12/9/97	12
Richmond American Homes	1855 North Alta Mesa Drive	4/4/98	7/1/99	12

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
Richmond American Homes	1855 North Alta Mesa Drive	4/4/98	12/31/98	12
Mesa Unified School District #4	N.E. Corner of McKellips & Ellsworth Roads	1/1/00	8/1/00	11
HuntCor, Inc.	3160 South Alma School	6/2/92	3/1/94	10
Hunter Contracting Company	Hampton Avenue - Clearview/Sossaman	5/17/93	10/17/93	10
Perini Building Company, Inc.	4555 East McDowell Road	11/25/96	5/30/97	10
Sonoran Desert Holdings, L.L.C.	3202 North Ridgecrest	11/24/99	11/24/00	10
Great Western Projects, Inc.		2/9/98	9/9/98	9
Sonoran Desert Holdings, L.L.C.	7250 East Eaglecrest Drive	11/1/00	11/1/01	9
Sonoran Desert Holdings, L.L.C.	7900 East Eagle Crest Drive	6/27/00	6/27/01	9
Torino Holding, Inc.	Baseline and Power Road	8/10/94	8/10/96	9
C.S. Construction, Inc.	1212 North Center Street	9/8/97	1/5/98	8
Nesbitt Contracting Co., Inc.		7/6/93	10/15/93	7

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
Sonoran Desert Holdings, L.L.C.	8230 East Las Sendas Mountain Drive	7/1/00	7/1/01	7
C&F Equipment Co., Inc.	McDowell Road and Lindsay	3/1/93	6/29/93	6
Diessner Development Group	5202 East Baseline Road	1/2/00	6/1/01	6
Sonoran Desert Holdings, L.L.C.	7710 East Las Sendas Mountain Drive	7/1/00	7/1/01	6
Sonoran Desert Holdings, L.L.C.	7700 East Las Sendas Mountain Drive	3/1/00	3/1/01	6
Sonoran Desert Holdings, L.L.C.	7700 East Las Sendas Mountain Drive	1/1/00	1/1/01	6
The Voit Companies	7205 East Southern Avenue	8/15/99	8/15/00	6
Archon, Inc.	Country Club & Center	6/30/98	6/1/99	5
Bigelow Development	825 South Dobson Road	6/8/98	12/15/98	5
City of Mesa Environmental	120 North Robson	4/1/99	4/1/00	5
City of Mesa Environmental	Country Club & Center Streets	8/24/98	6/1/99	5
Haydon Building Corp.	120 North Robson	4/1/99	4/1/00	5

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
Haydon Building Corporation	5154 East Roadrunner Road	1/10/00	6/10/00	5
Pierson Construction Corporation	South Crismon Road and East Baseline Road	1/2/96	2/15/96	5
Richmond American Homes	Thomas & Recker Roads	10/6/98	6/30/99	5
Pulice Construction, Inc.	City of Mesa Urbanized Area	3/1/94	12/31/94	4
Achen-Gardner, Inc.	Main Street from Country Club to Hobson	6/30/97	11/19/97	3
Lee's Pipelines, Inc.	Ray Road and Power Road	8/11/97	1/15/98	3
Lee's Pipelines, Inc.	Ray Road and Power Road	8/11/97	1/15/98	3
Teran Ltd Partnership	950 West Main	4/1/99	4/1/00	3
Hunter Contracting Co., Inc.	6308 East Baseline Road	5/1/98	12/1/99	2
Hunter Contracting Company	East Baseline Road	5/1/98	12/1/99	2
Sonoran Desert Holdings, L.L.C.	2750 North Ridgcrest	11/24/99	11/24/00	2
AA Builders, LTD.	425 South Val Vista Drive			1

<i>Facility Operator</i>	<i>Facility Address</i>	<i>Start Date</i>	<i>Completion Date</i>	<i>Estimated Area to be Disturbed (in acres)</i>
Summit Builders	1440 South Higley Road	11/1/99	6/30/00	0
Evans-Withycombe, Inc.	1320 South Val Vista Drive			
Pulte Home Corporation	9350 East McKellips Road			