



Draft Storm Water Management Plan 2007 Annual Report MS4 Permit No. AZS000018

Prepared for



Maintenance Planning and Operations Arizona Department of Transportation 206 South 17th Avenue Phoenix, Arizona, 85007

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DEFINITIONS

Arizona Administrative Code (AAC) - Arizona Administrative Code.

ADEQ - Arizona Department of Environmental Quality.

Arizona Pollutant Discharge Elimination System (AZPDES) - The State program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of CWA.

Best Management Practice (BMP) - Permit condition used in place of or in conjunction with effluent limitations to prevent or control the discharge of pollutants. BMPs may include, but are not limited to, treatment requirements, operating procedures, or practices to control plant/facility site runoff, spillage, leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may also include schedule of activities, prohibition of practices, maintenance procedure, or other management practice.

Clean Water Act (CWA) - The Clean Water Act is an act passed by the U.S. Congress to control water pollution. It was formerly referred to as the Federal Water Pollution Control Act of 1972 or Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500), 33 U.S.C. 1251 et. seq., as amended by: Public Law 96-483; Public Law 97-117; Public Laws 95-217, 97-117, 97-440, and 100-04.

Code of Federal Regulations (CFR) - A codification of the final rules published daily in the Federal Register. Title 40 of the CFR contains the environmental regulations.

Composite Sample - Sample composed of two or more discrete samples. The aggregate sample will reflect the average water quality covering the compositing or sample period.

Discharge Monitoring Report (DMR) - The form used (including any subsequent additions, revisions, or modifications) to report self-monitoring results by AZPDES permittees. DMRs must be used by approved states as well as by EPA.

EPA - Environmental Protection Agency.

Grab Sample - A sample that is taken from a waste stream on a one-time basis without consideration of the flow rate of the waste stream and without consideration of time.

Municipal Separate Storm Sewer System (MS4) - A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) owned by a state, city, town or other public body, that is designed or used for collecting or conveying stormwater, which is not a combined sewer, and which is not part of a publicly owned treatment works. Commonly referred to as an "MS4" [40 CFR 122.26(b)(8)].

Permittee - means the Arizona Department of Transportation.

Stormwater - Stormwater runoff, snowmelt runoff, and surface runoff and drainage [40 CFR 122.26(b)(13)].

Stormwater Management Plan (SWMP) - A comprehensive plan for implementation of AZPDES permit requirements.

Waters of the United States - All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide. Waters of the United States include but are not limited to all interstate waters and intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, play lakes, or natural ponds. [See 40 CFR 122.2 for the complete definition.]

EXECUTIVE SUMMARY

The Arizona Department of Transportation (ADOT) is submitting this 2007 Stormwater Management Plan (SWMP) Annual Report describing the activities and programs implemented by ADOT from July 1, 2006 through June 30, 2007, as part of its Municipal Storm Sewer System (MS4) Phase I Permit. This annual report is prepared pursuant to the requirements of the Arizona Pollutant Discharge Elimination System (AZPDES) Permit Number AZS000018. This permit expired on August 31, 2002 but has been administratively continued by the Environmental Protection Agency (EPA) and the Arizona Department of Environmental Quality (ADEQ). A copy of the permit has been provided in Appendix A of this annual report.

The permit stipulates that an annual report be prepared and submitted to the permitting authority. This annual report addresses the stipulations established in the following documents:

- Title 40 Code of Federal Regulations (CFR) 122.26 and 122.42 26 as incorporated into reference by Arizona Administrative Code (AAC) R18-9-A905
- AZPDES permit No. AZS000018, effective October 1, 1999
- AAC Title 18, Chapter 9, Article 9, effective December 7, 2001
- ADOT Part 1 Permit Application dated November, 1991
- ADOT Part 2 Permit Application dated November, 1992
- Certification Statement

In compliance with these documents, the annual report includes discussion of the components of the SWMP implemented by ADOT, proposed changes to the SWMP, summary of data collected throughout the reporting year, annual expenditures, enforcement actions, inspections, public education programs, and water-quality improvements or degradation. The practices which implement the SWMP are continuously being reviewed and improved as new data, research, and technology become available.

The annual report is divided into thirteen categories: (1) Maintenance, (2) Construction, (3) Design, (4) Transportation Control Measures, (5) Stormwater Monitoring, (6) Dry Weather Screening, (7) Assessment of Best Management Practices (BMPs), (8) Office of Environmental Services (OES), (9) Statewide Permit Application, (10) Stormwater Advisory Teams (SWATs), (11) Proposed Changes, (12) Assessment of Water Quality Improvement or Degradation, and (13) Annual Expenditures. This annual report will be used by ADOT to assess the performance of its stormwater management program and to establish long-term assessment strategies.

CERTIFICATION STATEMENT

MUNICIPAL SEPARATE STORM SEWER SYSTEM ANNUAL REPORT FOR THE REPORTING YEAR ENDING June 30, 2007

AZPDES Permit Holder:	Arizona Department of Transportation
Period Covered by This Report:	July 1, 2006 through June 30, 2007
AZPDES Permit Number:	AZS000018

Person to contact concerning information contained in the report:

Todd G. Williams, M. Sc.

Director, Office of Environmental Services Arizona Department of Transportation 206 South 17th Avenue, MD 102A Phoenix, Arizona 85007 602.712.7540

As required by Title 40 CFR Section 122.22(b)(2) and incorporated into reference by AAC R18-9-A905:

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 this 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.

As required by AZPDES Permit Number AZS000018:

I certify that stormwater management program revisions previously approved by EPA, after consultation with the Arizona Department of Environmental Quality (ADEQ), were implemented on schedule.

Fort

Douglas A. Forstie, PE Deputy State Engineer, Operations Arizona Department of Transportation

September 28, 2007 Date

1 MAINTENANCE

1.1 Street Sweeping and Litter Pick-Up – Phoenix and Tucson

1.1.1 Street Sweeping

Street sweeping within ADOT's Phoenix District occurs on a weekly basis by contractors. Sweeping is normally completed between the hours of 8 PM to 4:30 AM. Contractors also respond to emergency situations within 30 minutes of being contacted by ADOT. The sweeping contractors are required to document and inform ADOT of any unusual spills or dumping observed during sweeping.

Street sweeping within the Tucson District is performed on a yearly, quarterly, monthly, or bi-weekly basis depending upon the area.

1.1.2 Mechanized Litter Pick-up

Debris in the Phoenix District is removed manually by ADOT personnel and the sweeping contractor on a schedule coinciding with the street sweeping schedule, or on a weekly or asneeded basis. Debris removed includes litter, dead animals, car parts, and other discarded materials. ADOT does not maintain records of the amount of debris removed by its personnel.

ADOT's Tucson District no longer conducts mechanized litter pick-up by a private firm. This activity is performed manually by ADOT personnel and prison work crews. Litter pick-up is performed two times per week and records are maintained by the Tucson District Office.

1.1.3 Manual Litter Pick-up

Manual litter pick-up occurs within the Phoenix and Tucson Districts as per the procedures described in the mechanized litter pick-up description above. Additionally, ADOT maintains on-call contractors in both Phoenix and Tucson to manually remove debris on an as-needed basis. This activity includes the removal of litter and debris at the roadway edge and within the right-of-way. Locations with higher traffic volumes require more frequent cleaning.

In the event that hazardous containers or other materials are found during litter pick-up by ADOT personnel or the on-call firm, crews are instructed to leave them in place so materials can be tested. Staff members are instructed to contact the ADOT Safety and Health office. ADOT maintains a contract with a hazardous materials handler to test and properly dispose of such materials. Wastes determined to be hazardous are properly disposed of by the contracted company. Both the Phoenix and Tucson Districts report that no hazardous materials have been found during the past year.

1.1.4 Adopt A Highway Program

The ADOT Adopt A Highway Program (AAH) helps reduce litter on Arizona highways by encouraging volunteers to clean up litter and by heightening public awareness of the need to keep the highways clean. The program includes both volunteers and sponsors. The volunteer program allows organizations to adopt designated sections of highway for which they are responsible to pick up litter four times per year (one pick up per quarter). The sponsor program requires 26 pick-ups per year in the Phoenix District and 12 pick-ups per year in the Tucson District. ADOT or sponsor contractors erect signs, which call the motorist's attention to the litter control program. The signs also credit the adoptive organization for its effort in keeping the highway clean. The following is the amount of waste removed within the Phase I areas and the number of miles adopted within each area:

- The Phoenix District AAH removed approximately 163,000 bags of litter during Fiscal Year 2006/2007. This is an increase from the 111,632 bags removed the previous year. This litter was removed by three paid litter removal contractors, three AAH sponsor contractors, and two prison crews from Perryville Prison. There were 199 miles adopted by sponsors and 114 miles adopted by volunteers within the Phoenix area.
- The Tucson District AAH removed 1,139 bags of litter during Fiscal Year 2006/2007. This is a decrease from 6,077 bags removed the previous year. Litter was removed by various private parties and organizations. Eighteen miles of highways were adopted by sponsors for the Tucson District AAH in the last year with two additional miles pending. Seven hundred thirty-eight miles were adopted by volunteers in the last year.

1.2 Storm Sewer System Maintenance – Phoenix and Tucson

1.2.1 Pump Station Maintenance – Phoenix Only

All pump stations within the Phoenix drainage system have been inspected once per week during the past year. If ADOT personnel determine that a pump station requires cleaning, the wells are dewatered with a hydro-vac and sediment and debris are removed. No discernable pollutants have been noted for any Phoenix pump stations during the past year.

1.2.2 Tunnel Maintenance – Phoenix Only

ADOT owns and operates three large drainage tunnels (18' to 21' diameter) in the Phoenix area. The profiles of the tunnels have sag points that tend to trap sediment during low velocity flows upstream from their outlet structures. All three tunnels discharge into the Salt River. The East and West tunnels discontinued pumping due to mechanical failure and lack of parts due to the age of the engines while the Price Road tunnel was dewatered and only partially inspected the presence of silt and mud inside.

1.2.3 Storm Sewer Maintenance – Phoenix and Tucson

ADOT maintains large diameter storm sewers (those large enough to walk through) within the Phoenix and Tucson Districts. These storm sewers have been inspected yearly and cleaned on an as-needed basis. The smaller storm sewers are self-cleaning and therefore do not require scheduled inspections and cleaning. No pollutants have been detected.

1.2.4 Storm Sewer Inlet/Catch Basin Maintenance – Phoenix and Tucson

Inlets and catch basins within the Phoenix District have been inspected and cleaned on an asneeded basis within the past year. Additionally, storm sewer inlets and catch basins within landscaped areas are maintained by ADOT's District Maintenance Organizations. There has been no serious or unusual clogging of storm sewer inlets or catch basins during the past year.

The ADOT Tucson District inspects all of its storm sewer inlets and catch basins on a yearly basis. Some serious or unusual clogging of storm sewer inlets or catch basins did occur during the past year requiring additional maintenance during the summer monsoon season.

1.2.5 Open Channel Maintenance – Phoenix and Tucson

Open channels within Phoenix's drainage system are inspected annually and cleaned at least once every three years. There is an on-call clean-out service available on an as-needed basis. Within the past year, there has been no unusual clogging reported.

The Tucson District conducts open channel inspections yearly. Tucson also maintains an oncall clean-out service. Some unusual clogging did occur during the summer monsoon season, as a result additional cleaning was required for the Tucson District.

1.2.6 Culvert Maintenance – Tucson Only

Each of the cross-drainage culverts under ADOT highways has undergone a formal inspection once within the past year. Inspection of these culverts has coincided with storm events. Some serious clogging occurred during the summer monsoon season resulting in additional maintenance to be required for some culverts within the Tucson area.

1.3 Control of Illicit Discharges

1.3.1 Permit System – Phoenix and Tucson

Storm sewers that connect and drain into ADOT's MS4 are controlled by one of two means: an Intergovernmental Agreement (IGA) or a connection permit (encroachment permit). If the connection is made during construction of the ADOT storm sewer, an IGA is formed between ADOT and the city/agency that is discharging to ADOT's system. If the connection is made subsequent to construction, the discharger is required to obtain a connection permit. If a non-permitted connection is made to ADOT's storm sewers, enforcement actions may be taken. These illegal connections may be removed or an encroachment permit required. ADOT issued a stormwater management guidance document for external parties on September 1, 2006. A copy of *Stormwater Guidance for External Parties* was placed on the ADOT website and on the District Permits webpages on September 15, 2006. The Phoenix and Tucson Districts report that they have not issued any connection permits during the fiscal year 2006/2007.

1.3.2 Inspection – Phoenix and Tucson

Inspections for illicit discharges to ADOT's storm sewer system within the Phoenix and Tucson Districts was conducted within the past year. Report of any illegal discharges is submitted by ADOT Road Maintenance crews who may observe them while performing normal activities. Illicit discharges may also be identified as a result of complaint calls. No illicit discharges have been identified during the past year.

1.3.3 Dry-Weather Screening – Phoenix and Tucson

During the past year, dry weather screening was conducted on at least 20% of the stormwater outfall discharge sites in the Phoenix and Tucson metropolitan areas. Eleven outfalls within the Phoenix area were inspected and three outfalls within the Tucson area were inspected. Section 6 contains further details concerning dry weather screening.

1.3.4 Pump Station Gas Detection – Phoenix Only

ADOT storm sewer pump stations are equipped with gas detection systems, which send an alarm signal to the Phoenix District Office in the event combustible gasses are detected in the wet well. The alarm is monitored on a 24-hour basis. If the alarm is sounded, pump maintenance personnel can respond in 15 to 20 minutes to shut off the pump if necessary. ADOT reports no detection of combustible gas in the pump stations within the past year.

1.3.5 Discharges to ADOT's System

The Tucson District reports four separate incidents for illicit concrete discharges on the I-10 Prince Rd – 29th St. project occurred. These incidents are described below:

- The first illicit concrete discharge occurred on April 17, 2007 in Simpson Wash from the slope to the wash. There were no known mitigation efforts and the ADOT Resident Engineer was informed of the incident and provided with a copy of the Construction Bulletin on Concrete Discharges. As a result of this incident, specific stormwater training was conducted and open to the public for attendance. The training included identification of illicit discharges and how to properly handle concrete waste. In attendance were several I-10 construction workers, Erosion Control Coordinator (ECC) and ADOT construction personnel.
- The second illicit discharge occurred on June 14, 2007 at I-19 MP 54.9 when sign posts foundations were poured by a subcontractor. Information was forwarded to the ADOT supervisor who emailed the ADOT Resident Engineer concerning the incident. As a result, procedures for concrete wash-outs were discussed in a weekly construction meeting.
- The third incident occurred on June 22, 2007 in the Bronx Wash along the slope embankment by a contractor. No known mitigation efforts were implemented and the concrete was subsequently covered by the construction company's subcontractor. Information concerning the incident was forwarded to the ADOT Resident Engineer, ADOT engineer consultant and SWPPP inspector. The ECC contacted the Tucson District Environmental Coordinator (DEC) to conduct storm water training for the contractor's staff, foremen and superintendents.
- The fourth illicit discharge occurred on June 25, 2007 in the Santa Cruz River behind the contractor's construction yard. The contractor cleaned up the concrete discharge after it solidified and hauled it away for proper disposal. The issue was discussed in the weekly construction meeting. The ADOT District Engineer also informed the contractor that he will be held responsible for the contractor and subcontractors on the project for illicit concrete discharges. The contractor's project manager agreed that the contractor will be responsible for any illicit discharges. The contractor will also

send a letter to all subcontractors notifying them that any illicit discharge will be reported to ADEQ. The letter is intended as further mitigation efforts

1.4 Emergency Response Program – Phoenix and Tucson

The State of Arizona has a plan to respond to accidental spills of hazardous materials called the State of Arizona Hazardous Materials Response and Recovery Plan. This plan defines authority and responsibility for individual State agencies in response to accidental spills. It also establishes an emergency management framework for joint state agency operations. ADOT signed a memorandum of understanding along with other State agencies, committees, and commissions that indicated their concurrence with the plan. Since then, ADOT has been actively carrying out its responsibilities under the plan.

The Phoenix District has created its own response team called ALERT (an acronym for ADOT Local Emergency Response Team) that responds to all types of emergencies on ADOT's roadways in the Phoenix District including spills of hazardous material. ADOT has prepared an ALERT Manual designating individual responsibility and lists key emergency personnel within ADOT and local communities. The ALERT members are on-call 24 hours a day, 7 days a week. Eight employees of the District ALERT Team are on call 24 hours a day, 7 days a week to respond to emergencies. Their duty in the event of a hazardous material spill is to contain the spill, manage traffic problems, and manage the spill clean-up.

In the event of an accidental spill, the Department of Public Safety (DPS, Highway Patrol) contacts the ADOT on-call ALERT members directly. DPS, ADEQ, and ADOT district maintenance crews all respond to the spill. ADOT's responsibilities include:

- 1. Coordinate with local fire and police departments
- 2. Contain spill by blocking storm drains, building dikes, etc.
- 3. Take care of traffic problems
- 4. Manage the cleanup of the hazardous materials

The Phoenix District Traffic Operation Control Center is manned 24 hours a day, 7 days a week for emergency calls and equipment monitoring.

ADOT adopted the current call back policy on 12/10/2002 to ensure that adequate staff are available to meet unexpected contingencies and emergencies. Procedures are in place to call any employee back to work to perform unanticipated services outside of their regularly scheduled hours. In addition, ADOT's Safety and Health Section employs a statewide emergency response specialist (Courtney Perrier-Bear, 520-838-2626) who responds to emergencies for all districts. ADOT also employs an Emergency Response Specialist II (Jeff Page, 602-712-4407) who responds to all statewide hazardous materials emergency responses.

The Tucson District has six separate maintenance groups that respond to all types of emergencies on ADOT's roadways including spills of hazardous material. Each maintenance group has three members who are available to DPS, Highway Patrol 24 hours a day, 7 days a

week. The duty of these members is to contain the spill, manage traffic problems, and manage the spill clean-up.

In most cases, the individual or company that is guilty of the spill is held responsible for contracting with a waste management company to clean it up. However, in the event that the guilty party either cannot be identified or does not have the necessary resources, ADOT has risk management funds in place to address such spills.

1.5 Erosion Control Practices – Phoenix and Tucson

1.5.1 Erosion Control Maintenance – Phoenix and Tucson

The Phoenix and Tucson Districts have ongoing maintenance programs to provide permanent erosion control in areas of erodible soils. These maintenance programs include soil stabilization, reseeding bare ground, turf renovation, landscape irrigation maintenance, granite erosion control, and landscaping. Inspection of these areas has occurred on an asneeded basis within the past year and routine maintenance has been performed as conditions require.

1.5.2 Irrigation System Pressure Detection – Phoenix and Tucson

ADOT's landscape irrigation system is continuously monitored for water pressure and flow through the use of telemetry. Malfunctions or leaks in the irrigation system are detected by pressure sensors automatically and are directed to a computer terminal at the maintenance district offices.

The irrigation system provides immediate detection of broken sprinklers and water pipes, which allows repair crews to respond immediately. A side benefit of this system is control of erosion. Since ADOT repair crews can respond almost immediately to water system failures, there is less chance of soil erosion as a result of broken water pipes. Normal upkeep and maintenance of the irrigation system has occurred within the past year with no significant system failures reported for the Phoenix District. The Tucson District recorded a significant system failure along the I-10 construction zone due to conflicts with the new construction work. The failure was subsequently repaired and the contractor supplied water to the plants in the interim.

1.6 Roadside Vegetation Management Program – Phoenix and Tucson

ADOT maintains a statewide roadside vegetation management program to control annual weeds that tend to displace more desirable perennial grasses. The annual weeds provide little if any erosion control since they do not have extensive root systems and since they die out or blow away each year. On the other hand, grasses and other perennial specials have extensive root systems that hold the soil in place. The vegetation management activities include chemical spraying, mowing, blading, reseeding/planting, fertilizing, and brush removal. In the case of chemical spraying, ADOT commissioned a study to determine environmentally acceptable methods of applying herbicides. The ADOT Roadside Vegetation Management Program has been carried out during the past year with no significant difficulty.

1.7 Stormwater Pollution Prevention Plan for Maintenance Yards – Phoenix and Tucson

Maintenance yards within the Phase I area are regulated as part of ADOT's MS4 permit. These yards include facilities for roadway and landscape equipment storage and maintenance, chemical storage, sign manufacturing, and bulk paint storage for roadway striping. The ADOT permit requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP) for each maintenance yard in the Phoenix and Tucson MS4 areas.

SWPPPs are in place for six maintenance yards in Phoenix and two maintenance yards in Tucson. The EPA document entitled "Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans" was used to develop the SWPPPs. Each SWPPP includes the following elements: (1) Identification of a pollution prevention team, (2) maps detailing drainage patterns, (3) materials inventory, (4) description of exposed significant material, (5) potential pollutant source identification, (6) BMPs identification, (7) implementation, and (8) worksheets for documenting discharges. The SWPPPs are on file at the maintenance yards, Tucson District office, and at OES headquarters in Phoenix. The SWPPPs are implemented by the pollution prevention team.

2 CONSTRUCTION – STATEWIDE

The procedures followed for construction projects have not changed significantly from the previous year. These procedures for complying with the AZPDES general permit for construction are outlined in the ADOT *Erosion and Pollution Control Manual for Highway Design and Construction* dated June 1995 and updated in 2004.

2.1 Develop Standards for BMPs – Erosion and Pollution Control Manual

ADOT developed standard details and special provisions for BMPs to be used on ADOT construction projects. These are outlined in the ADOT *Erosion and Pollution Control Manual*. This document includes several typical BMPs such as silt fences, mulching, and temporary dikes. The BMP details are updated regularly and posted on the Roadside Development webpage.

The design engineer, project manager, and the ADOT Roadside Development Section select structural BMPs from this standard manual for use in the Special Provisions for each project. Special Provisions also include standard contract language on the "good housekeeping" procedures such as proper solid waste management and chemical storage. The updated manual has incorporated AZPDES construction permit requirements and is available to ADOT contractors.

2.2 Training for Stormwater Pollution Prevention Plans

The ADOT Resident Engineers and their staff within each district office of ADOT are trained in the area of stormwater erosion control and "good housekeeping" procedures on construction sites. Many ADOT personnel have been attending the Erosion Control Coordinator (ECC) certification training implemented in April 2005 for contractor personnel. The Contractor's ECC is responsible for preparation and implementation of the SWPPP. ADOT project engineers are responsible for review of the SWPPP and to oversee the implementation of the plan. Contractors hired by ADOT to perform work on construction sites are also invited to attend ADOT training sessions. New training courses for ADOT specific AZPDES requirements are being developed to raise the awareness of ADOT personnel as to individual and collective responsibilities to the AZPDES program.

2.3 Construction Stormwater Pollution Prevention Plans

2.3.1 Plan Review at 60% Submittal Stage

The design engineers, project manager, and Roadside Development Section review the construction plans at the 60% submittal stage to determine if there are any erosion control measures that need to be incorporated into the plans. The design of temporary and permanent sediment and erosion control measures is an integral part of the design process.

2.3.2 Plan Review at 95% Submittal Stage

The District Engineer's office, the roadway designers, and the erosion control specialists review the construction plans at the 95% submittal stage with the following objectives:

- Review Permanent Erosion Controls The proposed permanent erosion control measures are reviewed and any necessary changes are incorporated.
- Prepare Temporary Erosion Control Plan for construction activities The Resident Engineer and the Roadside Development Section designers and erosion control specialists mark up the roadway plan and profile sheets with the BMPs that they anticipate will be required to control erosion during the different stages of construction.

2.3.3 Preparation of SWPPP

A SWPPP is prepared for each construction project that exceeds one acre of disturbance and is incorporated into the construction plans and specifications. In January 2006, ADOT issued a construction SWPPP template to be used on all construction projects. The template includes a revised construction inspection log that replaces the inspection checklist currently located in the ADOT *Erosion and Pollution Control Manual*. The SWPPP template was circulated to stakeholders and on March 21, 2007 ADOT updated the SWPPP template based on comments received from stakeholders. The revised template is available on ADOT's website.

2.4 Procedures Following Award of Contract

2.4.1 Critique Erosion Control Plan

After the award of the construction contract, the Resident Engineer attends the partnering session or pre-construction meeting and reviews the SWPPP with the contractor. At this meeting the proposed temporary control measures are adjusted and revised, if necessary, to accommodate field conditions and the contractor's scheduling and phasing of the project.

2.4.2 Prepare Revised Plan

Changes required to the SWPPP as a result of the discussion at the above meeting are incorporated. The Resident Engineer keeps the original and a copy remains with the contractor on the job site.

2.4.3 Certification of SWPPP

Both the contractor and the ADOT Resident Engineer sign the SWPPP. In the case of a project with local government participation, both ADOT and the local municipality sign the SWPPP.

2.4.4 Prepare Notice of Intent (NOI)

The ADOT Resident Engineer and the contractor each prepare separate NOIs and submit them to ADEQ at least 48 hours before any construction begins. In accordance with the general permit, ADOT is required to submit an NOI because of its control over the job specifications; the contractor is required to submit an NOI because he has day-to-day control over the job.

The NOIs submitted by ADOT are signed by the District Engineer or his representative. The NOI is then either submitted electronically through ADEQ's Smart NOI system or delivered by means of certified mail to: Stormwater Notice of Intent, Arizona Department of Environmental Quality, 1110 West Washington, 5415B-3, Phoenix Arizona 85007.

2.5 Installation of Erosion Control

The Resident Engineer works closely with the contractor on the installation of the erosion control measures. Revisions that occur as a result of changing field conditions or construction phasing and scheduling are noted on each copy of the SWPPP.

2.6 Inspections

The engineer and the ECC inspects the project at least every 14 calendar days, and also within 24 hours after any storm event of 0.50 inches or more. ADOT has also created a performance evaluation system consisting of two checklists used on inspections conducted by the Construction Group.

2.7 Notice of Termination (NOT)

ADOT and the contractor each submit a NOT after the permanent erosion and sediment control measures are in place and the project has met final stabilization criteria as specified in the ADOT *Erosion and Pollution Control Manual*.

The ADOT NOT is signed by the District Engineer or his representative and either submitted electronically through ADEQ's Smart NOI system or mailed by means of certified mail to ADEQ at the following address: Stormwater Notice of Termination, Arizona Department of Environmental Quality, 1110 West Washington, 5415B-3, Phoenix Arizona 85007.

In the case of an urban highway project, where the landscaping contract comes after the paving project, the following rule is followed for submittal of a NOT:

- If the bare ground is not seeded and mulched as part of the paving project, the contractor will submit an NOT when the construction contract is complete. Then, at the start of the subsequent landscaping contract, the landscaping contractor will submit an NOI to obtain a new permit to cover the landscaping activities. ADOT maintains permit coverage for the duration of the paving and landscaping projects.
- If seeding and mulching are part of the paving project, ADOT cannot submit a NOT until final stabilization is achieved. Therefore, under this condition ADOT maintains temporary erosion controls in the area and performs regular inspections (in accordance with the ADEQ general construction permit) during the interim period after the paving project is complete. In this case the paving contractor submits a NOT at the end of the paving contract. Until final stabilization is achieved, ADOT has sole responsibility.

2.8 Retention of Records

Records are maintained for a minimum of 3 years after the submittal of the NOT.

2.9 Other AZPDES Permit Requirements

2.9.1 Asphalt and Concrete Plants

Asphalt and concrete plants activities that occur on-site in support of ADOT construction activities are regulated under ADEQ's Multi Sector General Permit (MSGP) for industrial activities. This includes sites where the plants are portable and located within ADOT's right-of-way. The contractor or subcontractor is held responsible for filing the necessary documents with ADEQ to obtain an MSGP permit for industrial activities. Specifically, the permit authorizes discharges from construction support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, etc.) for local project(s) where an operator is currently involved (e.g., a concrete batch plant providing concrete to several different highway projects in the same county). ADOT cannot file the documents because ADOT does not own and operate the plants. Authorization of this discharge is contingent upon (1) the support activity not being a commercial operation serving multiple, unrelated construction project it serves; and (2) appropriate controls are identified in the stormwater pollution prevention plan (SWPPP) for the discharges from the support activity areas.

2.9.2 ADOT Materials Sources

Materials sources require separate coverage under ADEQ's MSGP for industrial activities. The owner and/or operator of commercial materials sources and contractor-owned sources, are required to obtain permit coverage. In the case of ADOT-owned materials sources, ADOT obtains permit coverage, prepares the SWPPP, and requires each contractor that works the source area to file for coverage under the MSGP using ADOT's SWPPP or modifying it for the contractor's use (much like permit coverage for construction sites). The

contractor is required to leave the source area in a reclaimed state by finish-grading the site and seeding the bare ground in a manner acceptable to ADOT.

3 DESIGN

The design procedures described below have not been changed significantly from previous years.

3.1 Landscaping

The design of ADOT highways includes landscaping to provide permanent erosion control on finish-graded construction slopes. The type of the landscape design depends on the character of the adjacent land. For example, in urban areas, bare ground is covered with decomposed granite, and trees and shrubs are planted to provide an aesthetically pleasing appearance and help to further stabilize soils. Landscape irrigation systems are designed into these projects to foster plant growth and insure plant life in the arid environment. In the rural areas, the construction slopes are seeded with native seed mixes and treated with straw mulches. In both cases, bare ground is stabilized to provide permanent erosion control.

Reclaimed water is used for irrigating vegetative areas within some medians, rights-of-way and landscaped areas. Areas using reclaimed water are indicated by purple water valve boxes and are maintained as per ADOT requirements.

3.2 Retention/Detention Basins

ADOT's storm sewer system includes several retention and detention basins. The old detention basins were designed to control stormwater quantity rather than quality, and therefore, they were typically designed as offline-type basins which store the peak of the flood and provide little in terms of reducing stormwater pollutants. There are, however, several retention basins, which drain by infiltration and thereby reduce the amount of pollutants discharged to the receiving waters.

ADOT recognizes that detention basins designed for the dual purpose of managing stormwater quantity and quality can be quite effective in reducing pollutant loads. Therefore, where appropriate, new detention basins are designed to capture stormwater and help remove pollutants.

3.3 Erosion Control

The design of ADOT's highways includes many permanent erosion control features to protect areas subject to erosion. Examples of the features include channel linings, culvert outlet protection, slope drains, check dams, etc. These erosion control features are reviewed by ADOT on an on-going basis to determine their effectiveness and to consider new alternatives.

3.4 Other Structural Controls

ADOT was required to consider the use of other structural controls as part of their AZPDES MS4 permit. Examples of these other controls include grassy swales or filter strips, media

filtration, and oil/water separators. The design engineers of ADOT's Roadway Design Group have been notified of this permit requirement and are developing alternative structural BMPs. Additionally, Roadway Design has updated the ADOT drainage report requirements for external party connections to the ADOT conveyance system (see Consent Order 90-day Status Report dated October 1, 2005). The Drainage Design Section is currently in the process of finalizing the ADOT *Post-Construction Best Management Practices (BMP) Manual.*

4 TRANSPORTATION CONTROL MEASURES

There is no significant change to report in these control measures.

4.1 Vehicle Emissions Testing

ADEQ requires emissions testing of certain vehicles (depending on year of manufacture) registered in Maricopa (Phoenix Area) and Pima (Tucson Area) Counties. Vehicles that do not meet minimum requirements are not registered until appropriate repairs have been made and the vehicles are re-tested to ensure compliance with emission standards.

4.2 High Occupancy Vehicle Lanes

ADOT is incorporating High Occupancy Vehicle (HOV) lanes into the design and construction of the urban highway system. These lanes are restricted to use by buses and carpools. ADOT also funds advertising campaigns to promote the use of the HOV lanes. The intent of providing these lanes is to encourage mass transit and thereby reduce traffic volume.

4.3 Intelligent Vehicle Highway System

Intelligent Vehicle Highway System (IVHS) is an electronic system of metering highway onramp traffic, coordinating traffic signals, controlling electronic billboards and monitoring traffic volumes. The system is monitored 24 hours per day at the Traffic Operation Control Center. This system helps to minimize stop-and-go traffic, which reduces pollutant generation and deposition. Idling vehicles in traffic generate more pollutants because of incomplete fuel combustion.

4.4 Clean Air Campaign

ADOT is an official sponsor of the Clean Air Campaign. This is the "Don't Drive One in Five" Campaign, which encourages commuters to use an alternative means of transportation one day out of the week.

4.5 Capitol Ride Share Program

ADOT provides promotional materials to encourage State employees to reduce travel. This includes telecommuting, flexible work schedules, assisting in carpooling, and providing mass transit information.

5 STORMWATER MONITORING

Stormwater monitoring was conducted at one site within the Phoenix area and one site within the Tucson area. The data collected is used to monitor BMP effectiveness and adjust those BMPs as-needed. The stormwater monitoring locations for the Phoenix and Tucson area are identified below along with dates that monitoring was conducted:

- Phoenix area Retention basin located at the northeast corner of 32nd Street and Loop 202. Monitoring was conducted from storm events on September 5, 2006 and October 9, 2006.
- Tucson area Interstate 10 and Grant Road along the south side of the freeway within the ADOT Grant Road Maintenance Yard. Monitoring was conducted from storm events on March 20, 2006 and June 7, 2006.

Stormwater monitoring was conducted in accordance with ADOT's *Storm Water Monitoring Guidance Manual for MS4 Activities* dated February 1, 2005. Stormwater monitoring summary results are provided in Appendix B.

6 DRY WEATHER SCREENING – PHOENIX AND TUCSON

During the past year, ADOT conducted dry weather screening for stormwater outfalls. A minimum of 20% of ADOT outfalls were screened during this reporting year. There are a total of 48 major outfalls in the Phoenix area and 14 major outfalls in the Tucson area. ADOT has integrated the existing stormwater system, including major outfalls, into a geographic information system (GIS). ADOT continuously updates the dataset to include future stormwater infrastructure along ADOT roadways. ADOT's Phase I and Phase II drainage maps are available on ADOT's website.

To fulfill the requirements for 2006-2007 reporting year, ADOT's list of major outfalls was used to select sites for dry weather screening activities. Visual inspections were performed at 11 outfalls in Phoenix and 3 outfalls in the Tucson metropolitan area. The purpose of the dry weather screening is to identify illicit connections and/or illegal dumping within ADOT's stormwater system. The discharge points were observed during dry weather. Forms were developed for dry weather field screening; these were used for record keeping purposes. Results of the dry weather screening for this reporting period are included in Appendix C and photos of the inspected outfalls are in Appendix D.

Given the local climatic conditions, the stormwater facilities only exhibit flow immediately following a precipitation event. Dry weather flow is a local phenomenon that is typically linked to tailwater discharge from agricultural irrigation. All agriculture in the region is irrigated, much of it using flood irrigation techniques. Tailwater is often discharged to local storm drain facilities.

In those cases where dry weather discharges are found and an illicit discharge identified, the procedure is to report them to the local municipality. The local municipality is charged with identifying the source of the discharge, determining whether it is an illicit discharge, and following up with the entity that is the source of the discharge. ADOT has no land use authority beyond the roadway right-of-way. The local municipalities, with different enabling

legislation, do have zoning and land use authority, along with enforcement authority. An updated list of ADOT's major outfalls is provided in Appendix E.

During the dry weather screening conducted as a requirement of this annual report, the following ADOT outfalls had at least some flow present:

- 210-1.2 located along the southern bank of the Arroyo Chico Wash, southeast of the intersection of East 10th Street and North Bean Avenue, Tucson, AZ
- 210-2.7 located in the Railroad Wash under the AZ-210 freeway, near the intersection of South Campbell Avenue and South Norris Avenue, Tucson, AZ

7 ASSESSMENT OF BEST MANAGEMENT PRACTICES

7.1 Enforcement Actions; Inspections; Public Education Programs

7.1.1 Enforcement Actions

ADOT maintains a hazardous materials response unit within the Safety and Health Section trained and equipped to deal with any type of material. It is standard operating procedure for ADOT staff that comes upon any substance or unidentified items on the roadway to first contact the Traffic Operations Center (TOC) who then contacts the Hazmat specialist on duty. Likewise, if there are any spills at the maintenance yards, staff is to call the TOC and not attempt to clean up the spill.

Having a unit with staff and equipment specifically trained to deal with hazardous materials guarantees a high level of expertise will be focused on the hazardous material spill. This results in a higher level of effectiveness in cleaning up the spill in a timely manner with minimal impact to the environment, other people, and the staff themselves.

ADOT's hazardous materials response team is one of three state agencies (DPS, ADEQ) that respond to spills on ADOT roadways involving both known and unknown pollutant generators. Once a call is received by ADOT, staff is sent to the scene of the spill for traffic control and light clean-up activity. In the case of a large spill, the fire department is called for immediate containment of the substance. Following the containment and initial assessment, an emergency response contractor is contacted for final containment and clean-up.

If the source of the spill is known, ADOT pursues recovery of clean-up costs through ADOT's Risk Management and the Arizona Attorney General's Office. If the source of the spill is unknown, funds are allocated through ADOT's Risk Management Department and the Arizona Department of Administration.

7.1.2 Inspections

During the past year, ADOT road maintenance personnel performed inspections of ADOT's stormwater system. These activities occur on an as-needed basis and include the following:

• Storm Sewer System Maintenance

- Control of Illicit Discharges
- Erosion Control Practices
- Roadside Vegetation Management Program

7.1.3 Public Education Programs

ADOT is an official sponsor of the Clean Air Campaign. This is the "Don't Drive One in Five" Campaign, which encourages commuters to use an alternative means of transportation one day out of the week.

ADOT provides promotional materials to encourage State employees to reduce travel. This includes telecommuting, flexible work schedules, assisting in carpooling, and providing mass transit information.

The AAH Program is another public education program that helps to reduce litter on Arizona's highways. This program allows organizations to adopt designated sections of highways for which they are responsible to remove litter at least three times per year. ADOT erects signs, which indicate which organization sponsors clean-up for that section of highway.

Additionally, ADOT has joined Stormwater Outreach for Regional Municipalities (STORM), a regional group that was established to help promote stormwater public education efforts within the greater Maricopa County area. ADOT participates in the Stormwater Working Group of the Pima Association of Governments (PAG) for the promotion of public education and outreach within the Tucson area. ADOT has held meetings with the City of Flagstaff and Northern Arizona University concerning potential stormwater public education and outreach. More recently, ADOT has facilitated the organization of a Northern MS4 Coalition which is comprised of the Cities of Prescott, Prescott Valley, Sedona, Flagstaff, Camp Verde, Cottonwood and the Counties of Yavapai and Coconino.

8 OFFICE OF ENVIRONMENTAL SERVICES

ADOT appointed Todd Williams as Director of OES effective March 25, 2006. Mr. Williams is responsible for oversight of all ADOT environmental activities and development of environmental programs and processes needed to ensure compliance with environmental standards, including stormwater. The Director is supported by five groups consisting of: Plans and Permits; Compliance; Water Quality; Environmental Planning; and Natural Resources Management. He is also supported by one Construction SWPPP Coordinator and nine District Environmental Coordinators. Currently, the Compliance Group Manager position is vacant and the OES is interviewing candidates to assist Mr. Williams in oversight of the Compliance Program.

9 STATEWIDE PERMIT APPLICATION

ADOT submitted a Statewide Stormwater Management Plan (SSWMP) to ADEQ on February 1, 2005 and a Statewide Stormwater Permit Application on March 1, 2005 in response to a consent order it entered into with the ADEQ. The SSWMP included general

information, as well as information concerning non-stormwater discharges, municipal discharges, industrial discharges and construction projects. ADOT has complied with all terms of the consent order and submitted a request for dismissal to ADEQ in May 2006. No response has been received to date from the ADEQ concerning this request. However, on March 16, 2007 ADOT received a draft Statewide Stormwater Permit. ADOT is currently working closely with ADEQ to clarify issues before the Statewide Stormwater Permit is available for public comment.

10 STORMWATER ADVISORY TEAMS

ADOT formed Stormwater Advisory Teams (SWATs) to assist in implementing the Statewide Stormwater Management Plan. Eight SWATs were formed from members of ADOT and various consultants. Each SWAT identified 5-year goals for their area of concern and how best to implement and achieve those goals. The information below details some of the progress each SWAT has made over the past year.

10.1 Construction SWAT

This SWAT addressed construction issues specifically related to stormwater. Their accomplishments over the past year are summarized below:

Construction Bulletins:

- August 1, 2006 Issued construction bulletin 06-01 which included a Construction Inspection Checklists
- September 26, 2006 Issued construction bulletin 06-02 discussing erosion control and pollutant discharge reporting & concrete waste management

Job Order Contract

A Job Order Contract was established which addressed how to achieve final stabilization on completed construction projects.

Publications

The Roadway Design Guidelines 2007 Chapter 100, Section 113 (Environmental Regulations) and Chapter 600 (Drainage) were modified from the original 1996 version. The newly updated version is dated January 2007 and is available online.

10.2 Design SWAT

This SWAT addressed design issues specifically related to stormwater. Its goals and accomplishments are listed below:

Publications

• A task order was submitted for Phase II of the development of ADOT's Permanent Water Quality BMP Manual. Phase II involves finalizing guidelines for determining where, when, and how permanent BMPs are applied. This includes identification and development of design guidelines for selected BMPs; and compilation and completion of a permanent water quality BMP manual and design specifications ("C" standards).

• Roadside Development has completed revisions and updates to the SWPPP Index Sheet, and Erosion/Sediment Control and Water Quality Protection Details and installed them on the Roadside Development homepage website. Roadside Development also sent out a questionnaire to assess and obtain customer comment on stormwater issues and BMP improvements.

10.3 Encroachment Permits SWAT

This SWAT addressed encroachment permit issues specifically related to stormwater. Its goals and accomplishments are listed below:

Publications

- A new ADOT Encroachment Permit Application was finalized along with a guidance document, *Stormwater Requirements for External Parties Guidance*.
- Two external party guidance brochures entitled *Stormwater Requirements for External Parties* and *How to Apply for an Encroachment Permit* were produced for the ADOT public.
- SWAT members reviewed and commented on the drainage checklist prepared by the Design SWAT and Bill Harmon attended and provided comments on the Level II Comprehensive Stormwater Management training pilot class on March 5, 2007.

Database

Funding was obtained for an extensive retrofit of the Permits Database which will include identification of stormwater elements for each permit issued and could help identify and possibly track stormwater issues as part of its routine. A stormwater structural "features" inventory will be created so that information pertaining to permits affecting these features will be recorded in the future.

10.4 Information Management Systems SWAT

This SWAT addressed information management system (IMS) issues specifically related to stormwater. Its goals and accomplishments are listed below:

Reporting

- The IMS SWAT completed the 5-year plan annual report
- Finished the first draft of 15 county maps showing impaired, not attaining, and unique waters
- Updated the material sources map and spreadsheet for the material source site reports included in the 10th-13th Status Reports to ADEQ
- Reviewed and analyzing implementation / compliance issues with terms of the Draft ADOT Individual Stormwater Permit

Software/Programming

• Completed a new Adopt a Highway Arc Internet Map Server (ArcIMS) site for the AAH program in Kingman

- Reached 90 percent completion of a new AAH interactive map (ArcIMS) for the Globe District
- Completed the design of a temporary AAH database
- Began working with the Permits section to develop a clean database containing all the potentially adoptable segments for the AAH program
- Updated Adopt a Highway web maps
- SWAT members attended meetings with ADOT Permits staff, ADOT AAH staff, and Maricopa County Department of Transportation (McDOT) AAH staff to discuss web mapping software and applications for data management, display, and querying of AAH information
- Created a "Who should I call" lists for each District and for the OES Program Managers
- Consulted with Jim Rindone of EPG to provide updates for the OES web page, adding a 15 county map series
- A new ArcIMS site was completed that provides depth to ground water information for Resident Engineer's in the ADOT Districts
- Commercial mining material source site locations that ADOT uses were geocoded and maps were produced for the State Engineer's office and ADOT Materials Group. Consultation continued to QC location data on ADOT owned as well as commercial mine sites
- Prioritized tasks for the stormwater project continued and the high priority items are to inventory all drainage assets (similar to the MS4 inventory) and the design/implementation of a new Information Management System for the OES.

<u>Training</u>

Staff completed various training courses and completed a brown bag presentation.

10.5 Maintenance SWAT

This SWAT addressed maintenance issues specifically related to stormwater issues. Its goals and accomplishments are listed below:

Publications

On September 13, 2006 the revised ADOT *Maintenance and Facilities Best Management Practices (BMP) Manual* was released for review and comment. In March 2007, the final ADOT *Maintenance and Facilities Best Management Practices (BMP) Manual* was released to allow for immediate implementation in the Maintenance stormwater training program and to accommodate a 1-year pilot program to field-test the best management practices. Upon termination of the pilot program, OES will assist in an evaluation of all recommended revisions for an updated edition of the manual.

Physical Plant Operations released their draft *Service and Repair Shops Best Management Practice Manual* in July 2006 for review and comment. The final version was completed November 2006 and will be updated as necessary.

Maintenance Yards

Maintenance yard personnel in the Phoenix and Tucson areas received SWPPP training.

10.6 MS4 SWAT

SWPPPs

A SWPPP orientation was completed for the Grant Road. Maintenance Yard in Tucson. A draft SWPPP for the ADOT Signing and Stripping facility was developed.

Reports

Dry weather screening of ADOT outfalls within the Tucson and Phoenix MS4 areas was completed and the annual report developed and submitted. Dry weather screening results were presented at the StormCon 2007 conference.

10.7 Materials SWAT

This SWAT addressed material sites specifically related to stormwater. Its goals and accomplishments are listed below:

SWPPP Inventory

ADOT material sources listed on the ADOT Material Sources Inventory for Stormwater Compliance Evaluation Purposes (SWPPP Inventory) have been reviewed. Twelve (12) sites have been identified for completion of a SWPPP under Sector J of the Multi-Sector General Permit (MSGP-2000). Draft SWPPPs were completed for the 12 sites and were finalized in November 2006.

Site Inventory

The Materials Group revises the SWPPP Inventory on a quarterly basis. and will continue to provide ADEQ with an updated SWPPP Inventory and location map on a quarterly basis or as required. OES has been providing support and guidance to the Material SWAT and new information will be coordinated with OES.

10.8 Public Education and Outreach SWAT

This SWAT addressed public education and outreach issues specifically related to stormwater. Its goals and accomplishments are listed below:

<u>STormwater Outreach for Regional Municipalities (STORM) – Maricopa County</u> Members of the SWAT attended monthly STORM meetings which includes other MS4's within the greater Phoenix metropolitan area.

<u>Stormwater Management Working Group (SWMWG) – Pima Association of Governments</u> Members of the SWAT attend SWMWG meetings and assisted in the preparation of their "Stormwater Controls for Construction" conference held August 25, 2006 by providing copies of ADOT Erosion and Pollution Control Manual for all participants.

Northern Arizona MS4s

The ADOT Flagstaff District Environmental Coordinator invited Northern Arizona MS4s for an initial meeting in May 2007. In attendance were: City of Flagstaff, Coconino County, Yavapai County, City of Camp Verde, City of Prescott, City of Prescott Valley, Northern Arizona University, City of Cottonwood, and City of Sedona.

Adopt a Highway

The Kingman AAH map was completed and a similar GIS map for the Globe District was undertaken.

AZ Cooperative Extension Outreach

ADOT will seek to work with AZ Cooperative Extension on outreach in the state outside of the metropolitan areas.

Arizona Clean & Beautiful

Arizona Clean & Beautiful's (ACB) fall newsletter was published. The trash bags sent by ACB for the Litter Hotline have been redesigned to have the DON'T TRASH ARIZONA logo.

Anti-Litter Campaign

Activity packets were mailed to 30 different Arizona towns and cities to summer day care camp counselors/instructors the week of June 18, 2007. The activities are tailored to align with the Civics/Government Strand of the Social Studies Standard for Arizona's fourth graders.

Internal Education and Involvement

ADOT's Environmental Planning Group hosted the brown bag lunch: "Environmental Topics in Construction," given by ADOT's Construction Group, on November 16, 2006.

10.9 Training SWAT

This SWAT addressed training issues specifically related to stormwater. Its goals and accomplishments are listed below:

Overall management of the Stormwater Training program.

The overall management of the stormwater training program has made continued progress by identification and the award of five on-call consultants for each of the functional areas: Construction; Maintenance; Permits; Materials; Environmental and Pre-Construction (Design). Development of an 8-hour Stormwater Management for ITD Course is 90% completed, with a pilot to 23 participants delivered on March 5, 2007. The ADOT Comprehensive Stormwater Management Level II training course was put on hold until the Draft ADOT Stormwater permit can be finalized.

Introduction to Stormwater Awareness Course, 2 hour Course

Twenty-four courses were delivered to 705 ADOT employees in 2006, nine classes of which were between October and December, training 253 employees. In 2007, 16 courses were held, training 581 participants. In total (2006 and 2007), 40 Courses to 1,286 ADOT employees have been delivered.

Stormwater Training Library

Materials have been assembled for a stormwater training library for access by ADOT personnel. Materials may be either purchased or created by on-call consultants. A photo database is in development for use by consultants for training materials.

Quantlists:

The Erosion Quantitative Checklists (quantlists) were updated and changes include splitting administrative checklist into Tribal, Non-tribal and Sensitive versions.

11 PROPOSED CHANGES TO THE SWMP

There are no proposed changes to ADOT's SWMP. However, as data and situations dictate a necessary change, it will be implemented and ADEQ will be notified.

12 ASSESSMENT OF WATER QUALITY IMPROVEMENT OR DEGRADATION

ADOT has adopted many BMPs that are effective in maintaining acceptable water quality. This includes removal of significant amounts of debris from roadways, street sweeping, implementation of measures to ensure its contractors maintain compliance with AZPDES, dry weather screening, personnel training, periodic inspection and cleaning of its storm sewers and drains, and incorporating "first flush" storage capacity in some of its new detention basins. Additionally, monitoring of stormwater and dry weather flows has not identified pollutants above Arizona Surface Water Quality Standards. ADOT's implementation of these BMPs has been a factor in improving water quality and no degradation to surface water quality has been identified.

13 ANNUAL EXPENDITURES

13.1 Fiscal Resources

ADOT does not have a specific fund dedicated solely for its stormwater programs. There are, however, several sources available for funding of this program, which include: the Arizona Department of Transportation Five-Year Construction Program, the Highway Maintenance Program, and the Administrative Budget.

13.2 Five-Year Construction Program

ADOT's Five-Year Construction Program is a source of funding that will be used when a stormwater issue or concern is related to a construction project that is in the existing program. The Program is reviewed on an annual basis, and at that time, new projects are added and modifications to existing projects are made. There are several sources of funds that are identified to fund the Program. These include federal, state, local, and private sources. The approval process required for incorporation of the stormwater issues into the program is the identification of the project and funding requirements and submittal to the

Priority Planning Committee, and then in turn, to the Transportation Board for final approval. The program is adopted July 1st of each year.

13.3 Highway Maintenance Program

Stormwater issues related to maintenance will be covered under the Highway Maintenance Program, which is funded by the state. Issues and costs are identified and submitted for approval to the legislature in August of each year. Funds for new issues are received on July 1st of the following year. Currently, there is a total of approximately \$118,087,100 in this program.

13.4 Administrative Budget

An additional source of funding for ADOT stormwater programs is the Administrative Budget, which again, is state-funded and appropriated by the Arizona Legislature. The process is identical to the Highway Maintenance Program. As part of the Administrative Budget, ADOT receives a total of approximately \$67,809,700 in state funds for administrative purposes.

13.5 Office of Environmental Services Budget

The OES was formed in 2006 and its budget has not been established. Currently, the OES operates under several budget accounts. Table 13-5 below provides the actual and estimated expenditures for implemented activities covered by the Phase I, MS4 Permit AZS000018 program requirements.

PROGRAM/ACTIVITY	FY 2006/2007 Actual	FY 2007/2008 Estimated
Street Sweeping – Phoenix and Tucson Area	\$2,123,561.38	\$2,305,580.93
Litter Pick-up and Removal – Phoenix and Tucson Area	\$3,989,276.58	\$4,331,214.57
Preparation and Implementation of Statewide Permit	\$190,000.00	\$250,000.00
Implement/ Update of SWPPPs for ADOT yards	\$10,000	\$12,000
Maintain and Update Stormwater Outfall Map to ADOT's GIS	\$2,500.00	\$50,000.00
Compliance Audit of ADOT Maintenance Yards	\$5,000.00	\$7,000.00
Dry Weather Sampling – 20% of Outfalls (includes training)	\$6,000.00	\$6,000.00
Stormwater Monitoring	\$18,000.00	\$20,000.00
Preparation of Annual Report	\$5,500.00	\$6,000.00
ANNUAL TOTALS	\$6,349.837.96	\$6,987,795.50

Table 13-5. ADOT'S ESTIMATED STORMWATER MANAGEMENT PROGRAM COMPREHENSIVE ANNUAL BUDGET

APPENDIX A AZPDES Permit # AZS000018

Permit No. AZS000018

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et. seq.; the "Act"),

Arizona Department of Transportation 206 South 17th Avenue Phoenix, AZ 85007-3213

is authorized to discharge storm water runoff from the municipal separate storm sewer system (MS4) operated by the permittee in the Phoenix and Tucson metropolitan areas to waters of the United States from all outfalls within the MS4 operated by the permittee in accordance with effluent limitations, monitoring requirements and other conditions set forth in Part I, Part II (EPA Region IX Standard Federal NPDES Permit Conditions for MS4 Discharges Dated May 24, 1996), and Appendix 1 of this permit.

This permit shall become effective on SEP 3.0 1999

This permit and the authorization to discharge shall expire at midnight, August 31, 2002.

Signed this 30th day of Statube 1999

For the Regional Administrator

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Director, Water Division

Page 2 of 18 Permit No. AZS000018

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- 1. During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge storm water runoff from all outfalls of the permittee's MS4 as defined in Part E.5 of this permit.
- 2. Storm Water Management Program

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The permittee shall control pollutants in storm water discharges to the maximum extent practicable, and to demonstrate compliance with this requirement, the permittee shall implement in its entirety the proposed storm water management program (SWMP) described in the documents listed in Part I.E.12 of this permit. All storm water pollution control measures identified in the SWMP shall be implemented as follows:

- a. For the existing MS4 on the effective date of this permit, the requirements of the SWMP shall be implemented no later than the effective date of this permit.
- b. For additional roadways added to the MS4 in the future, control measures during the construction phase shall be implemented as described in the SWMP. Post-construction control measures described in the SWMP shall be implemented as soon as practicable for the newly added roadways, but not later than 3 months after construction is complete.

The permittee shall also implement the additional control measures related to the SWMP set forth in Appendix 1 to this permit in the time frame set forth in Appendix 1.

3. Storm Water Monitoring Program

The permittee shall implement the storm water monitoring requirements described in Appendix 1 of this permit, in the time frame set forth in Appendix 1.

4. Compliance with Arizona Water Quality Standards

To ensure that the permittee's activities achieve timely compliance with applicable water quality standards (Arizona Administrative Code, Title 18, Chapter 11,

Article 1), the permittee shall implement the SWMP, monitoring, reporting and other requirements of this permit in accordance with the time frames established in the SWMP referenced in Part I.A.2, and elsewhere in this permit. The timely implementation of the requirements of this permit shall constitute a schedule of compliance authorized by Arizona Administrative Code, section R18-11-121(C).

B. LEGAL AUTHORITY REQUIREMENTS

As part of the reapplication for this permit, the permittee shall submit to Region 9 an evaluation of the adequacy of the permittee's existing legal authority in implementing the requirements of this permit. This analysis shall be based on the permittee's experiences in implementing the requirements of this permit during the term of this permit.

C. ANNUAL REPORT

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The permittee shall submit an annual report summarizing the storm water program activities of the previous year including, at a minimum, the following items:

- 1. The status of implementing the components of the storm water management program required by the permit; at a minimum, the report must include a description of the status of each program element listed in Table 1 of the fact sheet accompanying the permit (except item A.5), and the activities of the permittee during the previous year.
- 2. An assessment of the effectiveness of the best management practices described in the storm water management program and monitoring program in limiting the discharge of pollutants. The assessment must, at a minimum, include:
 - a. A summary describing the number and nature of enforcement actions, inspections, and public education programs;
 - b. A summary of the data, including monitoring data, that is accumulated throughout the reporting year; and
 - c. An assessment of water quality improvement or degradation.
- 3. The report shall also identify data limitations and proposed changes to the storm water management program that are established as permit conditions along with a specific timetable for implementation.

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- 4. A certification shall be included that storm water management program revisions previously approved by EPA, after consultation with ADEQ, were implemented on schedule.
- 5. Annual expenditures for the year covered by the report, and proposed budget and annual expenditures for the next reporting period.

The first annual report is due September 30, 2000, covering fiscal year ending June 30, 2000. Subsequent reports are due on September 30 of each year thereafter, covering the previous fiscal year.

D. ENDANGERED SPECIES ACT REQUIREMENTS

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This permit does not authorize nor require the construction of any particular structural storm water quality control device that could adversely affect listed or proposed threatened or endangered species.

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E. DEFINITIONS

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- 1. Best Management Practices (BMPs) refer to schedules of activities, prohibition of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of 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.
- "CWA" means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 95-483 and Pub. L. 97-117, 33 U.S.C. 1251 et seq.
- 3. "Director" means the Regional Administrator of EPA, Region 9.
- 4. "Illicit Discharge" means any discharge to a municipal separate storm sewer system that is not composed entirely of storm water except discharges pursuant to an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges from fire fighting activities.
- 5. "Major Outfall" means a municipal separate storm sewer outfall from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more, or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more).
- Municipal Separate Storm Sewer" means a conveyance, or system of conveyances (including roads with drainage systems, municipal streams, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
 (i) owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

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(ii) designed or used for collecting of conveying storm water;

(iii) which is not a combined sewer; and

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(iv) which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

For purposes of this permit, the MS4 consists of the highway runoff conveyance system within the metropolitan areas of Phoenix and Tucson including the specific roadways identified in section 1 of the document entitled "National Pollutant Discharge Elimination System (NPDES) Part 2 Permit Application for Phoenix and Tucson Metropolitan Areas", Arizona Department of Transportation, November, 1992. The MS4 also includes all ADOT roadways existing on the effective date of this permit which were not identified in the above document but which meet the selection criteria described in the Part 2 permit application. In addition, future ADOT roadways shall be added to the MS4 in accordance with the same selection criteria.

- 7. "Outfall" means a point source where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.
- 8. "Permittee" means the Arizona Department of Transportation (ADOT).
- 9. "Point Source" means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged.
- 10. "Representative Storm" means a storm event of greater than 0.1" of rainfall and at least 72 hours after the previously measurable (greater than 0.1" rainfall) storm event. Where feasible, the variance in the duration of the event and the total rainfall of the event should not exceed 50 percent from the average or median rainfall event in the area.
- 11. "Storm water" means storm water runoff, snow melt runoff, and surface runoff and drainage.
12. The "storm water management program" (SWMP) consists of the following documents:

i. SWMP described in section 5 of the document entitled "National Pollutant Discharge Elimination System (NPDES) Part 2 Permit Application for Phoenix and Tucson Metropolitan Areas", Arizona Department of Transportation, November, 1992; and

ii. Description of Construction Site Runoff Pollution Control Program found in the document entitled "ADOT Erosion and Pollution Control for Highway Design and Construction", Arizona Department of Transportation, June, 1995.

13. "Waters of the United States means":

(a) all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(b) all interstate waters, including interstate "wetlands";

(c) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) which are or could be used by interstate or foreign travelers for recreational or

other purposes;

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(2) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(3) which are used or could be used for industrial purposes by industries in interstate commerce;

(d) all impoundments of waters otherwise defined as waters of the United States under this definition;

(e) tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) the territory sea; and

(g) wetlands adjacent to areas (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to man-made bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States.

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REGION IX STANDARD FEDERAL NPDES PERMIT CONDITIONS (Revised for Municipal Storm Water Permits, May 24, 1996)

1. Duty to Reapply [40 CFR 122.21(d)]

The permittee shall submit a new application 180 days before the existing permit expires.

2. Applications [40 CFR 122.22]

- a. All permit applications shall be signed as follows:
 - (1) <u>For a corporation</u>. by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

(i) A 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 for the corporation, 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.

- (2) <u>For a partnership or sole proprietorship</u>: by a general partner or the proprietor, respectively, or
- (3) For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes; (I) The chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
- b. All reports required by permits and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative or representatives of that person. A person is a duly authorized representative only if:

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- The authorization is made in writing by a person described in paragraph (a) of this Section.
- (2) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either named individual or any individual occupying a named position.); and
- (3) The written authorization is submitted to the Director.
- c. <u>Changes to authorization</u>. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or a portion of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.
- d. <u>Certification</u>. Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

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

Duty to Comply [40 CFR 122.41(a)]

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(1)

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

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- (1) The authorization is made in writing by a person described in paragraph (a) of this Section;
- (2) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either named individual or any individual occupying a named position.); and
- (3) The written authorization is submitted to the Director.
- c. <u>Changes to authorization</u>. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or a portion of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.
- d. <u>Certification</u>. Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

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

Duty to Comply [40 CFR 122.41(a)]

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3.

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

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a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

b. The Clean Water Act provides that:

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- (1) Any person who causes a violation of any condition in this permit is subject to a civil penalty not to exceed \$25,000 per day of each violation. Any person who negligently causes a violation of any condition in this permit is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both for a first conviction. For a second conviction, such a person is subject to a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two years, or both. [Updated pursuant to the Water Quality Act of 1987]
- (2) Any person who knowingly causes violation of any condition of this permit is subject to fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than three years, or by both for a first conviction. For a second conviction, such a person is subject to a fine of not more than \$100,000 per day of violation, or by imprisonment of not more than six years, or both. [Updated pursuant to the Water Quality Act of 1987]
- (3) Any person who knowingly causes a violation of any condition of this permit and, by so doing, knows at that time that he thereby places another in imminent danger of death or serious bodily injury shall be subject to a fine or not more than \$250,000, or imprisonment of not more than 15 years, or both. A person who is an organization and violates this provision shall be subject to a fine or not more than \$1,000,000 for a first conviction. For a second conviction under this provision, the maximum fine and imprisonment shall be doubled. [Updated pursuant to the Water Quality Act of 1987]
- c. By regulation, EPA has increased the statutory maximum penalty amounts referred to above (see 40 CFR Part 19).

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Duty to Mitigate [40 CFR 122.41(d)]

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The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance [40 CFR 122.41(e)]

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

6. Permit Actions [40 CFR 122.41(f)]

The permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. Property Rights [40 CFR 122.41 (g)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

8. Duty to Provide Information [40 CFR 122.41(h)]

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

9. Inspection and Entry [40 CFR 122.41(i)]

The permittee shall allow the Director, or an authorized representative, upon the presentation of credential and other documents as may be required by law, to:

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- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

10. Monitoring and Records [40 CFR 122.41(j)]

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- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- b. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.
- c. Records of monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) analyses were performed;
 - (4) The individual(s) who performed the analyses;

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(5) The analytical techniques or methods used; and

(6) The results of such analyses.

d. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless test procedures have been specified in this permit.

e. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained in this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both for a first conviction. For a second conviction, such a person is subject to a fine of not more than \$20,000 per day of violation, or imprisonment for not more than four years, or both. [Updated pursuant to the Water Quality Act of 1987]

11. <u>Signatory requirement</u> [40 CFR 122.41(k)]

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- a. All applications, reports or information submitted to the Director shall be signed and certified. (See 40 CFR 122.22)
- b. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record other document submitted or required to be maintained under this permit, including monitoring reports of compliance or non-compliance shall, upon conviction, be punished by a fine or not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both for a first conviction. For a second conviction, such a person is subject to fine of not more than \$20,000 per day of violation, or imprisonment of not more than four years, or both. [Updated pursuant to the Water Quality Act of 1987]
- 12. <u>Reporting requirements</u> [40 CFR 122.41(l)]
 - a. <u>Anticipated noncompliance</u>. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with the permit requirements.
 - b. <u>Monitoring reports</u>. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

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- Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring.
- (2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR Part 136, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
- (3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
- c. <u>Compliance schedules</u>. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
- d. <u>Twenty-four hour reporting</u>.

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- (1) The permittee shall report any noncompliance which may endanger public health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned in order to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- (2) The following shall be included as information which must be reported within 24 hours under this paragraph.
 - (i) Any unanticipated bypass which exceeds any effluent limitation in the permit. [See 40 CFR 122.41(g).]
 - (ii) Any upset which exceeds any effluent limitation in the permit.
 - (iii) Violation of a maximum daily discharge limitation for any of the

pollutants listed by the Director in the permit to be reported within 24 hours. [See 40 CFR 122.44(g).]

- e. <u>Other noncompliance</u>. The permittee shall report all instances of noncompliance not reported under the above paragraphs (i), (ii), and (iii) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed paragraph (iii) of this section.
- f. <u>Other information</u>. Where the permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.
- 13. Bypass [40 CFR 122.41(m)]
 - a. Definitions

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- (1) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. However, diversions of storm water which are consistent with the normal operation of the municipal storm sewer system shall not be considered bypasses.
- (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Sever property damage does not mean economic loss caused by delays in production.
- b. <u>Bypass not Exceeding Limitations</u>. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this section.
- c. Notice.
 - (1) <u>Anticipated bypass</u>. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, of possible at least ten days before the date of the bypass.

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- (2) <u>Unanticipated bypass</u>. The permittee shall submit notice of an unanticipated bypass as required in paragraph (d) of section (12) (24-hour notice).
- d. <u>Prohibition of bypass</u>.

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- (1) Bypasses are prohibited, and the Director may take enforcement action against a permittee for a bypass, unless:
 - A bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance, and
 - (iii) The permittee submitted notices as required under paragraph c of this section.
- (2) The Director may approve an anticipated bypass, after considering its adverse effects, if the director determines it will meet the three conditions listed above in paragraph (d) of this section.

14. <u>Upset</u> [40 CFR 122.41(n)]

- a. <u>Definition</u>. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.
- b. <u>Effect of an upset</u>. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirement of paragraph c of this section are met. No determination made during administrative review of claims that noncompliance, is final administrative

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action subject to judicial review.

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c. <u>Conditions necessary for a demonstration of upset</u>. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
- (2) The permitted facility was at the time being properly operated; and
- (3) The permittee submitted notice of the upset as required in paragraph 12(d) (24-hour notice).
- (4) The permittee complied with any remedial measures required under 40 CFR 122.41(d).
- d. <u>Burden of proof</u>. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.
- 15. Termination of permits [40 CFR 122.64]

The following are causes for terminating a permit during its term, or for denying a permit renewal application:

- a. Noncompliance by the permittee with any condition of the permit;
- b. The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time;
- c. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination; or
- d. A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit (for example, plant closure or termination of discharge by connection to a POTW).

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16. Availability of Reports [Pursuant to Clean Water Act Section 308]

Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Regional Administrator. As required by the Act, permit applications, permits, and effluent data shall not be considered confidential.

17. <u>Removed Substances</u> [Pursuant to Clean Water Act Section 301]

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

18. <u>Severability</u> [Pursuant to Clean Water Act Section 512]

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The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and remainder of the permit, shall not be affected thereby.

19. <u>Civil and Criminal Liability</u> [Pursuant to Clean Water Act Section 309]

Except as provided in permit conditions on "Bypass" (Section 14) and "Upset" (Section 15), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

20. <u>Oil and Hazardous Substance Liability</u> [Pursuant to Clean Water Act Section 311]

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

21. <u>State or Tribal Law</u> [Pursuant to Clean Water Act Section 510]

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the operator from any legal action or relieve the operator from any responsibilities, liabilities, or penalties established pursuant to any applicable State or Tribal law or regulation under authority preserved by Section 510 of the Clean Water Act.

APPENDIX 1 - Additional Permit Requirements

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A. Storm Water Pollution Control on ADOT Maintenance Yards

Within 6 months of the effective date of this permit, the permittee shall develop and implement a storm water pollution prevention plan at each of its maintenance yards within the area covered by this permit. At a minimum, the plans shall address potential pollutants from activities including vehicle and equipment cleaning, repair and storage; vehicle fueling; and bulk storage of sand, other construction materials, pesticides and herbicides, and litter and debris generated from road maintenance.

B. Additional Field Screening Activities for Illicit Discharges

The permittee shall implement an ongoing program to re-evaluate major outfalls for illicit discharges. At a minimum, this program shall include rescreening of 60% of the major outfalls once during the three year term of this permit. Not fewer than 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 which are located. NPDES permitted discharges are exempt from this prohibition. In addition, the following discharges need only be prohibited when the permittee determines that the discharges are a source of pollutants:

water line flushing landscape irrigation diverted stream flows rising ground waters uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers uncontaminated pumped ground water discharges from potable water sources foundation drains air conditioning condensate irrigation water springs water from crawl space pumps footing drains lawn watering individual residential car washing flows from riparian habitats and wetlands dechlorinated swimming pool discharges street wash water

APPENDIX 1 - Additional Permit Requirements

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Discharges from fire fighting activity shall be prohibited only when the discharges are identified as significant sources of pollutants to waters of the United States.

C. Storm Water Pollution Control Education for Contractors

The permittee shall invite its construction site contractors to participate in the permittee's training program pertaining to storm water pollution control at construction sites.

D. Storm Water Monitoring Program

Not later than 1 year after the effective date of this permit, the permittee shall submit to Region 9 a proposed highway storm water monitoring program for the remainder of the term of the permit. At a minimum, the proposal shall include monitoring of one representative site in both the Phoenix and Tucson metropolitan areas. The proposal shall provide for monitoring of constituents judged appropriate by the permittee for highway runoff and shall include DDE among the constituents to be monitored. Upon receipt of the proposal by Region 9, this permit shall be reopened and modified to include the proposal, or a modification of the proposal as necessary to comply with applicable requirements of the Clean Water Act.

E. Structural Storm Water Controls for New Highway Development/Redevelopment

As part of the permittee's design program for long-term storm water pollution control for new highway development and redevelopment, the permittee shall consider other structural controls such as grassy swales or filter strips, media filtration and oil/water separators in addition to detention and retention basins.

F. Debris Removal from Drainage System

The permittee shall remove debris and other accumulated material from storm sewer inlets, catch basins, pump stations, tunnels and open channels when the permittee's inspections indicate that the accumulated material could pose a significant threat to downstream water quality. For catch basins, accumulated material shall be removed on a regular basis and in no case shall 50% of the capacity of the basins be reached.

APPENDIX B Stormwater Monitoring Summary Results

ADOT Stormwater Sampling Phoenix District						
Sample ID: 32nd 202-1	Lab:Envir	onmental Science Corp.	Date	e 9/05/06		
Category	Method	Parameter	Result	Units		
	160.1	Total Dissolved Solids (TDS)	210	mg/l		
	160.2	Total Suspended Solids (TSS)	690	mg/l		
	SM 2130 B	Turbidity	180	NTU		
	120.1	Specific Conductance	230	umhos/cm		
Conventionals	130.1	Hardness	110	mg/l		
Conventionars	SM 5210 B	BOD	BDL	mg/l		
	410.4	COD	110	mg/l		
	110.2	Color	180	pcu		
	Field	pH	7	s.u.		
	Field	Temperature				
	-		•			
	300	Nitrite	0.18	mg/l		
Nutrients	300	Nitrate	0.36	mg/l		
- (350.1	Ammonia Nitrogen	0.33	mg/l		
	351.2	Total Kjeldahl Nitrogen (TKN)	2.4	mg/l		
Pesticides,Organochlorine	608	4,4 - DDE	BDL	mg/l		
		Cadmium (Cd)	BDI	mg/l		
		Chromium (Cr)	0.011	mg/l		
Metals, Total	200.7	Copper (Cu)	0.011	mg/l		
	200.7	L and (Pd)	0.074	mg/l		
		Zing (Zn)	0.010	mg/l		
	265.1		0.19	mg/l		
	505.1	Phosphorus, Total	0.30	IIIg/I		
		Dissolved Cadmium (Cd)	BDL	mg/l		
		Dissolved Chromium (Cr)	BDL	mg/l		
Metals, Dissolved	200.7	Dissolved Copper (Cu)	0.033	mg/l		
		Dissolved Lead (Pd)	BDL	mg/l		
		Dissolved Zinc (Zn)	0.038	mg/l		
	·					
Total Petroleum Hydrocarbons	3510/DRO	TPH	1.2	mg/l		
				-		
Phenolics	420.2	Total Phenol	0.051	mg/l		
			1			
Surfactants	425.1	Surfactants (detergents)	BDL	mg/l		

ADOT Stormwater Sampling Phoenix District						
Sample ID: 32nd 202-2	Lab:Envir	ronmental Science Corp.	Date:	10/09/2006		
Category	Method	Parameter	Result	Units		
	160.1	Total Dissolved Solids (TDS)	260	mg/l		
	160.2	Total Suspended Solids (TSS)	13	mg/l		
	SM 2130 B	Turbidity	1.6	NTU		
	120.1	Specific Conductance	330	umhos/cm		
Conventionals	130.1	Hardness	110	mg/l		
Conventionais	SM 5210 B	BOD	<5.0	mg/l		
	410.4	COD	150	mg/l		
	110.2	Color	160	pcu		
	Field	pH	7.27	s.u.		
	Field	Temperature	80.9			
	300	Nitrite	0.46	mg/l		
Nutrients	300	Nitrate	0.18	mg/l		
rutions	350.1	Ammonia Nitrogen	1.5	mg/l		
	351.2	Total Kjeldahl Nitrogen (TKN)	2.1	mg/l		
Pesticides,Organochlorine	608	4,4 - DDE	< 0.010	mg/l		
		Codmium (Cd)	<0.0050	m a /1		
		Chromium (Cr)	<0.0030	mg/l		
Metals, Total	200.7		<0.010	mg/l		
	200.7	L and (Dd)	0.021	mg/l		
			<0.0030	mg/l		
	265.1		0.048	mg/l		
	305.1	Phosphorus, Total	0.33	mg/I		
	[Dissolved Cadmium (Cd)		mg/l		
		Dissolved Chromium (Cr)		mg/l		
Metals, Dissolved	200.7	Dissolved Copper (Cu)		mg/l		
		Dissolved Lead (Pd)		mg/l		
		Dissolved Zinc (Zn)		mg/l		
				iiig/1		
Total Petroleum Hydrocarbons	3510/DRO	ТРН	1.9	mg/l		
Phenolics	420.2	Total Phenol	< 0.040	mg/l		
Surfactants	425.1	Surfactants (detergents)	0.62	mg/l		

Sample ID: ADOT-110-1Lab: Lab: TurbityDate: SU2006CategoryMethodParametorResultUnitsEPA 100.1Total Disolved Solids (TDS)670mg1EPA 100.1Total Disolved Solids (TDS)670mg1EPA 100.1Total Disolved Solids (TDS)980unbosicedEPA 100.1Condecision980mulhosiceSM 210.0Condecision920mg1 as CaC03EPA 403.1BOD120mg1 as CaC03EPA 404.0COD925s.s.SM 2120.0Color-915s.s.SM 2120.0PH 404.0CODmg1Concentring94-10mg1EPA 300Nitrogen, Nitric (at N)4.00Color31mg1EPA 300Nitrogen, Nitric (at N)-10Color31mg1EPA 300Nitrogen, Nitric (at N)-10Color23Nitrogen, Nitric (at N)-10EPA 300Nitrogen, Nitric (at N)-10mg1Total Chlorine54922.8Feed Colform (by men. Filtration)10EPA 300.5Total Chlorine-10mg1EPA 300.5Total Chlorine-10ug1EPA 300.5Total ChlorineNDug1EPA 300.5Total ChlorineNDug1EPA 408Feed Colform (by men. Filtration)-10ug1EPA 300.5Total ChlorineNDug1EPA 408Feed Colform (by men. Filtration)-10 <t< th=""><th colspan="4">ADOT Stormwater Sampling Tucson District</th></t<>	ADOT Stormwater Sampling Tucson District				
CategoryMethodParametriResulUnitsFPA 100.1Fold Subside Staik GTSS)6.90Mag1EPA 100.1Fold Subside Staik GTSS)6.90MatholEPA 120.1Fold Subside Staik GTSS)6.90MatholEPA 120.1Fold Subside Staik GTSS)6.90MatholEPA 120.1Fold Subside Staik GTSS)6.90Mag1EPA 120.1Fold Subside Staik GTSS)6.90Mag1EPA 400.1Fold Subside Staik GTSS)6.90Mag1EPA 400.1Fold Subside Staik GTSS)6.90Mag1Subside Staik GTSSFold Subside Staik GTSS)6.90Mag1EPA 30.1Subside Staik GTSS6.90Mag1EPA 30.1Nitrogen, Nitrate (as Mag16.90Mag1EPA 30.3Nitrogen, Nitrate (as Mag16.90Mag1EPA 30.3Nitrogen, Nitrate (as Mag16.90Mag1EPA 30.3Nitrogen, Kriet (as Mag16.90Mag1EPA 30.3Nitrogen, Kriet (as Mag16.90Mag1ENA 50.4Fold Stait (Cas Mag1Mag1Mag1ENA 50.4Fold Stait (Cas Mag1Mag1Mag1	Sample ID: ADOT-I10-1	Lab: Tu	rner Laboratories, Inc.	Date:	3/20/2006
PA 101.1 Total Disolved Solis (TDS) 670 mg1 PFA 101.1 Total Surgended Solis (TDS) 26 mg1 PFA 180.11 Torbishics (CSS) 32 mg1 and solis (CSS) 320	Category	Method	Parameter	Result	Units
Def 101 PA 101.0 PA 101.1Total sopended Solubs (1S8) 50 M mg1 medication SA 200 PA 101.1Conductivity 86 multication mg1 ar CACO SA 200 M mg1 ar CACO SA 200 M mg1 ar CACO SA 200 PA 405.1Part 10.0 SA 200 PA 405.1Part 10.0 SA 200 SA 200 PA 405.1Part 10.0 SA 200 SA 200 PA 405.1Part 10.0 SA 200 SA 200 PA 400.1Part 10.0 SA 200 SA 200 PA 400.1Part 10.0 SA 200 SA 200 SA 200 SA 2000 PA 400.1Part 10.0 SA 2000 SA 2000 SA 2000 PA 400.1Part 10.0 SA 2000 SA 2000 <td></td> <td>EPA 160.1</td> <td>Total Dissolved Solids (TDS)</td> <td>670</td> <td>mg/l</td>		EPA 160.1	Total Dissolved Solids (TDS)	670	mg/l
LPA 190.1 Turbuity 58 NTU FPA 10.1 Conductivity 680 unbuscim SM230.6 Hardness, Toul (a. C.CO.) 300 mg1 a. C.CO.3 EPA 405.1 BOD 120 mg1 a. C.CO.3 BM1210.8 C.O.0 800 mg1 a. C.CO.3 SM2120.8 P.H 7.1 s.s. SM2120.8 P.H 7.1 s.s. SM2120.8 Nitrogen, Nitrite (a. N) <1.0		EPA 160.2	Total Suspended Solids (TSS)	26	mg/l
EPA 120.1Conductivity880unthosimeSM 2340 BHardness, Total (ar CaCO3)320mgl ac CaCO3EPA 405.1BOD120mgl ac CaCO3EPA 405.1BOD120mgl ac CaCO3SM 2120 BColor>155s.a.SM 2120 BColor>10mgl ac CaCO3Materian SM 2120 BOlor>10mgl ac CaCO3Materian SM 2120 BNitrogen, Nitrile-0.10mgl ac CaCO3Partian SM 2120 BNitrogen, Nitrile-0.10mgl ac CaCO3Partian SM 202 BNitrogen, Nitrile (as N)-1.0mgl ac CaCO3CacutationTotal Nitrogen, Mitrile (as N)17mgl ac CaCO3Partian SM 922 BFecal Coliform (by men, Filtration)CPU100nlCPU100nlEPA 30.5Total NitrogenMgl ac CaCO3NDugl ac CaCO3NoSM 922 BFecal Coliform (by men, Filtration)CPU100nlCPU100nlEPA 30.5Total CholrineNDugl ac CaCO3NDugl ac CaCO3NoSM 922 BFecal Coliform (by men, Filtration)Ugl ac CaCO3NDugl ac CaCO3NoSM 922 BFecal Coliform (by men, Filtration)Ugl ac CaCO3NDugl ac CaCO3NoUgl ac CaCO3NDugl ac CaCO3ND<		EPA 180.1	Turbidity	58	NTU
ConventionalsSN 23:0.8Hardness, Total (as CaCO3)3.0mg/l as CaCO3EPA 410.4BOD100mg/lSN 2120.8BOD300mg/lSN 2120.8PH7.1s.n.SN 2120.8PH7.1s.n.SN 2120.8PH7.1s.n.FPA 300Nikrogen, Nitrike (as N)<1.0		EPA 120.1	Conductivity	850	umhos/cm
Image: PA 405.1POD100mg4PA 410.4COD800mg4PA 410.4COD800mg4SN 2120 BColor>15S.a.SN 2120 BPH7.1s.a.PA 50.0Nitrogen, Nitrite6.0.10mg4PA 50.1Nitrogen, Nitrite (sN)<1.0	Conventionals	SM 2340 B	Hardness, Total (as CaCO3)	320	mg/l as CaCO3
EPA 104 (SM 210 BCOD800 (mg1)SM 210 BColar>-15s.m.SM 210 BPH7.1s.m.SM 210 BNitrogen, Nitrite		EPA 405.1	BOD	120	mg/l
SM 2120 BColor9.15s.u.SM 2120 BPH7.1s.u.SM 2120 BPH7.1s.u.EPA 300Nitrogen, Nitrite<0.10		EPA 410.4	COD	800	mg/l
SM 2120 B pH 7.1 s.a.		SM 2120 B	Color	>15	s.u.
EPA 300 Nitrogen.Nitrite <0.10 mg/l Br0 300 Nitrogen.Nitrite (is N) <1.0		SM 2120 B	рН	7.1	s.u.
PA 300 Nitrogen, Nitrice < BA 300 Nitrogen, Nitrice (as N)					
FPA 300 Nitrogen, Namate (as N) < Biological/Chlorine EPA 350.1 Nitrogen, Kpidahl, Ioul 31 mg/l Calculation Total Nitrogen, Kpidahl, Ioul 31 mg/l Biological/Chlorine SM 9222 B Fecal Coliform (by men, Filtration) CFU/100ml Biological/Chlorine SM 922 B Fecal Coliform (by men, Filtration) mg/l Nutrogen Arroclor 1016 ND ug/l Arroclor 122 ND ug/l Arroclor 1232 ND ug/l Arroclor 1242 ND ug/l Arroclor 1242 ND ug/l Arroclor 1242 ND ug/l Arroclor 1242 ND ug/l Arroclor 1243 ND ug/l Arroclor 1260 ND ug/l Biological/Chuine		EPA 300	Nitrogen, Nitrite	< 0.10	mg/l
Bit PA 350.1 Nitrogen, Annooia (as N) 17 mg/l EPA 351.3 Nitrogen, Kjeldahl total 31 mg/l Calculation Total Nitrogen 48 mg/l Biological/Chlorine SM 9222 B Feal Coliform (by men. Filtration) CFU/100ml Biological/Chlorine SM 9222 B Facal Coliforn (by men. Filtration) 0 0 Number State Facal Coliforn (by men. Filtration) ND 0 0 Number State Facal Coliforn (by men. Filtration) ND 0 0 Number State Facal Coliforn (by men. Filtration) ND 0 0 Number State Facal Coliforn (by men. Filtration) ND 0 0 Number State Facal Coliforn (by men. Filtration) ND 0 0 Number State Facal Coliforn (by men. Filtration) ND 0 0 Number State Facal Coliforn (by men. Filtration) ND 0 0 Number State Facal Coliforn (Do Coliforn (by men. Filtration) ND 0 0 Number St		EPA 300	Nitrogen, Nitrate (as N)	<1.0	mg/l
EPA 351.3 Nitrogen, Kjeldahl, total 3.1 mg/l Caluation Total Nitrogen 48 mg/l Biological/Chlorine SM 9222 B Fecal Coliform (by men, Filtration) CFU/100ml EPA 330.5 Total Chlorine mg/l Number Network mg/l mg/l Number Network Marcelor 1016 ND ug/l Aroclor 123.2 ND ug/l Marcelor 123.2 ND ug/l Aroclor 124.3 ND ug/l Marcelor 124.4 ND ug/l Aroclor 124.5 ND ug/l Marcelor 124.4 ND ug/l Aroclor 124.5 ND ug/l Marcelor 124.5 ND ug/l Aroclor 126.0 ND ug/l Marcelor 126.5 ND ug/l Biological/Chlorine ND ug/l Marcelor 126.5 ND ug/l Gloran ND ug/l Marcelor 126.5 ND ug/l Gloran ND ug/l Marcelor 126.5 ND ug/l	Nutrients	EPA 350.1	Nitrogen, Ammonia (as N)	17	mg/l
Calculation Total Nitrogen 48 mg1 Biological/Chlorine SM 9222 B Fecal Coliform (by mem. Filtration) CFU/100nl EPA 330.5 Total Chlorine mg1 No U mg1 Aroclor 1021 ND ug1 Aroclor 1222 ND ug1 Aroclor 1232 ND ug1 Aroclor 124 ND ug1 Aroclor 1254 ND ug1 Aroclor 1250 ND ug1 Aroclor 1260 ND ug1 Aroclor 1254 ND ug1 Aroclor 1250 ND ug1 Aroclor 1260 ND ug1 Gelta-BHC ND ug1 <td></td> <td>EPA 351.3</td> <td>Nitrogen, Kjeldahl, total</td> <td>31</td> <td>mg/l</td>		EPA 351.3	Nitrogen, Kjeldahl, total	31	mg/l
Biological/Chlorine SM 9222 B Fecal Coliform (by mem. Filtration) CFU/100ml EPA 330.5 Total Chlorine mg1 Aroclor 1016 ND ug1 Aroclor 1021 ND ug1 Aroclor 1221 ND ug1 Aroclor 1232 ND ug1 Aroclor 1242 ND ug1 Aroclor 1248 ND ug1 Aroclor 1260 ND ug1 Aroclor 1260 ND ug1 Aroclor 1260 ND ug1 alpha-BHC ND ug1 gamma-BHC (Lindane) ND ug1 gamma-BHC (Lindane) ND ug1 Gatorian ND ug1<		Calculation	Total Nitrogen	48	mg/l
Biological/ChlorineSM 922 BFecal Coliform (by mem. Filtration)CFU/100mlBroadBPA 330.5Total ChlorinemglNetworkNetworkNetworkNetworkAroclor 1016NDuglAroclor 1221NDuglAroclor 1232NDuglAroclor 1248NDuglAroclor 1248NDuglAroclor 1240NDuglAroclor 1240NDuglAroclor 1240NDuglAroclor 1240NDuglAroclor 1240NDuglBiological/ChlorineNDuglBreadNDuglAroclor 1240NDuglAroclor 1240NDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBiological/ChlorineNDuglBio					
EPA 330.5 Total Chlorine mg/l	Biological/Chlorine	SM 9222 B	Fecal Coliform (by mem. Filtration)		CFU/100ml
Pesticides, Organochlorine Name Name Name EPA 608 EPA 608 Aroclor 1016 ND ug/1 Aroclor 1221 ND ug/1 Aroclor 1232 ND ug/1 Aroclor 1242 ND ug/1 Aroclor 1248 ND ug/1 Aroclor 1250 ND ug/1 Aroclor 1250 ND ug/1 Aroclor 1260 ND ug/1 Beta-BHC ND ug/1 Gamma-BHC ND ug/1 Gamma-BHC ND ug/1 Heta/Ar-DDT ND ug/1 Erdosulfan II ND </td <td>Dioiogreui, emornie</td> <td>EPA 330.5</td> <td>Total Chlorine</td> <td></td> <td>mg/l</td>	Dioiogreui, emornie	EPA 330.5	Total Chlorine		mg/l
Aroclor 1016 ND ug/l Aroclor 121 ND ug/l Aroclor 1221 ND ug/l Aroclor 1232 ND ug/l Aroclor 1242 ND ug/l Aroclor 1243 ND ug/l Aroclor 1244 ND ug/l Aroclor 1240 ND ug/l Aroclor 1240 ND ug/l Aroclor 1240 ND ug/l Aroclor 1260 ND ug/l Aroclor 1260 ND ug/l alpha-BHC ND ug/l beta-BHC ND ug/l gamma-BHC (Lindane) ND ug/l gamma-BHC (Lindane) ND ug/l 4.4-DDT ND ug/l EPA 608 EPA 608 ND ug/l Endosulfan I ND ug/l Erdosulfan I ND ug/l Endosulfan I ND ug/l Endosulfan I ND ug/l					
Pesticides, Organochlorine FPA 608 Ancolor 1221 ND ug/l Aroclor 1232 ND ug/l Aroclor 1248 ND ug/l Aroclor 1254 ND ug/l Aroclor 1250 ND ug/l Aroclor 1260 ND ug/l Bradosulfan ND ug/l Aroclor 1260 ND ug/l Bradosulfan I ND ug/l Bradosulfan I ND ug/l Bradosulfan I ND			Aroclor 1016	ND	ug/l
Ancclor 1232 ND ug/l Arcclor 1243 ND ug/l Arcclor 1243 ND ug/l Arcclor 1243 ND ug/l Arcclor 1254 ND ug/l Arcclor 1260 ND ug/l Arcclor 1260 ND ug/l Arcclor 1260 ND ug/l Arcclor 1260 ND ug/l Idhrin ND ug/l alpha-BHC ND ug/l Ideut-BHC ND ug/l gamma-BHC (Lindane) ND ug/l Ideut-BHC ND ug/l </td <td rowspan="2"></td> <td>Aroclor 1221</td> <td>ND</td> <td>ug/l</td>			Aroclor 1221	ND	ug/l
Aroclor 1242 ND ug/l Aroclor 1248 ND ug/l Aroclor 1248 ND ug/l Aroclor 1254 ND ug/l Aroclor 1260 ND ug/l Aroclor 1260 ND ug/l Aroclor 1260 ND ug/l Image: State of the s			Aroclor 1232	ND	ug/l
Arcolor 1248 ND ug/l Arcolor 1254 ND ug/l Arcolor 1260 ND ug/l Arcolor 1260 ND ug/l Altrin ND ug/l Barmar-BHC (Lindane) ND ug/l Gamma-BHC (Lindane) ND ug/l 4.4-DDD ND ug/l 4.4-DDE ND ug/l Endosulfan II ND ug/l Endosulfan Sulfate ND ug/l Endosulfan Sulfate ND ug/l Heptachlor Epoxide ND ug/l Heptachlor Epoxide ND u			Aroclor 1242	ND	ug/l
Pesticides, Organochlorine Image: Pesticides, Organochlorine			Aroclor 1248	ND	ug/l
Arcolor 1260 ND ug/l Aldrin ND ug/l Aldrin ND ug/l alpha-BHC ND ug/l beta-BHC ND ug/l delta-BHC ND ug/l gamma-BHC (Lindane) ND ug/l Gamma-BHC (Lindane) ND ug/l 4,4-DDD ND ug/l 4,4-DDT ND ug/l 4,4-DDT ND ug/l Gandaufan I ND ug/l EPA 608 Endosulfan I ND ug/l Gandosulfan Sulfate ND ug/l Endosulfan Sulfate ND ug/l Endosulfan Sulfate ND ug/l Endrin Aldehyde ND ug/l Heptachlor Epoxide ND ug/l Utertarin ND ug/l EPA 200.7/601 ND ug/l Metals, Total EPA 200.7/601 ND ug/l			Aroclor 1254	ND	ug/l
AldrinNDug/lalpha-BHCNDug/lalpha-BHCNDug/lbeta-BHCNDug/ldelta-BHCNDug/lgamma-BHC (Lindane)NDug/lgamma-BHC (Lindane)NDug/l4,4-DDDNDug/l4,4-DDENDug/l6,4-DDTNDug/l10DieldrinNDug/l11NDug/l11ug/l11ug/l11 <td>Aroclor 1260</td> <td>ND</td> <td>ug/l</td>			Aroclor 1260	ND	ug/l
Pesticides, OrganochlorineImage: Image:			Aldrin	ND	ug/l
Besticides, Organochlorine Image: Pesticides, Organochlorine			alpha-BHC	ND	ug/l
Pesticides, Organochlorine EPA 608 delta-BHC ND ug/1 Gamma-BHC (Lindane) ND ug/1 Chlordane ND ug/1 GA4,4DDD ND ug/1 4,4-DDE ND ug/1 GA4,4DDT ND ug/1 GA4,4DDT ND ug/1 GA4,4DDT ND ug/1 Gamba-BHC ND ug/1 Heptachlor ND ug/1 Gamba-BHC ND ug/1 Methoxychlor<			beta-BHC	ND	ug/l
Pesticides, Organochlorine EPA 608 gamma-BHC (Lindane) ND ug/l Chlordane ND ug/l 4,4-DDD ND ug/l 4,4-DDE ND ug/l 4,4-DDT ND ug/l 10idrin ND ug/l Endosulfan I ND ug/l Endosulfan II ND ug/l Endosulfan Sulfate ND ug/l Endrin Aldehyde ND ug/l Heptachlor ND ug/l Heptachlor Epoxide ND ug/l Methoxychlor ND ug/l Toxaphene ND ug/l Toxaphene 110 ug/l			delta-BHC	ND	ug/l
Pesticides, Organochlorine EPA 608 Chlordane ND ug/l 4,4-DDD ND ug/l 4,4-DDE ND ug/l 4,4-DDT ND ug/l 6 4,4-DDT ND ug/l 6 100 ND ug/l 6 100 ND ug/l 6 100 ND ug/l 6 100 ND ug/l 6 Endosulfan II ND ug/l 6 Endosulfan Sulfate ND ug/l 6 Endrin ND ug/l 6 Endrin Aldehyde ND ug/l 10 ug/l Heptachlor Epoxide ND ug/l 10 ug/l Toxaphene ND ug/l 10 ug/l 10 ug/l 10 ug/l 10 ug/l			gamma-BHC (Lindane)	ND	ug/l
Metals, Total 4,4-DDD ND ug/1 4,4-DDE ND ug/1 4,4-DDT ND ug/1 4,4-DDT ND ug/1 Dieldrin ND ug/1 Endosulfan I ND ug/1 Endosulfan II ND ug/1 Endosulfan Sulfate ND ug/1 Endrin Aldehyde ND ug/1 Heptachlor Epoxide ND ug/1 Metals, Total EPA 200.7/6010 Calcium 110 ug/1	Pesticides, Organochlorine	EPA 608	Chlordane	ND	ug/l
Metals, Total EPA 200.7/6010 ND ug/l 4,4-DDE ND ug/l 4,4-DDT ND ug/l Dieldrin ND ug/l Endosulfan I ND ug/l Endosulfan Sulfate ND ug/l Endosulfan Sulfate ND ug/l Heptachlor ND ug/l Metals, Total ND ug/l			4,4-DDD	ND	ug/l
Metals, Total EPA 200.7/601 ND ug/l 4,4-DDT ND ug/l Dieldrin ND ug/l Endosulfan I ND ug/l Endosulfan II ND ug/l Endosulfan Sulfate ND ug/l Endosulfan Aldehyde ND ug/l Heptachlor ND ug/l Metals, Total EPA 200.7/601 ND ug/l			4,4-DDE	ND	ug/l
Dieldrin ND ug/l Endosulfan I ND ug/l Endosulfan II ND ug/l Endosulfan Sulfate ND ug/l Endosulfan Sulfate ND ug/l Endrin Aldehyde ND ug/l Heptachlor ND ug/l Heptachlor Epoxide ND ug/l Methoxychlor ND ug/l Methoxychlor ND ug/l Magnesium 110 ug/l			4,4-DDT	ND	ug/l
Image: Market			Dieldrin	ND	ug/l
Endosulfan II ND ug/l Endosulfan Sulfate ND ug/l Endrin Aldehyde ND ug/l Endrin Aldehyde ND ug/l Heptachlor ND ug/l Heptachlor Epoxide ND ug/l Methoxychlor ND ug/l EPA 200.7/6010 Calcium 110 ug/l			Endosulfan I	ND	ug/l
Endosulfan Sulfate ND ug/l Endrin ND ug/l Endrin Aldehyde ND ug/l Heptachlor ND ug/l Heptachlor Epoxide ND ug/l Methoxychlor ND ug/l Toxaphene ND ug/l Metals, Total EPA 200.7/6010 Calcium 110 ug/l			Endosulfan II	ND	ug/l
Endrin ND ug/l Endrin Aldehyde ND ug/l Heptachlor ND ug/l Heptachlor Epoxide ND ug/l Methoxychlor ND ug/l Toxaphene ND ug/l Metals, Total EPA 200.7/6010 Calcium 110 ug/l			Endosulfan Sulfate	ND	ug/l
Endrin Aldehyde ND ug/l Heptachlor ND ug/l Heptachlor Epoxide ND ug/l Methoxychlor ND ug/l Toxaphene ND ug/l Metals, Total EPA 200.7/6010 Calcium 110 ug/l			Endrin	ND	ug/l
Heptachlor ND ug/l Heptachlor Epoxide ND ug/l Methoxychlor ND ug/l Toxaphene ND ug/l Metals, Total EPA 200.7/6010 Calcium 110 ug/l			Endrin Aldehyde	ND	ug/l
Heptachlor Epoxide ND ug/l Methoxychlor ND ug/l Toxaphene ND ug/l Metals, Total EPA 200.7/6010 Calcium 110 ug/l			Heptachlor	ND	ug/l
Methoxychlor ND ug/l Toxaphene ND ug/l Metals, Total EPA 200.7/6010 Calcium 110 ug/l			Heptachlor Epoxide	ND	ug/l
Toxaphene ND ug/l Metals, Total EPA 200.7/6010 Calcium 110 ug/l			Methoxychlor	ND	ug/l
Metals, Total EPA 200.7/6010 Calcium 110 ug/l Magnesium 11 ug/l			Toxaphene	ND	ug/l
Metals, Total EPA 200.7/6010 Calcium 110 ug/l Magnesium 11 ug/l			<u></u>	44.2	~
Magnesium 11 ug/l	Metals, Total	EPA 200.7/6010	Calcium	110	ug/l
			Magnesium	11	ug/I

		Dissolved Cadmium ⁴	< 0.0050	mg/l
		Dissolved Chromium ⁵	< 0.010	mg/l
Metals, Dissolved	EPA 200.7/6010	Dissolved Copper	< 0.010	mg/l
		Dissolved Lead	<0.030	g, 1
		Dissolved Zinc	0.11	mg/l
		Dissorved Line	0.11	111 <u>6</u> , 1
		Banzana	ND	na/l
		Promodiabloromathana	ND	ug/1
		Bromoform	ND	ug/1
		Promomethana	ND	ug/1
		Carbon tatrachlarida	ND	ug/1
		Chlorohongono	ND	ug/1
		Chlorosthana	ND	ug/1
			ND	ug/I
			ND	ug/1
		Chloroform	ND	ug/l
		Chloromethane	ND	ug/l
		Dibromochloromethane	ND	ug/l
		Dichlorodifluromehane	ND	ug/l
		1,2-Dichlorobenzene	ND	ug/l
		1,3-Dichlorobenzene	ND	ug/l
		1,4-Dichlorobenzene	ND	ug/l
		I,I-Dichloroethane	ND	ug/l
		1,2-Dichloroethane	ND	ug/l
Volalitale Organic Compounds	EPA 624	1,1-Dichloroethene	ND	ug/l
		cis-1,2-Dichloroethene	ND	ug/l
		trans-1,2-Dichloroethene	ND	ug/l
		1,2-Dichloropropane	ND	ug/l
		cis-1,3-Dichloropropene	ND	ug/l
		trans-1,3-Dichloropropene	ND	ug/l
		Ethylbenzene	ND	ug/l
		Methylene chloride	ND	ug/l
		Tetrachloroethene	ND	ug/l
		Styrene	ND	ug/l
		Toluene	ND	ug/l
		1,1,1 -Trichloroethane	ND	ug/l
		1,1,2,2-Tetrachloroethane	ND	ug/l
		1,1,2-Trichloroethane	ND	ug/l
		Trichloroethene	ND	ug/l
		Trichlorofluoromethane	ND	ug/l
		Vinyl chloride	ND	ug/l
		Xylene, Total	ND	ug/l
		Γ		
		Acenaphthene	ND	ug/l
		Acenaphthylene	ND	ug/l
		Anthracene	ND	ug/l
		Benzidine	ND	ug/l
		Benz(a)anthracene	ND	ug/l
		Benzo(a)pyrene	ND	ug/l
		Benzo(b)fluoranthene	ND	ug/l
		Benzo(ghi) perylene	ND	ug/l
		Benzo(k)fluoranthene	ND	ug/l
		4-Bromophenyl phenyl ether	ND	ug/l
		Butyl benzyl phthalate	ND	ug/l

Semi-Volatile Organic Compounds FPA 623 FPA 624 FPA 624 FPA 625 Semi-Volatile Organic Compounds FPA 624 FPA 624 ND ug1 Semi-Volatile Organic Compounds FPA 624 FPA 624 ND ug1 Columer Sequence ND ug1 Up1 Up1 Up1 Semi-Volatile Organic Compounds FPA 624 Columer Sequence ND ug1 Semi-Volatile Organic Compounds FPA 624 Discretta, humbrace ND ug1 Semi-Volatile Organic Compounds FPA 624 Discretta, humbrace ND ug1 Semi-Volatile Organic Compounds FPA 624 Discretta, humbrace ND ug1 1.4.15 humbrace ND ug1 2.4-Discretta, humbrace ND ug1 2.4-Discretta, humbrace ND ug1 2.4-Discretta, humbrace ND ug1 1.4.15 humbrace ND ug1 2.4-Discretta, humbrace ND ug1 2.4-Discretta phatale ND ug1 2.4-Discretta, humbrace ND ug1 <t< th=""><th></th><th></th><th>Bis(2-chloroethoxy)methane</th><th>ND</th><th>ug/l</th></t<>			Bis(2-chloroethoxy)methane	ND	ug/l
Bit3C-Bhorsiopropy) ether ND ug1 p-Chloron-merced ND ug1 2-Chlorosphulaler ND ug1 2-Chlorosphulaler ND ug1 2-Chlorosphulaler ND ug1 4-Chlorosphulaler ND ug1 Chyson ND ug1 Chyson ND ug1 Chyson ND ug1 Disecut phulale ND ug1 1.3-Dichlorobenzone ND ug1 1.4-Dichlorobenzone ND ug1 2.4-Dichlorobenzone <			Bis(2-chloroethyl) ether	ND	ug/l
Semi-Volatile Organic Compounds LFA 625 Produces ND ugd Semi-Volatile Organic Compounds LFA 625 LFA 626 ND ugd LA-Distrophenol ND ugd Up and the second se			Bis(2-chloroisopropyl) ether	ND	ug/l
Semi-Volatile Organic Compounds FPA 625 EPA 625 Chloromaphalace: ND ug/1 2-Chloromaphalace: ND ug/1			p-Chloro-m-cresol	ND	ug/l
Semi-Volatile Organic Compounds EPA 625 Output ND ug/l 2-Chlorophenol ND ug/l Utput Utput Utput Semi-Volatile Organic Compounds EPA 625 EPA 625 Utput			2-Chloronaphthalene	ND	ug/l
Semi-Volatile Organic Compounds EPA 625 EPA 625 Head Additionable and Additionable anditionable and Additionable and Additionable anditi			2-Chlorophenol	ND	ug/l
Chrysne ND ug4 Dile-barg phalata ND ug4 Di-barg phalata ND ug4 1.2-Dickloroberazen ND ug4 1.3-Dickloroberazen ND ug4 1.4-Dickloroberazen ND ug4 1.4-Dickloroberazen ND ug4 2.4-Dickloroberazen ND ug4 2.4-Dickloroberazen ND ug4 2.4-Dickloroberazen ND ug4 2.4-Dinerbylphenol ND ug4 2.4-Dinitro-cresol ND ug4 1.2-Diphylphylphataic ND ug4 1.2-Diphylphylphataic ND ug4 Hesachlor			4-Chlorophenyl phenyl ether	ND	ug/l
Bits Ditect(a,b)mthracene ND ug/l Di-n-butyl phnhalae ND ug/l 1.2.D5:0hlorobenzme ND ug/l 1.3.Dichlorobenzme ND ug/l 3.3.D5:0hlorobenzme ND ug/l 2.4.Dichlorobenzme ND ug/l 2.4.Dinitrooluene ND ug/l 2.4.Dinitrooluene ND ug/l 1.2.Diphenylhydrazine ND </td <td></td> <td></td> <td>Chrysene</td> <td>ND</td> <td>ug/l</td>			Chrysene	ND	ug/l
Bendix Display Bit Intervention ND ug/l 1.3-Dichlorobenzane ND ug/l 1.3-Dichlorobenzane ND ug/l 1.3-Dichlorobenzane ND ug/l 1.4-Dichlorobenzane ND ug/l 2.4-Dichlorobenzane ND ug/l 1.4-Dichlorobenzane ND ug/l 2.4-Dichlorobenzane ND ug/l 1.4-Dichlorobenzane ND ug/l 2.4-Dichlorobenzane ND ug/l 1.4-Dichlorobenzane ND ug/l 2.4-Dinitrophenol ND ug/l 1.4-Dichlorobenzane ND ug/l 2.4-Dinitrophenol ND ug/l 1.4-Dichlorobenzane ND ug/l 2.4-Dinitrosolucene ND ug/l 1.2-Diphenyl phthalate ND ug/l 1.2-Diphenyl phthalate ND ug/l 1.2-Diphenyl phthalate ND ug/l 1.2-Diphenyl phthalate ND ug/l 1.2-Diphenyl phthalate ND ug/l 1.2-Diphenyl phthalate ND ug/l 1.2-Diphthoroben			Dibenz(a,h)anthracene	ND	ug/l
Semi-Volatile Organic Compounds Image: Figure State Stat			Di-n-butyl phthalate	ND	ug/l
Semi-Volatile Organic Compounds II.3-Dichlorobezizine ND ug/1 3.3-Dichlorobezizine ND ug/1 3.3-Dichlorobezizine ND ug/1 2.4-Dichlorobezizine ND ug/1 2.4-Dichlorobezizine ND ug/1 2.4-Dichlorobezizine ND ug/1 2.4-Dimethylphehale ND ug/1 2.4-Dimethylphehale ND ug/1 2.4-Dimethylphehale ND ug/1 2.4-Dinitrotolene ND ug/1 3.3-Diphenylydnitale ND ug/1 1.4-Dichorobezizie ND ug/1 2.4-Dinitrotolene ND ug/1 1.4-Dichorobezizie ND ug/1 1.4-Dichorobezizie ND ug/1 1.2-Distrotolene ND ug/1 1.2-Distrotolene			1,2-Dichlorobenzene	ND	ug/l
Semi-Volatile Organic Compounds IPA 625 IPA 625 IPA 625 IPA 625 Semi-Volatile Organic Compounds FPA 625 Dimethyl phthalate ND ug/l 2.4-Dinchtylphenol ND ug/l Up/l Up/l Up/l 2.4-Dinchtylphenol ND ug/l Up/l Up/l Up/l 2.4-Dinchtylphenol ND ug/l Up/l Up/l Up/l 2.4-Dinitro-Occesol ND ug/l Up/l Up/l Up/l 2.4-Dinitro-Occesol ND ug/l Up/l Up/l Up/l Up/l 2.4-Dinitro-Occesol ND ug/l Up/l			1,3-Dichlorobenzene	ND	ug/l
Semi-Volatile Organic Compounds FPA 625 3.3-Dichlorobenzidine ND ug/1 2.4-Dicktorophenol ND ug/1 2.4-Dinictylphthalare ND ug/1 2.4-Dimitrylphthalare ND ug/1 2.4-Dimitrylphenol ND ug/1 1.2-Diphenylhydrazine ND ug/1 Hexachlorobenzone ND ug/1 Nortoscal-propynatimine ND ug/1 <t< td=""><td></td><td></td><td>1,4-Dichlorobenzene</td><td>ND</td><td>ug/l</td></t<>			1,4-Dichlorobenzene	ND	ug/l
Semi-Volatile Organic Compounds EPA 625 2.4-Dichlorophenol ND ug/l Diethyl phthalate ND ug/l 2.4-Dimethyl phthalate ND ug/l 2.4-Dimethyl phthalate ND ug/l 2.4-Dimethyl phthalate ND ug/l 1.2-Diphenyllhydrazine ND ug/l 1.2-Diphenyllhydrazine ND ug/l Fluoranthene ND ug/l 1.2-Diphenyllhydrazine ND ug/l Hexachlorobutadiene ND ug/l 1.2-Diphenyllhydrazine ND ug/l Hexachlorobutadiene ND ug/l 1.2-Diphenyllhydrazine ND ug/l Naphthalatoree ND			3,3'-Dichlorobenzidine	ND	ug/l
Semi-Volatile Organic Compounds Diethyl phthalate ND ug/l 2,4-Dimethyl phthalate ND ug/l 2,4-Dimethyl phthalate ND ug/l 2,4-Dimitro-persol ND ug/l 2,4-Dimitro-persol ND ug/l 2,4-Dimitro-persol ND ug/l 2,4-Dimitro-persol ND ug/l 2,4-Dimitrotoluene ND ug/l 2,4-Dimitrotoluene ND ug/l 2,4-Dimitrotoluene ND ug/l 1,2-Diphenylhydrazine ND ug/l 1,2-Diphenylhydrazine ND ug/l Fluorene ND ug/l Hexachlorobutadiene ND ug/l Hexachlorobutadiene ND ug/l Hexachlorobutadiene ND ug/l Hexachlorobutadiene ND ug/l Naphthalene ND ug/l Vitrobenzene ND ug/l NNitrosodirenylamine ND ug/l NNitrosodirenylamine			2,4-Dichlorophenol	ND	ug/l
Semi-Volatile Organic Compounds 2.4-Dimethylphenol ND ug1 2.4-Dimethylphenol ND ug1 4.6-Dinitro-cressol ND ug1 2.4-Dinitroblenol ND ug1 1.2-Diphonthyltpraine ND ug1 1.2-Diphonthyltpraine ND ug1 Fluorenthene ND ug1 Hexachloroburatiene ND ug1 Hexachloroburatiene ND ug1 Hexachloroburatiene ND ug1 Naphthalene ND ug1 N-Nitrosodinen-propylamine ND ug1			Diethyl phthalate	ND	ug/l
Semi-Volatile Organic Compounds EPA 625 Dimethyl phthalate ND ug/l 2.4.Dinitrophenol ND ug/l 1.2.Diphenylhydrazine ND ug/l Pluoranthene ND ug/l Hexachlorocyclopentadiene ND ug/l Hexachlorocyclopentadiene ND ug/l Hexachlorocyclopentadiene ND ug/l Nitrobenzene ND ug/l Nitrobenzene ND ug/l Nitrosodiphenylamine ND ug/l N-Nitrosodirhenylamine ND ug/l N-Nitrosodirhenylamine ND ug/l N-Nitrosodirhenylamine ND ug/l N-Nitrosodirhenylamine ND ug/l Phenol			2,4-Dimethylphenol	ND	ug/l
A.6-Dinitro-c-cresol ND ug1 2.4-Dinitrophenol ND ug1 2.4-Dinitrophenol ND ug1 2.4-Dinitrophenol ND ug1 2.6-Dinitrotoluene ND ug1 Di-n-ocryl phtalate ND ug1 1.2-Diphenylhydrazine ND ug1 Fluoranthene ND ug1 Hexachlorobutadiene ND ug1 Hexachlorobutadiene ND ug1 Hexachlorocthane ND ug1 Hexachlorochane ND ug1 Idem0(1,2,3-c0)prene ND ug1 Idem0(1,2,3-c0)prene ND ug1 Naphthalene ND ug1 Naphthalene ND ug1 Neitrosodin-propylamine ND ug1 N-Nitrosodin-propylamine ND ug1 N-Nitrosodin-propylamine ND ug1 Phenol ND ug1 Phenol ND ug1 Phenol ND <td>Semi-Volatile Organic Compounds</td> <td>EPA 625</td> <td>Dimethyl phthalate</td> <td>ND</td> <td>ug/l</td>	Semi-Volatile Organic Compounds	EPA 625	Dimethyl phthalate	ND	ug/l
1.2.4-Dinitrophend ND ug/l 2.4-Dinitrophend ND ug/l 2.4-Dinitrotoluene ND ug/l 2.6-Dinitrotoluene ND ug/l 2.6-Dinitrotoluene ND ug/l 1.2-Diphenylhydrazine ND ug/l 1.2-Diphenylhydrazine ND ug/l Fluoranthene ND ug/l Fluoranthene ND ug/l Hexachlorocyclopentadiene ND ug/l Hexachlorochorazene ND ug/l Hexachlorochorazene ND ug/l Hexachlorochorazene ND ug/l Hexachlorochorazene ND ug/l Naphthalene ND ug/l Naphthalene ND ug/l Vitrobenzine ND ug/l N-Nitrosodimethylamine ND ug/l N-Nitrosodin-proprolanine ND ug/l N-Nitrosodin-proplanine ND ug/l Phenol ND ug/l <td< td=""><td></td><td></td><td>4.6-Dinitro-o-cresol</td><td>ND</td><td>ug/l</td></td<>			4.6-Dinitro-o-cresol	ND	ug/l
Dimonstructure ND ug/l 2.4-Dimonstructure ND ug/l 2.6-Dimitrotoluene ND ug/l Dimonstructure ND ug/l Discense ND ug/l Discense ND ug/l Fluorene ND ug/l Hexachlorobutatiene ND ug/l Hexachlorocyclopentadiene ND ug/l Hexachlorocyclopentadiene ND ug/l Ideno(1,2,3-cd)pyrene ND ug/l Idenof,1,2,3-cd)pyrene ND ug/l Nitrobenzene ND ug/l Vitrophenol ND ug/l Nitrosodiphenylamine ND ug/l N-Nitrosodiphenylamine ND ug/l Phenol ND ug/l Phenol ND			2.4-Dinitrophenol	ND	ug/1
Dimensional Dimensional Dimensional 2.6-Dimitrotoluene ND ug1 Dim-octyl phthalate ND ug1 1.2-Diphenylhydrazine ND ug1 bis (2-Ethylhexyl) phthalate ND ug1 Fluoranthene ND ug1 Hexachlorobenzene ND ug1 Hexachlorocyclopentadiene ND ug1 Hexachlorocyclopentadiene ND ug1 Hexachlorocyclopentadiene ND ug1 Hexachlorochadiene ND ug1 Hexachloropene ND ug1 Nitrobenzene ND ug1 Neitrosodiphenylamine ND ug1 N-Nitrosodiphenylamine ND ug1 Phenol ND ug1 Phenol ND ug1			2.4-Dinitrotoluene	ND	ug/1
Dimoctly phthalate ND ug/l 1,2-Diphenylhydrazine ND ug/l 1,2-Diphenylhydrazine ND ug/l bis (2-Eittylhexyl) phthalate ND ug/l Fluoranthene ND ug/l Fluoranthene ND ug/l Hexachlorobuzatiene ND ug/l Hexachlorocyclopentatiene ND ug/l Hexachlorochutadiene ND ug/l Hexachlorochutadiene ND ug/l Hexachlorocyclopentatiene ND ug/l Hexachlorochutadiene ND ug/l Ideno(1,2,3-cd)pyrene ND ug/l Naphthalene ND ug/l Nitrobenzene ND ug/l Nitrobenzene ND ug/l N-Nitrosodimethylamine ND ug/l N-Nitrosodin-propylamine ND ug/l Phenalthrene ND ug/l Phenalthrene ND ug/l Phenalthrene ND ug/l <			2.6-Dinitrotoluene	ND	ug/l
Description Description Description 12-Disphenylhydrazine ND ug/1 bis (2-Ethylhexyl) phthalate ND ug/1 Fluoranthene ND ug/1 Fluoranthene ND ug/1 Hexachlorobutadiene ND ug/1 Ideno(1,2,3-cd)pyrene ND ug/1 Ideno(1,2,3-cd)pyrene ND ug/1 Nitrobenzene ND ug/1 Nitrobenzene ND ug/1 Nitrobenzene ND ug/1 N-Nitrosodi-n-propylamine ND ug/1 N-Nitrosodi-n-propylamine ND ug/1 Phenol ND ug/1			Di-n-octyl phthalate	ND	ug/1
Interspective Interspective Interspective bis (2-Fitylhexyl) phthalate ND ug/1 Fluoranthene ND ug/1 Fluorene ND ug/1 Hexachlorobenzene ND ug/1 Hexachlorobutadiene ND ug/1 Hexachlorobutadiene ND ug/1 Hexachlorocyclopentadiene ND ug/1 Hexachlorocyclopentadiene ND ug/1 Hexachlorocyclopentadiene ND ug/1 Hexachlorocethane ND ug/1 Hexachlorocethane ND ug/1 Ideno(1,2,3-cd)pyrene ND ug/1 Naphthalene ND ug/1 Naphthalene ND ug/1 Nitrobenzene ND ug/1 NNitrosodimetylamine ND ug/1 N-Nitrosodiphenylamine ND ug/1 N-Nitrosodiphenylamine ND ug/1 Phenaltene ND ug/1 Phenanthrene ND ug/1			1.2-Diphenylhydrazine	ND	ug/1
Image: Section of the sectio			bis (2-Ethylhexyl) phthalate	ND	11g/1
Fluorene ND ug/1 Fluorene ND ug/1 Hexachlorobenzene ND ug/1 Hexachlorobutadiene ND ug/1 Hexachlorobenzene ND ug/1 Hexachlorobutadiene ND ug/1 Hexachlorocyclopentadiene ND ug/1 Naphthalene ND ug/1 Naphthalene ND ug/1 Neitrosodimethylamine ND ug/1 N-Nitrosodin-propylamine ND ug/1 Phenol ND ug/1 Phenol ND ug/1 Phenol ND ug/1 1,2,4-Trichlorobenzene ND ug/1 1,2,4-Grichlorophenol ND ug/1 1,2,4-Grichlorophenol ND ug/1 <			Fluoranthene	ND	ug/1
Hexachlorobenzene ND ug/1 Hexachlorobutadiene ND ug/1 Ideno(1,2,3-cd)pyrene ND ug/1 Ideno(1,2,3-cd)pyrene ND ug/1 Naphthalene ND ug/1 Naphthalene ND ug/1 2-Nitrophenol ND ug/1 N-Nitrosodimethylamine ND ug/1 N-Nitrosodi-n-propylamine ND ug/1 Phenol ND ug/1 Phenol ND ug/1 Phenol ND ug/1 Q.4.6-Trichlorobenzene ND ug/1 Q.4.6-Trichlorobenzene ND ug/1 Phenol ND ug/1 Q.4.6-Trichlorobenzene ND ug/1 Q.4.6-Trichlorobenzene ND ug/1 Q.4.6-Trichlorobenzene ND ug/1 Q.4.6-Trichlorophenol			Fluorene	ND	ug/1
Hexachlorobutadiene ND ug/l Hexachlorobutadiene ND ug/l Hexachlorocthane ND ug/l Hexachlorocthane ND ug/l Ideno(1,2,3-cd)pyrene ND ug/l Isophorone ND ug/l Naphthalene ND ug/l Nitrobenzene ND ug/l 2-Nitrophenol ND ug/l N-Nitrosodimethylamine ND ug/l N-Nitrosodi-n-propylamine ND ug/l Pentachlorophenol ND ug/l Phenol ND ug/l Phenol ND ug/l Phenol ND ug/l Pyrene ND ug/l Q Pyrene ND ug/l Q Phenol ND ug/l Pyrene ND ug/l Q/l Phenol ND ug/l Q/l Q Phenol ND ug/l Q			Hexachlorobenzene	ND	ug/l
Phenolics EPA 420.1 Phenolics, Total Petroleum Hydrocarbons <5.0			Hexachlorobutadiene	ND	ug/1
Phenolics EPA 1664A Total Petroleum Hydrocarbons* <5.0			Hexachlorocyclopentadiene	ND	ug/1
Ideno(1.2.3-cd)pyrene ND ug/1 Isophorone ND ug/1 Isophorone ND ug/1 Naphthalene ND ug/1 Naphthalene ND ug/1 Nitrobenzene ND ug/1 2.Nitrophenol ND ug/1 4.Vitrophenol ND ug/1 N-Nitrosodimethylamine ND ug/1 N-Nitrosodi-n-propylamine ND ug/1 N-Nitrosodi-n-propylamine ND ug/1 Pentachlorophenol ND ug/1 Phenol ND ug/1 1.2.4-Trichlorobenzene ND ug/1 1.2.4-Trichlorophenol ND ug/1 Total Petroleum Hydrocarbons ^{&} EPA 1664A Total Petroleum Hudrocarbons <5.0			Hexachloroethane	ND	ug/1
Nation (App) Copy Nate ND ug/1 Isophorone ND ug/1 Naphthalene ND ug/1 Nitrobenzene ND ug/1 2-Nitrophenol ND ug/1 4-Nitrophenol ND ug/1 N-Nitrosodimethylamine ND ug/1 N-Nitrosodi-n-propylamine ND ug/1 N-Nitrosodi-n-propylamine ND ug/1 Pentachlorophenol ND ug/1 Phenol ND ug/1 Phenol ND ug/1 1,2,4-Trichlorobenzene ND ug/1 1,2,4-G-Trichlorophenol ND ug/1 Total Petroleum Hydrocarbons ⁸ EPA 1664A Total Petroleum Hudrocarbons <5.0			Ideno(1.2.3-cd)pyrene	ND	ug/1
Nopinotic No ug/i Naphthalene ND ug/i Nitrobenzene ND ug/i 2-Nitrophenol ND ug/i 4-Nitrosodimethylamine ND ug/i N-Nitrosodi-n-propylamine ND ug/i N-Nitrosodi-n-propylamine ND ug/i N-Nitrosodi-n-propylamine ND ug/i Pentachlorophenol ND ug/i Phenol ND ug/i Phenol ND ug/i 1.2.4-Trichlorobenzene ND ug/i 1.2.4-Trichlorophenol ND ug/i 1.2.4-Trichlorophenol ND ug/i Phenol ND ug/i 1.2.4-Trichlorophenol ND ug/i 1.2.4-Trichlorophenol ND ug/i Phenol ND ug/i 1.2.4-Trichlorophenol ND ug/i Phenolics ND ug/i			Isophorone	ND	ug/1
Phenolics EPA 420.1 Phenolics, Total recoverable <0.050			Naphthalene	ND	ug/1
Phenolics EPA 420.1 Phenolics, Total recoverable <0.050			Nitrobenzene	ND	ug/1
Phenolics EPA 420.1 Phenolics, Total recoverable <0.050			2-Nitrophenol	ND	ug/1
Phenolics EPA 420.1 Phenolics, Total recoverable <0.050			4-Nitrophenol	ND	ug/1
N-Nitrosodinkunykamine ND ug/1 N-Nitrosodiphenylamine ND ug/1 N-Nitrosodi-n-propylamine ND ug/1 Pentachlorophenol ND ug/1 Phenanthrene ND ug/1 Phenol ND ug/1 Pyrene ND ug/1 1,2,4-Trichlorophenol ND ug/1 2,4,6-Trichlorophenol ND ug/1 Total Petroleum Hydrocarbons ⁸ EPA 1664A Total Petroleum Hudrocarbons <5.0			N-Nitrosodimethylamine	ND	ug/1
Microsolipheny kinine N.D. ug/i N-Nitrosodi-n-propylamine N.D. ug/i Pentachlorophenol N.D. ug/i Phenanthrene N.D. ug/i Pyrene N.D. ug/i 1,2,4-Trichlorobenzene N.D. ug/i 1,2,4-Trichlorobenzene N.D. ug/i 2,4,6-Trichlorophenol N.D. ug/i Verticeum Hydrocarbons [®] EPA 1664A Total Petroleum Hudrocarbons <5.0			N-Nitrosodinhenylamine	ND	ug/1
Pentachlorophenol ND ug/1 Pentachlorophenol ND ug/1 Phenanthrene ND ug/1 Phenol ND ug/1 Pyrene ND ug/1 1,2,4-Trichlorophenol ND ug/1 2,4,6-Trichlorophenol ND ug/1 Total Petroleum Hydrocarbons [®] EPA 1664A Total Petroleum Hudrocarbons <5.0			N-Nitrosodi-n-propylamine	ND	ug/1
Phenolics EPA 420.1 Phenolics ND ug/l Phenolics ND ug/l Phenolics ND ug/l Phenolics ND ug/l			Pentachlorophenol	ND	ug/l
Phenol ND ug/l Pyrene ND ug/l 1,2,4-Trichlorobenzene ND ug/l 2,4,6-Trichlorophenol ND ug/l			Phenanthrene	ND	ug/1
Index Index Index Index Pyrene ND ug/l 1,2,4-Trichlorobenzene ND ug/l 2,4,6-Trichlorophenol ND ug/l			Phenol	ND	ug/1
Image: Constraint of the second se			Pyrene	ND	ug/1
Intervision Intervision Intervision Intervision 1,2,4,6-Trichlorophenol ND ug/l 2,4,6-Trichlorophenol ND ug/l			1.2.4-Trichlorobenzene	ND	ug/1
Total Petroleum Hydrocarbons ⁸ EPA 1664A Total Petroleum Hudrocarbons <5.0 ug/l Phenolics EPA 420.1 Phenolics, Total recoverable <0.050			2.4.6-Trichlorophenol	ND	ug/1
Total Petroleum Hydrocarbons ⁸ EPA 1664A Total Petroleum Hudrocarbons <5.0 ug/l Phenolics EPA 420.1 Phenolics, Total recoverable <0.050					ug/1
Phenolics EPA 420.1 Phenolics, Total recoverable <0.050 mg/l	Total Petroleum Hydrocarbons ⁸	EPA 1664A	Total Petroleum Hudrocarbons	<5.0	
Phenolics EPA 420.1 Phenolics, Total recoverable <0.050 mg/l	Total Terroreum Tryurocarbons	211110041			
	Phenolics	EPA 420.1	Phenolics, Total recoverable	< 0.050	mg/l

ADOT Stormwater Sampling Tucson District				
Sample ID: ADOT-I10-1	Lab: Tu	rner Laboratories, Inc.	Date:	6/7/2006
Category	Method	Parameter	Result	Units
	EPA 160.1	Total Dissolved Solids (TDS)	670	mg/l
	EPA 160.2	Total Suspended Solids (TSS)	26	mg/l
	EPA 180.1	Turbidity	58	NTU
	EPA 120.1	Conductivity	850	umhos/cm
Conventionals	SM 2340 B	Hardness, Total (as CaCO3)	120	mg/l as CaCO3
	EPA 405.1	BOD	131	mg/l
	EPA 410.4	COD	690	mg/l
	SM 2120 B	Color	>15	s.u.
	SM 2120 B	рН	7.1	s.u.
				T
	EPA 300	Nitrogen, Nitrite	14	mg/l
	EPA 300	Nitrogen, Nitrate (as N)	<0.20	mg/l
Nutrients	EPA 350.1	Nitrogen, Ammonia (as N)	17	mg/l
	EPA 351.3	Nitrogen, Kjeldahl, total	31	mg/l
	Calculation	Total Nitrogen	48	mg/l
		[
Biological/Chlorine	SM 9222 B	Fecal Coliform (by mem. Filtration)		CFU/100ml
-	EPA 330.5	Total Chlorine		mg/l
		Aroclor 1016	ND	ug/l
		Aroclor 1221	ND	ug/l
		Aroclor 1232	ND	ug/l
		Aroclor 1242	ND	ug/l
		Aroclor 1248	ND	ug/l
		Aroclor 1254		ug/l
		Aroclor 1260		ug/l
		Aldrin		ug/l
		alpha-BHC		ug/l
				ug/1
		delta-BHC		ug/l
		Chlordana		ug/1
Pesticides, Organochlorine	EPA 608			ug/1
		4.4-DDE	<0.10	ug/l
		4.4-DDT		ug/1
		Dieldrin	ND	ug/1
		Endosulfan I	ND	ug/1
		Endosulfan II	ND	ug/l
		Endosulfan Sulfate	ND	ug/1
		Endrin	ND	ug/l
		Endrin Aldehvde	ND	ug/l
		Heptachlor	ND	ug/l
		Heptachlor Epoxide	ND	ug/l
		Methoxychlor	ND	ug/l
		Toxaphene	ND	ug/l
		· · · · · · · · · · · · · · · · · · ·		
		Calcium	110	ug/l
Metals, 1 otal	EPA 200.//6010	Magnesium	11	ug/l

		Dissolved Cadmium ⁴	<0.050	mg/l
Metals, Dissolved		Dissolved Chromium ⁵	<0.10	mg/l
	EPA 200.7/6010	Dissolved Copper	<0.10	mg/l
		Dissolved Lead	<0.15	
		Dissolved Zinc	<0.50	mg/l
				6
		Benzene	ND	ug/l
		Bromodichloromethane	ND	ug/l
		Bromoform	ND	ug/l
		Bromomethane	ND	ug/l
		Carbon tetrachloride	ND	ug/l
		Chlorobenzene	ND	ug/l
		Chloroethane	ND	ug/l
		2-Chloroethylvinyl ether	ND	ug/l
		Chloroform	ND	ug/l
		Chloromethane	ND	ug/l
		Dibromochloromethane	ND	ug/l
		Dichlorodifluromehane	ND	ug/l
		1,2-Dichlorobenzene	ND	ug/l
		1,3-Dichlorobenzene	ND	ug/l
		1,4-Dichlorobenzene	ND	ug/l
		1,1-Dichloroethane	ND	ug/l
		1,2-Dichloroethane	ND	ug/l
Volalitale Organic Compounds	EPA 624	1,1-Dichloroethene	ND	ug/l
		cis-1,2-Dichloroethene	ND	ug/l
		trans-1,2-Dichloroethene	ND	ug/l
		1,2-Dichloropropane	ND	ug/l
		cis-1,3-Dichloropropene	ND	ug/l
		trans-1,3-Dichloropropene	ND	ug/l
		Ethylbenzene	ND	ug/l
		Methylene chloride	ND	ug/l
		Tetrachloroethene	ND	ug/l
		Styrene	ND	ug/l
		Toluene	ND	ug/l
		1,1,1 -Trichloroethane	ND	ug/l
		1,1,2,2-Tetrachloroethane	ND	ug/l
		1,1,2-Trichloroethane	ND	ug/l
		Trichloroethene	ND	ug/l
		Trichlorofluoromethane	ND	ug/l
		Vinyl chloride	ND	ug/l
		Xylene, Total	ND	ug/l
		Acenaphthene	ND	ug/l
		Acenaphthylene	ND	ug/l
		Anthracene	ND	ug/l
		Benzidine	ND	ug/l
		Benz(a)anthracene	ND	ug/l
		Benzo(a)pyrene	ND	ug/l
		Benzo(b)fluoranthene	ND	ug/l
		Benzo(ghi) perylene	ND	ug/l
		Benzo(k)fluoranthene	ND	ug/l
		4-Bromophenyl phenyl ether	ND	ug/l
		Butyl benzyl phthalate	ND	ug/l

		Bis(2-chloroethoxy)methane	ND	ug/l
		Bis(2-chloroethyl) ether	ND	ug/l
		Bis(2-chloroisopropyl) ether	ND	ug/l
		p-Chloro-m-cresol	ND	ug/l
		2-Chloronaphthalene	ND	ug/l
		2-Chlorophenol	ND	ug/l
		4-Chlorophenyl phenyl ether	ND	ug/l
		Chrysene	ND	ug/l
		Dibenz(a,h)anthracene	ND	ug/l
		Di-n-butyl phthalate	ND	ug/l
		1,2-Dichlorobenzene	ND	ug/l
		1,3-Dichlorobenzene	ND	ug/l
		1,4-Dichlorobenzene	ND	ug/l
		3,3'-Dichlorobenzidine	ND	ug/l
		2,4-Dichlorophenol	ND	ug/l
		Diethyl phthalate	ND	ug/l
		2,4-Dimethylphenol	ND	ug/l
Semi-Volatile Organic Compounds	EPA 625	Dimethyl phthalate	ND	ug/l
		4,6-Dinitro-o-cresol	ND	ug/l
		2,4-Dinitrophenol	ND	ug/l
		2,4-Dinitrotoluene	ND	ug/l
		2,6-Dinitrotoluene	ND	ug/l
		Di-n-octyl phthalate	ND	ug/l
		1,2-Diphenylhydrazine	ND	ug/l
		bis (2-Ethylhexyl) phthalate	ND	ug/l
		Fluoranthene	ND	ug/l
		Fluorene	ND	ug/l
		Hexachlorobenzene	ND	ug/l
		Hexachlorobutadiene	ND	ug/l
		Hexachlorocyclopentadiene	ND	ug/l
		Hexachloroethane	ND	ug/l
		Ideno(1,2,3-cd)pyrene	ND	ug/l
		Isophorone	ND	ug/l
		Naphthalene	ND	ug/l
		Nitrobenzene	ND	ug/l
		2-Nitrophenol	ND	ug/l
		4-Nitrophenol	ND	ug/l
		N-Nitrosodimethylamine	ND	ug/l
		N-Nitrosodiphenylamine	ND	ug/l
		N-Nitrosodi-n-propylamine	ND	ug/l
		Pentachlorophenol	ND	ug/l
		Phenanthrene	ND	ug/l
		Phenol	ND	ug/l
		Pyrene	ND	ug/l
		1,2,4-Trichlorobenzene	ND	ug/l
		2,4,6-Trichlorophenol	ND	ug/l
Total Petroleum Hydrocarbons ⁸	EPA 1664A	Total Petroleum Hudrocarbons	<5.0	ug/l
Phenolics	EPA 420.1	Phenolics, Total recoverable	< 0.050	mg/l

APPENDIX C Dry Weather Screening Forms

Structure Name: CIRCULAR PIPE		
Outfall Location Code: <u>/0/ ~ /6 . 3/</u>	L.U.Type BES. , HIGHWAY	
(see manual, pp FCE Receiving Water: A)51.) 91. 150	(see reverse)	
(water of the U.S., USGS ma	ap waters, or ADEQ designated waters)	
Access Instructions: <u>6.4 ml. Sof BLARE</u>	SLLY ED., 300' W OF 101	
For discrepancies or omissions only:		
Outfall type, shape, material, and dimension $\underline{D}_1A = 48$ "	s (see manual for codes): <u>CONCLETE</u> ,	
Vegetative Growth (circle one): none (nor	mal excessive growth inhibited growth	
(If no flow but excessive or inhibited growth, so	chedule additional site visit).	
1 st Visit	2 nd Visit (>4 hours and <24 hours later)	
Date/Time: 8/30/07 0958	Date/Time:	
Precipitation <96 hours? Yes / No Precipitation <96 hours? Yes /		
Flow? Yes No	Flow? Yes / No	
pH::su Color:#	pH::su Color:#	
Cl2:ppm Ammonia:ppm	Cl2:ppm Ammonia:ppm	
Cu:ppm Oil sheen: Y / N	Cu:ppm Oil sheen: Y / N	
Phenols:ppm Surface scupn: Y / N	Phenols:ppm Surface scum: Y / N	
Deterg:ppm Air Temp:104_°F	Deterg:ppm Air Temp:°F	
Turbility:NTU Water Temp: <u>Nr</u> °F	Turbility: NTU Water Temp: °F	
Attach copy of Chain of Custody Record (see manual for example form) Attach copy of Chain of Custody Record (see manual for example form)		
Physical Observations (1 st Visit): Physical Observations (2 nd Visit):		
(circle appropriate descriptors, for "other" write in description)(circle appropriate descriptors, for "other" write in description)		
Deposits: mone sediments oily other Deposits: none sediments oily other		
Odor: none musty sewage rotten eggs Odor: none musty sewage rotten eggs		
solvent chlorine other solvent chlorine other		
Biological none fish algae other	Biological: none fish algae other	
Signature: Jaluna Jappin	Signature:	



Structure Name: <u>CILCULAR</u> PIPE			
Outfall Location Code: 10/~16.62	L.U.Type Bas., HIGHWAY		
Receiving Water: NZW KIVZR	(see reverse)		
(water of the U.S., USGS ma Access Instructions: O.2 MI. S. OF DEAL (neares	p waters, or ADEQ designated waters) SULY CO. , SWY W OF IV t intersection or landmark)		
For discrepancies or omissions only: Outfall type, shape, material, and dimensions $D_{1A.} = 48$ "	(see manual for codes): <u>CONCLER</u> ,		
Vegetative Growth (circle one): norm	nal excessive growth inhibited growth		
(If no flow but excessive or inhibited growth, sch	hedule additional site visit).		
1 st Visit	2 nd Visit (>4 hours and <24 hours later)		
Date/Time: 8/30/07 10/0	Date/Time:		
Precipitation <96 hours?Yes / NoPrecipitation <96 hours?Yes / NoFlow?Yes / NoFlow?Yes / No			
pH::	pH::su Color:#		
Cl2:ppm Ammonia:ppm	Cl2:ppm Ammonia:ppm		
Cu:ppm Oil sheen: Y / N	Cu:ppm Oil sheen: Y / N		
Phenols:ppm Surface scan: Y / N	Phenols:ppm Surface scum: Y / N		
Deterg:ppm Air Temp:104 °F	Deterg:oF		
Turbility: NTU Water Temp: <u>NTU</u> °F	Turbility:NTU Water Temp:°F		
Attach copy of Chain of Custody Record (see manual for example form) Attach copy of Chain of Custody Record (see manual for example form)			
Physical Observations (1st Visit): (circle appropriate descriptors, for "other" write in description)Physical Observations (2nd Visit): (circle appropriate descriptors, for "other" write in description)			
Deposits: none sediments oily other Deposits: none sediments oily other			
Odor: none musty sewage rotten eggs Odor: none musty sewage rotten eggs			
solvent chlorine other solvent chlorine other			
Biological none fish algae other	Biological: none fish algae other		
Signature: plura petperson	Signature:		



Structure Name: TRA	PCZOIDAL OPEN	CHANNEL	
Outfall Location Cod	e: 101-16.74	L.U.Ty	De MIXED - HIGHWAY
Receiving Water A \-	(see manual, pp FCD- $P_{11} = P_{11}$	1-5)	(see reverse)
100	(water of the U.S., USGS maj	p waters, or ADEQ designated	waters)
Access Instructions: <u>}</u>	50' S OF BEARDER	Y RD., 2000' W OF	75th Avz .
For discrepancies or on	ussions only:	intersection of fandmark)	
Outfall type, shape, m	aterial, and dimensions	(see manual for codes):	NCIZETZ,
1W-20, D-11	·		
Vegetative Growth (cir	rcle one): none norm	nal excessive growth	n inhibited growth
(If no flow but excessiv	e or inhibited growth, scl	hedule additional site visi	t).
1 st Visit		2 nd Visit (>4 hours and	<24 hours later)
Date/Time: 8/30/0	7 09.32	Date/Time:	
Precipitation <96 hours	? Yes / (No)	Precipitation <96 hours	? Yes / No
Flow?	Yes / No	Flow	Yes / No
pH: : <u>NA</u> su	Color: #	pH::su	Color: #
Cl2:ppm	Ammonia:ppm	Cl2:ppm	Ammonia:ppm
Cu:ppm	Oil sheen: Y / N	Cu:ppm	Oil sheen: Y / N
Phenols:ppm	Surface scure Y / N	Phenols:ppm	Surface scum: Y / N
Deterg:ppm	Air Temp: <u>104</u> °F	Deterg:ppm	Air Temp:°F
Turbility:NTU	Water Temp: <u>NA</u> °F	Turbility: NTU	Water Temp:°F
Attach copy of Chai (see manual fo	Attach copy of Chain of Custody Record (see manual for example form) (see manual for example form)		
Physical Observations	s (1 st Visit):	Physical Observations	(2 nd Visit):
(circle appropriate d	(circle appropriate descriptors, (circle appropriate descriptors,		
tor "other" write in description) for "other" write in description)			
<u>Deposits</u> : none (sediments) oily other <u>Deposits</u> : none sediments oily other			
Udor: (none) musty	sewage rotten eggs	<u>Odor</u> : none musty	sewage rotten eggs
solvent chl	orine other	solvent chlo	orine other
Biological: none fish	algae other	Biological: none fish	algae other
Signature: Jaluia	Katpesa	Signature:	



Structure Name: CIACULAK PIPE			
Outfall Location Code: <u>101 - 20.19</u>	L.U.Type ESIDENTA KOM.		
(see manual, pp FCD) Receiving Water, Supply (2554)	-1-5) (see reverse)		
(water of the U.S., USGS ma	p waters, or ADEQ designated waters)		
Access Instructions: 0.5 ml. S. of BLAR	DSLEY ED., W. SIDE OF 575 AVE.		
For discrepancies or omissions only:	a intersection of landmark)		
Outfall type, shape, material, and dimensions	s (see manual for codes): <u>CONCLER</u> ,		
_DIA. = CLO			
Vegetative Growth (circle one): none non	nal excessive growth inhibited growth		
(If no flow but excessive or inhibited growth, so	hedule additional site visit).		
1 st Visit	2 nd Visit (>4 hours and <24 hours later)		
Date/Time: 8/36/07 1033	Date/Time:		
Precipitation <96 hours? Yes /	Precipitation < <u>96</u> hours? Yes / No		
Flow? Yes / No	Flow? Yes / No		
pH::	pH::su Color:#		
Cl2:ppm Ammonia:ppm	Cl2:ppm Ammonia:ppm		
Cu: ppm Oil sheen: Y / N	Cu:ppm Oil sheen: Y / N		
Phenols:ppm Surface scung Y / N	Phenols:ppm Surface scum: Y / N		
Deterg:ppm Air Temp:107_°F	Deterg:oF		
TurbilityNTU Water Temp: MA_°F	Turbility:NTU Water Temp:°F		
Attach copy of Chain of Custody Record (see manual for example form)	Attach copy of Chain of Custody Record (see manual for example form)		
Physical Observations (1 st Visit):	Physical Observations (2 nd Visit):		
(circle appropriate descriptors, for "other" write in description)	(circle appropriate descriptors, for "other" write in description)		
Deposits: none sediments oily other	Deposits: none sediments oily other		
Odor: none musty sewage rotten eggs	Odor: none musty sewage rotten eggs		
solvent chlorine other	solvent chlorine other		
Biological none fish algae other	Biological: none fish algae other		
Signature: Jahren Jahren	Signature:		



Structure Name: TRAZZONDAL OPEN CHANNEL		
Outfall Location Code: <u>/0/ - Al. A 3A</u> (see manual, pp FCD	L.U.Type <u>RES</u> . <u>///(/////////////////////////////////</u>	
Receiving Water: SKUNK CLECK		
(water of the U.S., USGS map waters, or ADEQ designated waters) Access Instructions: <u>240' E. of 4340 Arc.</u> , N. SIDL of 101 N. HONTAGE CO.		
For discrepancies or omissions only: Outfall type, shape, material, and dimensions (see manual for codes): $Conclure R$, TW = 20', $D = 2'$		
Vegetative Growth (circle one): none norr	nal excessive growth inhibited growth	
(If no flow but excessive or inhibited growth, schedule additional site visit).		
1 st Visit	2 nd Visit (>4 hours and <24 hours later)	
Date/Time: 8/30/09 1124	Date/Time:	
Precipitation <96 hours? Yes / 10	Precipitation 496 hours? Yes / No	
Flow? Yes / (No)	Flow? Yes / No	
pH::Su Color:#A	pH::su Color:#	
Cl2:ppm Ammonia:ppm	Cl2:ppm Ammonia:ppm	
Cu:ppm Oil sheen: Y / N	Cu:ppm Oil sheen: Y / N	
Phenols:ppm Surface scure: Y / N	Phenols: ppm Surface scum: Y / N	
Deterg:ppm Air Temp:°F	Deterg:oF	
Turbility:NTU Water Temp: <u>///</u> °F	Turbility:NTU Water Temp:°F	
Attach copy of Chain of Custody Record (see manual for example form)	Attach copy of Chain of Custody Record (see manual for example form)	
Physical Observations (1 st Visit): (circle appropriate descriptors, for "other" write in description)	Physical Observations (2 nd Visit): (circle appropriate descriptors, for "other" write in description)	
Deposits: none sediments oily other	Deposits: none sediments oily other	
Odor: of musty sewage rotten eggs	Odor: none musty sewage rotten eggs	
solvent chlorine other	solvent chlorine other	
Biological: none fish algae other	Biological none fish algae other	
Signature: Jaluin Jarpen	Signature:	



Structure Name: CIRCULAR PIPE	
Outfall Location Code: 10/ - 21.23B L.U.Type Les., HIGHWAY	
(see manual, pp FCD-1-5) (see reverse)	
(water of the U.S., USGS map waters, or ADEQ designated waters)	
Access Instructions: 245' E. OF 4300 AVE., N. SLOZ OF 101 N. PRONTAGE RD.	
For discrepancies or omissions only:	
DiA = 42"	
Vegetative Growth (circle one): none norm	nal excessive growth inhibited growth
(If no flow but excessive or inhibited growth, schedule additional site visit).	
1 st Visit	2 nd Visit (>4 hours and <24 hours later)
Date/Time: 8/30/07 //29	Date/Time:
Precipitation <96 hours? Yes / 🐼	Precipitation <96 hours? Yes / No
Flow? Yes / No	Flow? Yes / No
pH::	pH::su Color:#
Cl2:ppm Ammonia:ppm	Cl2:ppm Ammonia:ppm
Cu:ppm Oil sheen: Y / N	Cu:ppm Oil sheen: Y / N
Phenols:ppm Surface soum: Y / N	Phenols:ppm Surface scum: Y / N
Deterg:ppm Air Temp:107_°F	Deterg:opm Air Temp:oF
Turbility:NTU Water Temp: <u>\DA</u> °F	Turbility:NTU Water Temp:°F
Attach copy of Chain of Custody Record (see manual for example form)	Attach copy of Chain of Custody Record (see manual for example form)
Physical Observations (1 st Visit):	Physical Observations (2 nd Visit):
(circle appropriate descriptors, for "other" write in description)	(circle appropriate descriptors, for "other" write in description)
Deposits: none sediments oily other)	Deposits: none sediments oily other
Odor: none musty sewage rotten eggs	<u>Odor</u> : none musty sewage rotten eggs
solvent chlorine other	solvent chlorine other
Biological nope fish algae other	Biological: none fish algae other
Signature: Jalein Jetpen	Signature:


.

Structure Name: CIRCULAR PIPE									
Outfall Location Code: 101-21.83 L.U.Type Ets. & HIGHWAY									
(see manual, pp FCD-1-5) (see reverse)									
(water of the U.S., USGS ma	(water of the U.S., USGS map waters, or ADEQ designated waters)								
Access Instructions: 200' W. OF 35TH AVE., S. SIDZ OF 101 S. FRONTAGE RD.									
(nearest intersection or landmark) For discrepancies or omissions only:									
$D_{IA} = 90$ "									
Vegetative Growth (circle one): none normal excessive growth inhibited growth									
(If no flow but excessive or inhibited growth, schedule additional site visit).									
1 st Visit	2 nd Visit (>4 hours and <24 hours later)								
Date/Time: 8/30/07 1200	Date/Time:								
Precipitation <96 hours? Yes / 😡	Precipitation <96 hours? Yes / No								
Flow? Yes / No	Flow? Yes / No								
pH::	pH::su Color:#								
Cl2:ppm Ammonia:ppm	Cl2:ppm Ammonia:ppm								
Cu:ppm Oil sheen: Y / N	Cu:ppm Oil sheen: Y / N								
Phenols:ppm Surface scurn: Y / N	Phenols:ppm Surface scum: Y / N								
Deterg:ppm Air Temp: 108 °F	Deterg:oF Air Temp:oF								
Turbility:NTU Water Temp: <u>MA_</u> °F	Turbility: NTU Water Temp: °F								
Attach copy of Chain of Custody Record (see manual for example form)	Attach copy of Chain of Custody Record (see manual for example form)								
Physical Observations (1 st Visit):	Physical Observations (2 nd Visit):								
for "other" write in description)	(circle appropriate descriptors, for "other" write in description)								
Deposits: none sediments oily other	Deposits: none sediments oily other								
Odor: none musty sewage rotten eggs	Odor: none musty sewage rotten eggs								
solvent chlorine other	solvent chlorine other								
Biological: none fish algae other	Biological: none fish algae other								
Signature: Jaluia Jatpin	Signature:								



.

Structure Name: TRAPZZODA ORN CHANNEL								
Outfall Location Code: 101 - 21.87A L.U.Type Res. & HIGHWAY								
(see manual, pp FCD-1-5) (see reverse)								
(water of the U.S., USGS map waters, or ADEQ designated waters) Access Instructions: ISDO' W. OF 35TH AVE., N. SIDZ OF 101 N. FRONTAGE RD.								
For discrepancies or omissions only: Outfall type, shape, material, and dimensions (see manual for codes): $W = 32^{\circ}$, $D = 8^{\circ}$								
Vegetative Growth (circle one): none nor	mal excessive growth inhibited growth							
(If no flow but excessive or inhibited growth, schedule additional site visit).								
1 st Visit (>4 hours and <24 hours later)								
Date/Time: 8/30/07 1114	Date/Time:							
Precipitation <96 hours? Yes / 🔞	Precipitation <96 hours? Yes / No							
Flow? Yes / No	Flow? Yes / No							
pH::su Color:#	pH::su Color:#							
Cl2:ppm Ammonia:ppm	Cl2:ppm Ammonia:ppm							
Cu:ppm Oil sheen: Y / N	Cu:ppm Oil sheen: Y / N							
Phenols:ppm Surface scure: Y / N	Phenols:ppm Surface scum: Y / N							
Deterg:ppm Air Temp:OF	Deterg:Ppm Air Temp:°F							
Turbility: <u>NTU</u> Water Temp: <u><i>NA</i></u> °F	Turbility: NTU Water Temp: °F							
Attach copy of Chain of Custody Record (see manual for example form)	Attach copy of Chain of Custody Record (see manual for example form)							
Physical Observations (1st Visit): (circle appropriate descriptors, for "other" write in description)Physical Observations (2nd Visit): (circle appropriate descriptors, for "other" write in description)								
Deposits: none sediments oily other	Deposits: none sediments oily other							
Odor: none musty sewage rotten eggs	Odor: none musty sewage rotten eggs							
solvent chlorine other	solvent chlorine other							
Biological: none fish algae other	Biological: none fish algae other							
Signature: Jalua Jappini	Signature:							



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Structure Name: CIRCULAR PIPZ									
Outfall Location Code: 101-21.876 L.U.Type RES. & HIGHWAY									
(see manual, pp FCD-1-5) (see reverse)									
(water of the U.S., USGS m	ap waters, or ADEQ designated waters)								
Access Instructions: 1600 W. of 35th 1	TYE., N. SIDE OF N. FRONTAGE CD.								
(nearest intersection or landmark) For discrepancies or omissions only: Qutfall type, shape, material, and dimensions (see manual for codes): DIA = 42"									
Vegetative Growth (circle one): none nor	mal excessive growth inhibited growth								
(If no flow but excessive or inhibited growth, schedule additional site visit).									
1 st Visit 2 nd Visit (>4 hours and <24 hours later)									
Date/Time: <u>8/36 /07</u>	Date/Time:								
Precipitation <96 hours? Yes / 🕅	Precipitation <96 hours? Yes / No								
Flow? Yes / No	Flow? Yes / No								
pH::	pH::su Color:#								
Cl2: ppm Ammonia:ppm	Cl2:ppm Ammonia:ppm								
Cu:ppm Oil sheen: Y / N	Cu:ppm Oil sheen: Y / N								
Phenols:ppm Surface scure: Y / N	Phenols:ppm Surface scum: Y / N								
Deterg:ppm Air Temp: <u>107</u> °F	Deterg:oF								
Turbility: <u>V</u> NTU Water Temp: <u>NA</u> °F	Turbility:NTU Water Temp:°F								
Attach copy of Chain of Custody Record (see manual for example form)	Attach copy of Chain of Custody Record (see manual for example form)								
Physical Observations (1 st Visit): (circle appropriate descriptors, for "other" write in description)	Physical Observations (2 nd Visit): (circle appropriate descriptors, for "other" write in description)								
Deposits: none (sediments) oily other	Deposits: none sediments oily other								
Odor: none musty sewage rotten eggs	Odor: none musty sewage rotten eggs								
solvent chlorine other	solvent chlorine other								
Biological: none fish algae other	Biological none fish algae other								
Signature: Jallia Japan	Signature:								



Structure Name: CIRCULAK PIPZ									
Outfall Location Code: 202 - 7.44 L.U.Type Rcs., Com., HIGHWAY									
(see manual, pp FCD-1-5) (see reverse) Receiving Water: $T_{5,44}O_7$ (see reverse)									
(water of the U.S., USGS map waters, or ADEQ designated waters)									
Access Instructions: APPROX. 1100' W. OF KULAT RD., N. BAUK OF SALT RIVER									
For discrepancies or omissions only:									
Utitali type, shape, material, and dimensions (see manual for codes): $(U) URETZ$,									
Vegetative Growth (circle)	one): none norm	val evensive grout	inhibited and th						
(If no flow but errors			i illinoited growin						
	or innibited growth, ser	redule additional site visi	t).						
1 st Visit		2^{na} Visit (>4 hours and	<24 hours later)						
Date/Time: $\frac{9/6}{07}$	1017	Date/Time:							
Precipitation <96 hours?	$\frac{\text{Yes}}{10}$	Precipitation <96 hours	? Yes / No						
FIOW? TEMPE TOUNE L	LAKE / NO	Flow?	Yes / No						
pH::_ <u></u>	olor: # <u></u>	pH: :su	Color: #						
Cl2: ppm Ai	mmonia:ppm	Cl2:ppm	Ammonia:ppm						
Cu:ppm Oi	il sheen: Y / N	Cu:ppm	Oil sheen: Y / N						
Phenols:ppm Su	urface scum: Y / N	Phenols:ppm	Surface scum: Y / N						
Deterg:ppm Ai	ir Temp: <u>4</u> °F	Deterg:ppm	Air Temp:°F						
Turbility:NTU W	/ater Temp:°F	Turbility: NTU	Water Temp:°F						
Attach copy of Chain of (see manual for exa	f Custody Record ample form)	Attach copy of Chain of Custody Record (see manual for example form)							
Physical Observations (1 st (circle appropriate descr	st Visit): riptors,	Physical Observations (2 nd Visit): (circle appropriate descriptors,							
Denosita:	eta oilu othor	for "other" write in (lescription						
Deposits. <u>Hone</u> sedimen	wage rotten agga	<u>Deposits</u> : none sedir	nents oily other						
solvent chlorine	e other	Odor: none musty	sewage rotten eggs						
Biological none fish alo	other	Biological none fich	algae other						
Signature:		Biologicar: none fish algae other							
Signature. All Ma /	1 HUD	Signature:							



Structure Name: DUAL Box CULVERT								
Outfall Location Code: 202-7.98 L.U.Type RES., COM., HIGHWAY								
(see manual, pp FCD-1-5) (see reverse) Receiving Water: $TTMOT$ (see reverse)								
(water of the U.S., USGS map waters, or ADEQ designated waters) Access Instructions: $APPRNX U(X) = APPRNX U(X)$								
(nearest intersection or landmark)								
Outfall type, shape, material, and dimensions (see manual for codes): (0) (12) $(2 - 8' \times 8')$								
Vegetative Growth (cir	cle one): none norm	nal excessive growth inhibited growth	h					
(If no flow but excessive or inhibited growth, schedule additional site visit).								
1 st Visit 2 nd Visit (>4 hours and <24 hours later)								
Date/Time: <u>9/6/07</u>	0755	Date/Time:						
Precipitation <96 hours Flow? OUTFALL IS WITH TEMPL TOWNE L	? Yes <u>(No</u>) 11W Yes / No AKL	Precipitation <96 hours? Yes / No Flow? Yes / No						
pH::Asu	Color: # <u>٨</u>	pH::su Color:#	~					
Cl2:ppm	Ammonia ppm	Cl2:ppm Ammonia:p	om					
Cu:ppm	Oil sheen: Y / 🕅	Cu:ppm Oil sheep: Y / N						
Phenols:ppm	Surface scum: Y / 😡	Phenols:ppm Surface scum: Y / 1	N					
Deterg:ppm	Air Temp: <u>9</u>) °F	Deterg:ppm Air Temp:	°F					
TurbilityNTU	Water Temp:°F	Turbility: Water Temp:	_⁰F					
Attach copy of Chai (see manual for	n of Custody Record example form)	Attach copy of Chain of Custody Record (see manual for example form)						
Physical Observations (circle appropriate de for "other" write in	(1 st Visit): escriptors, description)	Physical Observations (2 nd Visit): (circle appropriate descriptors, for "other" write in description)						
Deposits: none sedi	ments oily other	Deposits: none sediments oily other						
Odor: none musty	sewage rotten eggs	Odor: none musty sewage rotten egg	şs					
solvent chlo	orine other	solvent chlorine other						
Biological: none fish	algae other	Biological: none fish algae other						
Signature: Jaluno	patpiso	Signature:						

,



Structure Name: OPW CHANNEL								
Outfall Location Code: 77-79.9 L.U.Type Com., RU., HICHWAY								
(see manual, pp FCD-1-5) (see reverse) Receiving Water: <u>(AUADA D2L OKO TELBUTIARY WASH</u> (water of the U.S., USGS map waters, or ADEQ designated waters) Access Instructions: F OLAOPED T AP -77/06 APIS (D) St WARKSY ZINO								
(nearest intersection or landmark) For discrepancies or omissions only: Outfall type, shape, material, and dimensions (see manual for codes): $CONCLETC$, TW = 25', $D = 8'$								
Vegetative Growth (circle one): none norr	nal excessive growth inhibited growth							
(If no flow but excessive or inhibited growth, sc	hedule additional site visit).							
1 st Visit	2 nd Visit (>4 hours and <24 hours later)							
Date/Time: 8/29/07 1042	Date/Time:							
Precipitation <96 hours? Yes / No Flow? Yes / No	Precipitation <96 hours? Yes / No Flow? Yes / No							
pH:: <u>NA</u> su Color: # <u>NA</u>	pH::su Color:#							
Cl2:ppm Ammonia:ppm	Cl2:ppm Ammonia:ppm							
Cu:ppm Oil sheen: Y / N	Cu:ppm Oil sheen: Y / N							
Phenols:ppm Surface scum/Y / N	Phenols:ppm Surface scum: Y / N							
Deterg:ppm Air Temp: <u>102</u> °F	Deterg: ppm Air Temp:°F							
Turbility: <u>NTU</u> Water Temp: <u>MA</u> °F	Turbility:NTU Water Temp:°F							
Attach copy of Chain of Custody Record (see manual for example form)	Attach copy of Chain of Custody Record (see manual for example form)							
Physical Observations (1 st Visit): (circle appropriate descriptors, for "other" write in description)	Physical Observations (2 nd Visit): (circle appropriate descriptors, for "other" write in description)							
Deposits: none sediments oily other	Deposits: none sediments oily other							
Odor: none musty sewage rotten eggs	Odor: none musty sewage rotten eggs							
solvent chlorine other	solvent chlorine other							
Biological: none fish algae other	Biological: none fish algae other							
Signature: Jahrna Jakpioa	Signature:							



Structure Name: <u>()</u>	CULAR PIPE								
Outfall Location Cod	e: <u>210 - 1.2</u>	L.U.Type Com., W.D., HIGHWHY							
(see manual, pp FCD-1-5) (see reverse) Receiving Water: <u>ARLOYO</u> (<u>HICO</u> <u>WTSH</u> (water of the U.S., USGS map waters, or ADEQ designated waters) Access Instructions: S.E. (b) AQCA IT OF 10 ⁷¹ ST 1 340 A 15									
(nearest intersection or landmark) For discrepancies or omissions only: Outfall type, shape, material, and dimensions (see manual for codes):									
Vegetative Growth (cir	cle one): none norm	nal excessive growth inhibited growth							
(If no flow but excessive or inhibited growth, schedule additional site visit).									
1 st Visit Date/Time: $\theta/29/0^{-1}$	7	2 nd Visit (>4 hours and <24 hours later) Date/Time:							
Precipitation <96 hours' Flow?	? Yes (No Yes) No	Precipitation % hours? Yes / No Flow? Yes / No							
pH:: <u>7.20</u> su	Color: #	pH::su Color:#							
Cl2:ppm	Ammonia:ppm	Cl2:ppm Ammonia:ppm							
Cu:ppm	Oil sheen: Y / 🕥	Cu:ppm Oil sheen: Y / N							
Phenols:ppm	Surface scum: (Y) N	Phenols:ppm Surface scum: Y / N							
Deterg:ppm	Air Temp: <u>104</u> °F	Deterg:oF Air Temp:oF							
Turbility:NTU	Water Temp: <u>91. </u>	Turbility:NTU Water Temp:°F							
Attach copy of Chair (see manual for	n of Custody Record example form)	Attach copy of Chain of Custody Record (see manual for example form)							
Physical Observations (circle appropriate de for "other" write in a	(1 st Visit): escriptors, description)	Physical Observations (2 nd Visit): (circle appropriate descriptors, for "other" write in description)							
Deposits: none sedir	nents oily other	Deposits: none sediments oily other							
Odor: none (musty)	sewage rotten eggs	Odor: none musty sewage rotten eggs							
solvent chlo	rine other	solvent chlorine other							
Biological: none fish	algae) other	Biological: none fish algae other							
Signature: Jaluna	Jatpisa	Signature:							

.

1 st Visit	2 nd Visit (>4 hours and <24 hours later)
Use one of the following:	Use one of the following:
A. Free Fall into container:	A. Free Fall into container:
Volume: (gal) Time: (sec)	Volume:(gal) Time:(sec)
B. Channel/pipe Flow (provide sketch): Depth:(in) Width:(in) Velocity:(ft/sec)	B. Channel/pipe Flow (provide sketch): Depth:(in) Width:(in) Velocity:(ft/sec)
Discharge estimate:(gpm)	Discharge estimate:(gpm)
Photograph of Outfall (record roll number and expo	sure number)
JE PHOTUS &3-31. Additional Notes (sketch, flow data, observations, spe へ	cify visit as 1^{st} or 2^{nd}):
N	STRICT
Line Line Line Line Line Line Line Line	ARROYO CHICO WASH 210-1.2
Land Use (L.U.) Type: Indicate dominant wat commercial, agriculture	ershed land use as residential, industrial, ral, mixed , unknown

Structure Name: Cik	CULAR PIPE		······						
Outfall Location Code: 210-2.7 L.U.Type Com., WD., HIGHWAY									
(see manual, pp FCD-1-5) (see reverse)									
(water of the U.S., USGS map waters, or ADEQ designated waters)									
Access Instructions: A	Access Instructions: N.W. QUADRANT OF CAMPBELL AVE. J AVIATION PKWY.								
For discrepancies or on	nissions only:	i intersection of fandmark)							
Outfall type, shape, m	aterial, and dimensions	(see manual for codes):	NCRETT,						
_DIA 100	······································								
Vegetative Growth (cir	rcle one): none norm	nal excessive growth	n inhibited growth						
(If no flow but excessiv	e or inhibited growth, scl	hedule additional site vis	it).						
1 st Visit		2 nd Visit (>4 hours and	l <24 hours later)						
Date/Time: 8/29/0	7 1254	Date/Time:							
Precipitation <96 hours	? Yes / No	Precipitation <96 hours	? Yes / No						
Flow?	Yes) No	Flow2	Yes / No						
pH:: <u>8.14</u> su	Color: #	pH::su	Color: #						
Cl2:ppm	Ammonia:ppm	Cl2:ppm	Ammonia:ppm						
Cu:ppm	Oil sheen: Y / 🕅	Cu:ppm	Oil sheen: Y / N						
Phenols:ppm	Surface scum: Y / N	Phenols:ppm	Surface scum: Y / N						
Deterg:ppm	Air Temp: 10ϕ °F	Deterg:ppm	Air Temp:°F						
Turbility:NTU	Water Temp: <u>91.3</u> °F	Turbility:NTU	Water Temp:°F						
Attach copy of Chai (see manual for	n of Custody Record example form)	Attach copy of Chain of Custody Record (see manual for example form)							
Physical Observations	(1 st Visit):	Physical Observations (2 nd Visit):							
for "other" write in	description)	(circle appropriate descriptors, for "other" write in description)							
Deposits: none sedi	ments) oily other	Deposits: none sedi	ments oily other						
Odor: none musty	sewage rotten eggs	Odor: none musty	sewage rotten eggs						
solvent chlo	orine other	solvent chlorine other							
Biological: none fish	algae other	Biological: none fish	algae other						
Signature: Jaluna	, Setpiso	Signature:							



APPENDIX D Dry Weather Screening Photos



Description: Outfall 101-16.31 located within the New River, approximately 0.4 miles south of Beardsley Road and 300 feet west of the 101 Freeway

View: East

Date: August 30, 2007



Photo No. D-2

Description: Outfall 101-16.62 located within the New River, approximately 0.2 miles south of Beardsley Road and 500 feet west of the 101 Freeway

View: East

Date: August 30, 2007



Photo No. D-3

Description: Outfall 101-16.74 located adjacent to the New River, approximately 150 feet south of Beardsley Road and 2800 feet west of 75th Avenue

View: West

Date: August 30, 2007



Description: Outfall 101-20.19 located adjacent to Skunk Creek, approximately 0.5 miles south of Beardsley Road, on the west side of 51st Avenue

View: Northeast

Date: August 37, 2006



Photo No. D-5

Description: Outfall 101-21.23A located adjacent to Skunk Creek, approximately 260 feet east of 43rd Avenue, on the north side of the 101 North Frontage Road

View: East

Date: August 30, 2007



Description: Outfall 101-21.23B located adjacent to Skunk Creek, approximately 245 feet east of 43rd Avenue, on the north side of the 101 North Frontage Road

View: East

Date: August 30, 2007





Description: Outfall 101-21.83 located adjacent to Scatter Wash, approximately 2,000 feet west of 35th Avenue, on the south side of the 101 South Frontage Road

View: East

Date: August 30, 2007



Photo No. D-8

Description: Outfall 101-21.87A located adjacent to Scatter Wash, approximately 1,500 feet west of 35th Avenue, on the north side of the 101 North Frontage Road

View: East

Date: August 30, 2007



Photo No. D-9

Description: Outfall 101-21.87B located adjacent to Scatter Wash, approximately 1,600 feet west of 35th Avenue, on the north side of the 101 North Frontage Road

View: East

Date: August 30, 2007



Description: Outfall 202-7.44 located with Tempe Towne Lake (Salt River), approximately 1,100 feet west of Rural Road

View: East

Date: September 6, 2007



Photo No. D-11

Description: Outfall 202-7.98 located with Tempe Towne Lake (Salt River), approximately 1,100 feet east of Rural Road

View: East

Date: September 6, 2007



Photo No. D-12

Description: Outfall 77-79.9 located adjacent to a Canada del Oro tributary wash, within the southeast quadrant of the AZ-77 (Oracle Road) and Hanley Boulevard intersection

View: North

Date: August 29, 2007



Description: Outfall 210-1.2 located within Arroyo Chico Wash, southeast of the intersection of 10^{th} Street and 3^{rd} Avenue

View: Southeast

Date: August 29, 2007



Photo No. D-14

Description: Outfall 210-2.7 located within Railroad Wash, in the northwest quadrant of Campbell Avenue and Barraza-Aviation Parkway

View: Southwest

Date: August 29, 2007

APPENDIX E ADOT Major Outfalls Table

Outfall													
Identifier	S	Storm Sewer Da	a		Location Data					Construction Plan Data			
Route No – Mile Post	Туре	Size / Depth	Material	Route No. Route Name	Receiving Water	Location	East	North	City	Project ID No	Project Station	Offset L/R	
101-6.05	Trapezoidal Open Channel	TW=102' D=12'	Concrete	Loop 101 Agua Fria Freeway	New River	300' W of 107th Ave.	586,000	917,800	Glendale	101L MA 005	357+00	L	
101-7.76	Trapezoidal Open Channel	TW=82' D=8'	Concrete	Loop 101 Agua Fria Freeway	New River	1/2 mile S. of Northern Ave. and 1000' W. of 99th Ave.	590,450	927,350	Glendale	M-600-0-501	440+83	L 1650	
101-10.84	Trapezoidal Open Channel	TW=65' D=12'	Concrete & Soil Cement	Loop 101 Agua Fria Freeway	New River	1/2 mile N. of Peoria Ave. along E. Bank of New River	594,450	941,650	Peoria	M-600-0-502	603+68	L 920	
101-11.85	Trapezoidal Open Channel	TW=45' D=8'	Concrete	Loop 101 Agua Fria Freeway	New River	1/2 Mile S. of Thunderbird Rd. and 300' West	596,400	946,600	Peoria	M-600-0-502	658+30	L 715	
101-13.44	Dual Circular Pipe	DIA=42"	Concrete	Loop 101 Agua Fria Freeway	Skunk Creek	200' S. of S.B. Bridge over Skunk Creek and 80' East	601,500	953,100	Peoria	M-600-0-502	742+10	L 260	
101-13.68	Trapezoidal Open Channel	TW=22' D=4'	Concrete	Loop 101 Agua Fria Freeway	Skunk Creek	30 ' N of NB Bridge over Skunk Creek and 80' E	601,900	953,650	Peoria	M-600-0-502	750+84	L 135	
101-14.38	Open Channel	TW=28' D=10'	Concrete	Loop 101 Agua Fria Freeway	New River	1200' S. of Bell Road Traffic Interchange & 300' West	601,650	958,750	Peoria	M-600-0-502	800+00	L 300	
101-15.18	Circular Pipe	DIA=48"	Concrete	Loop 101 Agua Fria Freeway	New River	4/10 Mile N of Bell Rd. & 500' West	602,550	962,150	Glendale	M-600-0-502	834+00	L 560	
101-16.31	Circular Pipe	DIA=48"	Concrete	Loop 101 Agua Fria Freeway	New River	4/10 of a mile S. of Beardsley Rd. and 300' W.	603,650	968,000	Glendale	M-600-0-503	895+00	L 340	
101-16.62	Circular Pipe	DIA=48"	Concrete	Loop 101 Agua Fria Freeway	New River	2/10 of a mile S. of Beardsley Rd. and 500' W	604,150	969,550	Glendale	M-600-0-503	908+25	L 560	
101-16.74	Trapezoidal Open Channel	TW=56' D=11'	Concrete	Loop 101 Agua Fria Freeway	New River	150' S of Beardsley Rd. & 2800' W. of 75 Ave	604,850	970,300	Glendale	M-600-0-503	917+50	L 550	
101-20.19	Circular Pipe	DIA=36"	Concrete	Loop 101 Agua Fria Freeway	Skunk Creek	1/2 Mile S. of Beardsley Rd. at 51st Ave	623,150	968,650	Glendale	RBA-600-0-505	1098+50		
101-21.23 B	Circular Pipe	DIA=42"	Concrete	Loop 101 Agua Fria Freeway	Skunk Creek	245' E of 43rd Ave & N. Side of Beardsley	628,650	971,400	Phoenix	RBA-600-0-505	1154+50		
101-21.23 A	Trapezoidal Open Channel	TW=20' D=2'	Concrete	Loop 101 Agua Fria Freeway	Skunk Creek	260' E of 43rd Ave & N side of N Frontage Rd.	628,650	971,450	Phoenix	RBA-600-0-505	1154+65		
101-21.83	Circular Pipe	DIA=96"	Concrete	Loop 101 Agua Fria Freeway	Scatter Wash	2000' W. of 35th Ave. & S. side of S. Frontage Rd.	631,750	971,050	Phoenix	RBA-600-0-505	1186+00		
101-21.87A	Trapezoidal Open Channel	TW=32' D=8'	Concrete	Loop 101 Agua Fria Freeway	Scatter Wash	1500' W of 35th Ave & N side of N Frontage Rd.	632,000	971,500	Phoenix	RBA-600-0-505	1188+00		
101-21.87B	Circular Pipe	DIA=42"	Concrete	Loop 101 Agua Fria Freeway	Scatter Wash	1600' W. of 35th Ave & N side of N. Frontage Rd.	632,000	971,450	Phoenix	RBA-600-0-505	1187+00		
101 - 25.92	2 Barrel Box Culvert	2 - 8' x 6'	Concrete	Loop 101 Pima Freeway	Cave Creek	S. of 101, 1/4 mile west of 7th St into east bank of Cave Creek	653,200	970,600	Phoenix	AC-STP-600-1-(13)B	42+778 (m.)	L 232 (ft.)	
101 - 50.87	2 Barrel Box Culvert	2 - 10' x 10'	Concrete	Loop 101 Pima Freeway	Salt River	N bank of Salt River in NE quadrant of 101 / 202 interchange	708,150	887,350	Mesa				
101-51.07	3 Barrel Box Culvert	3 - 12' x 12'	Concrete	Loop 101 Price Freeway	Salt River	S bank of Salt River, E of 101 under 202 interchange	707,900	886,850	Mesa	RAM-600-1-512	203+00		
10-130.2	Circular Pipe	DIA=48"	Concrete	I-10 Papago Freeway	Salt River	W. bank of Agua Fria River under Van Buren St.	572,634	890,899	Avondale	I-10-2 (75)	6868+90	R	
10-130.3 Papago Channel	Trapezoidal Open Channel	TW=80' D=10'	Concrete	I-10 Papago Freeway	Agua Fria River	¹ / ₂ Mile W. of El Mirage Rd. & 100' N. of I-10	573,800	894,850	Avondale	I-10-2 (75)	6869+10	L	
10-145.17 West Tunnel	Circular Tunnel	DIA=21"	Concrete	I-10 Papago Freeway	Salt River	Central Ave. W side @ N. Bank of Salt River	652,050	881,600	Phoenix	I-10-3(223)	7677+00	R	
10-149.18 East Tunnel	Circular Tunnel	DIA=21"	Concrete	I-10 Papago Freeway	Salt River	20th St. E. side@ N. Bank of Salt River	662,550	879,500	Phoenix	I-10-3(225)	7866+00	R	
10-150.44	Circular Pipe	D=36"	Concrete	I-10 Maricopa Freeway	Salt River	N. Bank of Salt River @ W side of I-10	668,550	880,250	Phoenix	I-10-3(206)	7936+00	R	
10-150.45	Dual Circular Pipe	D=72"	Concrete	I-10 Maricopa Freeway	Salt River	N. Bank of Salt River @ E. side of I-10	668,900	880,450	Phoenix	I-10-3(206)	7936+00	L	

Outfall Identifier	S	Storm Sewer Dat	a		Location Data					Construction Plan Data		
Route No – Mile Post	Туре	Size / Depth	Material	Route No. Route Name	Receiving Water	Location	East	North	City	Project ID No	Project Station	Offset L/R
10-151.06	Circular Pipe	D=66"	Concrete	I-10 Maricopa Freeway	Tempe Drain	NW Quadrant of I-10 & University Traffic Interchange	671,200	878,150	Phoenix	I-10-3(206)	7945+00	L
10 - 162.44	Dual Box Culverts	2 - 10' x 8'	Concrete	I-10 Maricopa Freeway	Gila Floodway	NW quadrant of I-10 / Maricopa Road Interchange	683,750	829,700	Phoenix			
143-2.90	Circular Pipe	D=66"	Concrete	S.R. 143 Hohokam Expressway	Old Cross Cut Canal	600' N. of Van Buren & 350' E of S.R. 143 at west bank of Old Cross Cut Canal	680,250	892,250	Phoenix	143-MA-H-0843-01D	166+71	R350
153 - 1.64	Circular Pipe	D=72"	Concrete	S.R. 153 Sky Harbor Expressway	Salt River	S. bank of Salt River west of expressway	680,200	883,950	Phoenix	153 MA 003	50+88.05	L
17 - 198.48	Circular Pipe	D=102"	Concrete	I-17 Black Canyon Freeway	Salt River	2200' S. of Buckeye Rd. & 1700' E. of 27th Ave.	638,850	879,550	Phoenix	l-17-1(9)	69+60	L 6000
17-208.2	Circular Pipe	D=36"	Concrete	I-17 Black Canyon Freeway	Arizona Canal Diversion Channel	1/4 mile north of Dunlap, west of I-17 into Az Canal	638,550	935,400	Phoenix	I-17-3-912	582+45	L 153
202-3.57	Dual Box Culverts	2 - 3' x 4'	Concrete	Loop 202 East Papago Freeway	Old Cross Cut Canal	Directly under Loop 202/SR143 interchange at E. bank of Relocated Old Cross Cut Canal	679,900	894,200	Phoenix	202L-MA-H-0858-01D	34+60	L163
202-5.14	Open Channel	TW=60' D=5'	Earthen	Loop 202 East Papago Freeway	Salt River	N of north side levee on Salt River ¼ mile west of 202 and E of 143	683,300	887,700	Phoenix	202L-MA-H-0858-01D	112+00	R290
202-5.90	Circular Pipe	DIA=36"	Concrete	Loop 202 East Papago Freeway	Salt River	1000' E. of Priest Dr. and 2200' N. of 1st St.	687,400	886,250	Tempe	202L-MA-H-0858-01D	148+80	R 280
202-7.44	Circular Pipe	DIA=48"	Concrete	Loop 202 East Papago Freeway	Salt River	1100' W. of Rural Rd. @ N Bank of Salt River	695,700	885,150	Tempe	202L-MA-H-0858-01D	230+10	R 850
202-7.98	Dual Box Culvert	2 - 8' x 8'	Concrete	Loop 202 East Papago Freeway	Salt River	1100' E. of Rural Rd. @ N. Bank of Salt River	698,400	885,350	Tempe	202L-MA-H-0858-01D	258+60	R865
202-8.28	Circular Pipe	D=48"	Concrete	Loop 202 East Papago Freeway	Salt River	2300' E. of Rural Rd. @ N. Bank of Salt River	699,950	886,050	Tempe	H-0861-04C	247+90	R 20
202-8.65	Circular Pipe	D=36"	Concrete	Loop 202 East Papago Freeway	Salt River	4000' E. of Rural Rd. @ N. Bank of Salt River	700,800	885,850	Tempe	H-0861-04C	289+20	R 150
202 - 14.22	Trapezoidal Open Channel	TW=43' D=11'	Concrete	Loop 202 East Red Mt. Freeway	Salt River	S bank of Salt River, 1000' W of Mesa Dr, 2200' N of 202	727,800	897,500	Mesa	AC-STP-600-8(9)B	595+00	L
51-5.45	Circular Pipe	D=48"	Concrete	S.R. 51 Squaw Peak Parkway	Arizona Canal Diversion Channel	300' N & W of Intersection @ 18th St. and Ocotillo	661,700	922,450	Phoenix	C.O.P. BR-885442	270+55	L
51-7.04	Circular Pipe	D=48"	Concrete	S.R. 51 Squaw Peak Parkway	Dreamy Draw Wash	400' S and E of Intersection @ Northern and Squaw Peak Freeway	663,200	930,650	Phoenix	M-600-Z-502	84+50	L
51-8.22	Concrete Box Culvert	10' x 6'	Concrete	S.R. 51 Squaw Peak Parkway	Dreamy Draw Wash	500' E of Northern, 400' S of 51 @ Dreamy Draw	667,000	934,950	Phoenix	M-600-2-506	146+85	R 170
51 - 10.91	Trap Channel	TW=86' D=8'	Concrete	S.R. 51 Squaw Peak Parkway	Indian Bend Wash	¹ / ₄ mile east of 51, 250' S of Sweetwater into Indian Bend Wash	673,000	947,250	Phoenix	RAM-600-2-514	100+00	R
51 - 11.62	Circular Pipe and Box Culvert	84" pipe,10' x 6' CBC	Concrete	S.R. 51 Squaw Peak Parkway	Indian Bend Wash	400' N of Thunderbird into Indian Bend Wash	671,850	950,550	Phoenix	RAM-600-2-522	9+95.12	
87-178.55	Open Channel		Concrete	S.R. 87 Mesa-Payson Hwy	Salt River	S. of S.R.87 east of McDowell Rd intersection	723,848	896,765	Mesa	AC-STP-053-1(29)	425+10	R
60-187.43	Trapezoidal Open Channel	TW=44' D=8'	Concrete	S.R. 60 Superstition Freeway	East Maricopa Floodway	¹ / ₂ mile E of Higley Rd. & S.R. 60 Traffic Interchange north side	765,800	868,450	Phoenix	BP-028-1-509	815+80	L 65
60-189.65	Trapezoidal Open Channel	TW=48' D=9'	Concrete	S.R. 60 Superstition Freeway	Sossoman Channel	1/4 mile E of Sossman & S.R. 60 Traffic Interchange	777,300	868,500	Phoenix	F-028-1-514	939+80	L 130