City of Mesa Retention Basin

STORM WATER ANNUAL REPORT

JULY 1998 – JUNE 1999

City of Mesa, Arizona

NPDES Permit Number AZS000004

CITY OF **MESA**

Great People, Quality Service!

Storm Water Report Certification

Recommended By: _____ Date 9-30-99

Jack Friedline
Public Works Manager

"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."

Signature _____ Date 9/30/99

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Table of Contents

Tables

Appendices

Introduction

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 second storm water annual report and covers the period from July 1, 1998 through June 30, 1999.

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.

Residential and Commercial Activities

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 1998/1999 reporting year, four Parks personnel were responsible for overseeing contractor activities. This changed to three personnel starting in September 1999. 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 vactor out sediment. At the end of each month, they submit an inspection report to the EPD describing cleaning activities. In the 1998/1999 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.

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 vactor cleaning of pump sites. To manage the large number of drains, they have divided the city into three districts. A map of these districts can be found in Appendix B. Storm drain maintenance activities are also included in the previously mentioned monthly inspection report monthly (Appendix B). The following table is a summary of cleaning and inspection activities for the 1998/1999 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 1998	991
August	5,834
September	1,548
October	2,701
November	1,949
December	13,456
January 1999	5,359
February	11,607
March	3,898
April	13,601
May	0
June	360
Total	61,304

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. They hire an outside contractor to sweep arterials approximately once a week. Streets Department personnel sweep residential and collector streets approximately once every five weeks. The same districts discussed in BMPs #2 are used to manage the street sweeping program and track the number of centerline miles swept. 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 98	794	563
August 98	885	788
September 98	896	698
October 98	794	726
November 98	885	766
December 98	885	727
January 99	794	629
February 99	803	100
March 99	994	795
April 99	795	795
May 99	844	946
June 99	780	763
Total	10,149	8,296

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 1998/1999 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 currently under design 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. Basin designs will be completed by November 1999; construction will occur during FY 99/00.

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 will be completed by March 2000; construction will occur during FY 99/00 and 00/01.

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 Department is responsible for planning and conducting the annual HHW event. They hire an outside contractor to manage the collection and disposal of the various wastes that are brought in. After the event each year, Solid Waste prepares a report summarizing the day's activities. The last event occurred on March 6, 1999. Appendix C includes a copy of the event report.

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. It was anticipated in the 1997/1998 Annual Report that the brochure would be completed during the 1998/1999 reporting year. Unfortunately, that completion goal was not achieved. An effort will be made to complete the brochure within the 1999/2000 reporting year. However, at a minimum, the it will be completed during Mesa's first permit term which expires in 2002.

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. During the 1998/1999 reporting year five outfalls were rescreened on June 24, 1999 and June 25, 1999. Appendix D identifies which outfalls were sampled on each date and presents the sampling results. No illicit discharges have been identified through the rescreening process.

Sample analysis was performed in accordance with 40 CFR Part 136. A HACH Storm Water Test Kit and standard laboratory equipment were used 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. A copy of the HACH Sampling Manual is also included in Appendix D.

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 1998/1999 reporting year:

Table C-1
Summary of Street Maintenance Spill Response*

	Auto Fluids	Concrete	Solid Waste (Hyd. Fluid)	Other	Total
July 1998	11	13	6	2	32
August	5	9	4	4	22
September	2	8	3	9	22
October**	--	--	--	--	--
November	4	4	1	9	18
December	22	8	6	4	40
January 1999	23	9	6	29	67
February	11	0	8	2	21
March	19	6	4	0	29
April	2	3	5	3	13
May	19	0	7	0	26
June	31	0	5	3	39
Totals	131	30	42	50	253

* Appendix B includes a sample monthly report.
** Spill Data was not recorded in the month of October, although cleanups did occur

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 1998/1999 reporting year, Environmental Programs responded to approximately 95 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 1998 through June 1999 the HAZMAT team responded to approximately 340 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 1998/1999 reporting year, public education was conducted for several SWMP components. These included the HHW event, the Construction Site Inspection Program, and Management of Used Oil and Toxics.

As described in BMPs #6 & #12, the Solid Waste Division advertised the 1999 HHW event in local newspapers, utility bills, on the Internet and in a news release (Appendix F). In addition to this advertising, information was distributed at the HHW event. Specifically, a brochure entitled "About Hazardous Products in the Home" and a contact page were given out. Appendix E 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 F. During 1998/1999 the information package was updated and distributed to contractors through Mesa's Building Inspections Department.

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 1999. One way in which that event is advertised is through a brochure entitled "Household Hazardous Waste Program". 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 event is advertised in local newspapers, in 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 annual HHW event and are given information as to where used oil, batteries and anti-freeze may be recycled in the interim.

Industrial Facilities

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 Sirrine 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. 6th 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.

Construction Projects

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, 1999, the database had information on over 165 projects in Mesa. Appendix I includes a summary report of these projects. The database will be used as the basis to prioritize site inspections.

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, 1998 through June 30, 1999. Many of the construction inspections have been conducted in response to dust or track-out complaints. The last column of Table F-2 has changed from last year's report. Instead of indicating whether compliance has been achieved, the column now tells how many times each site was visited by the environmental technician. This change has been made to better describe where the focus of enforcement activities took place. The last 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
Anodizing of Mesa*	1064 West Birchwood Street	3471	NA
SWD Urethane**	539 South Drew Street	3086	5/12/99
Mesa Fully Formed Co.	1111 South Lewis Street	3281	6/8/99
Korral Kool Incorporated	564 East Juanita Ave., Unit 6	3444	6/9/99
Semflex Incorporated	5550 East McDowell Road	3679	5/27/99
Olin Microelectronics Materials***	6550 South Mountain Road	2819, 2899	12/1/98
Special Devices Inc.	3431 North Reseda Circle	3714	6/2/99
Polytek Southwest	11400 East Pecos Road	5093	12/15/99

* This site has not yet been visited. A notification of upcoming inspection was sent to Anodizing of Mesa in June 1999.

** This site has not yet been visited. Pre-inspection activities have been conducted and a Storm Water Pollution Prevention Plan has been received.

*** Olin has determined that the Multi Sector Permit does not apply to their facility as they do not discharge to a Water of the United States.

Table F-2
Summary of Construction Inspections

Major Cross Streets	Inspection Date	Number of Site Visits
Guadalupe & Hawes	June 1998	>20
Southern & Power	July 1998	4
8th Street & Dobson	July 1998	12
Brown & Lindsay	July 1998	6
Main Street & Gilbert	July 1998	2
Brown & Ellsworth	June 1998	2
Broadway & 72nd Street	June 1998	1
Pecos and Ellsworth	July 1998	1
8th Street & Price	July 1998	1
Main Street & Val Vista	August 1998	2
Southern & Alma School	August 1998	2
Barkley & McKellips	August 1998	4
Country Club & Center	August 1998	4
Main Street & Center	August 1998	2
Southern & Country Club	August 1998	1
Baseline & Val Vista	August 1998	1
Main Street & Center	August 1998	2
Baseline & Crismon	August 1998	1
8th Street & Stapley	September 1998	6
University & Ellsworth	September 1998	1
Southern & Horne	September 1998	>20
University & Signal Butte	September 1998	3
Broadway & Signal Butte	September 1998	4
McDowell and Greenfield	September 1998	5
McDowell & Gilbert	September 1998	1
Main Street & Roosevelt	September 1998	15
Broadway & Power	September 1998	1
McKellips & Higley	September 1998	2
Main Street & 54th Street	October 1998	2
Baseline & 96th Street	October 1998	2
McLellan & Alma School	October 1998	3
McKellips & CAP Canal	October 1998	4
Main Street & Power	October 1998	5
Southern & Mesa Drive	October 1998	4
McLellan & Ellsworth	October 1998	2
Baseline & Ellsworth	October 1998	5
Brown & Ellsworth	October 1998	1
1st Avenue and Robson	October 1998	1
Guadalupe & Sossaman	October 1998	1
Baseline & Hawes	October 1998	4
Main Street & Gilbert	November 1998	3

Major Cross Streets	Inspection Date	Number of Site Visits
Main Street & Greenfield	October 1998	1
Guadalupe & Hawes	November 1998	1
Southern & Country Club	November 1998	1
Broadway & Power	November 1998	1
Main Street & Longmore	December 1998	1
McDowell & Power	December 1998	1
Baseline & Signal Butte	December 1998	1
Southern & Crimson	December 1998	1
Baseline & Sossaman	December 1998	1
McDowell & 64th Street	December 1998	1
McKellips & Center	December 1998	1
Superstition Freeway & Dobson	December 1998	1
Hermosa Vista & 24th Street	December 1998	1
Brown & Lindsay	January 1999	2
Southern & Mesa Drive	January 1999	1
6th Place & Center	January 1999	1
Southern & Signal Butte	January 1999	1
Broadway & Signal Butte	January 1999	1
Southern & Signal Butte	January 1999	2
6th Street & Mesa Drive	January 1999	10
McLellan & Higley	January 1999	2
Southern & Val Vista	January 1999	2
Broadway & Alma School	January 1999	1
Virginia & Greenfield	January 1999	1
Baseline & Hawes	January 1999	1
McDowell & Higley	February 1999	8
Main Street & 54th Street	February 1999	3
2nd Street & Lindsay	February 1999	18
Guadalupe & Ellsworth	February 1999	1
Brown & Greenfield	March 1999	3
McKellips & Horne	March 1999	3
University & Lewis	March 1999	7
6th Street & Mesa Drive	March 1999	9
University & Greenfield	March 1999	2
McKellips & Higley	March 1999	2
1st Street & Country Club	March 1999	2
McKellips & Higley	March 1999	1
McKellips & Mesa Drive	March 1999	1
Brown & Gilbert	March 1999	3
McLellan & Country Club	April 1999	2
McLellan & Harris	April 1999	1
1st Street & Extension	April 1999	4
McKellips & Harris	April 1999	2
8th Avenue & Country Club	April 1999	12

Major Cross Streets	Inspection Date	Number of Site Visits
Brown & Higley	April 1999	2
Baseline & Stapley	April 1999	1
Guadalupe & Hawes	April 1999	5
Southern & Higley	April 1999	1
Southern & Higley	April 1999	2
Broadway & Meridian	April 1999	2
McKellips & Lindsay	April 1999	8
McKellips & Val Vista	April 1999	3
Baseline & Power	April 1999	1
Inverness & Val Vista	May 1999	3
Broadway & Val Vista	May 1999	3
McKellips & Higley	May 1999	2
Baseline & Greenfield	May 1999	1
Guadalupe & Hawes	May 1999	1
Main Street & 56th Street	May 1999	1
Broadway & Greenfield	May 1999	1
Brown & Recker	May 1999	1
Western Canal & Price	May 1999	1
University & Stapley	May 1999	3
Hermosa Vista & Val Vista	June 1999	3
McKellips & Higley	June 1999	3
University & Extension	June 1999	2
Broadway & Val Vista	June 1999	2
Southern & Gilbert	June 1999	2
Broadway & Power	June 1999	3
Broadway & Val Vista	June 1999	1
Guadalupe & Alma School	June 1999	1

Table F-3
Summary of Public Education Activities

Subject	Type	Where	Date
Household Hazardous Waste	EPA Brochure	HHW Event	Once a year
Household Hazardous Waste Collection Day	Advertisement	Mesa Tribune Arizona Republic E. Mesa Independent	2/27, 3/3 & 3/6/99 2/27, 3/3 & 3/6/99 2/28/98 & 3/3/99
Household Hazardous Waste Collection Day	Website Ad	Mesa's Webpage	February 1998
Household Hazardous Waste Collection Day	News Release	Various Sources	3/2/99
Household Hazardous Waste Collection Day	Open Line	Utility Bills	February 1999
Household Hazardous Waste	Brochure	City Offices, Library	All Year
Household Hazardous Waste, Used Oil and Toxics	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 1st permit term

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

A total of ten (10) samples were collected from five (5) separate storms in reporting year 1998-1999. Three (3) of the sampled storms occurred during the summer "monsoon" season (July, August, and September) which typically has short duration, high intensity storms. The remaining two (2) storms occurred during 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).

Eight (8) of the ten (10) samples analyzed were collected from representative storms. 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 1998 through June 1999. The table only reports data for the 26 contaminants identified in the Permit.

Analysis for additional contaminants was performed for the storm events occurring on August 1, 1998, August 12, 1998 and August 15/16, 1998. That data is presented in Appendix H of this report. Sampling data from the non-representative storms is also presented in Appendix H. 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 1998/1999 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.

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

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
Total Runoff Volume	15224.18

* "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_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	07/31/98	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	NM	1.3	2.62	3.92	NM	NM	NM	NM
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_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					2655.60	5051.00	8425874.00	1922337.00	4535.00	4387.00	36.24	114.05	146.82	136.54	26.72	17.00	176.00
EMC					64.77	113.95	234052.06	53398.25	105.47	102.02	0.91	2.65	3.67	3.41	0.62	0.40	4.51

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)	Chyrsene 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	ND
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
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	NM
MESA_2	12/05/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MESA_2	03/11/95	NM	NM	NM	NM	NM	NM	NM	ND	NM	NM	NM	NM	NM	NM
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	NM	NM	NM	NM	NM	NM
MESA_2	02/04/98	0.52	5.3	16	7	ND	80	ND	NM	ND	ND	ND	ND	ND	ND
MESA_2	07/31/98	ND	2.2	24	12	ND	180	ND	NM	NM	ND	ND	ND	ND	NM
MESA_2	10/25/98	0.32	4.4	28	7	ND	110	ND	NM	NM	ND	ND	ND	ND	NM
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	ND	10	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	NM	NM	NM	NM	NM	NM
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	NM	ND	ND	ND	ND	NM
MESA_3	*8/15/1998	0.26	1.4	14	10	0.3	160	ND	NM	NM	ND	ND	ND	ND	NM
MESA_3	02/04/99	0.5	3.7	ND	8	ND	80	ND	ND	ND	ND	ND	ND	ND	NM
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	NM	NM	NM	NM	NM
MESA_4	*7/31/1998	ND	1.6	ND	5	ND	90	ND	NM	NM	ND	ND	ND	ND	NM
MESA_4	*8/15/1998	0.51	1.5	18	9	ND	120	ND	NM	NM	NM	NM	NM	NM	NM
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	NM	ND	ND	ND	ND	NM
Sum of Concentrations		29.29	338.00	622.00	228.00	1.00	4702.00	0.00	0.00	0.00	5.00	0.00	0.00	7.50	0.00
EMC		0.65	7.51	13.82	5.07	0.02	104.49	0.00	0.00	0.00	0.13	0.00	0.00	0.20	0.00

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
Grand Totals	75992	46467	6579	6119	10632	6195		15224.18	

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
Total Volume to the Salt River	9927.72
Volume to Maricopa County Floodway	3906.93
Total Volume to the Gila River	3906.93
Volume to Salt River Project	612.92
CAP Canal	91.76
On-site Retention	684.85
Total Volume to Other	1389.53
Total Runoff Volume	15224.18

* 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	868.07	341.62	121.50	1331.19
COD High Level	1527.21	601.01	213.75	2341.97
Fecal Coliform*				
Fecal Streptococci*				
TDS	1413.55	556.29	197.85	2167.69
TSS	1367.32	538.09	191.38	2096.78
Total Nitrogen (TKN+No2+No3)	49.19	19.36	6.88	75.43
Nitrogen Ammonia+Organic Total	45.70	17.99	6.40	70.08
PhosphorousTotal	8.31	3.27	1.16	12.74
Phosphorous Dissolved	5.36	2.11	0.75	8.22
Oil and Grease Total Recoverable	60.44	23.79	8.46	92.69
Cadmium Total Recoverable	0.0087	0.0034	0.0012	0.0134
Chromium Total Recoverable	0.1007	0.0396	0.0141	0.1544
Copper Total Recoverable	0.1852	0.0729	0.0259	0.2840
Lead Total Recoverable	0.0680	0.0267	0.0095	0.1042
Mercury Total Recoverable	0.0003	0.0001	0.0000	0.0004
Zinc Total Recoverable	1.4004	0.5511	0.1960	2.1475
P,P' DDE Total	0.0000	0.0000	0.0000	0.0000
Benzo-A-Pyrene Total	0.0000	0.0000	0.0000	0.0000
Chyrsene Total	0.0017	0.0007	0.0002	0.0027
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	0.0027	0.0011	0.0004	0.0041
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 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 1998/1999 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 1998/1999 reporting year, approximately 61,000 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 45,750 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.

$$61{,}000 \times 0.75 \approx 45{,}750$$

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 residentials. 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:

Ave. Arterial Load = [(174.49 miles)*(52 weeks)] * (0.14 tons/mile) = 1270 tons

+

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

+

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

Total = 1872 tons

Water Quality Improvement

During the 1998/1999 reporting year, 10,149 arterial centerline miles and 8,296 residential/collector miles were swept. Multiplying these numbers by 0.14 tons per mile and 0.07 tons per mile, respectively shows that 2002 tons of sediment and debris was removed by this BMP during the second year of the permit.

Actual Arterial Load = (10,149 miles) * (0.14 tons/mile) = 1421 tons

+

Actual Resid. and Collector Load = (8,296 miles) * (0.07 tons/mile) = 581 tons

Total = 2002 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) collection event was not held. However, any material collected at the event can be said to be a water quality improvement.

Water Quality Improvement

Appendix C of this report contains data from the event held on March 6, 1999. Table 1 of that report details the quantities of wastes that were collected. Conducting the HHW event 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 1998/1999 reporting year, the rescreening of major outfalls did not identify any illicit dicharges 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 253 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 1998/1999 reporting year, the HAZMAT team responded to approximately 340 environmentally 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 event held on March 6, 1999. Table 1 of that report 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 1998/1999, 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 1998/1999, 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 latest figures.

1998/1999 and 1999/2000
Reporting Period Expenditures

Storm Water Program Expenditures
Fiscal Year 1998-1999

Monitoring Program	$	43,733.00
Storm Drain Maintenance	$	593,135.00
• Repair of Damaged Facilities		
• Sediment Removal from Catch Basins		
• Clearing Debris from Inlet/Outlets		
• Regrading and Stabilizing Earthen Channels		
• Installation of Erosion Control Measures		
• Silt Removal from Retention Basins		
Retention Basin Maintenance	$	1,266,898.00
• Regular Litter and Debris Removal		
• Turf Maintenance		
• Erosion Control and Bank Stabilization		
• Repair of Damaged Facilities		
Street Cleaning	$	914,000.00
• Weekly Sweeping of Arterial Streets		
• Monthly Sweeping of Residential Streets		
Emergency Response	$	56,246.00*
• Spill Clean-Up		
• Material Dumping Clean-Up		
Household Hazardous Waste Management Program	$	81,750.00
Administration, Inspection and Enforcement	$	99,394.00
• Annual Field Screening		
• Inspection of Industrial Sites		
• Preparation of Annual Program Summaries		
• Legal Actions		
• Public Information and Education		
Total Annual Expenditures	$	3,055,156.00

* 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 1999-2000

Monitoring Program	$	45,000.00
Storm Drain Maintenance	$	657,486.00
• Repair of Damaged Facilities		
• Sediment Removal from Catch Basins		
• Clearing Debris from Inlet/Outlets		
• Regrading and Stabilizing Earthen Channels		
• Installation of Erosion Control Measures		
• Silt Removal from Retention Basins		
Retention Basin Maintenance	$	1,341,036.00
• Regular Litter and Debris Removal		
• Turf Maintenance		
• Erosion Control and Bank Stabilization		
• Repair of Damaged Facilities		
Street Cleaning	$	1,010,372.00
• Weekly Sweeping of Arterial Streets		
• Monthly Sweeping of Residential Streets		
Emergency Response	$	60,000.00*
• Spill Clean-Up		
• Material Dumping Clean-Up		
Household Hazardous Waste Management Program	$	85,000.00
Administration, Inspection and Enforcement	$	132,839.00
• Annual Field Screening		
• Inspection of Industrial Sites		
• Preparation of Annual Program Summaries		
• Legal Actions		
• Public Information and Education		
Total Annual Expenditures	$	3,331,733.00

* 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.

Sample Retention/Detention Basin

Inspection Report

RETENTION/DETENTION BASIN INSPECTIONS

ZONE 8

Month: July

Retention/Detention Basin Name	Week Ending: 7/3	Week Ending: 7/10	Week Ending: 7/17	Week Ending: 7/24	Week Ending: 7/31
Falcon Hill Park	✓	✓	✓	✓	✓
Red Mountain Park	✓	✓	✓	✓	✓
6865 E. Jensen (801)	✓	✓	✓	✓	✓
1228 N. Terripin (802)	✓	See Comment	✓	✓	✓
1240 N. Sterling (803)	✓	✓	✓	✓	✓
7026 E. Brown (804)	✓	✓	✓	✓	✓
459 N. 81'st St. (805)	✓	✓	✓	✓	✓
8015 E. Enrose (806)	✓	✓	✓	✓	✓
7600 E. University (807)	✓	✓	✓	✓	✓
9934 E. Quarterline 308)	✓	✓	✓	✓	✓
8045 E. Dover (809)	✓	✓	✓	✓	✓
515 N. Greenwood (810)	✓	✓	✓	✓	✓
713 N. Palo Verde (811)	✓	✓	✓	✓	✓
463 N Calle Largo (812)	✓	✓	✓	✓	✓
715 N Calle Largo (813)	✓	✓	✓	✓	✓

This signature warrants that all Retention/Detention basins 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.

Barry Cullen

Authorized Signature

8/10/98

Date

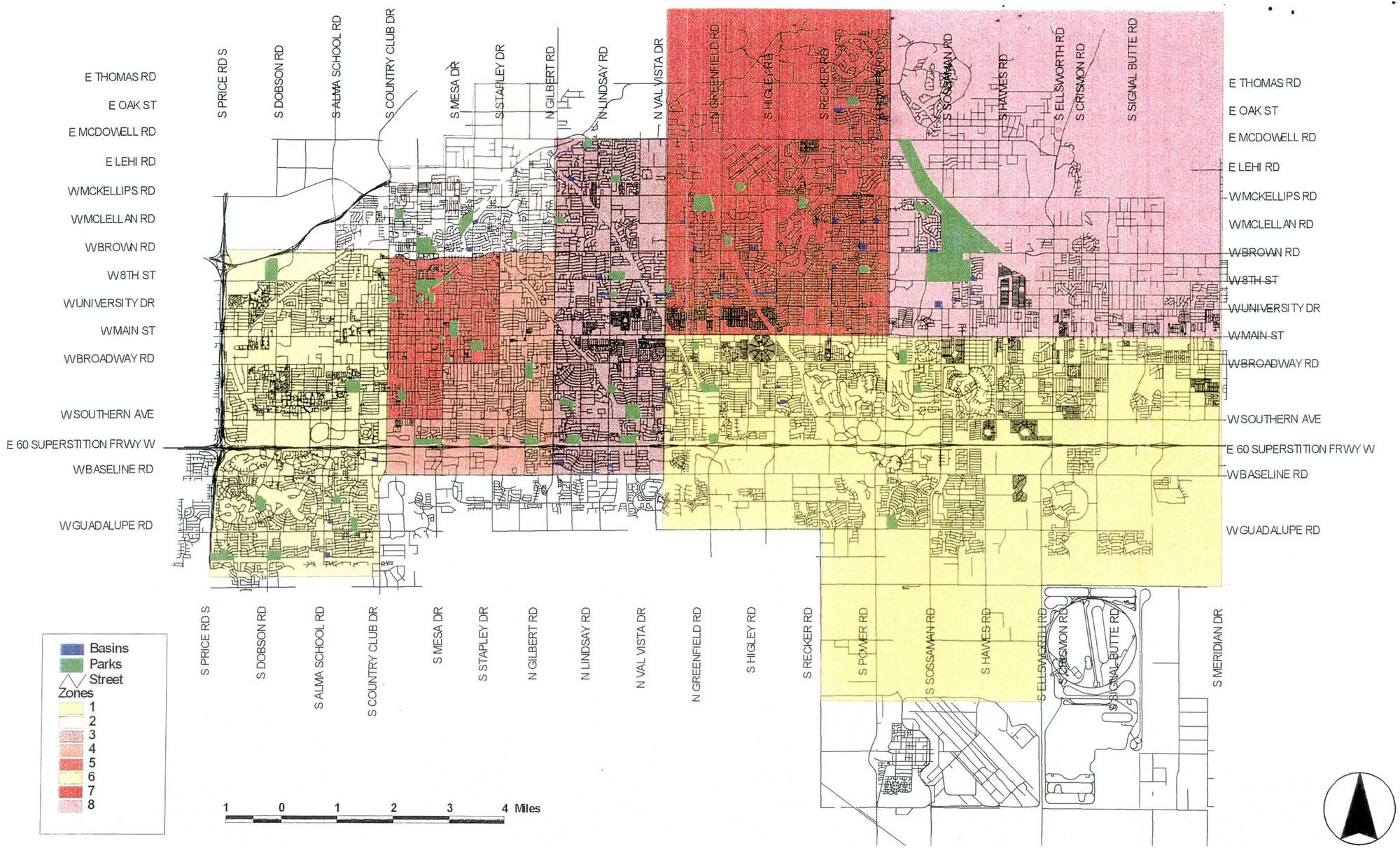
Comment – Motor Oil was found in a ½ Gallon Coffee Can. It appeared that unknown persons drained oil from a motorized vehicle & placed it in the basin for disposal. I placed the oil in a recycle container designated for that use. NO Spillage or Leakage occured.

Map of

Retention Basin Zones

City of Mesa, Parks Districts and Basin Locations

CITY OF MESA
Great People, Quality Service!



List of Parks

and

Retention Basins

MESA PARKS, RECREATION & CULTURAL DIVISION
R. C. 245-EAST DISTRICT
ROBERT WHITE-DISTRICT ADMINISTRATOR
(Effective March 18, 1999)

PARK AND BASIN LISTING

W.O. #	Park Name/ Basin Number	Address	Acreage	Location
Zone 1:				
David Tinguely, Landscape Coordinator-4137				
Landscape Maintenance of Arizona, Contrator-968-7925/moblie 602-397-0980 or 397-9968				
2309	Chelsea Park	160 S. Norwalk Cr.	5.8	40th & Balsaam
2310	Crismon Park	766 S. Crismon Rd.	30.0	Crismon & Pueblo
2311	Golden Hills Park	7256 E. Pueblo	10.6	72nd & Pueblo
2312	Greenfield Park	4105 E. Diamond	20.2	Greenfield & Diamond
2313	Holmes Park	1528 S. Greenfield Rd.	11.2	Greenfield & Hwy. 60
2314	Jefferson Park	360 S. Jefferson Ave.	16.5	Jefferson & Broadway
2315	Monterey Park	7045 E. Monterey Ave.	20.75	Monterey & E. of Power
2325	Basin 101	5228 E. Delta	2.55	Delta & Higley
"	Basin 102	5319 E. Enid	8.0	Enid & E. of Higley
"	Basin 103	5032 E. Delta	0.75	Delta & W. of Higley
"	Basin 104	3656 E. Pueblo	4.03	Val Vista & Pueblo
"	Basin 105	1143 S. 34th St.	3.3	37th & N. of Southern
"	Basin 106	3701 E. Holmes	3.35	37th & Hopi
"	Basin 107	4005 E. Hopi	1.66	Holmes & Hopi
"	Basin 108	2445 S. Saranac	0.6	Medero & Saranac
Zone 3:				
David Tinguely, Landscape Coordinator-4137				
Landscape Maintenance of Arizona, Contractor-968-7925/moblie 602-397-0980 or 397-9968				
2337	Chaparral Park	1645 N. Gilbert Rd.	6.20	Gilbert & Inca
2338	Countryside Park	1120 S. 32nd St.	28.1	Southern & 32nd
2339	Harmony Park	3065 E. Holmes Ave.	14.0	32nd & Hwy. 60
2340	Hermosa Vista Park	2237 N. Lindsay Rd.	8.0	Leonora & Lindsay
2341	Kingsborough Park	2311 E. Holmes Ave.	14.0	24th St. & Hwy. 60
2342	Los Alamos Park	2840 E. Covina St.	9.8	Covina & Lindsay
2343	Meadowgreen Park	765 S. Lindsay Rd.	6.6	Pueblo & Lindsay
2344	Mountain View Park	845 N. Lindsay Rd.	17.4	Adobe & Lindsay
2345	Sheepherders Park	2455 E. McDowell Rd.	8.0	McDowell & E. of Gilbert
2346	Silvergate Park	960 S. Briar	10.0	Enid & Briar
2354	Basin 301	2616 E. Northridge	1.5	26th & Northridge
"	Basin 302	2161 E. Norcroft	2.0	Norcroft & 22nd
"	Basin 303	2425 N. Rose	0.82	Rose & Hermosa Vista
"	Basin 304	2400 E. Menlo	2.0	24th & Hermosa Vista
"	Basin 305	2430 N. Kristen	1.95	26th & Hermosa Vista
"	Basin 306	2236 E. Leonora	3.51	Leonora & Rose
"	Basin 307	2201 N. 24th St.	2.0	24th & N. of Leonora
"	Basin 308	2223 N. Gilbert	0.64	Krammer & Gilbert
"	Basin 309	2621 E. Kenwood	1.31	Glenview & Kenwood
"	Basin 310	1713 N. 24th St.	0.78	24th & Ivyglen
"	Basin 311	1116 S. 38th St.	0.83	Gary & Glencove
"	Basin 312	2205 E. Fountain	0.39	22nd & Fountain
"	Basin 313	812 N. Ashbrook	0.55	Adobe & Ashbrook
"	Basin 314	2416 E. Adobe	1.56	Adobe & 24th
"	Basin 315	844 N. Yale	4.09	Adobe & Yale

"	Basin 316	3135 E. Ellis	1.25	Loma Vista & Ellis
"	Basin 317	1045 N. Miramar	3.31	Miramar & Fountain
"	Basin 318	1111 N. 35th St.	1.06	35th & Fairbrook
"	Basin 319	2011 E. Downing	0.50	Gilbert & Downing
"	Basin 320	602 N. Lindsay	5.51	Decatur & Yale
"	Basin 321	402 N. Creston	0.40	University & Creston
"	Basin 322	544 N. Val Vista	6.0	Citrus Cove & Caballero
"	Basin 323	3443 E. Caballero	0.35	Miramar & Caballero
"	Basin 324	2409 E. Boston	1.4	Winterhaven & Boston
"	Basin 325	3234 E. Coralbell	1.56	32nd & Coralbell
"	Basin 326	3416 E. Coralbell	0.89	34th & Coralbell
"	Basin 327	404 N. Creston	1.5	Glenview & N. of Pueblo
"	Basin 328	2110 E. Jacinto	4.47	Jacinto & Gilbert
"	Basin 329	1938 S. Glenview	1.98	Glenview & Baseline
"	Basin 330	1840 S. Fontana	2.75	Lindsay & N. of Baseline
"	Basin 331	2321 N. Yale	15.6	Yale & Hermosa Vista
"	Basin 332	2510 N. Gentry	0.50	Gentry & Mallory
"	Basin 333	2408 N. Acacua	0.75	Acacia & Hermosa Vista

Zone 7:
Gary Cullen, Landscape Coordinator-4516
Landscape Maintenance of Arizona, Contractor-968-7925/moblie 602-397-0980 or 397-9968

2365	Alta Mesa Park	1910 N. Alta Mesa Dr.8.2		Alta Mesa & S. of McKellips
2367	Ensenada Park	6413 E. Elmwood St.	7.6	64th & Elmwood
2368	Falcon Field Park	4900 E. McKellips Rd3.0		Fighter Aces & Falcon Field
2366	Gene Autry Park	4125 E. McKellips Rd.46.8		McKellips & W. of Greenfield
2369	Pequeno Park	537 N. Oakland	1.0	Contessa & Oakland
2370	Princess Park	4461 E. Princess Dr,	5.0	Princess & E. of Greenfield
2371	Summit Park	3342 N. Seapines	10.0	Sea Pines & S. of Virginia
2372	Vista Monterey Park	633 N. Val Vista Dr,	3.5	Val Vista & N. of University
	Valencia Groves Park			Greenfield & Covina
2378	Basin 701	2016 N. Maple	1.2	McKellips & Maple
"	Basin 702	462 N. Maple	0.5	Maple & University
"	Basin 703	601 N. Norfolk	5.73	Nassau & Covina
"	Basin 704	564 N. Greenfield	6.64	Ogden & Covina
"	Basin 705	552 N. Quail	7.13	Greenfield & Covina
"	Basin 706	4426 E. Adobe	2.53	Greenfield & Adobe
"	Basin 707	4026 E. Brown	2.78	Brown & 40th
"	Basin 708	1634 N. Maple	2.11	McLellan & Maple
"	Basin 709	1231 N. 48th St.	3.63	Brown & 48th
"	Basin 710	839 N. Quail	1.95	48th & Adobe
"	Basin 711	5121 E. Decatur	9.55	Higley & Decatur
"	Basin 712	6045 E. Encanto	3.68	Recker & Encanto
"	Basin 713	6313 E. Gary	0.56	Gary & Platina
"	Basin 714	6023 Ivy	4.68	McLellan & Recker
"	Basin 715	6260 E. Orion	1.76	Orion & E. Of Kashmir
"	Basin 716	1831 N. 64th St.	1.0	64th & Jensen
"	Basin 717	6434 E. McLellan	2.22	McLellan & 64th
"	Basin 718	1628 N. 66th St.	3.18	McLellan & 66th
"	Basin 719	3211 N. Recker	8.21	Recker & Preston
"	Basin 720	2809 N. Kashmir	0.4	Kashmir & McDowell
"	Basin 721	1315 N. 64th St.	0.65	64th & Tonto
"	Basin 722	6015 E. Gary	2.57	Gary & Recker
"	Basin 723	6420 E. Brown	8.59	Brown & 64th
"	Basin 724	4213 E. Hackamore	2.0	Hackamore & Ogden
"	Basin 725	525 N. Val Vista	3.17	Val Vista & N. of University
"	Basin 726	2823 N. Saffron	1.7	Sericin & McDowell
"	Basin 727	3005 N. Sericin	0.5	Sericin & Palm
"	Basin 728	2805 N. Ramada	1.0	Ramada & McDowell

"	Basin 729	2205 N. 64th St.	5.42	64th St. & Holly
"	Basin 730	553 N. Quail		

Zone 8:
Gary Cullen, Landscape Coordinator-4516
Landscape Maintenance of Arizona, Contractor968-7925/moblie 602-397-0980 or 397-9968

2389	E. Mesa Serv. Center	7115 E. Adobe	--	Adobe & W. of Sun Valley
2390	Falcon Hill Park	7420 E. Ivyglen	22.15	Jensen & Ivyglen
2391	Red Mountain Park	7745 E. Brown Rd.	94.5	Brown & Sun Valley
2402	Basin 801	6865 E. Jensen	1.31	Jensen & E. of Power
"	Basin 802	1228 N. Terripin	3.03	Brown & Terripin
"	Basin 803	1240 N. Sterling	7.8	Brown & Sterling
"	Basin 804	7026 E. Brown	2.6	Brown & 70th
"	Basin 805	459 N. 81st St.	4.65	81st & N. of University
"	Basin 806	8015 E. Enrose	3.5	80th & Adobe
"	Basin 807	7600 E. University	8.0	University & Sossaman
"	Basin 808	9934 E. Quarterline	1.5	Quarterline & Crismon
"	Basin 809	8045 E. Dover	2.5	80th & N. of University
"	Basin 810	515 N. Greenwood	3.7	Greenwood & N. of University
"	Basin 811	713 N. Palo Verde	4.2	Palo Verde & N. of Basin 810
"	Basin 812	715 N. Calle Largo	4.0	S. of Adobe off Calle Largo
"	Basin 813	463 N. Calle Largo	3.7	N. of University off 80th St.
"	Basin 814	6806 E. Mallory	1.52	Paves & Mallory
"	Basin 815	10800 E. University Dr.		University & Signal Butte

MESA PARKS, RECREATION & CULTURAL DIVISION
R.C. 245-WEST/CENTRAL DISTRICT
TERRI PALMBERG-DISTRICT ADMINISTRATOR
(Effective March 18, 1999)

PARK AND BASIN LISTING

W.O #	Park Name/ Basin Number	Address	Acreage	Location
Zone 2:				
Harold Gentry-3778				
IDT Corporation, Contractor 829-8530				
2133	Candlelight Park	1450 N. Barkley	5.2	Barkley & N. of Brown
	Hohokam Stadium	1235 N. Center St.	37.5	Center & 14th
2137	Park of the Canals	1710 N. Horne	31.3	Horne & SRP Canal
2140	Whitman Park	1750 N. Grand	10.0	Grand & Inglewood
2148	Basin 201	155 W. McLellan	0.95	McLellan & Grand
"	Basin 202	153 W. Indigo	0.75	McLellan & Grand
"	Basin 203	140 W. Inglewood	0.77	Inglewood & Grand
"	Basin 204	101 E. Juniper	1.06	Juniper & Pima
"	Basin 205	200 E. Juniper	0.40	Juniper & Pasadena
"	Basin 206	214 E. Bates	0.26	Pasadena & Bates
"	Basin 207	407 E. Jensen	0.55	Mesa & Jensen
"	Basin 208	1701 N. Pasadena	0.32	Pasadena & Ivy
"	Basin 209	1234 N. Horne	3.32	Grandview & Horne
"	Basin 210	821 E. Inca	1.81	Horne & Inca
"	Basin 211	2050 N. Lazona	1.67	Lazona & Krammer
"	Basin 212	1414 E. Leland	2.41	Lazona & Leland
"	Basin 213	2421 N. Harris	2.02	Harris & Hermosa Vista
"	Basin 214	2560 N. Gilbert	1.2	Gilbert & Kachina
"	Basin 215	1862 E. Jensen	0.82	Kachina & Jensen
"	Basin 216	1800 E. McLellan	1.21	McLellan & Forest
"	Basin 217	1212 N. Barkley	1.48	Brown & Barkley
"	Basin 218	1562 E. 8th	1.04	Adobe & Harris
Zone 4:				
Harold Gentry-3778				
IDT Corporation, Contractor 829-8530				
2134	Emerald Park	1455 S. Harris Dr.	16.2	Harris & Hwy. 60
2135	Heritage Park	1517 S. Center St.	17.2	Mesa & Hwy. 60
2138	Reed Park	1631 E. Broadway Rd.	19.0	Broadway & Williams
2139	Sherwood Park	1453 S. Horne	22.0	Horne & Hwy. 60
2148	Basin 418	231 E. Glencove	5.75	Glencove & Pasadena – Hohokam Basin
"	Basin 419	1817 E. 1st Ave.	0.68	Guthrie & 1st
"	Basin 420	921 S. Spur	1.23	El Moro & Spur
"	Basin 421	1105 S. Doran	1.41	Doran & S. of Forge
"	Basin 422	909 E. 9th Dr.	0.50	9th & Nevada
"	Basin 423	1441 S. Hobson	1.41	Hobson & Holmes
"	Basin 424	1251 E. Hilton	1.91	Hilton & E. of Stapley
"	Basin 425	1530 S. Harris	3.08	Harris & Hwy. 60

Zone 5:
Harold Gentry, 3778
Bowen's Horticulture, Contractor 829-1752

2157	Broadway Rec. Center	59 E. Broadway	1.0	Broadway & E. Of Center
2158	Ellsworth Park	107 S. Horne	10.0	Horne & 2nd
2159	Escobedo Park	514 N. Hibbert	2.5	2nd & Hibbert
2160	Evergreen Park	328 W. 5th St.	4.3	5th & Country Club
2161	Fitch Park	240 E. 8th St.	35.8	Mesa & 8th St
2162	Gateway Park	315 E. Main St.	1.0	Main & Mesa
2163	Mesa Arts Center	155 N. Center St.		Center & N. of 1st
2164	Parks Administration	100 N. Center St.		Center & 1st St.
2165	Pioneer Park	526 E. Main	17.8	Hobson & Main
2166	Porter Park	420 E. 8th St.	2.7	8th & E. of Mesa
2167	Guerrero Rotary Park	205 W. 8th Ave.	8.55	8th & MacDonald
2168	Sirrine House	160 N. Center	0.50	Center & 2nd
2169	Stapley Park	360 S. LeSueur	2.0	LeSueur & Udall
2170	Washington Park	44 E. 5th St.	2.0	5th & Pima

Zone 6:
Harold Gentry, 3778
Lizalde's Landscaping 464-9151

2188	Carriage Lane Park	3140 S. Carriage Lane	22.5	Carriage Lane & Canal
2189	Dobson Ranch Park	2359 S. Dobson Rd.	17.3	Dobson & S. of Baseline
2190	Kleinman Park	710 S. Extension Rd.	24.8	Extension & 8th Ave.
2191	Mesa Grande Ruins	1000 N. Date	2.5	Date & Brown
2192	Palo Verde Park	3135 S. Dobson Rd.	18.0	Dobson & Guadalupe
2193	Rancho Del Mar	754 W. Guadalupe Rd.	11.2	Cherry & Guadalupe
2194	Riverview Park	2100 W. 8th St.	51.0	8th & Dobson
2195	Woodglen Park	2342 S. Beverly	7.8	Beverly & Medina
2203	Basin 601	3105 S. Alma School Rd.	5.31	Alma School & Canal
"	Basin 602	1145 W. Nido	3.93	Spruce & Nido
"	Basin 603	755 W. Flower Ave.	1.77	Extension & Flower
"	Basin 604	740 W. Emerald	61.0	Emerald & Enid
"	Basin 605	755 W. Date	0.44	8th & Date
"	Basin 606	1802 S. Vineyard	3.42	Vineyard & Juanita

Sample of Street Maintenance's Monthly

Inspection Report

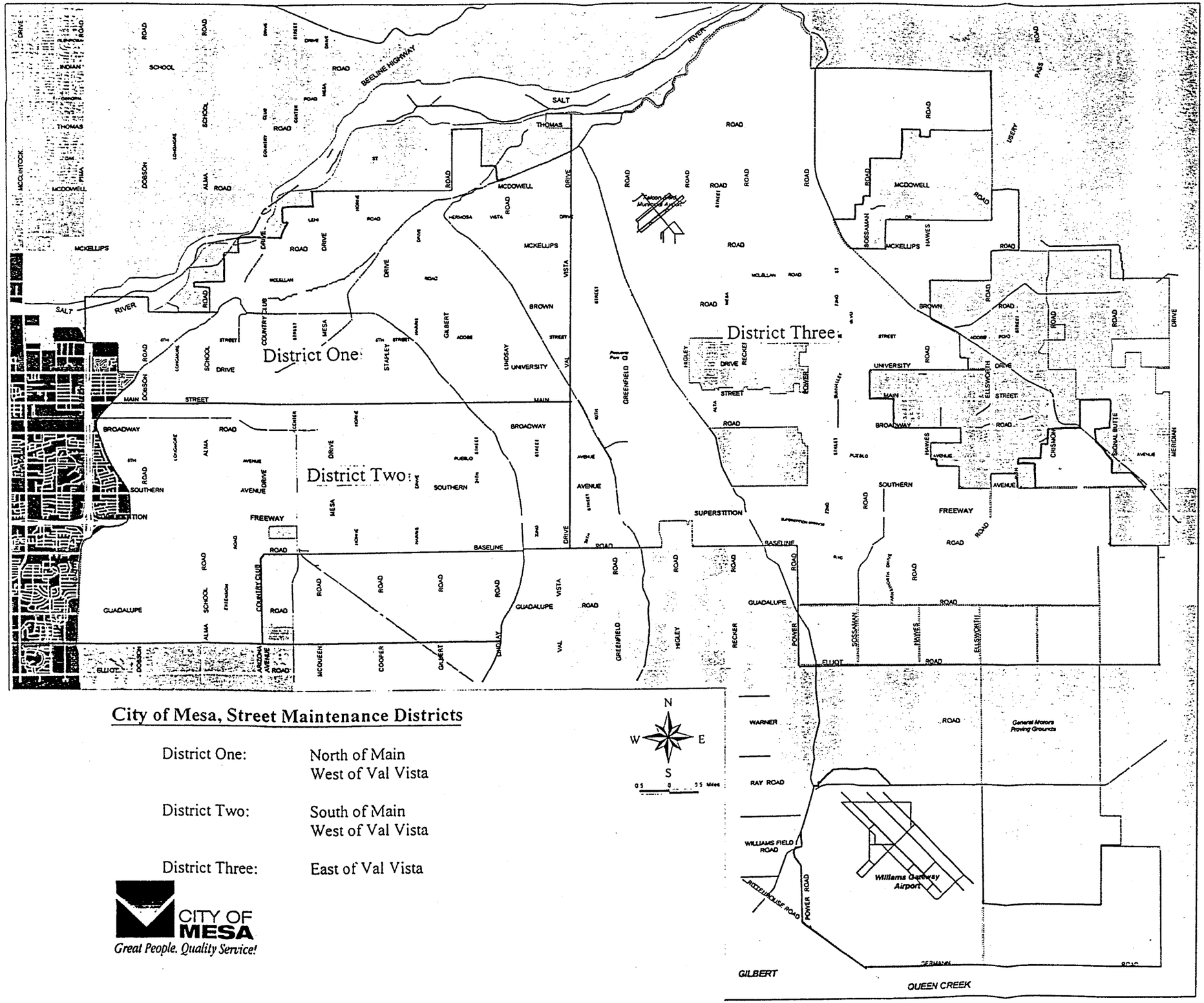
STORMWATER PROGRAM ACTIVITIES
STREET MAINTENANCE

MONTH July 98 DATE 8-5-98

			REMARKS / NOTES
RETENTION BASINS **SEDIMENT REMOVAL** **(Vactor Service)**	District 1 EA. 1		SITES: Grand & Hunter (Dry well)
	Dsstrict 2 EA 0		SITES: None completed
	District 3 EA 0		SITES: None completed
STORM DRAINS **CLEANING / STORM CHECK** CATCH BASINS AND PUMP SITES	Arterial/Collector (Catch Basins)	District 1 EA. 61 District 2 EA 0 District 3 EA 448	+ 120 Major Trash Racks
	Residential (Catch Basins)	District 1 EA. 2 District 2 EA 0 District 3 EA 360	
	PUMP SITE CLEANING EA. 0		SITES: None completed
STREET SWEEPING CLEANING	ARTERIAL STREETS (CONTRACT) CL MILES 794 RESID / COLL STREETS (CITY FORCES) CL MILES 462 101 contracted Residential Sweeping		
SPILL PREVENTION / RESPONSE **Non-Hazardous only**	EA. 32		SITES: Antifreeze spills (3) Concrete spills (13) Misc. (2) Oil Spills – Accident (1) Solid Waste (6) – other (7)

Map of

Street Maintenance Districts



City of Mesa, Street Maintenance Districts

District One:	North of Main West of Val Vista
District Two:	South of Main West of Val Vista
District Three:	East of Val Vista

CITY OF MESA
Great People. Quality Service!

Household Hazardous Waste Collection Day

1999 Report

MEMO

TO: Jack Friedline

THRU: Kari Kent

FROM: Jennifer Means

DATE: May 14, 1999

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 6, 1999.

Discussion

The City of Mesa held a one-day Household Hazardous Waste Collection event on March 6, 1999. 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 and the City of Chandler 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 solicited bids from contractors for the collection and disposal of the waste collected at the event. Based on these bids, the City contracted with the firm of Philip Services Corporation for the 1999 and 2000 events. Philip Services Corporation was also the contractor for the 1997 and 1998 events. 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 Solid Waste personnel from Mesa, volunteers from other City departments and outside sponsors such as TRW, Boeing and Motorola. Additionally, the Mesa Fire Department, the Gilbert 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, Surf & Ski and Bagel Nosh. 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. The City solicited TRW, Boeing and Motorola for sponsorship of the event. Together they donated $2,300 which was used to provide T-shirts and refreshments for the volunteers. 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 1,234 vehicles passed through the event; 547 vehicles at the East Mesa Service Center and 687 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 $64.15. Therefore, the following amounts will be billed to the participating jurisdictions:

Jurisdiction	Number of Cars	Total Cost
Town of Gilbert	169	$ 10,841.35
City of Chandler	31	1,988.65

The per car fee of $64.15 represents an increase of approximately $32.00 over the 1998 per car fee. This increase is due to the exhaustion of grant funding that was awarded to the City from the Arizona Department of Environmental Quality in 1996. Additionally, the disposal costs associated with the 1999 event increased by more than $12,000 due in part to the increased participation, increased supply costs and increased advertising.

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.

- Good communication and coordination between City departments ensured that everyone knew their responsibility pertaining to the event.

- Continuing communication with outside sponsors accounted for increased financial and volunteer support of the event. This year we partnered with TRW, Motorola and Boeing

who, together, supplied shirts and refreshments for the volunteers and provided volunteers to staff the event.

- Solicited bids and awarded a contract to sort and bulk latex paint that will be used for the Paint Reuse Program. Although this is a cost to the City, it frees Solid Waste staff to perform necessary job duties.

Future Program efforts to be considered:

- Explore new location for the East Mesa site due to safety concerns with utilizing the East Mesa Service Center. Sites being discussed include the EMSC front parking lot and a location near the East Mesa Library.

  The safety concerns surrounding the EMSC site involve the proximity of high voltage overhead power lines to the flammable material being collected and bulked and the weather conditions. Prior to the event, the tent that was constructed over the "hot zone", where flammable liquids were to be bulked, began conducting electricity from the overhead power lines. The tent was removed and the event opened on time. However, City staff and SRP staff suggested that the site be relocated to avoid potential hazards.

  Past events have been held at this location but the site received rain prior to the event, reducing the amount of static in the air. This year, the weather was dry and warm which contributed to the problem.

- Develop the Center Street facility as a drop-off location for select HHW materials to allow additional opportunities for residents to safely dispose of their HHW.

- 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 and sponsorship.

- 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 26% increase in participation from the 1998 event. This increase could be associated with increased publicity surrounding the event, population growth, and the consistency of the City providing a spring event.

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)*			2,800
Batteries			382
Tires - 40 yard rolloff			2
Hazardous Waste Drums			
Motor Oil	19	19	38
Antifreeze	3	3	6
Oxidizing Liquid	2	1	3
Organic Peroxides	1	0	1
Aerosol Paints	8	7	15
Poisonous Gases	0	1	1
Caustic Liquids	4	2	6
Sharps	0	1	1
Corrosive Liquids	3	3	6
Compressed Gases	4	3	7
Toxic Flammable Liquids	8	7	15
Pesticides	2	4	6
Aerosol Poisons	1	1	2
Flammable Solid	1	1	2
Flammable Liquid	3	10	13
Paints & Varnishes	98	44	142
Non RCRA Solids (oil filters)	1	0	1
Mercury	1	1	2
Alkaline Batteries	1	1	2
Total Hazardous Drums	160	109	269

* indicates estimated number

TABLE 2
EVENT COSTS

Labor		$ 5,700.00
Contractor Fees		13,288.00
Disposal of Material		41,800.00
Advertising		3,910.00
Materials/Supplies		12,420.00
Rental Equipment		2,650.00
T-Shirts		1,480.00
Refreshments		500.00
Total 1999 Event Cost		$ 81,750.00
Battery Credit		285.00
Sponsor Contribution	Boeing	1,000.00
Sponsor Contribution	TRW	800.00
Sponsor Contribution	Motorola	500.00
Total Credits/Grants/Contributions		$ 2,585.00
Net Cost to City		$ 79,165.00

numbers have been rounded to nearest $5 increment

Dry Weather Screening Data

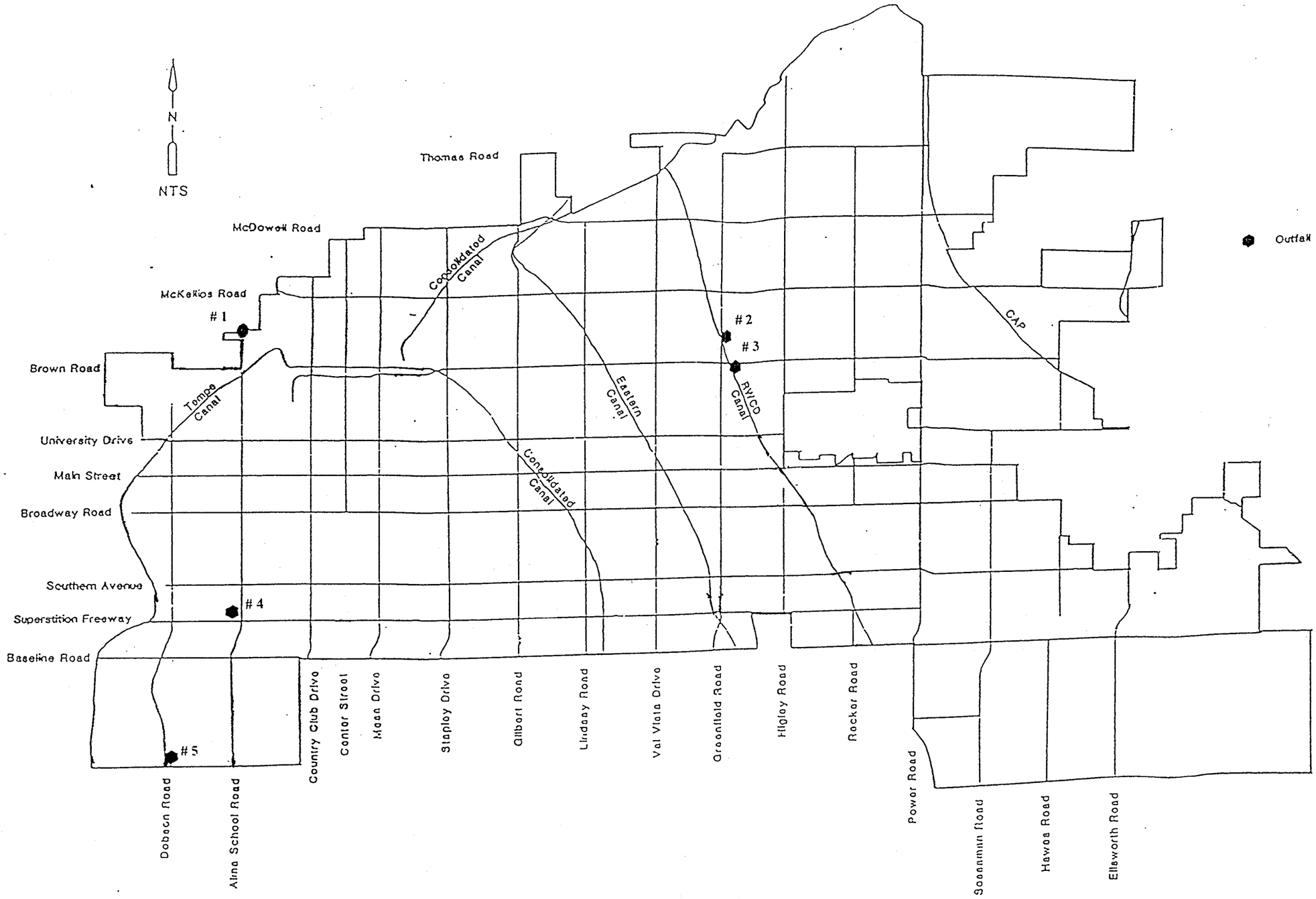
Dry Weather Screening Data

Sampling Location	Sample Date	Time	Outfall Type	Weather	Air Temp. (Farenheit)	Sample Color	Sample Odor	Free Cu (mg/l)	Total Cu (mg/l)	Complexed Cu (mg/l)	Phenols (mg/l)	Turbidity (NTU)	Chlorine (mg/l)	Detergents (mg/l)	pH	Oil Sheen	Surface Scum	Flow ** (cfm)
Mclellan & Alma School (1)	6/24/99	8:45 AM	48" RCP	Clear	90	Clear	None	0.0	0.0	0.0	0.0	0.9	0.05	0.25	8.1	No	No	None (Standing Water)
Princess Park (2)	6/24/99	10:15 AM	72" RCP	Clear	95	Clear	None	0.0	0.0	0.0	0.0	0.7	0.1	0.20	8.2	No	No	Low
Brown Road Floodway Discharge (3)	6/24/99	10:30 AM	60 " RCP	Clear	95	Clear	None	0.0	0.0	0.0	0.0	8.6	0.1	0.50	9.0	No	No	None (Standing Water)
Alma School at ADOT Channel (4)	6/25/99	8:30 AM	54" RCP	Clear	90	Clear	None	0.0	0.0	0.0	0.0	2.68	0.0	4.00	8.2	No	No	2.0
Palo Verde Park (5)	6/25/99	9:35 AM	54" RCP	Clear	90	Clear	None	0.0	0.0	0.0	0.0	2.02	0.0	0.90	7.9	No	No	Low

* RCP - Reinforced Concrete Pipe

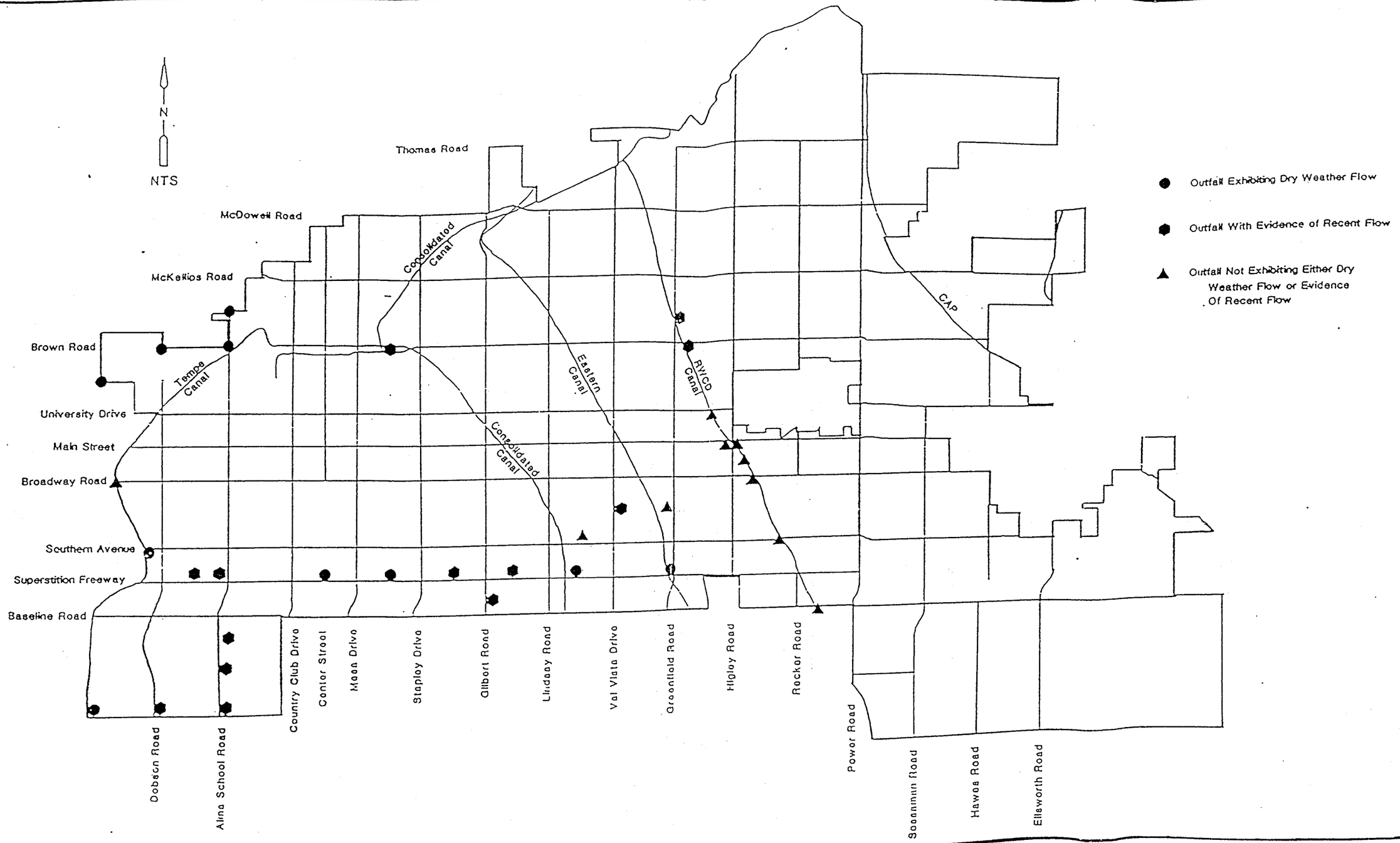
** Flow was calculated by recording cross sectional flow area and the time it took for a particle to travel a recorded distance.

Map of 1999 Sampled Outfalls



MAP OF 1999 SAMPLED OUTFALLS

Map of 1992 Surveyed Outfalls



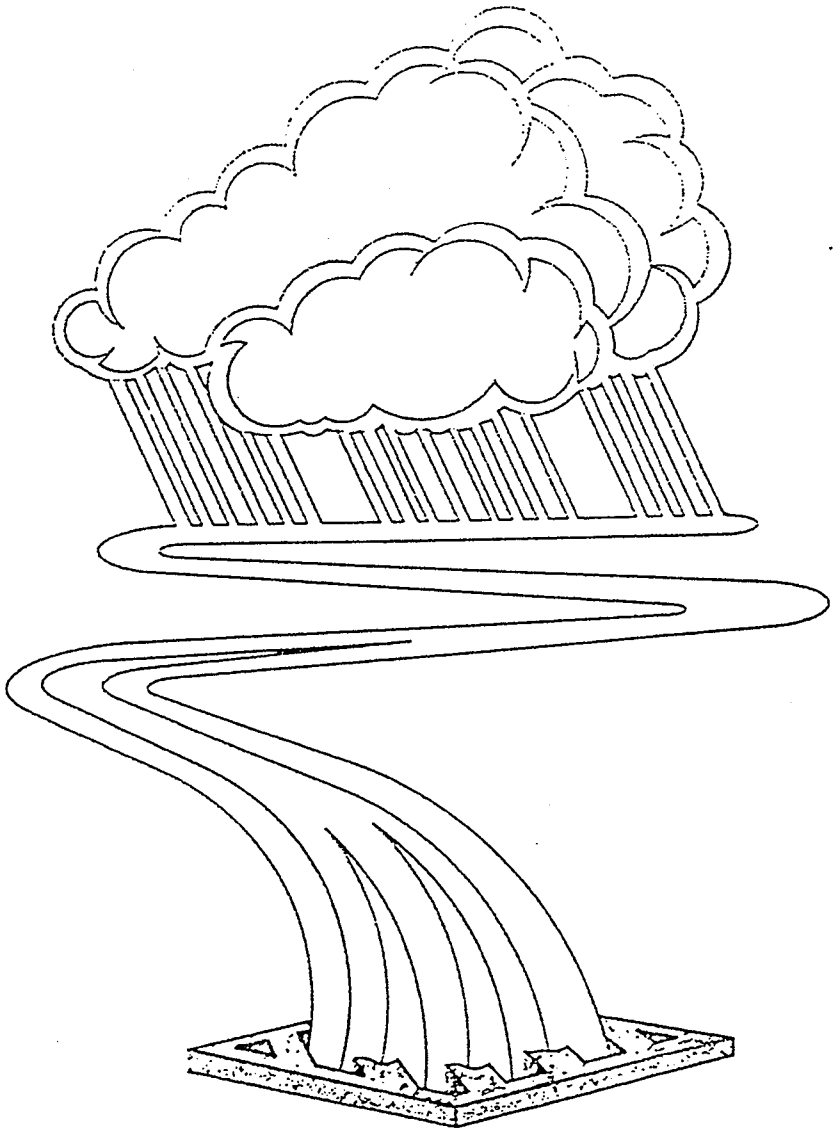
CDM
environmental engineers, scientists, planners, & management consultants

1992 LOCATION OF SURVEYED OUTFALLS

EXHIBIT E

Storm Water Test Kit Manual

STORM WATER TEST KIT MANUAL



HACH

CONTENTS

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_2)

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_2) through the scale window.

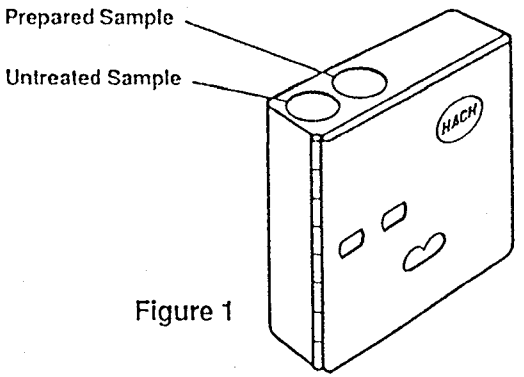


Figure 1

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).

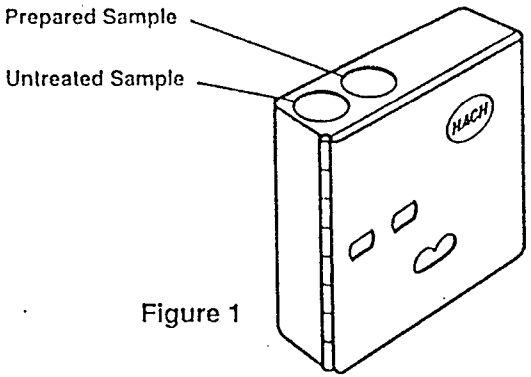


Figure 1

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 (not included in kit)	118 mL(4 oz) MDB*
272-28	Demineralized Water (not included in kit)	118 mL(4 oz)
2059-36	Formaldehyde (not included in kit)	15 mL(1/2 oz) SCDB**

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*
999-11	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: ±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.

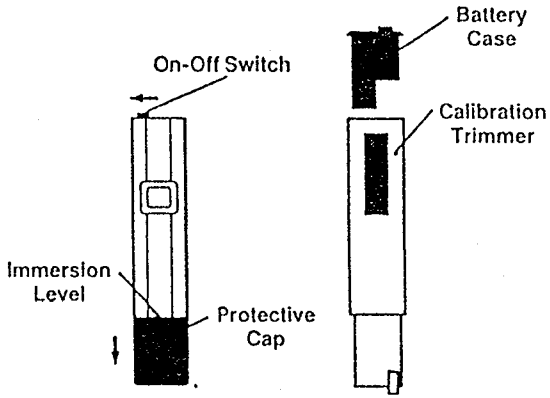


Figure 1

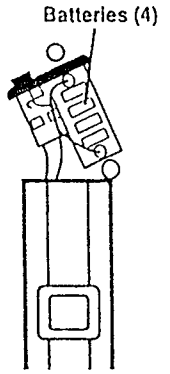


Figure 2

Pocket Pal is a trademark of Hach Company.

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.

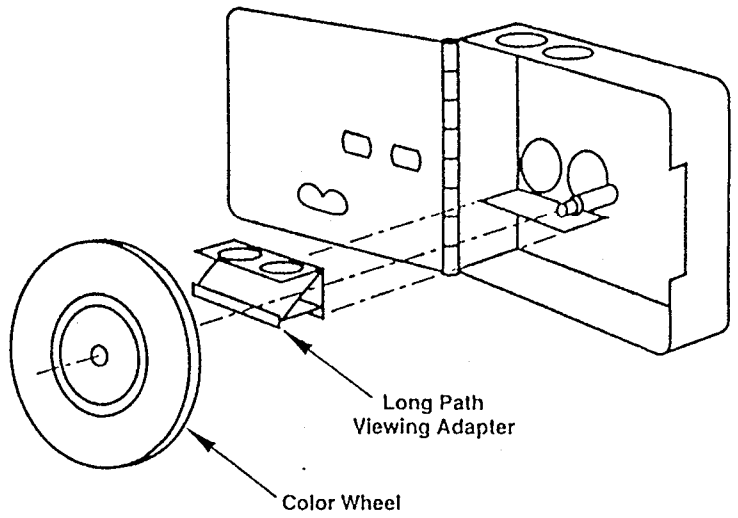


Figure 1

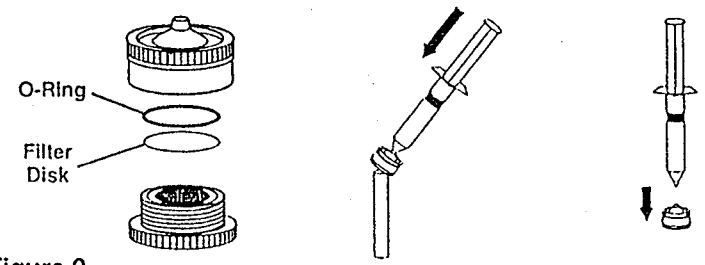


Figure 2

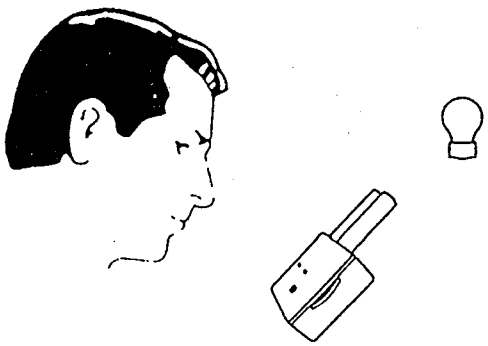


Figure 3

REPLACEMENTS

Reagents

Cat. No.	Description	Unit
7005-66	EDTA Reagent Powder Pillows	pk/50
424-26	Hardness 1 Buffer Solution	59 mL
2-4815-69	Phenol Reagent Powder Pillows (nonextraction)	pk/100
208-47-69	Potassium Persulfate Powder Pillows for Phosphonate	pk/100

Apparatus

Cat. No.	Description	Unit
936-00	Clippers	each
1732-00	Color Comparator	each
22095-25	Filter Discs, 25 mm, 45 micron	pk/25
2468-00	Filter Holder, for Luer-Lok	each
2-4122-00	Long Path Viewing Adapter	each
2-4834-00	Phenols Color Disc, 0-1 mg/L	each
22258-00	Syringe, 30 cc, Luer-Lok tip	each
416600-04	Viewing Tubes, plastic	pk/4

Public Education Package

for

Construction Projects

CITY OF MESA
Great People, Quality Service!

Environmental Programs

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

20 East Main Street
P.O. Box 1466
Mesa Arizona 85211-1466
602.644.4461 Tel
602.644.3937 Fax

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

The 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

Storm Water Coordinator
Arizona Department of Environmental Quality
P.O. Box 600
Phoenix, AZ 85001-0600

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

THIS FORM REPLACES PREVIOUS FORM 3510-6 (8-98)
See Reverse for Instructions

Form Approved. OMB No. 2040-0188

NPDES FORM

EPA

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 Secion 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

Is the facility located on Indian Country Lands? Yes ☐ No ☐

Project Name:

Project Address/Location:

City: State: Zip Code:

Latitude: Longitude: County:

Is 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 — Estimated Construction Start Date

Month Day Year — Estimated Completion Date

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

Estimate of Likelihood of Discharge (choose only one):

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

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: _____

EPA

Instructions – EPA Form 3510-9

Form Approved. OMB No. 2040-018

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 x .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 x 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.

THIS FORM REPLACES PREVIOUS FORM 3510-7 (8-92)

Please See Instructions Before Completing This Form

Form Approved. OMB No. 2040-0086
Approval expires: 8-31-98

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 Dicharges 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 a 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:

(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:

(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)

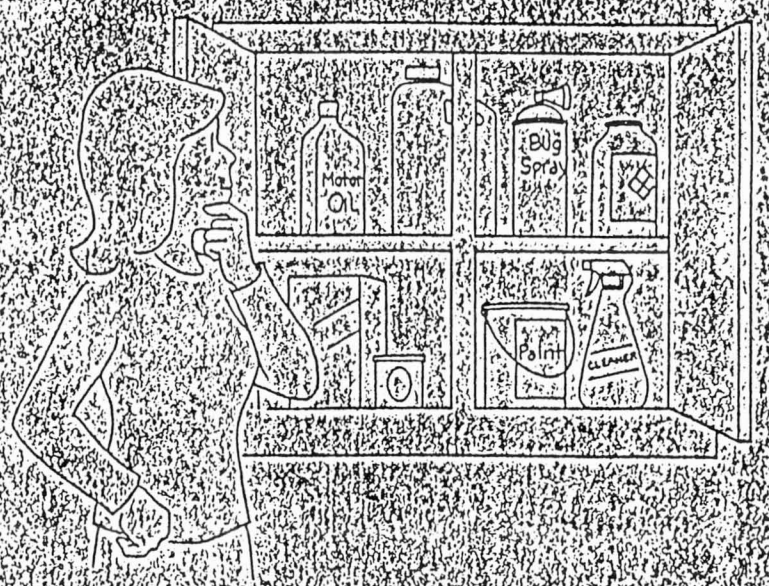
OWNER: The person indicated on the records of the Maricopa County Assessor or other official body as the owner of record of the property in question. (2568)

Household Hazardous Waste

Educational Brochure #1

ABOUT HAZARDOUS PRODUCTS IN THE HOME

-- a guide to proper use and disposal



Printed on recycled paper
(20% post-consumer content by weight)

NEARLY EVERY HOME CONTAINS HAZARDOUS MATERIALS

MANY ARE FOUND IN PRODUCTS WE USE ALL THE TIME, SUCH AS:

- cleansers
- automotive fluids
- beauty products
- lawn-care chemicals.

TOXIC CORROSIVE FLAMMABLE IRRITANT

A MATERIAL IS CONSIDERED HAZARDOUS IF IT'S:

- 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).

A Scriptographic® Booklet

To reorder phone 1-800-628-7733 or write Channing L. Bete Co., Inc., 200 State Road, South Deerfield, MA 01373. Ask for booklet number 49411A-11-92. Price List A

YOU NEED TO USE EXTRA CARE

when handling hazardous household materials. Proper storage, use and disposal go a long way in helping protect:

YOUR HEALTH

Repeated or excessive contact with hazardous household materials may lead to:

- lung problems
- brain and nerve damage
- depression
- cancer
- death.

Pregnant women who have repeated or excessive contact with these materials may risk birth defects in their unborn babies.

THE ENVIRONMENT

Our water, soil and air are all threatened unless proper disposal methods are used.

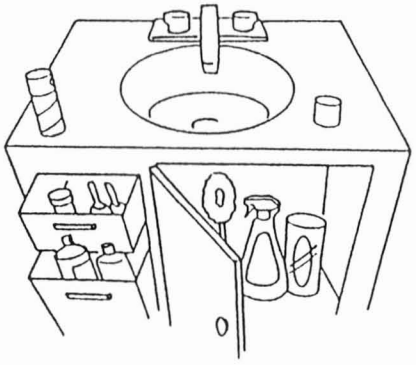
Fortunately, there's a lot you can do to minimize the hazards! Learn more...

HOW MANY HAZARDOUS PRODUCTS ARE IN YOUR HOME?

Probably a lot! Here are some of the most common:

KITCHEN

- oven cleaner
- drain cleaner
- floor-care products.



BATHROOM

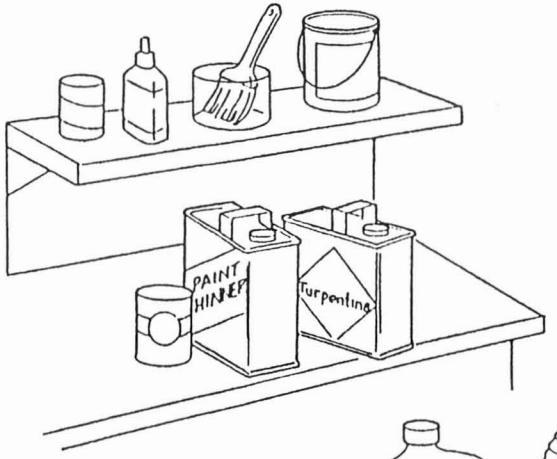
- toilet cleaner
- polish remover
- hair color
- aerosol deodorant
- some cosmetics
- medications.

LAUNDRY ROOM

- detergent
- chlorine bleach
- spot remover
- softener
- spray starch.

GENERAL HOUSEHOLD

- ammonia-based cleaner
- furniture polish
- mothballs
- some air fresheners
- insecticides
- flea and tick powder
- metal cleaner
- household batteries.

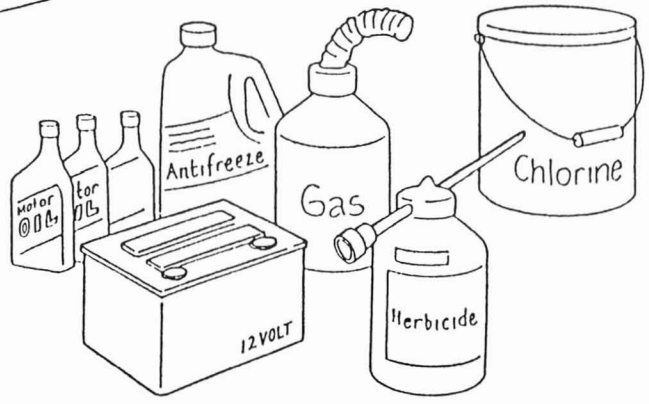


WORKSHOP

- paint
- glue
- varnish
- paint thinner
- turpentine.

GARAGE

- motor oil
- gasoline
- antifreeze
- car batteries
- lighter fluid
- pool chemicals
- herbicides.

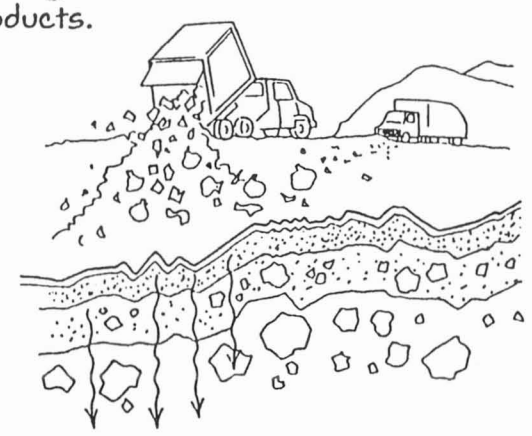


KNOW THE FACTS

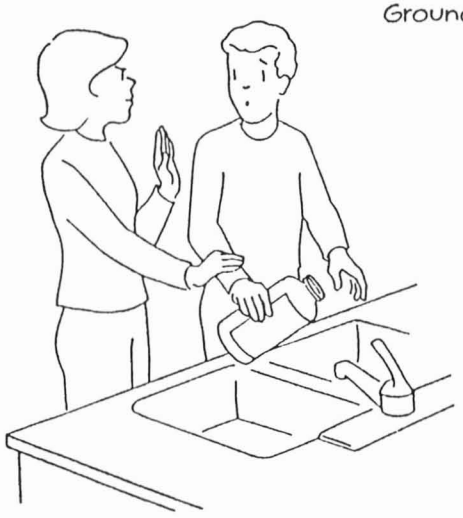
about handling and disposing of hazardous household products.

WHAT YOU THROW AWAY CAN COME BACK TO HAUNT YOU

Most trash ends up in a landfill. Hazardous materials may then seep into the ground and contaminate our soil and drinking water supply. And waste that is burned in an incinerator can pollute the air.



Ground water

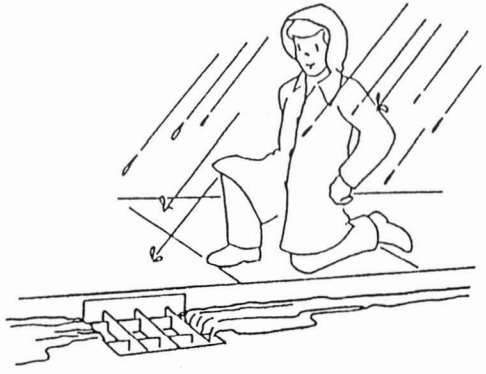


MOST CHEMICALS SHOULD NOT BE FLUSHED DOWN THE DRAIN

Hazardous chemicals that can't be removed or broken down by water treatment plants may end up in nearby lakes, rivers and streams. Hazardous chemicals in septic systems can affect the health of the soil nearby -- and make the septic system less efficient.

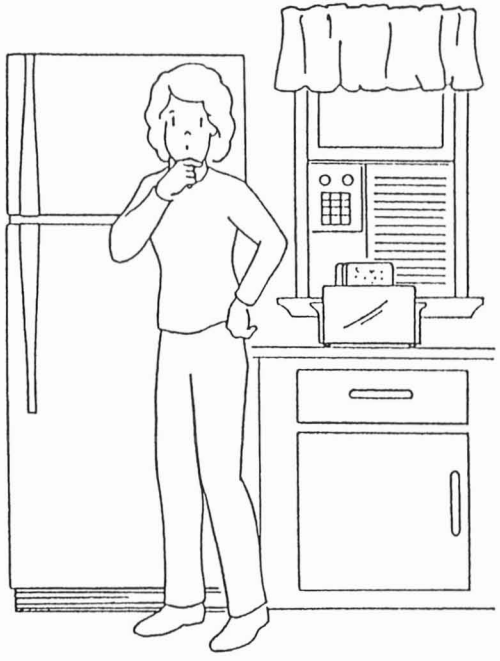
STORM DRAINS ARE FOR RAIN

In many areas, these drains feed into streams, ponds and lakes. Chemical waste dumped into storm drains usually goes untreated. It can harm plants and wildlife and end up in our drinking water.



AEROSOLS POLLUTE THE AIR WE BREATHE

Chemicals used in spray can products add to smog. And aerosols often contain dangerous chemicals, such as methylene chloride, which can cause cancer and nerve damage.



APPLIANCES MAY CONTAIN HIDDEN HAZARDS

If not disposed of properly, some appliances may pollute the environment with hazardous materials. For example, many older refrigerators and air conditioners use freon, a gas that can further damage the ozone layer if released into the air.

Hazardous waste is a serious problem. But you can be part of the solution. Read on ...

USE SAFE DISPOSAL METHODS

Improper disposal is not only dangerous, it may be illegal in your area.

TAKE PART IN HAZARDOUS WASTE COLLECTION DAYS

Some communities hold these events once or twice a year. Many types of waste are accepted.

LOOK FOR OTHER COLLECTION SITES

There may be a facility in your area that accepts hazardous waste year round. Call your local health or public works department for information.

FOLLOW LABEL INSTRUCTIONS

Some products can be put out with the trash (dried paint, for example). If you're not sure, call your water treatment plant or department of public works.

CONTACT A PRIVATE DISPOSAL COMPANY

For a fee, some licensed collectors will safely dispose of your hazardous waste. Look in the Yellow Pages, under "Waste Disposal." (This is usually a very expensive option.)

PLAY IT SAFE IN OTHER WAYS, TOO

Disposal may not be the only -- or best -- solution. In some cases, you can:

RECYCLE IT

Many hazardous materials can be broken down and used to make new products. For example, some service stations will accept used automotive fluids, batteries and tires. Look for other recycling centers in your area.

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

Friends, neighbors or community organizations may be able to use products you no longer need.

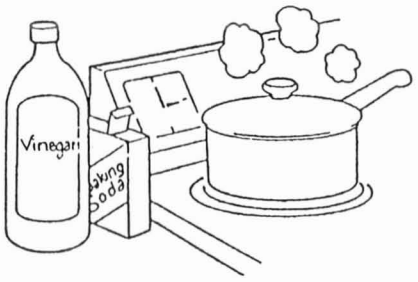
It may seem easier just to throw these products away. But careless disposal of hazardous wastes is hard on our planet -- and our health!

CONSIDER SAFER ALTERNATIVES

to hazardous products. They're usually just as effective as formulas you buy in the store. Here are a few examples:

OVEN CLEANER

Scour with baking soda and water. To prevent grease buildup, always clean spills as soon as the oven cools down.

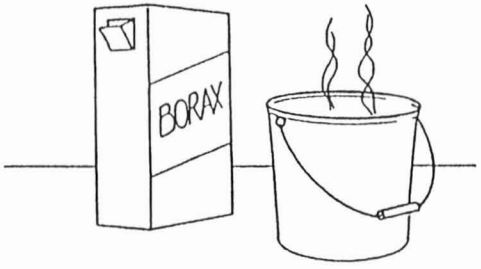


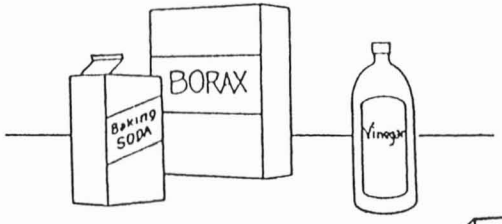
DRAIN CLEANER

Dissolve 1/2 cup of baking soda and a cup of vinegar in boiling water. Pour the mixture into the drain. A plunger can also help get things moving.

ALL-PURPOSE CLEANER

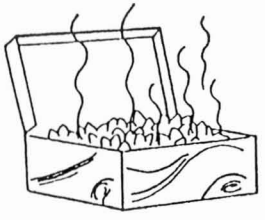
Mix 1 teaspoon of borax in 1 quart of warm water for counters, tabletops and other surfaces. Baking soda and water works great in the bathroom.





LAUNDRY DETERGENT

Try borax or baking soda. Add a few drops of vinegar to keep colors bright.

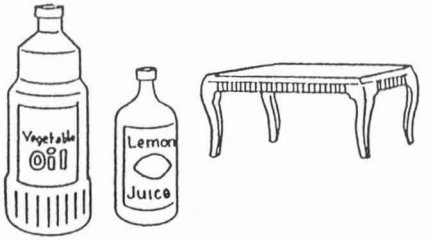


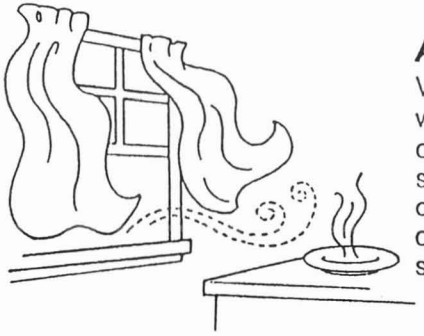
MOTHBALLS

Cedar chips and lavender flowers are great-smelling and safe.

FURNITURE POLISH

Mix 2 parts vegetable oil with 1 part lemon juice. Wipe with a soft, clean cloth.



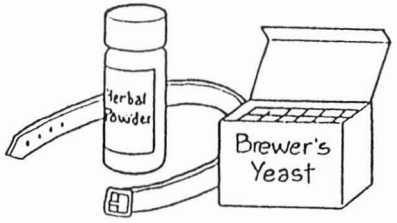


AIR FRESHENERS

Ventilate to keep household air fresh. When weather permits, leave windows and doors open for a few minutes each day. Place saucers of vinegar around the house to absorb odors. (Locate them carefully -- out of the reach of children and pets, where they won't be spilled, etc.)

TOILET BOWL CLEANER

Sprinkle the bowl with baking soda. Pour a small amount of vinegar on the toilet brush and scrub.



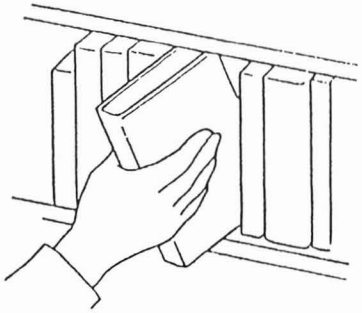
FLEA POWDER

Herbal powders and collars are available in health food stores and some pet stores. Top your pet's food with brewer's yeast (once in the blood, it can keep fleas from biting).

CHECK YOUR LOCAL LIBRARY

for books that list other safe alternatives to hazardous products. You can find safe ways to:

- control weeds and garden pests
- polish silver and other metals
- clean upholstery and carpeting.



Just about any household task can be accomplished with nonhazardous products!

FOLLOW THESE SAFETY RULES

if you do need to use a hazardous product:

READ THE LABEL BEFORE YOU BUY

Products won't be labeled "hazardous," so look for these signal words:

- POISON (highly toxic)
- DANGER (highly toxic, flammable or corrosive)
- WARNING (moderately toxic)
- CAUTION (slightly toxic).

USE THE RIGHT AMOUNT

Remember -- you won't get twice the results by using twice as much. Follow label directions.

BUY ONLY WHAT YOU NEED

Don't buy more than you think you'll use. This will save you the trouble of having to dispose of waste material. Before you buy, check to see if there's a safer alternative.

DON'T MIX PRODUCTS

Mixing products can cause an explosion or other dangerous chemical reaction. Always follow label instructions.

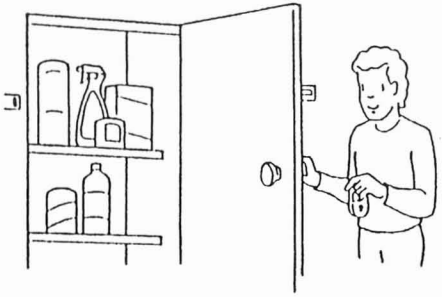
WEAR PROPER PROTECTION

Use protective equipment to guard yourself against injury or illness. Equipment may include gloves, goggles, rubber boots, a mask, etc. Check the label for specific information.

STORE PRODUCTS SAFELY

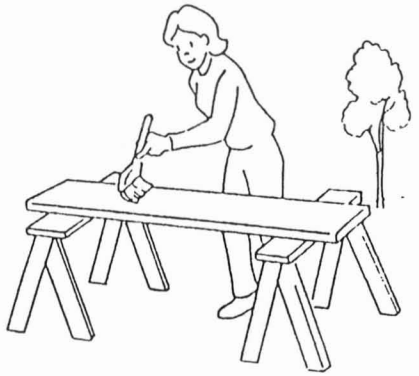
Cool, dry, well-ventilated areas are best. To help prevent accidents:

- Seal lids and caps tightly.
- Store products in a secure area, away from children and pets.
- Make sure all products are clearly labeled. Store them in their original containers, if possible.



ENSURE GOOD VENTILATION

When working with toxic vapors (from paint, varnish, etc.), keep windows and doors open. Work outside, if possible. Remove contact lenses before starting -- they can trap vapors against the eye.



ALWAYS CLEAN UP AFTERWARDS

Wash tools and surfaces after you finish working. Wash your hands carefully, too.

WHAT ELSE CAN I DO?

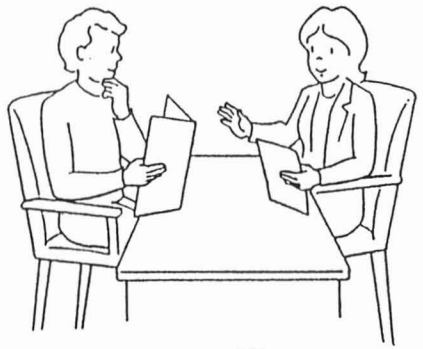
Here are a few ideas:

FIND OUT MORE ABOUT HAZARDOUS HOUSEHOLD PRODUCTS

Being well-informed can help you make safe, responsible decisions. Your public library is a good place to start.

TALK TO LOCAL OFFICIALS

Contact the coordinator of your local recycling program or hazardous household waste program. You can also call your local health department or public works department.



SUPPORT HAZARDOUS WASTE COLLECTION PROGRAMS

If there's no program in your area, find out how to start one. Call the Resource Conservation and Recovery Act Hotline at 1-800-424-9346. Or, call your public works department.

DEMAND SAFER PRODUCTS

Contact manufacturers and retailers, and voice your concerns about hazardous ingredients in the products you use.

Soo--

HELP SOLVE THE PROBLEM OF HAZARDOUS HOUSEHOLD WASTE!

✓ **LEARN THE SAFE WAY**
to use and dispose of hazardous products.

✓ **REDUCE THE AMOUNT**
of hazardous products in your home.

✓ **TAKE PART**
in hazardous household waste collection programs in your area.

Don't be sorry -- be safe!

Household Hazardous Waste

Educational Brochure #2

Solutions to Pollution

All-Purpose Cleaner

4 Tbsp. baking soda
1 quart warm water

Dissolve baking soda in warm water. Apply with a sponge. Rinse with clean water. Flour or salt can also be used with water to form a more abrasive cleaner.

Furniture Polish

2 parts vegetable oil
1 part lemon juice
or
3 cups olive oil
1 cup vinegar

Oven Cleaner

baking soda
water

Scour with baking soda and water. To prevent grease buildup, always clean spills as soon as the oven cools down.

Laundry Detergent

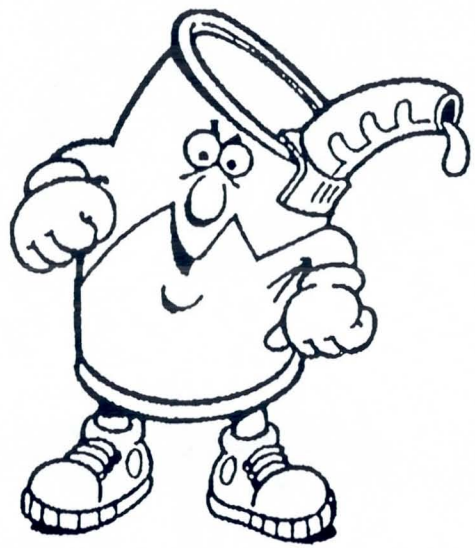
Try borax or baking soda. Add a few drops of vinegar to keep colors bright.

Solid Waste and Facilities
P.O. Box 1466
Mesa, Arizona 85211-1466

CITY OF MESA
at People. Quality Service!

CITY OF MESA
SOLID WASTE DIVISION

Household Hazardous Waste Program



"Committed to Excellence in Environmental Services."

Many c[illegible] 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 Re[illegible]s!

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 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.

Services are subject to change
(January, 1997)

PRINTED ON RECYCLED PAPER

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 644-2688 for more information regarding proper disposal methods, businesses that will accept household hazardous materials, and City collection events.

Visit the Solid Waste Division's
web site at
http://www.ci.mesa.az.us/waste/

Advertising

for

Household Hazardous Waste Day

Household Hazardous Waste Day Event
Media channels for 1999

The Tribune	2/27/99 3/3/99 3/6/99
AZ. Republic	2/28/99 3/3/99 3/7/99
East Mesa Independent	2/28/99 3/3/99

News Release, by Andrea Rasizer - March 2, 1999

WebPages/flyers (same content)

Openline February 1999 issue

The TRIBUNE
Cost 2,821.08

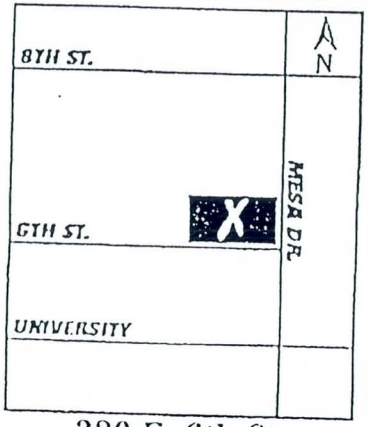
Feb 27th March 3 + 6

Household Hazardous Waste and Small Appliance Collection Day

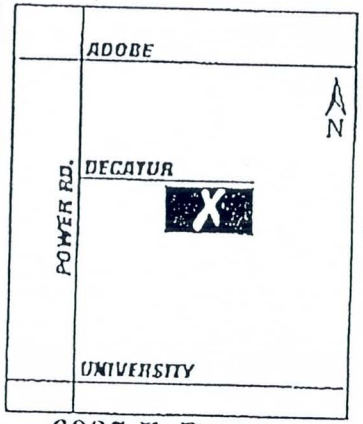
MARCH 6, 1999

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



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 waste, radioactive material, ammunition or explosives.

For a list of acceptable items or additional information call the Recycling Hotline at

644-2222

CITY OF MESA

Great People, Quality Service!

OK to pay 2

Feb 27th March 3 Mch 6th

THE AZ REPUBLIC
Cost- 849.60

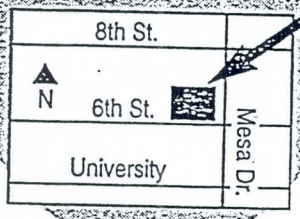
Household Hazardous Waste and Small Appliance Collection Day

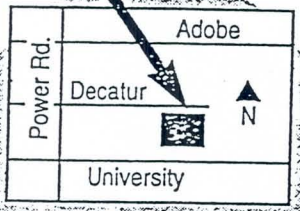
March 6, 1999 • 8:00am-2:00pm

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

Site Locations

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





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

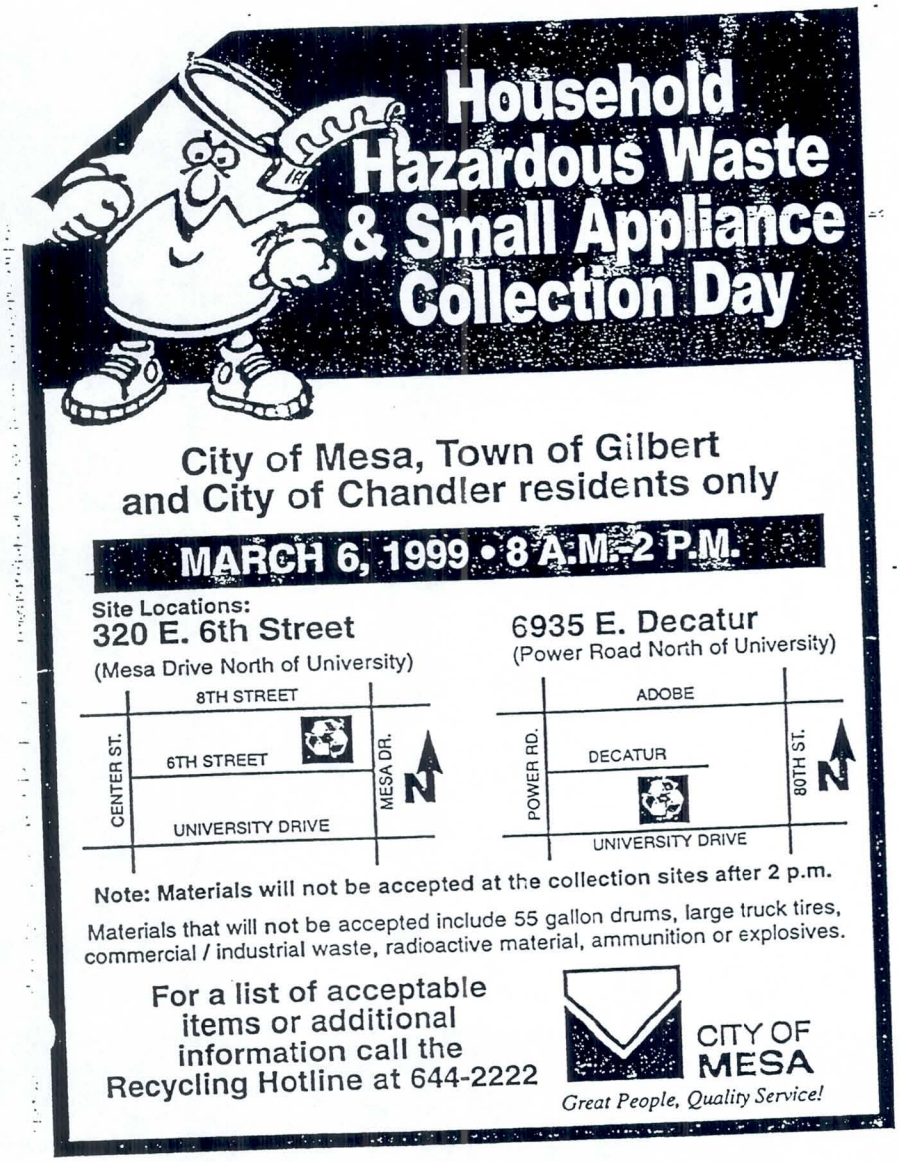
Note: Materials will not be accepted at the collection sites after 2:00pm.

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 644-2222.

CITY OF MESA
Great People, Quality Service!

EAST MESA INDEPENDENT
Cost 237.12



For Release ***March 2, 1999***
Contact: ***Andrea Rasizer***
Public Information Officer
644.2569 Tel 418.0078 Cell Phone/Pager

Is your garage a hazardous waste area?
Mesa, Gilbert, Chandler residents can recycle it Mar. 6

Is that leftover paint, dead battery and used motor oil collecting dust in your garage? Don't throw it away. Bring it to Mesa's Household Hazardous Waste and Small Appliance Collection Day this Saturday.

The City is hosting a Household Hazardous Waste and Small Appliance Collection Day for Mesa, Gilbert and Chandler residents 8 a.m. to 2 p.m. at the Sixth Street Service Center, 300 E. Sixth St. and the East Mesa Service Center, 6935 E. Decatur.

On Household Hazardous Waste Day, the City will accept 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, detergents, pesticides, pool chemicals, toasters, blenders, garbage disposals and other small appliances. All liquids must be in five-gallon containers or smaller.

Sorry, we can't accept explosives, radioactive materials, ammunition, 55-gallon drums of material, large truck tires and commercial or industrial waste.

Homeowners will be asked to present a recent monthly City utility bill showing they pay solid waste fees. Apartment residents will be asked to provide the name and address of their apartment complex.

Call 644-2222 for more information about Mesa's Household Hazardous Waste and Small Appliance Day.

- 30 -

Post-it® Fax Note 7671	Date 3/2	# of pages ▶ 1
To Kari Kent	From Andrea Rasizer	
Co./Dept. Solid Waste	Co. City of Mesa	
Phone #	Phone # 2569	
Fax # 3051	Fax # 2175	

TOTAL P.01

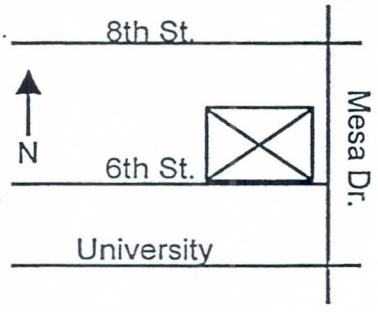
WEBPAGE / FLYERS

Household Hazardous Waste and Small Appliance Collection Day
March 6, 1999
8:00 AM - 2:00 PM

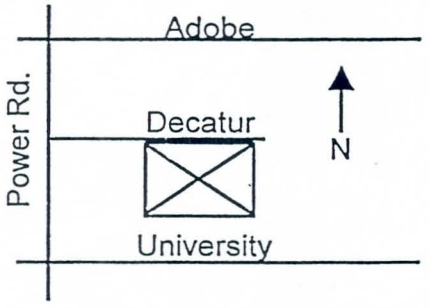
City of Mesa, Town of Gilbert, and
City of Chandler residents only

Site Locations:

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
turpentine
adhesives
cosmetics
motor oil
transmission fluid
oil/fuel additives
detergents
deodorizers
polishes
prescription drugs
pesticides
pool chemicals
gasoline
automobile/household batteries
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 644-2211)
no commercial/business tires

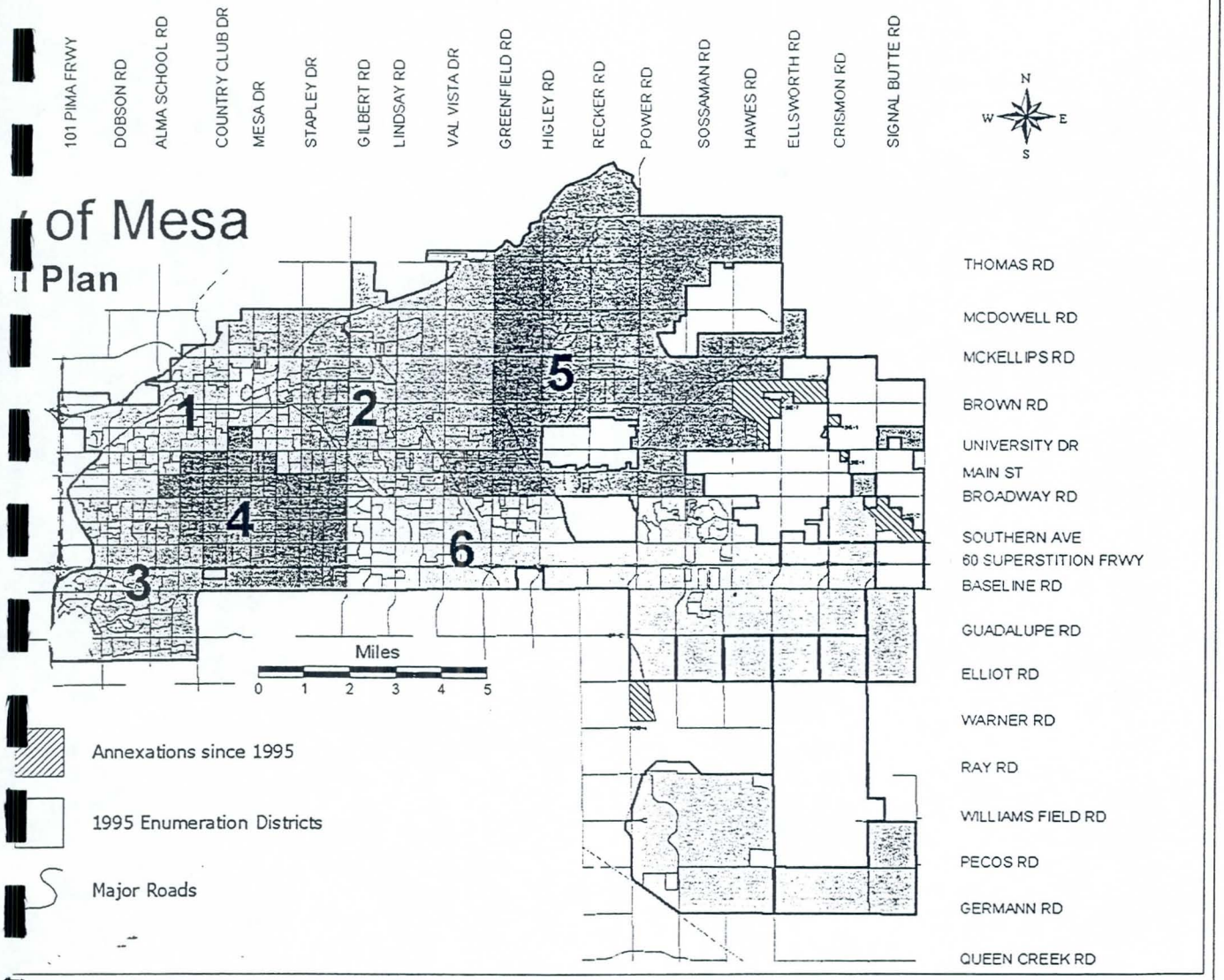
General Information

- 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 644-2222
- City of Chandler 786-2863
- Town of Gilbert 503-6437

OF MAINE
FEBRUARY 99



Prevent pollution, round up your 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. 6 at the Sixth Street Service Center, 300 E. Sixth St. and the East Mesa Service Center, 6935 E. Decatur.

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 644-2222 for more information.

Sample Letter for Support of Auto Part Store Oil

Collection

CITY OF MESA
Great People, Quality Service!

Environmental Programs

March 2, 1999

Mesa Resident
[redacted]
Mesa, Arizona 85213

Dear Mesa Resident:

The City of Mesa has received complaints reporting the improper disposal of used motor oil from your residence. The City is concerned about the effect improper disposal of automotive fluids can have on 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. Attached to this letter is 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 644-4654 if you have any questions related to this issue. Your cooperation in this effort is appreciated.

Sincerely,

J. Collum Hunter
Environmental Technician

ercl.231

20 East Main Street
P.O. Box 1466
Mesa Arizona 85211-1466
602.644.4461 Tel
602.644.3937 Fax

CITY OF MESA
Great People, Quality Service!

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

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

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

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.

I:stormwater:public education

Additional Sampling Data

Mesa 2 - Broadway and Lindsay			
Date of Sampling	Method	07/31/1998	08/15/1998
Time		2212	1100
Representative Storm Event		Y	N
Agency Collecting Sample		FCD	FCD
Agency Analyzing Sample		BOLIN	BOLIN
Drainage Area (acres) (DA)		145	145
Impervious Area (acres) (IA)		37	37
Land Use - Residential		--	--
Land Use - Commercial		--	--
Land Use - Industrial		--	--
Land Use - Undeveloped		--	--
Sampling Duration (minutes)		463	480
Storm Duration (minutes) (DRN)		181	169
Runoff Sampled (cubic feet) (RUN)		61,500	33,800
Total Storm Runoff (cubic feet)		75,000	50,000
Instantaneous Discharge (cfs)		12.2	3.4
Preceeding Dry Period (days) (ANT)		14	14
Total Storm Rainfall (inch)		0.27	0.12
Rainfall Sampled (inch) (TRN)		0.27	0.12
Maximum 5-minute rain intensity (MAX5)		1.2	0.24
Sample Temperature (deg. C)	Field	4	4
Effluent Temperature (deg. C)	Field	26	NM
pH, Effluent (standard units)	Field	NM	7
BOD5 (mg/l)	405.1	23	25
COD High Level (mg/l)	410.1	212	183
Fecal Coliform (CFU/100mL)	9222C	>1600	>160,000
Fecal Streptococci (CFU/100mL)	9230C	240	90,000
Total Dissolved Solids (mg/l)	160.1	172	425
Total Suspeded Solids (mg/l)	160.1	150	26
TKN Nitrogen (mg/l as N)	351.3	1.8	1.5
Nitrogen Nitrate Total (mg/l as N)	353.2	<0.1	2
Nitrogen Ammonia Total (mg/l as N)	350.3	2.94	1.44
Nitrogen Organic Total (mg/l as N)	351.4	<0.5	0.06
Phosphorous Total (mg/l as P)	365.2	1.5	1.7
Phosphorous Dissolved (mg/l as P)	365.3	0.8	1.5
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0	<5.0
Hardness (mg/l)	130.2	64	142
Cadmium Total Recoverable (ug/l as Cd)	213.2	<0.2	<0.2
Cadmium Dissolved (ug/l as Cd)	213.2	<0.2	0.2
Chromium Total Recoverable (ug/l as Cr)	218.2	2.2	<1
Chromium Dissolved (ug/l as Cr)	218.2	1.3	3.3
Copper, Total Recoverable, (ug/l as Cu)	220.2	24	14
Copper, Dissolved, (ug/l as Cu)	220.2	<15	<15
Lead, Total Recoverable, (ug/l as Pb)	239.2	12	<5
Lead, Dissolved, (ug/l as Pb)	239.2	6	<5
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2	0.3
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	0.5
Zinc, Total Recoverable, (ug/l as Zn)	289.2	180	110
Zinc, Dissolved, (ug/l as Zn)	289.2	50	80
P,P' DDE, Total, (ug/l)	608	<1.0	<1.0
Methylene Chloride, Total, (ug/l)	624	--	--
Toluene, Total, (ug/l)	624	--	<40
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0	<5.0
Chrysene, Total, (ug/l)	625	<5.0	<5.0
Fluoranthene, Total, (ug/l)	625	<5.0	<5.0
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0	<5.0
Pyrene, Total, (ug/l)	625	<5.0	<5.0

Mesa 3 - Falcon Field			
Date of Sampling	Method	07/31/1998	08/15/1998
Time		2225	1951
Representative Storm Event		Y	Y
Agency Collecting Sample		FCD	FCD
Agency Analyzing Sample		BOLIN	BOLIN
Drainage Area (acres) (DA)		171	171
Impervious Area (acres) (IA)		111	111
Land Use - Residential		--	--
Land Use - Commercial		--	--
Land Use - Industrial		--	--
Land Use - Undeveloped		--	--
Sampling Duration (minutes)		95	101
Storm Duration (minutes) (DRN)		185	142
Runoff Sampled (cubic feet) (RUN)		220,000	212,500
Total Storm Runoff (cubic feet)		>500,000	>500,000
Instantaneous Discharge (cfs)		56.9	56.9
Preceeding Dry Period (days) (ANT)		7	14
Total Storm Rainfall (inch)		0.76	0.26
Rainfall Sampled (inch) (TRN)		0.56	0.25
Maximum 5-minute rain intensity (MAX5)		5.28	1.32
Sample Temperature (deg. C)	Field	4	4
Effluent Temperature (deg. C)	Field	NM	NM
pH, Effluent (standard units)	Field	NM	7
BOD5 (mg/l)	405.1	24	31
COD High Level (mg/l)	410.1	155	121
Fecal Coliform (CFU/100mL)	9222C	>16,000	14,000
Fecal Streptococci (CFU/100mL)	9230C	9,000	2,400
Total Dissolved Solids (mg/l)	160.1	116	91
Total Suspended Solids (mg/l)	160.1	196	68
TKN Nitrogen (mg/l as N)	351.3	1.1	1
Nitrogen Nitrate Total (mg/l as N)	353.2	0.8	0.9
Nitrogen Ammonia Total (mg/l as N)	350.3	30.8	1.63
Nitrogen Organic Total (mg/l as N)	351.4	<0.5	<0.5
Phosphorous Total (mg/l as P)	365.2	0.8	0.4
Phosphorous Dissolved (mg/l as P)	365.3	0.3	0.4
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0	<5.0
Hardness (mg/l)	130.2	58	40
Cadmium Total Recoverable (ug/l as Cd)	213.2	0.7	0.26
Cadmium Dissolved (ug/l as Cd)	213.2	0.58	0.83
Chromium Total Recoverable (ug/l as Cr)	218.2	4.8	1.4
Chromium Dissolved (ug/l as Cr)	218.2	4.6	4.5
Copper, Total Recoverable, (ug/l as Cu)	220.2	<15	14
Copper, Dissolved, (ug/l as Cu)	220.2	<15	<15
Lead, Total Recoverable, (ug/l as Pb)	239.2	16	10
Lead, Dissolved, (ug/l as Pb)	239.2	8	<5
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2	0.3
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	<0.2
Zinc, Total Recoverable, (ug/l as Zn)	289.2	120	160
Zinc, Dissolved, (ug/l as Zn)	289.2	80	100
P,P' DDE, Total, (ug/l)	608	<1.0	<1.0
Methylene Chloride, Total, (ug/l)	624	--	--
Toluene, Total, (ug/l)	624	--	<40
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0	<5.0
Chrysene, Total, (ug/l)	625	<5.0	<5.0
Fluoranthene, Total, (ug/l)	625	<5.0	<5.0
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0	<5.0
Pyrene, Total, (ug/l)	625	<5.0	<5.0

Mesa 4 - Horne and Grandview			
Date of Sampling	Method	07/31/1998	08/15/1998
Time		2219	2002
Representative Storm Event		Y	Y
Agency Collecting Sample		FCD	FCD
Agency Analyzing Sample		BOLIN	BOLIN
Drainage Area (acres) (DA)		113.1	113.1
Impervious Area (acres) (IA)		58	58
Land Use - Residential		100	100
Land Use - Commercial		0	0
Land Use - Industrial		0	0
Land Use - Undeveloped		0	0
Sampling Duration (minutes)		262	480
Storm Duration (minutes) (DRN)		190	146
Runoff Sampled (cubic feet) (RUN)		165,000	65,400
Total Storm Runoff (cubic feet)		166,400	66,400
Instantaneous Discharge (cfs)		75.7	27
Preceeding Dry Period (days) (ANT)		7	15
Total Storm Rainfall (inch)		0.69	0.24
Rainfall Sampled (inch) (TRN)		0.69	0.24
Maximum 5-minute rain intensity (MAX5)		7.68	1.08
Sample Temperature (deg. C)	Field	NM	4
Effluent Temperature (deg. C)	Field	NM	NM
pH, Effluent (standard units)	Field	NM	NM
BOD5 (mg/l)	405.1	19	85
COD High Level (mg/l)	410.1	101	180
Fecal Coliform (CFU/100mL)	9222C	2,400	>160,000
Fecal Streptococci (CFU/100mL)	9230C	14,000	17,000
Total Dissolved Solids (mg/l)	160.1	111	153
Total Suspended Solids (mg/l)	160.1	40	59
TKN Nitrogen (mg/l as N)	351.3	1.1	1.7
Nitrogen Nitrate Total (mg/l as N)	353.2	--	1.5
Nitrogen Ammonia Total (mg/l as N)	350.3	--	1.65
Nitrogen Organic Total (mg/l as N)	351.4	--	0.05
Phosphorous Total (mg/l as P)	365.2	<0.05	0.6
Phosphorous Dissolved (mg/l as P)	365.3	<0.05	0.5
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0	<5.0
Hardness (mg/l)	130.2	43	52
Cadmium Total Recoverable (ug/l as Cd)	213.2	<0.2	0.51
Cadmium Dissolved (ug/l as Cd)	213.2	<0.2	<0.2
Chromium Total Recoverable (ug/l as Cr)	218.2	1.6	1.5
Chromium Dissolved (ug/l as Cr)	218.2	<1	2.6
Copper, Total Recoverable, (ug/l as Cu)	220.2	<15	18
Copper, Dissolved, (ug/l as Cu)	220.2	<15	<15
Lead, Total Recoverable, (ug/l as Pb)	239.2	5	9
Lead, Dissolved, (ug/l as Pb)	239.2	<5	<5
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2	<0.2
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	0.7
Zinc, Total Recoverable, (ug/l as Zn)	289.2	90	120
Zinc, Dissolved, (ug/l as Zn)	289.2	40	80
P,P' DDE, Total, (ug/l)	608	<1.0	<1.0
Methylene Chloride, Total, (ug/l)	624	--	--
Toluene, Total, (ug/l)	624	--	<40
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0	--
Chrysene, Total, (ug/l)	625	<5.0	--
Fluoranthene, Total, (ug/l)	625	<5.0	--
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0	--
Pyrene, Total, (ug/l)	625	<5.0	--

Mesa 5 - Broadway and Dobson		
Date of Sampling	Method	08/12/1998
Time		1805
Representative Storm Event		N
Agency Collecting Sample		FCD
Agency Analyzing Sample		BOLIN
Drainage Area (acres) (DA)		63
Impervious Area (acres) (IA)		56
Land Use - Residential		0
Land Use - Commercial		100
Land Use - Industrial		0
Land Use - Undeveloped		0
Sampling Duration (minutes)		480
Storm Duration (minutes) (DRN)		121
Runoff Sampled (cubic feet) (RUN)		67,200
Total Storm Runoff (cubic feet)		68,000
Instantaneous Discharge (cfs)		16.2
Preceeding Dry Period (days) (ANT)		7
Total Storm Rainfall (inch)		0.61
Rainfall Sampled (inch) (TRN)		0.61
Maximum 5-minute rain intensity (MAX5)		3.72
Sample Temperature (deg. C)	Field	4
Effluent Temperature (deg. C)	Field	27.8
pH, Effluent (standard units)	Field	7.8
BOD5 (mg/l)	405.1	68
COD High Level (mg/l)	410.1	191
Fecal Coliform (CFU/100mL)	9222C	160,000
Fecal Streptococci (CFU/100mL)	9230C	24,000
Total Dissolved Solids (mg/l)	160.1	85
Total Suspended Solids (mg/l)	160.1	116
TKN Nitrogen (mg/l as N)	351.3	2.4
Nitrogen Nitrate Total (mg/l as N)	353.2	1.5
Nitrogen Ammonia Total (mg/l as N)	350.3	1.48
Nitrogen Organic Total (mg/l as N)	351.4	0.92
Phosphorous Total (mg/l as P)	365.2	0.9
Phosphorous Dissolved (mg/l as P)	365.3	0.5
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0
Hardness (mg/l)	130.2	54
Cadmium Total Recoverable (ug/l as Cd)	213.2	1.1
Cadmium Dissolved (ug/l as Cd)	213.2	0.57
Chromium Total Recoverable (ug/l as Cr)	218.2	8.6
Chromium Dissolved (ug/l as Cr)	218.2	3.9
Copper, Total Recoverable, (ug/l as Cu)	220.2	42
Copper, Dissolved, (ug/l as Cu)	220.2	18
Lead, Total Recoverable, (ug/l as Pb)	239.2	24
Lead, Dissolved, (ug/l as Pb)	239.2	12
Mercury, Total Recoverable, (ug/l as Hg)	245.1	0.3
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2
Zinc, Total Recoverable, (ug/l as Zn)	289.2	320
Zinc, Dissolved, (ug/l as Zn)	289.2	200
P,P' DDE, Total, (ug/l)	608	<1.0
Methylene Chloride, Total, (ug/l)	624	<100
Toluene, Total, (ug/l)	624	<40
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0
Chrysene, Total, (ug/l)	625	<5.0
Fluoranthene, Total, (ug/l)	625	<5.0
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0
Pyrene, Total, (ug/l)	625	<5.0

Mesa 2 - Broadway and Lindsay		
Date of Sampling	Method	10/25/1998
Time		2223
Representative Storm Event		Y
Agency Collecting Sample		FCD
Agency Analyzing Sample		BOLIN
Drainage Area (acres) (DA)		145
Impervious Area (acres) (IA)		37
Land Use - Residential		--
Land Use - Commercial		--
Land Use - Industrial		--
Land Use - Undeveloped		--
Sampling Duration (minutes)		964
Storm Duration (minutes) (DRN)		343
Runoff Sampled (cubic feet) (RUN)		57,900
Total Storm Runoff (cubic feet)		62,000
Instantaneous Discharge (cfs)		4.7
Preceeding Dry Period (days) (ANT)		33
Total Storm Rainfall (inch)		0.27
Rainfall Sampled (inch) (TRN)		0.27
Maximum 5-minute rain intensity (MAX5)		1.44
Sample Temperature (deg. C)	Field	4
Effluent Temperature (deg. C)	Field	22.9
pH, Effluent (standard units)	Field	7.85
BOD5 (mg/l)	405.1	--
COD High Level (mg/l)	410.1	154
Fecal Coliform (CFU/100mL)	9222C	--
Fecal Streptococci (CFU/100mL)	9230C	--
Total Dissolved Solids (mg/l)	160.1	123
Total Suspeded Solids (mg/l)	160.1	102
TKN Nitrogen (mg/l as N)	351.3	<0.5
Nitrogen Nitrate Total (mg/l as N)	353.2	--
Nitrogen Ammonia Total (mg/l as N)	350.3	0.84
Nitrogen Organic Total (mg/l as N)	351.4	<0.5
Phosphorous Total (mg/l as P)	365.2	0.42
Phosphorous Dissolved (mg/l as P)	365.3	0.29
Oil and Grease Total Recoverable (mg/l)	413.1	--
Hardness (mg/l)	130.2	52
Cadmium Total Recoverable (ug/l as Cd)	213.2	0.32
Cadmium Dissolved (ug/l as Cd)	213.2	<0.2
Chromium Total Recoverable (ug/l as Cr)	218.2	4.4
Chromium Dissolved (ug/l as Cr)	218.2	<2
Copper, Total Recoverable, (ug/l as Cu)	220.2	28
Copper, Dissolved, (ug/l as Cu)	220.2	<15
Lead, Total Recoverable, (ug/l as Pb)	239.2	7
Lead, Dissolved, (ug/l as Pb)	239.2	<5
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2
Zinc, Total Recoverable, (ug/l as Zn)	289.2	110
Zinc, Dissolved, (ug/l as Zn)	289.2	90
P,P' DDE, Total, (ug/l)	608	<1.0
Methylene Chloride, Total, (ug/l)	624	--
Toluene, Total, (ug/l)	624	--
Benzo (a) Anthracene, Total, (ug/l)	625	<25
Chrysene, Total, (ug/l)	625	<25
Fluoranthene, Total, (ug/l)	625	<25
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<25
Pyrene, Total, (ug/l)	625	<25

Mesa 5 - Broadway and Dobson		
Date of Sampling	Method	10/25/1998
Time		2233
Representative Storm Event		Y
Agency Collecting Sample		FCD
Agency Analyzing Sample		BOLIN
Drainage Area (acres) (DA)		63
Impervious Area (acres) (IA)		56
Land Use - Residential		0
Land Use - Commercial		100
Land Use - Industrial		0
Land Use - Undeveloped		0
Sampling Duration (minutes)		952
Storm Duration (minutes) (DRN)		430
Runoff Sampled (cubic feet) (RUN)		50,740
Total Storm Runoff (cubic feet)		53,500
Instantaneous Discharge (cfs)		6.7
Preceeding Dry Period (days) (ANT)		35
Total Storm Rainfall (inch)		0.36
Rainfall Sampled (inch) (TRN)		0.36
Maximum 5-minute rain intensity (MAX5)		0.84
Sample Temperature (deg. C)	Field	4
Effluent Temperature (deg. C)	Field	21.4
pH, Effluent (standard units)	Field	7.62
BOD5 (mg/l)	405.1	--
COD High Level (mg/l)	410.1	151
Fecal Coliform (CFU/100mL)	9222C	--
Fecal Streptococci (CFU/100mL)	9230C	--
Total Dissolved Solids (mg/l)	160.1	111
Total Suspended Solids (mg/l)	160.1	78
TKN Nitrogen (mg/l as N)	351.3	--
Nitrogen Nitrate Total (mg/l as N)	353.2	--
Nitrogen Ammonia Total (mg/l as N)	350.3	1.44
Nitrogen Organic Total (mg/l as N)	351.4	--
Phosphorous Total (mg/l as P)	365.2	0.2
Phosphorous Dissolved (mg/l as P)	365.3	0.11
Oil and Grease Total Recoverable (mg/l)	413.1	--
Hardness (mg/l)	130.2	45
Cadmium Total Recoverable (ug/l as Cd)	213.2	0.52
Cadmium Dissolved (ug/l as Cd)	213.2	<0.2
Chromium Total Recoverable (ug/l as Cr)	218.2	17
Chromium Dissolved (ug/l as Cr)	218.2	<2
Copper, Total Recoverable, (ug/l as Cu)	220.2	30
Copper, Dissolved, (ug/l as Cu)	220.2	<15
Lead, Total Recoverable, (ug/l as Pb)	239.2	11
Lead, Dissolved, (ug/l as Pb)	239.2	<5
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2
Zinc, Total Recoverable, (ug/l as Zn)	289.2	200
Zinc, Dissolved, (ug/l as Zn)	289.2	80
P,P' DDE, Total, (ug/l)	608	<1.0
Methylene Chloride, Total, (ug/l)	624	--
Toluene, Total, (ug/l)	624	--
Benzo (a) Anthracene, Total, (ug/l)	625	<25
Chrysene, Total, (ug/l)	625	<25
Fluoranthene, Total, (ug/l)	625	<25
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<25
Pyrene, Total, (ug/l)	625	<25

Mesa 3 - Falcon Field		
Date of Sampling	Method	02/04/1999
Time		1731
Representative Storm Event		Y
Agency Collecting Sample		FCD
Agency Analyzing Sample		BOLIN
Drainage Area (acres) (DA)		171
Impervious Area (acres) (IA)		111
Land Use - Residential		--
Land Use - Commercial		--
Land Use - Industrial		--
Land Use - Undeveloped		--
Sampling Duration (minutes) (DRN)		277
Storm Duration (minutes)		368
Runoff Sampled (cubic feet) (RUN)		219500
Total Storm Runoff (cubic feet)		>500,000
Instantaneous Discharge (cfs)		24
Preceeding Dry Period (days) (ANT)		49
Total Storm Rainfall (inch)		0.23
Rainfall Sampled (inch) (TRN)		0.22
Maximum 5-minute rain intensity (MAX5)		0.24
Sample Temperature (deg. C)	Field	4
Effluent Temperature (deg. C)	Field	12.1
pH, Effluent (standard units)	Field	8.17
BOD5 (mg/l)	405.1	5
COD High Level (mg/l)	410.1	102
Fecal Coliform (MPN/100mL)	9222C	340
Fecal Streptococci (MPN/100mL)	9230C	--
Total Dissolved Solids (mg/l)	160.1	36
Total Suspended Solids (mg/l)	160.1	<1
TKN Nitrogen (mg/l as N)	351.3	2.37
Nitrogen Nitrate Total (mg/l as N)	353.2	--
Nitrogen Ammonia Total (mg/l as N)	350.3	1.16
Nitrogen Organic Total (mg/l as N)	351.4	1.21
Phosphorous Total (mg/l as P)	365.2	0.11
Phosphorous Dissolved (mg/l as P)	365.3	0.39
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0
Hardness (mg/l)	130.2	12
Cadmium Total Recoverable (ug/l as Cd)	213.2	0.5
Cadmium Dissolved (ug/l as Cd)	213.2	0.2
Chromium Total Recoverable (ug/l as Cr)	218.2	3.7
Chromium Dissolved (ug/l as Cr)	218.2	3.4
Copper, Total Recoverable, (ug/l as Cu)	220.2	<15
Copper, Dissolved, (ug/l as Cu)	220.2	<15
Lead, Total Recoverable, (ug/l as Pb)	239.2	8
Lead, Dissolved, (ug/l as Pb)	239.2	<5
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2
Zinc, Total Recoverable, (ug/l as Zn)	289.2	80
Zinc, Dissolved, (ug/l as Zn)	289.2	50
P,P' DDE, Total, (ug/l)	608	<1.0
Methylene Chloride, Total, (ug/l)	624	<20
Toluene, Total, (ug/l)	624	<8
Benzo (a) Pyrene	625	<5.0
Chrysene, Total, (ug/l)	625	<5.0
Fluoranthene, Total, (ug/l)	625	<5.0
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0
Pyrene, Total, (ug/l)	625	<5.0

NPDES Construction Projects Database

Construction NOIs

Facility Operator	*Facility Address*	*Start Date*	*Completion Date*	*Estimated Area to be Disturbed (in acres)*
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.	2121 South Lansing	12/1/97	12/31/98	120
A.R. Development L.L.C.	2401 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

Facility Operator	*Facility Address*	*Start Date*	*Completion Date*	*Estimated Area to be Disturbed (in acres)*
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

Facility Operator	*Facility Address*	*Start Date*	*Completion Date*	*Estimated Area to be Disturbed (in acres)*
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
Pulte Home Corporation	9350 East McKellips Road	3/1/97	3/1/99	46
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

Facility Operator	*Facility Address*	*Start Date*	*Completion Date*	*Estimated Area to be Disturbed (in acres)*
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
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
Pulice Construction, Inc.	Baseline - Guadalupe	6/9/97	11/30/98	38
Pulice Construction, Inc.	Baseline - Guadalupe	6/9/97	11/30/98	38

Facility Operator	*Facility Address*	*Start Date*	*Completion Date*	*Estimated Area to be Disturbed (in acres)*
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
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
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
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

Facility Operator	*Facility Address*	*Start Date*	*Completion Date*	*Estimated Area to be Disturbed (in acres)*
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
A.R. Development L.L.C.	2420 South Crismon Road	8/1/99	8/1/00	30
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.	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
A.R. Development L.L.C.		12/1/97	12/31/98	27

Facility Operator	*Facility Address*	*Start Date*	*Completion Date*	*Estimated Area to be Disturbed (in acres)*
A.R. Development L.L.C.	2730 South 96th Street	12/1/97	12/31/98	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
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
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

Facility Operator	*Facility Address*	*Start Date*	*Completion Date*	*Estimated Area to be Disturbed (in acres)*
A.R. Development L.L.C.	Ellsworth and Baseline	8/1/99	8/1/00	25
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.	9767 East Navarro	8/1/99	8/1/00	24
A.R. Development L.L.C.	2220 South Crismon Road	8/1/99	8/1/00	24
Communities Southwest	10404 East Southern Avenue	10/15/96	10/15/97	24
Communities Southwest	SEC of E. Baseline Rd & S. Ellsworth	12/1/97	12/31/98	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

Facility Operator	*Facility Address*	*Start Date*	*Completion Date*	*Estimated Area to be Disturbed (in acres)*
Communities Southwest	SEC of E. Baseline Rd & S. Ellsworth	12/1/97	12/31/98	23
Communities Southwest	SEC of E. Baseline Rd & S. Ellsworth	12/1/97	12/31/98	23
Richmond American	32nd Street and US 60	10/1/97	10/1/99	23
Richmond American		6/1/96	12/1/96	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 to Country Club Drive	7/7/97	5/31/98	22
Pulice Construction, Inc.	McKellips Road - Country Club Drive	7/7/97	5/7/98	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

Facility Operator	*Facility Address*	*Start Date*	*Completion Date*	*Estimated Area to be Disturbed (in acres)*
D.P. Homes, Inc.	West of Higley Road - South of Broadway	1/30/93	4/30/99	20
Hancock Homes	NE Corner of McDowell and Ramada	9/3/96	9/3/99	20
Hancock Homes	Crismon/Southern	2/7/97	2/7/00	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

Facility Operator	*Facility Address*	*Start Date*	*Completion Date*	*Estimated Area to be Disturbed (in acres)*
Communities Southwest	10404 East Southern Avenue	10/15/96	10/15/97	16
Parkwood Ranch LLC	10404 East Southern Avenue	9/10/97	3/1/98	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
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
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

Facility Operator	*Facility Address*	*Start Date*	*Completion Date*	*Estimated Area to be Disturbed (in acres)*
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
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
Richmond American Homes	1855 North Alta Mesa Drive	4/4/98	12/31/98	12
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
Great Western Projects, Inc.		2/9/98	9/9/98	9

Facility Operator	*Facility Address*	*Start Date*	*Completion Date*	*Estimated Area to be Disturbed (in acres)*
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
C&F Equipment Co., Inc.	McDowell Road and Lindsay	3/1/93	6/29/93	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
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

Facility Operator	*Facility Address*	*Start Date*	*Completion Date*	*Estimated Area to be Disturbed (in acres)*
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
Têran 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
AA Builders, LTD.	425 South Val Vista Drive			1
Evans-Withycombe, Inc.	1320 South Val Vista Drive			
Pulte Home Corporation	9350 East McKellips Road			