

Storm Water Management Plan for the Arizona Department of Transportation

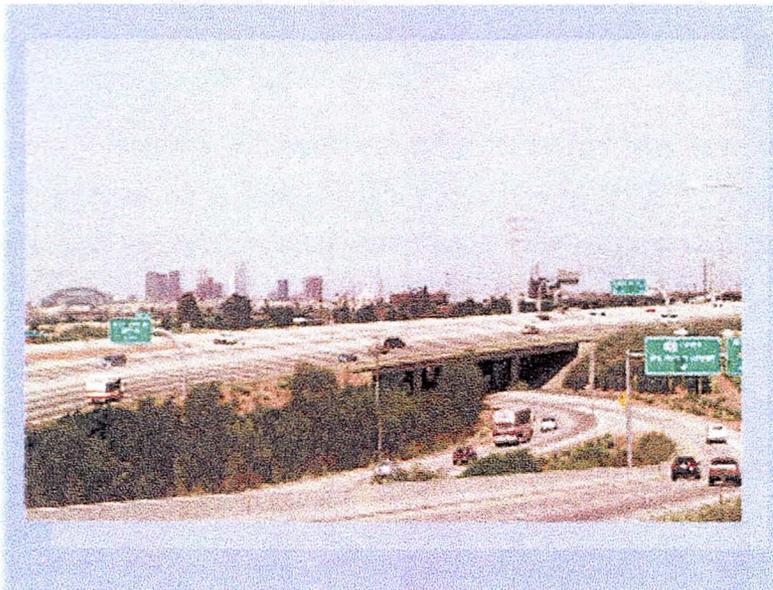
Property of
Phoenix Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

Arizona
Department of
Transportation



ANNUAL REPORT September 2001

NPDES MS4 Permit # AZS000018



STORM WATER MANAGEMENT PLAN

2001 Annual Report

NPDES MS4 Permit #AZS000018

Arizona Department of Transportation

Maintenance Planning and Operations
Arizona Department of Transportation
2739 E. Washington St., Rm 125
Phoenix, AZ 85034



ARIZONA DEPARTMENT OF TRANSPORTATION

EXECUTIVE SUMMARY

CERTIFICATION STATEMENT

1 MAINTENANCE 1

1.1 Street Sweeping and Litter Pick-Up – Phoenix and Tucson 1

 1.1.1 Street Sweeping 1

 1.1.2 Mechanized Litter Pick-Up..... 1

 1.1.3 Manual Litter Pick-Up 1

 1.1.4 Adopt-A-Highway Program..... 2

1.2 Storm Sewer System Maintenance – Phoenix and Tucson 2

 1.2.1 Pump Station Maintenance – Phoenix Only 2

 1.2.2 Tunnel Maintenance – Phoenix Only..... 2

 1.2.3 Storm Sewer Maintenance – Phoenix and Tucson..... 2

 1.2.4 Storm Sewer Inlet/Catch Basin Maintenance – Phoenix and Tucson 2

 1.2.5 Open Channel Maintenance – Phoenix and Tucson 3

 1.2.6 Culvert Maintenance – Tucson Only 3

1.3 Control of Illicit Discharges..... 3

 1.3.1 Permit System – Phoenix and Tucson..... 3

 1.3.2 Inspection – Phoenix and Tucson 3

 1.3.3 Dry-weather Screening – Phoenix and Tucson..... 4

 1.3.4 Pump Station Gas Detection – Phoenix Only 4

1.4 Emergency Response Program – Phoenix and Tucson..... 4

1.5 Erosion Control Practices – Phoenix and Tucson..... 5

 1.5.1 Erosion Control Maintenance – Phoenix and Tucson..... 5

 1.5.2 Irrigation System Pressure Detection – Phoenix and Tucson 5

1.6 Roadside Vegetation Management Program – Phoenix and Tucson..... 5

1.7 SWPPPs for Maintenance Yards – Phoenix and Tucson 6

2 CONSTRUCTION – STATEWIDE..... 7

2.1 Develop Standards for BMPs – Erosion and Pollution Control Manual 7

2.2 Training for SWPPPs..... 7

2.3 Storm Water Pollution Prevention Plans 8

 2.3.1 Plan Review at 60% Submittal Stage..... 8

 2.3.2 Plan Review at 95% Submittal Stage..... 8

 2.3.3 Preperation of SWPPP 8

2.4 Procedures following Award of Contract 8

 2.4.1 Critique Erosion Control Plan..... 8

 2.4.2 Prepare Revised Plan 8

 2.4.3 Certification of SWPPP 9

 2.4.4 Prepare Notice of Intent (NOI) 9

2.5 Installation of Erosion Control..... 9

2.6 Inspections 9

2.7 Notice of Termination (NOT)..... 9

2.8 Retention of Records 10

2.9 Other NPDES Permit Requirements..... 10

 2.9.1 Asphalt and Concrete Plants 10

| | | |
|-----------|--|-----------|
| 2.9.2 | ADOT Materials Sources..... | 10 |
| 3 | DESIGN | 10 |
| 3.1 | Landscaping..... | 10 |
| 3.2 | Retention/Detention Basins | 11 |
| 3.3 | Erosion Control..... | 11 |
| 3.4 | Other Structural Controls..... | 11 |
| 4 | TRANSPORTATION CONTROL MEASURES..... | 11 |
| 4.1 | Vehicle Emissions Testing..... | 11 |
| 4.2 | High Occupancy Vehicle (HOV) Lanes | 12 |
| 4.3 | Intelligent Vehicle Highway System | 12 |
| 4.4 | Clean Air Campaign | 12 |
| 4.5 | Capitol Ride Share Program | 12 |
| 5 | STORM WATER MONITORING | 12 |
| 5.1 | Current Status | 12 |
| 6 | DRY WEATHER SCREENING – PHOENIX AND TUCSON..... | 12 |
| 7 | ASSESSMENT OF BEST MANAGEMENT PRACTICES | 13 |
| 7.1 | Enforcement Actions; Inspections; Public Education Programs | 13 |
| 7.1.1 | Enforcement Actions | 13 |
| 7.1.2 | Inspections | 14 |
| 7.1.3 | Public Education Programs..... | 14 |
| 8 | PROPOSED CHANGES TO THE SWMP..... | 14 |
| 9 | ASSESSMENT OF WATER QUALITY IMPROVEMENT OR DEGRADATION..... | 15 |
| 10 | ANNUAL EXPENDITURES | 15 |
| 10.1 | Fiscal Resources | 15 |
| 10.2 | Five Year Construction Program | 15 |
| 10.3 | Highway Maintenance Program | 15 |
| 10.4 | Administrative Budget..... | 16 |

APPENDIX

- APPENDIX A: Liter Pick-up Schedule for Phoenix and Tucson
- APPENDIX B: ADOT AHA News Release
- APPENDIX C: Requested Update for Erosion Control Manual
- APPENDIX D: SWPPP Training Records
- APPENDIX E: Construction SWPPP Checklist
- APPENDIX F: NPDES Inspection Checklist
- APPENDIX G: ADOT Interoffice Memo
- APPENDIX H: Major Storm Outfalls
- APPENDIX I: Dry Weather Field Screening
- APPENDIX J: Dry Weather Screening Photos Phoenix and Tucson

EXECUTIVE SUMMARY

The 2001 Storm Water Management Plan (SWMP) annual report describes the activities and programs implemented by the Arizona Department of Transportation (ADOT) from July 1, 2000 through June 30, 2001, as part of its Municipal Storm Sewer System (MS4), Phase I Program. This report is prepared pursuant to the requirements of the National Pollutant Discharge Elimination System (NPDES) Permit Number AZS000018. The Permit stipulates that an annual report be prepared and submitted to the EPA regarding the status of permit activities. ADOT's second annual report addresses the stipulations established in the following documents:

- Title 40 Code of Federal Regulations 122.26 and 122.42
- NPDES permit No. AZS000018, effective October 1, 1999
- ADOT Part 1 Permit Application dated November, 1991
- ADOT Part 2 Permit Application dated November, 1992
- Certification Statement.

The annual report complies with the above referenced documents by including how ADOT has implemented components of the SWMP, 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 degradations. These practices are continuously being reviewed and improved as new data, research and technology becomes available. The annual report is divided into nine categories: (1) Maintenance (2) Construction (3) Design (4) Transportation Control Measures (5) Storm Water Monitoring (6) Dry Weather Sampling (7) Assessment of Best Management Practices (8) Proposed Changes and (9) Annual Expenditures. This annual report will be utilized by ADOT to assess the performance of its storm water management program and to establish longer term assessment strategies.

**CERTIFICATION STATEMENT
MUNICIPAL SEPARATE STORM SEWER SYSTEM
ANNUAL REPORT
FOR THE YEAR ENDING SEPTEMBER 30, 2001**

NPDES Permit Holder: Arizona Department of Transportation

Period Covered by This Report: July 1, 2000 through June 30,2001

NPDES Permit Number: AZS000018

Person to contact concerning information contained in the report:

Robert N. Morden
Maintenance Planning and Operations
Arizona Department of Transportation
2739 E. Washington St., Rm 125
Phoenix, AZ 85034
602-712-7403

As required by Title 40 C.F.R. Section 122.22(b)(2):

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 NPDES Permit Number AZS000018:

I certify that storm water management program revisions previously approved by EPA, after consultation with ADEQ, were implemented on schedule.

William J. Higgins
William J. Higgins, P.E.
Deputy State Engineer of Operations
Arizona Department of Transportation

9/28/01
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. This is accomplished during daylight hours by several local street sweeping companies. Sweeping within the Tucson district is performed by a contractor on a monthly basis. The schedule for completing street sweeping within the Phoenix and Tucson areas are provided in Appendix A of this annual update. There have been no changes to this program in either district within the last reporting year.

1.1.2 Mechanized Litter Pick-Up

The contract between ADOT and the private firm that used to perform mechanized litter pick-up within the Phoenix area has expired within the last year and was not renewed. ADOT personnel have assumed the responsibility of removing larger debris previously removed by the contractor. Debris is currently removed by ADOT personnel manually during the night time hours according to the schedule provided in Appendix A. Debris removed includes litter, dead animals, car parts, and other discarded materials too large for street sweeping machinery to pick-up. ADOT does not maintain records of the amount of debris removed by its personnel.

ADOT's Tucson district continues mechanized litter pick-up using a private firm. This activity is performed five times per week and records maintained by the Tucson district office. The schedule for this activity is located in Appendix A of this report.

1.1.3 Manual Litter Pick-Up

Manual litter pick-up occurs within the Phoenix district as per the procedures described in the mechanized litter pick-up description above. Additionally, ADOT does maintain an on-call contractor to manually remove debris on an as needed basis. This activity includes the removal of litter and debris left at the roadway edge and within the right of way. Locations with higher traffic volumes require more frequent cleaning than others. The Tucson districts performs manual litter pick-up on an as needed basis.

The Phoenix district reports the on-call contractor removed 7,068 bags (bags are 22 gallons each) of litter from non-sponsored landscaped areas within the urban freeway system in the year 2000.

In the event that hazardous containers or other materials are found during litter pickup 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 HAZMAT office. ADOT maintains a contract with a hazardous materials handler to test and dispose of such materials. Wastes determined to be hazardous wastes are properly disposed of by the contracted company. Both the Phoenix and Tucson districts report that no hazardous material has been found during the past year.

1.1.4 Adopt-A-Highway Program

The ADOT Adopt-A-Highway Program (AHA) 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 sponsors of highway clean-up and volunteers.

The program allows organizations to adopt designated sections of highway for which they are responsible to pick up litter at least three times a year. ADOT erects 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 AHA sponsor program within the Phoenix district removed 58,160 bags of litter in the year 2000. This service was generally performed on a weekly basis. As of August 2001, 75 segments were adopted out of 147 segments that are available within the Phoenix area. Segments are generally two miles in length for one direction only. The AHA sponsor program within the Tucson district contains 40.3 miles and has removed 703 bags of litter within the past year. ADOT reports that overall the number of areas serviced by the AHA program is dropping. Appendix B contains the news release for the ADOT Phoenix AHA program.

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 within the past year. If ADOT personnel determine that a pump station requires cleaning, the wells are de-watered with a hydro-vac and sediment and debris removed. No discernible pollutant has been noted for any Phoenix pump stations during the past year. Therefore, no water samples have been collected for analyses from a pump station within 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. The tunnels discharge into the Salt River. Each of the three tunnels has been inspected once within the last year. Water found in the tunnels is pumped out once per year (usually in November) and debris and sediment removed.

1.2.3 Storm Sewer Maintenance – Phoenix and Tucson

Large diameter storm sewers (those large enough to walk through) within the Phoenix and Tucson district have been inspected on an as needed basis within the past. The smaller storm sewers are self cleaning and therefore do not require scheduled inspections and cleaning.

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 as needed basis within the past year. Additionally, Storm sewer inlets and catch basins within landscaped areas are maintained by ADOT's Road Maintenance division and areas not

landscaped are maintained by the Environmental Planning division. Within the past year, there has been no serious or unusual clogging of storm sewer inlets or catch basins to report.

The ADOT Tucson district inspects its storm sewer inlets and catch basins on a yearly basis. So far in 2001, approximately 10% of its storm sewer inlets have been inspected. There has been no serious or unusual clogging of storm sewer inlets or catch basins to report.

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. Cleaning has occurred on certain open channels more frequently when ADOT personnel determine they are becoming clogged. Within the past year, unusual clogging has occurred in the open channel near 115th Avenue and the I-10 which discharges to the Agua Fria River. ADOT is currently investigating the cause for this unusual clogging at this location. The Tucson district conducts open channel inspections yearly and has completed 100% of the inspections. There is no unusual clogging or cleaning to report 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 occurred to coincide with storm events. There has been no serious clogging or maintenance to report for culverts within the Tucson area.

1.3 Control of Illicit Discharges

1.3.1 Permit System – Phoenix and Tucson

Storm sewers which connect and drain into ADOT's drainage system are controlled by one of two means. If the connection is made during construction of the ADOT storm sewer, there is normally an Intergovernmental Agreement formed between ADOT and the city/agency, which is discharging to ADOT's facility. If the connection is made subsequent to construction, the discharger is required to obtain a permit. If an unpermitted connection is made to ADOT's storm sewers, enforcement actions may be taken. These illegal connections may be removed or an encroachment permit required. The discharger is required to either enter into an intergovernmental agreement with ADOT or obtain a permit from ADOT. Within the past year only one connection has been made to ADOT's storm sewers in the Phoenix Area. This connection was made by Shelley Farms. The Tucson district reports that there have been no permits issued within the past year.

1.3.2 Inspection – Phoenix and Tucson

Inspections for illicit discharges to ADOT's storm sewer system within the Phoenix and Tucson district have occurred on an as needed basis within the past year. Typical reports of an illegal discharge have been received from ADOT Road Maintenance crews while performing other activities and from various complaint calls. To better control these activities, ADOT intends to hire a new full time employee to inspect and investigate encroachment of construction, illegal connections, dumping and illicit discharges to its storm sewer system. This new full time position is in ADOT's annual budget for fiscal year 2001/2002.

1.3.3 Dry-weather Screening – Phoenix and Tucson

During the past year, dry weather screening was conducted on at least 20% of the storm water discharge sites in the Phoenix and Tucson metropolitan area. Inspection of discharge points were conducted in the Phoenix area on September 10th and 11th of 2001, and Tucson areas discharges were inspected September 18, 2001. All of the screening points observed for this annual update had no dry weather discharge. Section 6 contains further details concerning dry weather screening.

1.3.4 Pump Station Gas Detection – Phoenix Only

ADOT storm sewer pump stations are constructed 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 – 20 minutes to shut off the pump if necessary. ADOT reports no detection of combustible gas in the pump stations within the past year.

1.4 Emergency Response Program – Phoenix and Tucson

The State of Arizona has a plan to respond to accidental spills of hazardous materials. The plan is 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 including spills of hazardous material. The ALERT members are on call 24 hours a day, 7 days a week. Their duty in the event of a hazardous material spill is to contain the spill, take care of traffic problems, and manage the cleanup of the spill.

ADOT has prepared an ALERT Manual which designates individual responsibilities and lists key emergency personnel within ADOT and within the local communities. The Phoenix district traffic operation control center is manned 24-hours per day, 7-days per week for emergency calls and equipment monitoring. Four employees of the District Alert Team and 7 employees from District Maintenance are on call 24 hours a day, 7 days a week to respond to emergencies. In addition, ADOT's Safety and Health Section employs a statewide emergency response specialist (Chuck Manuel 602-712-4107) who responds to emergencies for all districts.

The Tucson district has three 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 the Department of Public Safety (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 proper clean-up of the spills.

In the event of an accidental spill, the Arizona Department of Public Safety (Highway Patrol) contacts the ADOT on-call ALERT members directly. The Arizona Department of Public Safety, the Arizona Department of Environmental Quality and the Arizona Department of

Transportation district maintenance crews all respond to the accidental 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

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 can not be identified or does not have the necessary resources, ADOT has risk management funds in place to have the spill properly cleaned up.

1.5 Erosion Control Practices – Phoenix and Tucson

1.5.1 Erosion Control Maintenance – Phoenix and Tucson

The Phoenix and Tucson district 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 as needed 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 directed to a computer terminal at the Maintenance district offices.

The irrigation system provides immediate detection of broken sprinklers and water pipes which allow 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 to report.

1.6 Roadside Vegetation Management Program – Phoenix and Tucson

ADOT maintains a statewide roadside vegetation management program to control annual weeds that tend to choke out 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 species 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 following is an excerpt from the *Arizona Department of Transportation Roadside Vegetation Management Program*:

Summary Of the
Environmental Requirements and Mitigation Measures

1. Qualified specialist supervisory personnel will be available to each district. Program supervisory personnel will possess the appropriate Arizona Agricultural Pesticide Control Advisor License [Name of license changed in R3-3-206 of the Arizona Revised Statutes: Agricultural Pest Control Advisor License].
2. *It is ADOT procedure that applicators will possess the appropriate Restricted Use Applicators License* [Name of license changed in R3-3-207 of the Arizona Revised Statutes: Commercial Applicator Certification for Restricted Use Pesticides]. *Chemical applicators will be trained in the safe storage, mixing, application, container disposal and recordation of chemicals used.*
3. Well maintained spray equipment will be used in the application of chemicals.
4. Only E.P.A. labeled and registered chemicals will be used.
5. No E.P.A. listed prohibited or restricted chemicals will be used.
6. Review of research and testing will occur on a continual basis, adjustment to the proposed chemical list will reflect continuing public and environmental concerns.
7. Testing of the chemicals requiring further evaluation will follow established guidelines.
8. Substituting an above tested chemical into the scenario applications will occur only after concurrence of the Roadside Review Committee, and preparation of updated environmental assessment.
9. All recommended label directions for rates of application and species treated will be strictly followed.
10. Drift control agents will be used with all herbicides as appropriate.
11. Spraying will not be attempted in adverse weather conditions. Applications will stop when wind velocities negatively affect accurate application.
12. All chemical treatments will be recorded in a daily spray log, and records will be kept.
13. The phenoxy herbicides will not be used in proximity of susceptible agricultural crops during the crop season in strict compliance to the herbicide label.
14. Threatened or Endangered federally listed proposed or candidate plant species known locations will be designated restricted management areas.
15. Special consideration will be given to areas where an encroachment potential by livestock can be anticipated.
16. ADOT will obtain all necessary permits from agencies who retain ownership of the right of way.

This roadside vegetative management program has been carried out during the past year with no significant changes to report.

1.7 SWPPPs for Maintenance Yards – Phoenix and Tucson

ADOT maintenance yards are regulated as part of ADOT's NPDES 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 SWPPP for each maintenance yard in the Phoenix and Tucson metropolitan areas.

SWPPPs were prepared for seven maintenance yards in Phoenix and one maintenance yard in Tucson. The EPA document entitled "Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans" was used to develop the SWPPP's. 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) pollutant source identification, (6) BMP identification, (7) implementation, (8) worksheets for documenting discharges. The SWPPP's are kept at the maintenance yards and implemented by the pollution prevention team. Team members from each yard received training during the past year and ADOT has contracted with Engineering and Environmental Consultants, Inc (EEC) to provide additional training during the coming year. In addition, ADOT has also contracted with EEC to conduct compliance assessments for each of the eight maintenance yards to be completed by September 2002.

2 CONSTRUCTION – STATEWIDE

Except where noted below, the procedures followed for construction projects has not been changed from the previous year. These procedures for complying with the NPDES general permit for construction are outlined in ADOT's Erosion and Pollution Control Manual.

2.1 Develop Standards for BMPs – Erosion and Pollution Control Manual

ADOT developed standard details and special provisions for Best Management Practices (BMP's) to be used on ADOT construction projects. These are outlined in the *ADOT Erosion and Pollution Control Manual for Highway Design and Construction* dated June 1995, produced by ADOT Intermodal Transportation Division. These include several typical BMP's such as silt fences, mulching, and temporary dikes.

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 Erosion and Control Manual is currently under revision by ADOT. The purpose of the revision is to improve upon the BMP's in the existing manual and to incorporate NPDES Phase II rule changes. Through its experience with construction site BMP's over the past 10 years, ADOT has garnered significant knowledge which will be used to update and improve the BMP's described classified in the manual. Appendix C includes ADOT's draft scope of work for the update.

2.2 Training for SWPPPs

In each District office of ADOT, the resident engineers and their staff are trained in the area of storm water erosion control and "good housekeeping" procedures on construction sites. These individuals participate in the preparation of the Storm Water Pollution Prevention plans (SWPPP) and oversee the implementation of the plan. Contractors hired by ADOT to perform work on construction sites are invited to attend the training sessions.

Training sessions for NPDES requirements have been conducted by ADOT personnel or certified individuals hired by ADOT. Three training sessions regarding storm water pollution prevention were lead by Roland Tang from ADOT's Environmental Planning Group: June 21, 2001 and August 21, 2001, and August 23, 2001. Contractors to ADOT

involved with roadway construction were invited to attend these training sessions. Documentation for these training sessions is located in Appendix D of this document. In addition, training for SWPPP implementation at ADOT yards outside of Phoenix and Tucson during the 2001 – 2002 fiscal years is currently under development.

2.3 Storm Water Pollution Prevention Plans

2.3.1 Plan Review at 60% Submittal Stage

The design engineers, project manager, and Roadside Development Section reviews the construction plans at the 60% submittal stage to determine if there are any erosion control measures which need to be incorporated into the plans. The design of the 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 Engineers' 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 BMP's that they anticipate will be required to control erosion during the different stages of construction.

2.3.3 Preparation of SWPPP

A Storm Water Pollution Prevention Plan is prepared for each construction project and incorporated into the construction plans and specifications. The only change to report for this is the new construction SWPPP checklist provided in Appendix E. The checklist ensures that the construction general permit requirements are properly implemented.

2.4 Procedures following Award of Contract

2.4.1 Critique Erosion Control Plan

After the award of the construction contract, the resident engineers attend the partnering session or pre-construction meeting and go over 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

Any changes as a result of the discussion at the above meeting are incorporated into the SWPPP. The resident engineer keeps the original and a copy remains with the contractor on the job site.

2.4.3 Certification of SWPPP

The ADOT resident engineer signs the SWPPP and the local municipality also signs in the case of a project with local government participation.

2.4.4 Prepare Notice of Intent (NOI)

The ADOT resident engineer and the contractor each prepares separate NOI's and submits them to the EPA 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 and the contractor is also required to submit an NOI because he has day-to-day control over the job.

The NOI's are delivered by means of certified mail to ensure that it reaches the EPA. The NOI's submitted by ADOT are signed by the District Engineer or his representative. The NOI is mailed to: Storm Water Notice of Intent, P.O. Box 1215, Newington, VA 22122. Copies of the NOI are sent to: Storm Water Coordinator, ADEQ, P.O. Box 600, Phoenix, Arizona 85001-0600.

2.5 Installation of Erosion Control

The resident engineer works closely with the contractor on the installation of the erosion control features. 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

ADOT's resident engineer inspects the project monthly or within 24 hours after a rainfall of 2" or greater. The ADOT NPDES inspection checklist utilized for this purpose is included in Appendix F.

2.7 Notice of Termination (NOT)

ADOT and the contractor each submit a NOT after all the bare ground has been seeded and mulched and the permanent erosion and sediment control measures are in place.

The ADOT NOT is signed by the District Engineer or his representative and mailed by means of certified mail to the EPA at the following address: Storm Water Notice of Termination, P.O. Box 1185, Newington, VA 22122. Copies of the NOT are sent to: Storm Water Coordinator, ADEQ, P.O. Box 600, Phoenix, Arizona 85001-0600.

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

- If the bare ground is seeded and mulched as part of the paving project, ADOT and the contractor submit NOT's when the contract is complete. Then, at the start of the subsequent landscaping contract, both ADOT and the landscaping contractor submit NOI's to obtain a new permit to cover the landscaping activities.
- If seeding and mulching are not part of the paving project, ADOT can not submit a NOT until after the completion of the landscaping project. Therefore, under this condition ADOT maintains temporary erosion controls in the area and performs regular inspections

(in accordance with the EPA general permit) during the interim period after the paving project is complete and before the landscape contract begins. In this case the paving contractor submits a NOT at the end of the paving contract and the landscape contractor submits a NOI before he begins work. In the interim, ADOT has sole responsibility.

2.8 Retention of Records

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

2.9 Other NPDES Permit Requirements

2.9.1 Asphalt and Concrete Plants

Asphalt and concrete plants are not covered by the EPA general permit for construction sites. The EPA considers these facilities to be an industrial activity, which requires separate coverage under EPA's general permit for industrial activities. This is true in all cases, including the case 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 the EPA to obtain a NPDES permit for industrial activities. ADOT cannot file the documents because ADOT does not own and operate the plants.

2.9.2 ADOT Materials Sources

As is the case with asphalt and concrete plants, materials sources are not covered by EPA's general permit for construction sites. The EPA considers these facilities to be an industrial activity, which requires separate coverage under EPA's general permit for industrial activities.

In the case of commercial materials sources or contractor owned sources, the owner and/or operator is required to obtain permit coverage. In the case of ADOT owned materials sources, ADOT obtains a permit and requires each contractor that works the source area to obtain a permit; (much like permits 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

Except as noted, the design procedures described below have not been changed 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 all bare ground is covered with decomposed granite and trees and shrubs are planted to provide an aesthetically pleasing appearance and help to further stabilize the ground. 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, urban and rural highways, bare ground is stabilized to provide permanent erosion control.

A change in this program occurring within the past year is the use of reclaimed water for irrigating vegetative areas within some medians, right of ways 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

Currently, ADOT's storm sewer system includes several retention and detention basins. The old detention basins were designed to control storm water 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 storm water 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 that are designed for the dual purpose of managing storm water quantity and quality can be quite effective in reducing pollutant loads. Therefore, where appropriate, new detention basins are designed to capture storm water 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. During the past year, two new detention basins with "first flush" capacity have been constructed. One is Basin B on the San Tan Freeway near Kyrene Road. This Basin discharges to the Gila drain. The other is the 48th Street Basin (owned by the City of Phoenix) which collects runoff from the I-10/San Tan Interchange

3.4 Other Structural Controls

ADOT was required to consider the use of other structural controls as part of their NPDES 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 Group were notified of this permit requirement and were instructed to include and implement this requirement by incorporating it into the Roadway Design Manual, as a supplement to the Design Manual, or other guidelines. See interoffice memo in Appendix G, dated September 27, 2000.

4 TRANSPORTATION CONTROL MEASURES

Except as noted below, there is no significant change to report in these control measures.

4.1 Vehicle Emissions Testing

The Arizona Department of Environmental Quality requires annual emissions testing of all vehicles 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 insure compliance with emission standards.

4.2 High Occupancy Vehicle (HOV) Lanes

ADOT is incorporating 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

IVHS is an electronic system of metering highway on-ramp 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 STORM WATER MONITORING

5.1 Current Status

ADOT is currently awaiting comment and approval of its storm water monitoring plan submitted to the EPA in September 2000. Engineering and Environmental Consultants, Inc. verified through EPA's region 9 NPDES administrator, Eugene Bromley, that ADOT should await approval from EPA prior to implementing the monitoring plan.

6 DRY WEATHER SCREENING – PHOENIX AND TUCSON

ADOT is required to perform dry weather sampling under its NPDES permit as a means to identify illicit connections and illegal dumping activity. A minimum of 20% of the outfalls must be screened during each year. In the original application submittal date November 1991, the total number of major outfalls identified for the Phoenix and Tucson metropolitan areas was 35 and 14, respectively. Since 1991, additional major outfalls have been added to ADOT's storm water system. ADOT is currently taking steps to integrate the existing storm water system, including major outfalls, into a geographic information system (GIS). Once the existing system has been incorporated into the GIS, procedures will be developed and implemented to continuously update the dataset to include future storm water infrastructure along ADOT roadways. A list of currently identified major storm outfalls is included in Appendix H

To fulfill the requirements for 2001-2002, the original list of major outfalls was used to select sites for dry weather screening activities. Visual inspections were performed for 8 outfalls in Phoenix and 3 outfalls in Tucson metropolitan areas. The sites were selected from the list based on relative proximity to each other. The purpose of the dry weather screening is to identify illicit connections and/or illegal dumping within ADOT's storm water system. The discharge points were observed during dry weather. Dry weather field screen forms were developed for record keeping purposes. Results of the dry weather sampling for September 2001 are provided in Appendix I. Photos of the Dry weather screening are located in Appendix J.

Given the local climatic conditions, the storm water 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 agricultural 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, 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 which is the source of the discharge. ADOT has no land use authority beyond the roadway right-of-way. It has no enforcement authority. The local municipalities, with different enabling legislation, do have zoning and land use authority, along with enforcement authority.

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 trained and equipped to deal with any type of materials. It is standard operating procedure for ADOT staff who come upon any substance or unidentified items on the roadway to call the HazMat unit. Likewise, if there are any spills at the maintenance yards, staff is to call the HazMat unit and NOT to 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 emergency response team is one of three state agencies (DPS, ADEQ) which 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 for payment of necessary clean-up of accidental spills and illegal dumping activity.

7.1.2 Inspections

Road maintenance personnel perform inspections of ADOT's storm water 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 "Adopt-a-Highway Program" is another public education program which 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.

8 PROPOSED CHANGES TO THE SWMP

1. ADOT's NPDES permit requires the removal of accumulated debris in catch basins on a regular basis and in no case shall 50% of the capacity of the basins be reached. As a practical matter, this requirement does not correspond with ADOT's design of catch basins. These basins are self-cleaning due to the absence of a settling basin. Debris would accumulate in the catch basins only when obstructed. The scheduled inspection of the catch basins serves to prevent the obstruction of the catch basins and thus the accumulation of debris.
2. The expiration of the contract for mechanized litter pick-up has resulted in ADOT assuming this responsibility. This change of litter and debris removal by ADOT personnel is a permanent change to the SWMP.
3. EEC shall conduct assessments of each of the maintenance yards covered by the NPDES permit. The assessments will include review of materials management practices, incident-reporting requirements, and environmental compliance issues pertinent to the

NPDES permit. Inspections will be done at each yard including interviews with key staff for each regulated activity. The work will include a compliance update report for each site and onsite training as necessary. These compliance assessments will be included in next year's annual report to the EPA.

4. The responsibility of managing the SWMP has moved from the Environmental Planning Group to the Maintenance Planning and Operation Group within ADOT. This was done because most of the requirements of ADOT's MS4 permit relate closely to roadway maintenance and therefore, Maintenance Planning and Operation can be more responsive to the needs of the SWMP.

9 ASSESSMENT OF WATER QUALITY IMPROVEMENT OR DEGRADATION

Assessment of the effectiveness of BMP's implemented by ADOT within the past year is difficult to quantify without the collection of storm water samples for analyses. ADOT has, however, removed significant amounts of debris from roadways, ensures its contractors maintain compliance with NPDES, performed dry weather screening, training of personnel, conducted periodic inspections of its storm sewers and drains, and has incorporated "first flush" storage capacity in some of its new detention basins.

10 ANNUAL EXPENDITURES

10.1 Fiscal Resources

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

10.2 Five Year Construction Program

ADOT's Five-Year Construction Program is a source of funding that will be used when a storm water 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 and modifications to existing projects are made. There are several sources of funds that are identified to fund the program which include federal, state, local, and private sources. The approval process required for incorporation of the storm water 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.

10.3 Highway Maintenance Program

Storm water issues related to maintenance will be covered under our Highway maintenance Program which is state funds. The 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 \$83,934,800.00 in this program.

10.4 Administrative Budget

An additional source is our Administrative Budget, which again, is state funded and appropriated by the Arizona Legislature. The process is identical to the Maintenance Program. ADOT receives a total of approximately \$40,441,300.00 in state funds.

Table 10-4 below provides the actual and estimated expenditures for activities implemented as a result of NPDES permit requirements.

TABLE 10-4. STORM WATER MANAGEMENT PROGRAM COMPREHENSIVE ANNUAL BUDGET

| PROGRAM/ACTIVITY | FY 2000/2001 Actual | FY 2001/2002 Estimated |
|---|------------------------|---------------------------|
| Implement SWPPPs for ADOT yards, includes training | \$25,000.00 | \$10,000.00 |
| Water Quality Monitoring Equipment Installation | - 0 - | \$180,000.00 |
| Convert Storm Water Outfall Map to ADOT's GIS | - 0 - | \$50,000.00 |
| Compliance Audit of ADOT Maintenance Yards | - 0 - | \$20,000.00 |
| Dry Weather Sampling – 20% of Outfalls (includes training) | \$3,000.00 | \$6,000.00 |
| Train Field Staff & Contractors in NPDES Construction Permits | \$2,500.00 | \$2,500.00 |
| Storm Water Monitoring | - 0 - | \$12,000.00 |
| Preparation of Annual Report | \$16,000.00 | \$13,000.00 |
| Full Time Employee for NPDES | - 0 - | \$65,000.00 |
| Re-Application of MS4 Permit | - 0 - | \$40,000.00 |
| ANNUAL TOTALS | \$46,500.00 | \$398,500.00 |

APPENDICES

APPENDIX A

PHOENIX SCHEDULE

LITTER PICK-UP SCHEDULES

(SWEEPING IS PERFORMED THESE NIGHTS)

SUNDAY'S

US60

7871
7874

CAMELBACK TO ~~THUNDERBIRD RD.~~
I-10 TO GOLDFIELD RD.

AGUA FRIA RIVER

MONDAY'S

I-10

7871
7875
7873

115TH AVE. TO 35TH ST.
35TH AVE. TO 16TH ST.
16TH ST. TO CHANDLER BLVD.

I-17

7875
7873

DEER VALLEY RD. TO 16TH ST.
16TH ST. TO I-10

SR143

7873

ALL

SR153

7873

ALL

L-202

7873
7874

0.00 TO PRIEST DR.
PRIEST DR. TO COUNTRY CLUB DR.

TUESDAY'S

L-101

7874

PRINCESS DR. TO L-202

WEDNESDAY'S

L-101

7871
7875

I-10 TO 35TH AVE.
35TH AVE. TO SCOTTSDALE RD.

THURSDAY'S

SR51

7873

0.00 TO BELL RD.

L-101

7874

L-202 TO CHANDLER BLVD.

**NO FRIDAY
NO SATURDAY**

TUCSON SCHEDULE

[-> Sweeping which applied

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAY AND PARKING LOT SWEEPING INVENTORY AND SCHEDULE

SWEEP2001

DISTRICT II, AREA 1 - TUCSON

43.00

| UNIT NO. | ROUTE | DIR | ORG | LOCATION | LEFT CURB | RIGHT CURB | TOTAL | FREQUENCY | MONTH TOTAL | ANNUAL TOTAL |
|----------|--------|------|------|---|-----------|------------|-------|-----------|-------------|--------------|
| 1 | I-10 | T.I. | 8150 | REDROCK T.I., RAMPS 226 A, G, C, E, J | | | 1.76 | 2 X YEAR | N/A | 3.52 |
| 2 | I-10 | WB | 8150 | RAMP 228C | | | 0.19 | 2 X YEAR | N/A | 0.38 |
| 3 | I-10 | T.I. | 8150 | PINAL AIR PARK T.I. RAMPS 232A, G, E, I, P, O | | | 1.55 | 2 X YEAR | N/A | 3.10 |
| 4 | I-10 | FR | 8150 | M.P. 234.00 TO M.P. 235.00 WB | | | 0.60 | 2 X YEAR | N/A | 1.20 |
| 5 | I-10 | T.I. | 8150 | MARANA T.I. RAMPS 236A, G, E, J, E | | | 2.45 | 4 X YEAR | N/A | 4.90 |
| 6 | I-10 | EB | 8150 | MARANA MAINLINE BRIDGE M.P. 236.4 | 0.12 | 0.70 | 0.88 | 4 X YEAR | N/A | 3.52 |
| 7 | I-10 | WB | 8150 | MARANA MAINLINE BRIDGE M.P. 236.4 | 0.11 | 0.71 | 0.82 | 4 X YEAR | N/A | 3.28 |
| 8 | I-10 | FR | 8150 | M.P. 237.00 TO M.P. 238.00 WB | | | 0.15 | 2 X YEAR | N/A | 0.30 |
| 9 | I-10 | FR | 8150 | M.P. 238.00 TO M.P. 239.00 WB | | | 0.13 | 2 X YEAR | N/A | 0.26 |
| 10 | I-10 | FR | 8150 | M.P. 237.00 TO M.P. 238.00 EB | | | 0.43 | 2 X YEAR | N/A | 0.86 |
| 11 | I-10 | EB | 8150 | TANGERINE MAINLINE BRIDGE 240.4 | 0.11 | 0.60 | 0.71 | 4 X YEAR | N/A | 2.84 |
| 12 | I-10 | EB | 8150 | Rail Road Bridge M.P. 242.69 | 0.14 | 0.53 | 0.67 | 4 X YEAR | N/A | 2.68 |
| 13 | I-10 | WB | 8150 | Rail Road Bridge M.P. 242.69 | 0.13 | 0.57 | 0.70 | 4 X YEAR | N/A | 2.80 |
| 14 | I-10 | WB | 8150 | TANGERINE MAINLINE BRIDGE 240.4 | 0.11 | 0.63 | 0.74 | 4 X YEAR | N/A | 2.96 |
| 15 | I-10 | EB | 8150 | AVRA VALLEY MAINLINE BRIDGE 242.9 | 0.11 | 0.38 | 0.49 | 4 X YEAR | N/A | 1.96 |
| 16 | I-10 | WB | 8150 | AVRA VALLEY MAINLINE BRIDGE 242.9 | 0.12 | 0.42 | 0.54 | 4 X YEAR | N/A | 2.16 |
| 17 | I-10 | EB | 8150 | AS&R RR 243.33 | 0.23 | 0.52 | 0.75 | 4 X YEAR | N/A | 3.00 |
| 18 | I-10 | WB | 8150 | AS&R RR 243.33 | 0.15 | 0.27 | 0.42 | 4 X YEAR | N/A | 1.68 |
| 19 | I-10 | T.I. | 8150 | CORTARO T.I. RAMPS 246 A, G, C, J, E | 0.85 | 0.85 | 1.70 | MONTHLY | 1.70 | 20.40 |
| 20 | I-10 | EB | 8150 | CORTARO BRIDGE 246.6 | 0.12 | 0.58 | 0.70 | MONTHLY | 0.70 | 8.40 |
| 21 | I-10 | WB | 8150 | CORTARO BRIDGE 246.6 | 0.12 | 0.53 | 0.65 | MONTHLY | 0.65 | 7.80 |
| 22 | I-10 | T.I. | 8150 | INA ROAD T.I. RAMPS 248A, G, C, J, E, M, K | | | 1.00 | MONTHLY | 1.00 | 12.00 |
| 23 | I-10 | EB | 8150 | INA ROAD BRIDGE 248.72 | 0.12 | 0.51 | 0.63 | MONTHLY | 0.63 | 7.56 |
| 24 | I-10 | WB | 8150 | INA ROAD BRIDGE 248.72 | 0.13 | 0.64 | 0.77 | MONTHLY | 0.77 | 9.24 |
| 25 | I-10FR | EB | 8150 | INA ROAD TO SUNSET 248.75-251.15 | 2.40 | 2.40 | 4.80 | MONTHLY | 4.80 | 57.60 |
| 26 | I-10FR | WB | 8150 | INA ROAD TO SUNSET 248.75-251.15 | 2.40 | 2.40 | 4.80 | MONTHLY | 4.80 | 57.60 |
| 27 | I-10 | FR | 8150 | WB CANADA DEL ORO BRIDGE 249.50 | | | 0.15 | MONTHLY | 0.15 | 1.80 |

**ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAY AND PARKING LOT SWEEPING INVENTORY AND SCHEDULE**

SWEEP2001

DISTRICT II, AREA 1 - TUCSON

| UNIT NO. | ROUTE | DIR. | ORG. | LOCATION | LEFT CURB | RIGHT CURB | TOTAL | FREQUENCY | MONTH TOTAL | ANNUAL TOTAL |
|----------|--------|------|------|---|-----------|------------|-------|-----------|-------------|--------------|
| 28 | I-10 | FR | 8150 | WB RILLITO BRIDGE 250.7 -- | | | 0.20 | MONTHLY | 0.20 | 2.40 |
| 29 | I-10FR | EB | 8150 | SUNSET TO RUTHRAUFF RD. 251.2-252.4 -- | 1.20 | 1.20 | 2.40 | MONTHLY | 2.40 | 28.80 |
| 30 | I-10FR | WB | 8150 | SUNSET TO RUTHRAUFF RD. 251.2-252.4 -- | 1.20 | 1.20 | 2.40 | MONTHLY | 2.40 | 28.80 |
| 31 | I-10 | EB | 8150 | CANADA DEL ORO BRIDGE 249.49 | 0.21 | 0.21 | 0.42 | MONTHLY | 0.42 | 5.04 |
| 32 | I-10 | WB | 8150 | CANADA DEL ORO BRIDGE 249.49 | 0.24 | 0.24 | 0.48 | MONTHLY | 0.48 | 5.76 |
| 33 | I-10 | EB | 8150 | ORANGE GROVE ROAD BRIDGE 250.04 | 0.18 | 0.50 | 0.68 | MONTHLY | 0.68 | 8.16 |
| 34 | I-10 | WB | 8150 | ORANGE GROVE ROAD BRIDGE 250.04 | 0.19 | 0.48 | 0.68 | MONTHLY | 0.68 | 8.16 |
| 35 | I-10 | EB | 8150 | RILLITO CREEK BRIDGE 250.68 | 0.20 | 0.28 | 0.48 | MONTHLY | 0.48 | 5.76 |
| 36 | I-10 | WB | 8150 | RILLITO CREEK BRIDGE 250.68 | 0.22 | 0.23 | 0.45 | MONTHLY | 0.45 | 5.40 |
| 37 | I-10 | T.I. | 8150 | ORANGE GROVE T.I. 250A,G,C,J,E -- | | | 1.00 | MONTHLY | 1.00 | 12.00 |
| 38 | I-10 | EB | 8150 | SUNSET BRIDGE 251.18 | 0.18 | 0.44 | 0.62 | MONTHLY | 0.62 | 7.44 |
| 39 | I-10 | WB | 8150 | SUNSET BRIDGE 251.18 | 0.18 | 0.54 | 0.72 | MONTHLY | 0.72 | 8.64 |
| 40 | I-10 | T.I. | 8150 | SUNSET T.I. 251 A,J,E -- | 0.00 | 0.00 | 0.50 | MONTHLY | 0.50 | 6.00 |
| 41 | I-10 | EB | 8150 | RUTHRAUFF BRIDGE 252.43 | 0.19 | 0.31 | 0.50 | MONTHLY | 0.50 | 6.00 |
| 42 | I-10 | WB | 8150 | RUTHRAUFF BRIDGE 252.43 | 0.19 | 0.37 | 0.56 | MONTHLY | 0.56 | 6.72 |
| 43 | I-10 | T.I. | 8150 | RUTHRAUFF ROAD T.I. 252C,G,E -- | 0.53 | 0.53 | 1.06 | MONTHLY | 1.06 | 12.72 |
| 44 | I-10FR | EB | 8150 | RUTHRAUFF TO MIRACLE MILE. 252.4-255.2 -- | 3.00 | 3.00 | 6.00 | MONTHLY | 6.00 | 72.00 |
| 45 | I-10FR | WB | 8150 | RUTHRAUFF TO PRINCE RD. 252.4-254.2 -- | 1.80 | 1.80 | 3.60 | MONTHLY | 3.60 | 43.20 |
| 46 | I-10 | EB | 8150 | PRINCE ROAD BRIDGE 254.3 | 0.18 | 0.38 | 0.56 | MONTHLY | 0.56 | 6.72 |
| 47 | I-10 | T.I. | 8150 | PRINCE RD. EB ENTR. & EXIT RAMPS 254.3 -- | | | 0.84 | MONTHLY | 0.84 | 7.68 |
| 48 | I-10 | T.I. | 8150 | PRINCE RD. EB ENTR. & EXIT RAMPS 254.3 -- | 0.00 | 0.00 | 0.60 | MONTHLY | 0.60 | 7.20 |
| 49 | I-10 | WB | 8150 | MIRACLE MILE OVERPASS 255.30 | 0.30 | 0.30 | 0.60 | MONTHLY | 0.60 | 7.20 |
| 50 | I-10 | T.I. | 8150 | MIRACLE MILE T.I. 255A,G,L,MC2,D1 | 2.64 | 2.64 | 5.28 | MONTHLY | 5.28 | 63.36 |
| 51 | I-10 | EB | 8150 | MILEPOST 255.5 - 262.44 | 0.00 | 8.94 | 8.94 | 2 x MONTH | N/A | 186.58 |
| 52 | I-10 | WB | 8150 | MILEPOST 254.3 - 262.44 | 0.00 | 8.94 | 8.94 | 2 x MONTH | N/A | 166.56 |
| 53 | I-10 | EB | 8150 | MILEPOST 255.5 - 262.44 | 6.94 | 0.00 | 6.94 | 4 X Month | | 333.12 |
| 54 | I-11 | WB | 8150 | MILEPOST 254.3 - 262.44 | 8.24 | 0.00 | 8.24 | 4 X Month | | 395.52 |

Additional Supplemental Specifications I

REVISED February 2, 2001

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAY AND PARKING LOT SWEEPING INVENTORY AND SCHEDULE

SWEEP2001

DISTRICT II, AREA 1 - TUCSON

| UNIT NO. | ROUTE | DIR. | ORG. | LOCATION | LEFT CURB | RIGHT CURB | TOTAL | FREQUENCY | MONTH TOTAL | ANNUAL TOTAL |
|----------|---------|------|------|---|-----------|------------|-------|-----------|-------------|--------------|
| 55 | I-10 FR | EB | 8150 | Miracle Mile to Speedway 254.9-257.3 | 2.40 | 2.40 | 4.80 | MONTHLY | 4.80 | 57.60 |
| 56 | I-10 FR | WB | 8150 | Prince Rd. to Speedway. 254.2-257.3 | 3.10 | 3.10 | 6.20 | MONTHLY | 6.20 | 74.40 |
| 57 | I-10 | T.I | 8150 | GRANT ROAD T.I. 256A,G,C,J,E | | | 1.25 | 2 X Month | N/A | 30.00 |
| 58 | I-10 | T.I | 8150 | SPEEDWAY TI, 257,E2,E1,C1,A1, -- | | | 0.81 | 2 X Month | N/A | 19.44 |
| 59 | I-10FR | EB | 8150 | Speedway to Congress St. 257.3-258.2 | 0.90 | 0.90 | 1.80 | MONTHLY | 1.80 | 21.60 |
| 60 | I-10FR | WB | 8150 | Speedway to Congress St. 257.3-258.3 | 0.90 | 0.90 | 1.80 | MONTHLY | 1.80 | 21.60 |
| 61 | I-10 | T.I | 8150 | ST. MARYS T.I. 257L,2,6,H2 -- | | | 0.82 | 2 X Month | N/A | 19.68 |
| 62 | I-10 | T.I | 8150 | CONGRESS T.I. 258A,G,C,J, -- | 0.00 | 0.00 | 0.79 | 2 X Month | N/A | 18.98 |
| 63 | I-10 | T.I | 8150 | 22nd St.EB & WB On & Off Ramps | 0.00 | 0.00 | 0.99 | 2 X Month | N/A | 23.78 |
| 64 | I-10FR | EB | 8150 | Congress St-29th ST 258.2-259.7 | 1.50 | 1.50 | 3.00 | 2 X Month | N/A | 72.00 |
| 65 | I-10FR | WB | 8150 | Congress St-29th ST 258.2-259.8 | 1.50 | 1.50 | 3.00 | 2 X Month | N/A | 72.00 |
| 66 | I-10 | T.I | 8150 | I-19 T.I. 260A,D | | | 1.33 | 2 X Month | N/A | 31.92 |
| 67 | I-10 | T.I | 8150 | SIXTH AVE T.I. 261D,F,C,A & FRONTAGE RD | | | 3.39 | 2 X Month | N/A | 81.38 |
| 68 | I-10 | EB | 8150 | AJO WAY BRIDGE 262.44 | 0.23 | 0.23 | 0.46 | MONTHLY | 0.46 | 5.52 |
| 69 | I-10 | WB | 8150 | AJO WAY BRIDGE 262.44 | 0.19 | 0.19 | 0.38 | MONTHLY | 0.38 | 4.56 |
| 70 | I-10 | EB | 8150 | CAMPBELL AVENUE BRIDGE 262.53 | 0.12 | 0.12 | 0.24 | MONTHLY | 0.24 | 2.88 |
| 71 | I-10 | WB | 8150 | CAMPBELL AVENUE BRIDGE 262.53 | 0.12 | 0.12 | 0.24 | MONTHLY | 0.24 | 2.88 |
| 72 | I-10 | EB | 8150 | DIVERSION CHANNEL BRIDGE 262.82 | 0.08 | 0.08 | 0.12 | MONTHLY | 0.12 | 1.44 |
| 73 | I-10 | WB | 8150 | DIVERSION CHANNEL BRIDGE 262.82 | 0.08 | 0.08 | 0.12 | MONTHLY | 0.12 | 1.44 |
| 74 | I-10 | T.I | 8150 | PARK AVE T.I., 262G,J,H,L & FRONTAGE RD | | 2.93 | 2.93 | MONTHLY | 2.93 | 35.16 |
| 75 | I-10 | T.I | 8150 | KINO T.I. 263A,B,C,F,G,J,L | | | 0.98 | MONTHLY | 0.98 | 11.76 |
| 76 | I-10 | EB | 8150 | COUNTRY CLUB BRIDGE 263.82 | 0.12 | 0.29 | 0.41 | MONTHLY | 0.41 | 4.92 |
| 77 | I-10 | WB | 8150 | COUNTRY CLUB BRIDGE 263.82 | 0.12 | 0.12 | 0.24 | MONTHLY | 0.24 | 2.88 |
| 78 | I-10 | EB | 8150 | IRVINGTON ROAD BRIDGE 264.27 | 0.11 | 0.11 | 0.22 | MONTHLY | 0.22 | 2.64 |
| 79 | I-10 | WB | 8150 | IRVINGRON ROAD BRIDGE 264.27 | 0.11 | 0.11 | 0.22 | MONTHLY | 0.22 | 2.64 |
| 80 | I-10 | EB | 8150 | PALO VERDE T.I. M.P. 264 - 285 | 0.10 | 0.10 | 0.20 | MONTHLY | 0.20 | 2.40 |
| 81 | I-10 | WB | 8150 | PALO VERDE T.I. M.P. 264 - 285 | 0.12 | 0.12 | 0.24 | MONTHLY | 0.24 | 2.88 |
| 82 | I-10 | T.I | 8150 | PALO VERDE T.I. 264A,G,B,C,D1,D2,F,L,J | | | 3.16 | MONTHLY | 3.16 | 37.92 |

Additional Supplemental Specifications 1

REVISED February 2, 2001

SEP-21-2001 14:48 RIOT 520 628 5397 P.04

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAY AND PARKING LOT SWEEPING INVENTORY AND SCHEDULE

SWEEP2001

DISTRICT II, AREA 1 - TUCSON

| UNIT NO. | ROUTE | DIR | ORG | LOCATION | LEFT CURB | RIGHT CURB | TOTAL | FREQUENCY | MONTH TOTAL | ANNUAL TOTAL |
|----------------|-----------------|-----------------|-----------------|---|-----------------|-----------------|-----------------|----------------------|----------------|-----------------|
| 83 | I-10 | EB | 8150 | ALVERNON T.I. M.P. 265 - 268 | 0.07 | 0.07 | 0.14 | MONTHLY | 0.14 | 1.68 |
| 84 | I-10 | WB | 8150 | ALVERNON T.I. M.P. 265 - 268 | 0.14 | 0.14 | 0.28 | MONTHLY | 0.28 | 3.36 |
| 85 | I-10 | EB | 8150 | DREXEL ROAD BRIDGE 268.00 | 0.12 | 0.12 | 0.24 | MONTHLY | 0.24 | 2.88 |
| 86 | I-10 | WB | 8150 | DREXEL ROAD BRIDGE 268.00 | 0.12 | 0.12 | 0.24 | MONTHLY | 0.24 | 2.88 |
| 87 | I-10 | T.I. | 8150 | VALENCIA T.I. RAMPS A,G,H,P,C,J, MP 267.1 | 2.51 | 2.51 | 5.02 | MONTHLY | 5.02 | 60.24 |
| 88 | I-10 | EB | 8150 | VALENCIA - CRAYCROFT M.P. 267.1-268.1 | 0.35 | 1.58 | 1.93 | MONTHLY | 1.93 | 23.16 |
| 89 | I-10 | WB | 8150 | VALENCIA - CRAYCROFT M.P. 267.1-268.1 | 0.49 | 1.59 | 2.08 | MONTHLY | 2.08 | 24.96 |
| 90 | I-10 | EB | 8150 | FRONTAGE ROAD 267.10 - 267.33 | | 0.23 | 0.23 | MONTHLY | 0.23 | 2.76 |
| 91 | I-10 | WB | 8150 | FRONTAGE ROAD 267.10 - 267.33 | | 0.20 | 0.20 | MONTHLY | 0.20 | 2.40 |
| 92 | I-10 | T.I. | 8150 | CRAYCROFT RD T.I. RAMP A, M.P. 268.10 | 0.29 | 0.29 | 0.58 | MONTHLY | 0.58 | 6.96 |
| 93 | I-10 | EB | 8150 | WILMOT ROAD BRIDGE M.P. 269.36 | 0.27 | 0.27 | 0.54 | MONTHLY | 0.54 | 6.48 |
| 94 | I-10 | WB | 8150 | WILMOT ROAD BRIDGE M.P. 269.33 | 0.12 | 0.59 | 0.71 | MONTHLY | 0.71 | 8.52 |
| 95 | I-10 | T.I. | 8150 | WILMOT RD T.I. 269C,K,J,G,Q,E 270C | | | 2.73 | MONTHLY | 2.73 | 32.76 |
| 96 | I-10 | EB | 8150 | MAINLINE M.P. 271 - 272 KOLB ROAD | | | 0.11 | MONTHLY | 0.11 | 1.32 |
| 97 | I-10 | OP | 8150 | KOLB ROAD OVERPASS M.P. 270 | 1.20 | 1.20 | 2.40 | MONTHLY | 2.40 | 28.80 |
| 98 | I-10 | EB | 8150 | KOLB ROAD RAMPS A & G, M.P. 270 | 0.02 | 0.02 | 0.04 | MONTHLY | 0.04 | 0.48 |
| 99 | I-10 | WB | 8150 | KOLB ROAD RAMPS C & J, M.P. 270 | 0.02 | 0.02 | 0.04 | 4 X YEAR | N/A | 0.16 |
| 100 | I-10 | T.I. | 8150 | RITA RD T.I. 273 A,G,C,J,E | | | 1.72 | 4 X YEAR | N/A | 6.88 |
| 101 | I-10 | T.I. | 8150 | HOUGHTON RD T.I. 275 A,G,C,J,E | | | 1.69 | 4 X YEAR | N/A | 6.76 |
| 102 | I-10 | T.I. | 8150 | VAIL T.I. 279 A,G,C,J,E,K1,K2 | | | 2.22 | 4 X YEAR | N/A | 8.88 |
| 103 | I-10 | T.I. | 8150 | MOUNTAIN VIEW T.I. 281 A,G,D,J,E,P,H | | | 1.87 | 4 X YEAR | N/A | 7.48 |
| | | | | ORG TOTAL CURB MILES | | | 153.82 | | 87.86 | 2,556.76 |
| 104 | I-19 | SB | 8151 | OLD JCT WASH BRIDGE M.P. 30.70 | 0.03 | 0.03 | 0.06 | QUARTERLY | N/A | 0.24 |
| 105 | I-19 | NB | 8151 | OLD JCT WASH BRIDGE M.P. 30.70 | 0.03 | 0.03 | 0.06 | QUARTERLY | N/A | 0.24 |
| 106 | I-19 | SB | 8151 | TINAJA WASH BRIDGE M.P. 31.00 | 0.03 | 0.03 | 0.06 | QUARTERLY | N/A | 0.24 |

Additional Supplemental Specifications I

REVISED February 2, 2001

SEP-21-2001 14:49

AD01

520 628 5387 P.05

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAY AND PARKING LOT SWEEPING INVENTORY AND SCHEDULE

SWEEP2001

DISTRICT II, AREA 1 - TUCSON

| UNIT NO. | ROUTE | DIR. | ORG. | LOCATION | LEFT CURB | RIGHT CURB | TOTAL | FREQUENCY | MONTH TOTAL | ANNUAL TOTAL |
|----------|-------|------|------|----------------------------------|-----------|------------|-------|-----------|-------------|--------------|
| 107 | I-19 | NB | 8151 | TINAJA WASH BRIDGE M.P. 31.00 | 0.03 | 0.03 | 0.06 | QUARTERLY | N/A | 0.24 |
| 108 | I-19 | T.I. | 8151 | CANOA T.I. M.P. 34.85 | 0.30 | 0.57 | 0.87 | QUARTERLY | N/A | 3.48 |
| 109 | I-19 | SB | 8151 | ESPERANZA WASH BRIDGE M.P. 35.92 | 0.03 | 0.03 | 0.06 | QUARTERLY | N/A | 0.24 |
| 110 | I-19 | NB | 8151 | ESPERANZA WASH BRIDGE M.P. 35.92 | 0.03 | 0.03 | 0.06 | QUARTERLY | N/A | 0.24 |
| 111 | I-19 | T.I. | 8151 | CONTINENTAL T.I. M.P. 39.44 | 0.53 | 0.92 | 1.45 | QUARTERLY | N/A | 5.80 |
| 112 | I-19 | SB | 8151 | DRAINAGEWAY BRIDGE M.P. 40.27 | | | 0.05 | QUARTERLY | N/A | 0.20 |
| 113 | I-19 | NB | 8151 | DRAINAGEWAY BRIDGE M.P. 40.27 | | | 0.05 | QUARTERLY | N/A | 0.20 |
| 114 | I-19 | T.I. | 8151 | ESPERANZA T.I. M.P. 40.85 | 0.58 | 1.09 | 1.65 | QUARTERLY | N/A | 6.60 |
| 115 | I-19 | SB | 8151 | DRAINAGEWAY BRIDGE M.P. 41.31 | 0.05 | 0.05 | 0.10 | QUARTERLY | N/A | 0.40 |
| 116 | I-19 | NB | 8151 | DRAINAGEWAY BRIDGE M.P. 41.31 | 0.05 | 0.05 | 0.10 | QUARTERLY | N/A | 0.40 |
| 117 | I-19 | SB | 8151 | DRAINAGEWAY BRIDGE M.P. 42.30 | 0.04 | 0.04 | 0.08 | QUARTERLY | N/A | 0.32 |
| 118 | I-19 | NB | 8151 | DRAINAGEWAY BRIDGE M.P. 42.30 | 0.04 | 0.04 | 0.08 | QUARTERLY | N/A | 0.32 |
| 118 | I-19 | T.I. | 8151 | DUVAL MINE ROAD T.I. M.P. 43.27 | 0.16 | 0.22 | 0.38 | QUARTERLY | N/A | 1.52 |
| 120 | I-19 | SB | 8151 | ANACONDA BRIDGE M.P. 43.6 | 0.03 | 0.03 | 0.06 | QUARTERLY | N/A | 0.24 |
| 121 | I-19 | NB | 8151 | ANACONDA BRIDGE M.P. 43.8 | 0.03 | 0.03 | 0.06 | QUARTERLY | N/A | 0.24 |
| 122 | I-19 | SB | 8151 | QUARTZ WASH BRIDGE M.P. 45.15 | 0.03 | 0.04 | 0.07 | QUARTERLY | N/A | 0.28 |
| 123 | I-19 | NB | 8151 | QUARTZ WASH BRIDGE M.P. 45.15 | 0.03 | 0.04 | 0.07 | QUARTERLY | N/A | 0.28 |
| 124 | I-19 | SB | 8151 | EL TORO ROAD BRIDGE M.P. 45.80 | 0.06 | 0.07 | 0.13 | QUARTERLY | N/A | 0.52 |
| 125 | I-19 | NB | 8151 | EL TORO ROAD BRIDGE M.P. 45.80 | 0.06 | 0.07 | 0.13 | QUARTERLY | N/A | 0.52 |
| 126 | I-19 | T.I. | 8151 | HELMET PEAK T.I. M.P. 46.81 | 0.43 | 0.41 | 0.84 | QUARTERLY | N/A | 3.36 |
| 127 | I-19 | T.I. | 8151 | PIMA MINE T.I. M.P. 53.10 | 1.26 | 1.56 | 2.82 | QUARTERLY | N/A | 11.28 |
| 128 | I-19 | NB | 8151 | M.P. 58.0 TO M.P. 63.10 | 0.10 | 5.10 | 5.20 | MONTHLY | 5.20 | 62.40 |
| 129 | I-19 | SB | 8151 | M.P. 58.0 TO M.P. 63.10 | 0.10 | 5.10 | 5.20 | MONTHLY | 5.20 | 62.40 |
| 130 | I-19 | T.I. | 8151 | SAN ZAVIER T.I. M.P. 56.90 | 0.46 | 0.44 | 0.90 | MONTHLY | 0.90 | 10.80 |
| 131 | I-19 | T.I. | 8151 | VALENCIA T.I. M.P. 58.80 | 1.09 | 0.65 | 1.74 | MONTHLY | 1.74 | 20.88 |
| 132 | I-19 | T.I. | 8151 | AJO ROAD T.I. M.P. 61.90 | 1.48 | 0.65 | 2.13 | MONTHLY | 2.13 | 25.56 |

Additional Supplemental Specifications I

REVISED February 2, 2001

SEP-21-2001 14:50
ADOT
520 628 5387 P.06

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAY AND PARKING LOT SWEEPING INVENTORY AND SCHEDULE

SWEEP2001

DISTRICT II, AREA 1 - TUCSON

| UNIT NO. | ROUTE | DIR. | ORG | LOCATION | LEFT CURB | RIGHT CURB | TOTAL | FREQUENCY | MONTH TOTAL | ANNUAL TOTAL |
|----------------------|-------------------|-----------------|-----------------|---|-----------------|-----------------|-----------------|----------------------|------------------|-------------------|
| 133 | I-19 | T.I. | 8151 | RAMP 83A | 0.16 | 0.28 | 0.44 | MONTHLY | 0.44 | 5.28 |
| 134 | 77 | NB | 8151 | River Rd.-NO. CDO M.P. 72.07-82.15 | 10.08 | 10.08 | 20.16 | MONTHLY | 20.16 | 241.92 |
| 135 | 77 | SB | 8151 | River Rd.-NO. CDO M.P. 72.07-82.18 | 10.08 | 10.08 | 20.16 | MONTHLY | 20.16 | 241.92 |
| 136 | 77 | NB | 8151 | Tangerine-Catalina M.P. 82.18-85.99 | 0.00 | 3.83 | 3.83 | Monthly | 3.83 | 45.96 |
| 137 | 77 | SB | 8151 | Tangerine-Catalina M.P. 82.18-85.100 | 0.00 | 3.83 | 3.83 | Monthly | 3.83 | 45.96 |
| 138 | 77 | SB | 8151 | M.P. 85.99 - COUNTY LINE MP 85.99-87.8 | 0.00 | 1.81 | 1.81 | MONTHLY | 1.81 | 21.72 |
| 139 | 77 | NB | 8151 | M.P. 85.99 - COUNTY LINE MP 85.99-87.8 | 0.00 | 1.81 | 1.81 | MONTHLY | 1.81 | 21.72 |
| 140 | B-10 | EB | 8151 | BENSON HWY M.P. 250.4 TO 253.1 | 1.53 | 0.07 | 1.60 | MONTHLY | 1.60 | 19.20 |
| 141 | B-10 | WB | 8151 | BENSON HWY M.P. 250.4 TO 253.1 | 1.53 | 0.09 | 1.62 | MONTHLY | 1.62 | 19.44 |
| 142 | 210 | EB | 8151 | Broadway-Richey. MP 1.5- 4.7 | 3.20 | 3.20 | 6.40 | 2 X Month | N/A | 153.60 |
| 143 | 210 | WB | 8151 | Broadway-Richey. MP 1.5- 4.8 | 3.20 | 3.20 | 6.40 | 2 X Month | N/A | 153.60 |
| ORG TOTAL CURB MILES | | | | | | | 79.78 | | 70.43 | 1,189.76 |
| 130 | SR 189 | BOTH | 8153 | BORDER TO JCT US89 MP 3.70 (Mar - Nov) | 3.76 | 3.76 | 7.52 | 2 X MONTH | 15.04 | 180.48 |
| 131 | I-19 | NB | 8153 | MP 0.3 TO 3.00 4.00 | 2.70 | 2.70 | 5.40 | QUARTERLY | N/A | 21.60 |
| 132 | I-19 | SB | 8153 | MP 0.3 TO 3.00 | 2.70 | 2.70 | 5.40 | QUARTERLY | N/A | 21.60 |
| 133 | I-19 | T.I. | 8153 | WESTERN AVENUE T.I. MP 1.18 | | | 1.40 | 2 X MONTH | 2.80 | 33.60 |
| 134 | I-19 | T.I. | 8153 | MARIPOSA T.I. MP 2.95 | | | 1.40 | 2 X MONTH | 2.80 | 33.60 |
| 136 | I-19 | T.I. | 8153 | PENA BLANCA T.I. MP 7.71 | | | 1.40 | QUARTERLY | N/A | 5.60 |
| 136 | I-19 | T.I. | 8153 | CALABASAS T.I. MP 10.88 | | | 1.80 | QUARTERLY | N/A | 7.20 |
| 137 | I-19 | T.I. | 8153 | PECK CANYON T.I. MP 13.98 | | | 1.40 | QUARTERLY | N/A | 5.60 |
| 138 | I-19 | T.I. | 8153 | PALO PARADA T.I. MP 15.83 | | | 1.70 | QUARTERLY | N/A | 6.80 |
| 139 | I-19 | T.I. | 8153 | TUMACACORI T.I. MP 18.13 | | | 1.90 | QUARTERLY | N/A | 7.60 |
| 140 | I-19 | T.I. | 8153 | TUBAC T.I. MP 21.35 | | | 1.90 | QUARTERLY | N/A | 7.60 |
| 141 | I-19 | T.I. | 8153 | CHAVEZ T.I. MP 24.82 | | | 1.90 | QUARTERLY | N/A | 7.60 |

TOTAL P. 07

Additional Supplemental Specifications I

REVISED February 2, 2001

SEP-21-2001 14:51

ADOT

520 628 5387 P. 07

APPENDIX B

**SWMP Annual Report – Phoenix District Landscape Section Response
September 19, 2001**

3. Manual Litter Pickup

Landscape Section utilizes “on-call” litter contract to remove litter in non-sponsored landscape areas. 7,068 bags of litter were removed from the urban freeway system in the year 2000. This is performed on as needed basis.

No hazardous material is removed on this contract.

Only recorded documentation is approved invoice to pay contractor for services.

4. AAH Program

This are two programs in the Phoenix District Landscape Section

The *sponsored* program removed 58,160 bags of litter from the urban areas of this district in the year 2000. Service was generally performed weekly. As of August 2001, 75 segments were adopted out of 147 segments that are available. Segments are generally two miles in length for one direction only.

The *volunteer* program removed 2,161 bags of litter from the rural areas of this district in the year 2000. Service was generally performed 2 times per year.

Our experience has been that the number of areas serviced by the sponsor program are dropping, and the areas serviced by the volunteers are holding steady, but are not being maintained at the preferred service level.

APPENDIX C

RECEIVED AUG 16 20

Arizona Department of Transportation (ADOT)
On-Call Statewide Landscape Architecture Design Services
Revision of ADOT Erosion and Pollution Control Manual
TRAKS No. H5908 OIX, TASK ORDER 09

SCOPE OF WORK

Wheat Scharf Associates

July 30, 2001

PURPOSE: Recommend and implement changes to the ADOT Erosion and Pollution Control Manual

PROCEDURE: In consultation with other ADOT On Call Consultants, ADOT Roadside Development Section, ADOT Environmental Planning, and others (engineers, erosion/revegetation specialists) evaluate, assess, and develop recommendations/changes to the existing manual.

TASK DESCRIPTIONS:**I. Coordination & Research****A. Project Coordination**

1. Project Schedule: Work with ADOT Roadside Development Section to develop a schedule and submittal deadlines. Maintain and update schedule monthly.
2. Set up a Steering Committee: Work with ADOT Roadside Development staff to identify potential committee members from:
 - a. Agencies: ADOT, USFS, BLM, Corps of Engineers, FHWA, and ADEQ
 - b. ADOT Sections: Environmental Planning, Roadway Design, Natural Resources, Construction Operations and the Districts.
 - c. Private Consultants
3. Miscellaneous Project Management: coordination meetings, correspondence, etc.

B. Research - Review & compile developments & changes in:

1. Laws and Regulations: Work with ADOT Environmental Planning staff.
2. New ASTM's regarding erosion control
3. Academic literature re: best practices
4. Industry literature, technology, techniques & practices

C. Steering Committee Meeting:

1. Meeting Preparation: Roadside Development Section will assist with selection and reservation of meeting room. WSA will notify Steering Committee members regarding meeting time and location and prepare agenda and displays if needed (typical all meetings).
2. Lead Meeting & document discussion - Preliminary Meeting Agenda:
 - a. Review of existing Pollution Control Manual: discuss strengths and weaknesses of described techniques.
 - b. Review of existing text, photographs and details: Can these be improved?
 - c. Discuss new techniques and materials.

| | |
|---|-----------------------|
| Post-It™ brand fax transmittal memo 767: # of pages 3 | |
| To MARK GAVAN | From Harry Weizlein |
| Co. E.E.C. | Co. ADOT |
| Dept. | Phone# (602) 712-4262 |
| Fax# (602) 248-7851 | Fax# (602) 712-3217 |

- d. Discuss enforcement during construction, including Field Log and Quality Control Check List(s).
- e. Provide and Distribute Meeting Minutes

II. Rough Draft

- A. Import Existing Text and Images: from electronic files provided by ADOT
- B. Edit Text and Images - Organization and format of Manual will be same as existing Manual. Proposal is based on minimal changes to existing manual except for the following:
 - 1. Chapter 2: Objective 2 (pp. 7-10):
 - a. Text: Describe surface preparation, seeding, mulching and tacking in greater detail.
 - b. New photographs
 - 2. Appendix D: Best Management Practices—add the following new techniques:
 - a. Topsoil Salvage and Reuse
 - b. Seeding, tacking and mulching
 - c. Sediment Logs
 - d. Straw Rolls
 - e. Composted Mulch
 - f. Soil Stabilizers
 - 3. General Descriptions: WSA will describe intent of 5 new techniques listed above.
 - 4. Minor additional revisions and/or additions
- C. Revise Specifications to incorporate new techniques listed above (based on obtaining electronic files for existing text from ADOT). Includes revisions to:
 - 1. 104 SWPLN
 - 2. 104 SWPOL
 - 3. Section 201 - Clearing & Grubbing
 - 4. Section 203-3.03(B) Slopes
 - 5. Section 204 - Reshaping & Grading Existing Improvements
 - 6. Section 804 - Topsoil
 - 7. Section 807-3.02 Planted Stock & Seeding Establishment
 - 8. Section 810 - Erosion Control & Pollution Prevention
- D. Typical Details: WSA will incorporate details from existing manual and develop details for 5 new techniques.
- E. Field Log Format and Quality Control Checklist - based on input obtained at first Steering Committee Meeting.
- F. Review by Technical Advisors (Higgins & James) - revise draft as needed
- G. Steering Committee Review
 - 1. Print and distribute Rough Draft for comments (27 copies of 135 pages each)
 - 2. Organize meeting and document discussion.

III. Second Draft - Incorporate comments from: Steering Committee (revisions and additions)

- A. Text
- B. Images & Photographs
- C. Specifications

- D. Details
- E. Field Log Format and Quality Control Checklist
- F. Review by Technical Advisors - revise as needed
- G. Review by Steering Committee
 1. Print and distribute Second Draft for comments (27 copies of 135 pages each)
 2. Organize meeting and document discussion.

IV. **Final Draft**- incorporate comments from Steering Committee (revisions and additions)

- A. Text
- B. Images & Photographs
- C. Specifications
- D. Details
- E. Field Log Format and Quality Control Checklist
- F. Review by Technical Advisors - revise as needed
- G. Draft Printing
- H. Review by ADOT
- I. Final Printing (an allowance of \$6,000 has been included for printing. This budget is subject to review depending on the desired final product.

APPENDIX D

Globe/Safford Constructors

ARIZONA DEPARTMENT OF TRANSPORTATION
EMPLOYEE TRAINING
SIGN IN SHEET

Course Title: NPDES TRAINING Course Code: GN9995
 Instructor's Name: ROLAND TANG Instructor Code: _____
 Training Date: 8-23-01 Total Credit Hours: 3.0

| EMPLOYEE NAME (Please Print) | Social Security Number: | ORG. | Mail Drop: | Phone: |
|---------------------------------|----------------------------|------|---------------|--------------|
| 1). JOHN ACRES | | 8450 | 5450 | 928-428-4730 |
| 2). BRAD SMITH | | 11 | 11 | 11 |
| 3). WAYNE M. BAKER | | 8451 | 5451 | 928-687-1411 |
| 4). TYREL A. CRAWFORD | | 8451 | 5451 | 687-1411 |
| 5). BOWENAS PAUL | | 8330 | G 330 | 425-0412 |
| 6). DAVID WINDSOR | | 8468 | 5430 | 428-5473 |
| 7). BREN FRANCON | | 8330 | G 330 | 425-0412 |
| 8). SHAWN HARVEY | | 8430 | 5430 | 428-5473 |
| 9). BILL HARMON | | 8400 | 5400 | 428-5473 |
| 10). GAY HAWKINS | | 8430 | 5430 | 428-5473 |
| 11). REED LARSON | | 8430 | 5430 | 428-5473 |
| 12). MILLER B. YELBY | | 8430 | 5430 | 428-5473 |
| 13). PAUL R. DAVID | | 8430 | 5430 | 428-5473 |
| 14). DEBRA KENT | | 8330 | G 330 | 425-0412 |
| 15). MARK GUERENA | | 8330 | G 330 | 928-425-0412 |
| 16). FLORENCE LEAVENS | | 8332 | G 332 | 928-522-3533 |
| 17). CLINT NEFF | | 8332 | G 332 | 928-522-3533 |
| 18). CRAIG REDSTEER | | 8332 | G 332 | 537-3533 |
| 19). | | | | |
| 20). | | | | |
| 21). | | | | |
| 22). | | | | |
| 23). | | | | |
| 24). | | | | |
| 25). | | | | |
| 26). | | | | |
| 27). | | | | |
| 28). | | | | |
| 29). | | | | |
| 30). | | | | |

EMPLOYEE PROFILE DATA BASE
 TRAINING, SEMINARS, CONVENTIONS
 HUMAN RESOURCE DEVELOPMENT CENTER

Tucson/ Benson Construction

Course Title NPDES Training Course Code GEN9995
 Instructor's Name Roland tang Company Environmental Planning Group
 Instructor's Org. 9152 Start Date 8/21/01 End Date 8/21/01 Hours 3.0

| PLEASE PRINT FULL NAME | SOCIAL SECURITY NUMBER | ORG | MAIL DROP | 520 PHONE |
|---------------------------------|---------------------------|-------|--------------|--------------|
| 1 James Beindl | 395-56-471 | 18453 | S453 | 720.4751 |
| 2 GABRIEL AQUILA | 526-25-861 | 98452 | S452 | 3842385 |
| 3 MARTIN HERNANDEZ | 552-66-574 | 8454 | S454 | 520 43489 |
| 4 Ross G. Estavillo | 526-84-100 | 58431 | S431 | 586 2949 |
| 5 Jerry R Lawson | 527-76-686 | 8453 | S453 | 720 4751 |
| 6 Fred G. Aquiler | 526-50-955 | 28452 | S452 | 3842388 |
| 7 James Cunningham | 527-59-846 | 58431 | S431 | 586 2949 |
| 8 Anthony Hanna | 526-37-106 | 98132 | T132 | 628 5667 |
| 9 Michael R. White | 527-02-680 | 88431 | S431 | 586 2949 |
| 10 James Tidwell | 567-60-952 | 68133 | T133 | 836 2501 |
| 11 EDWARD A. LARA | 527-48-737 | 98133 | T133 | 836 2501 |
| 12 Ligia B. Luria | 168-34-026 | 78132 | T132 | 408 5667 |
| 13 Shawn Davis Granite. | | | | 748 8000 |
| 14 CHAD CHRISTOPHERSEN Granite. | | | | 622 7757 |
| 15 CLIFF RILEY | 286-44-181 | 38150 | T150 | 628 5700 |
| 16 RUDY BARRERA | 527-31-862 | 78431 | S431 | 586 2949 |
| 17 John H. Biggs | 527-23-562 | 88431 | S431 | 586 2949 |
| 18 CARTER L. MCKUNE | 526-88-693 | 98133 | T133 | 836 2501 |
| 19 GRESS PAGE - ASHTON Co | 514-46-868 | 04 | | 520 5500 |
| 20 PAUL FRANCOM - ASHTON Co | 526-48-350 | 05 | | 520 5500 |
| 21 ALFRED ZUMBA - ADOT | 527-89-894 | 98130 | T130 | 628 5602 |
| 22 DANNY GRANITE HDR | 5 | | | 628 5602 |
| 23 John Kane - ADOT | 526-83-935 | 68153 | T153 | 287 3771 |
| 24 GEORGE BLOMELT | 526-25-606 | 08454 | S454 | 364 3489 |
| 25 TODD B ADAMS | 527-89-129 | 99 | | 748 0188 |
| 26 William H. Flake II | 574-24-594 | 43 | | 623 0900 |
| 27 | | | | |
| 28 | | | | |
| 29 | | | | |
| 30 | | | | |

From: Carol Ellis
Sent: Monday, July 23, 2001 1:11 PM
To: Ken Damgaard
Subject: RE: NPDS (National Pollutant Discharge Elimination System)

Can you get a representative from you contractors on your projects and a project manager for you projects to attend also?

Carol Santa Cruz
Tucson District
Training Coordinator
520-620-5425

-----Original Message-----

From: Ken Damgaard
Sent: Monday, July 23, 2001 12:51 PM
To: Carol Ellis
Subject: RE: NPDS (National Pollutant Discharge Elimination System)

Carol;

For now August 21st is ok. Let me know when the date is finalized so that I can schedule it on my calendar. Thanks! Ken

-----Original Message-----

From: Carol Ellis
Sent: Monday, July 23, 2001 11:48 AM
To: Jo Ann Noriega; Susie Puzas; Alfredo Zuniga; Daniel Granillo; Ken Damgaard; Larry Maucher; Ligia Llorca; Tony Hanna; Carter McKune; James Tidwell
Cc: Mark Dunbar; Dennis Alvarez
Subject: NPDS (National Pollutant Discharge Elimination System)

Roland Tang contacted me to set up a meeting with him, you, and your contractors on the subject of NPDS. I can get 30 people in on a session tentatively set for August 21, from 9:00 am to 11:30 am. I need to have your input.

Carol Santa Cruz
Tucson District
Training Coordinator
520-620-5425

Carol Ellis

From: Tony Hanna
Sent: Wednesday, August 15, 2001 9:24 AM
To: 'cress@ashtoncoinc.com'
Cc: Carol Ellis
Subject: FW: NPDS (National Pollutant Discharge Elimination System)

Chris, if your group is interested in attending this class, please contact Carol at the number listed below. Thanks Tony
August 21 looks good to me. Let me know so we can check with the contractors and then tell Carol.

—Original Message—

From: Carol Ellis
Sent: Monday, July 23, 2001 11:48 AM
To: Jo Ann Noriega; Susie Puzas; Alfredo Zuniga; Daniel Granillo; Ken Damgaard; Larry Maucher; Ligia Lloria; Tony Hanna; Carter McKune; James Tidwell
Cc: Mark Dunbar; Dennis Alvarez
Subject: NPDS (National Pollutant Discharge Elimination System)

Roland Tang contacted me to set up a meeting with him, you, and your contractors on the subject of NPDS. I can get 30 people in on a session tentatively set for August 21, from 9:00 am to 11:30 am. I need to have your input.

Carol Santa Cruz
Tucson District
Training Coordinator
520-620-5425

Carol Ellis

From: Ken Damgaard
Sent: Thursday, August 02, 2001 2:50 PM
To: Carol Ellis
Subject: RE: NPDS (National Pollutant Discharge Elimination System)

Carol:

I've polled several of my contractor contacts and my own personnel. I think we can have about 5 contractor people and 5 ADOT. Kindly, let me know when you can confirm that the class is a go or no go. Thanks! Ken

-----Original Message-----

From: Carol Ellis
Sent: Monday, July 30, 2001 3:09 PM
To: Ken Damgaard
Subject: RE: NPDS (National Pollutant Discharge Elimination System)

Ken, can you tell me how many contractors and inspectors you will be sending?

Carol Santa Cruz
Tucson District
Training Coordinator
520-620-5425

-----Original Message-----

From: Ken Damgaard
Sent: Tuesday, July 24, 2001 1:19 PM
To: Carol Ellis
Subject: RE: NPDS (National Pollutant Discharge Elimination System)

Carol,

Yes, some inspectors might be interested, but you specifically asked about contractors and project managers. Thanks! Ken

-----Original Message-----

From: Carol Ellis
Sent: Tuesday, July 24, 2001 8:53 AM
To: Ken Damgaard
Subject: RE: NPDS (National Pollutant Discharge Elimination System)

What about the inspectors on the projects?

Carol Santa Cruz
Tucson District
Training Coordinator
520-620-5425

-----Original Message-----

From: Ken Damgaard
Sent: Monday, July 23, 2001 2:38 PM
To: Carol Ellis
Subject: RE: NPDS (National Pollutant Discharge Elimination System)

Carol,

Probably could get a contractor representative, but Larry Maucher and company are the only Project Managers we have in this area

-----Original Message-----



Environmental Planning Group

INTEROFFICE MEMO

to: JOHN LOUIS
Assistant State Engineer
Roadway Group

Date: September 27, 2000

from: ROLAND TANG *R. Tang*
Environmental Planning Group

Subject: National Pollutant Discharge
Elimination System (NPDES)

On September 30, 1999, ADOT was issued an NPDES permit by the US Environmental Protection Agency (EPA) for their municipal separate storm sewer systems (MS4's) located within the Phoenix and Tucson metropolitan areas. This permit (Permit No. AZS000018) authorizes ADOT to discharge storm water from its storm drains into the waters of the United States. The conditions of the permit require ADOT to control pollutants to the maximum extent possible by implementing their own proposed storm water management plan (SWMP) as described in ADOT's, Part 2 Permit Application, dated November, 1992. The permit also requires certain additional control measures as well as reporting requirements.

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.

Please include and implement this requirement by incorporating it in the Roadway Design Manual, as a supplement to the Design Manual, or other guidelines.

If you have any questions regarding this request, or would like a copy of the permit, please contact me at 602.712.7769.

C: Richard M. Duarte, Manager
Tammy Flaitz, Program Manager I
John Hauskins, Phoenix Maintenance District
Perry Powell, Phoenix Construction District
Dennis Alvarez, Tucson District

RT:jw

EMPLOYEE PROFILE DATA BASE
 TRAINING, SEMINARS, CONVENTIONS
 HUMAN RESOURCE DEVELOPMENT CENTER

Course Title NPDES Course Code GEN9995
 Instructor's Name Roland Tang Company ADOT / Environmental Plannin
 Instructor's Org. 9150 Start Date 6/21/01 End Date 6/21/01 Hours 3.0

| PLEASE PRINT FULL NAME | SOCIAL SECURITY NUMBER | ORG | MAIL DROP | PHONE |
|------------------------|------------------------|----------------------|-----------|----------------|
| 1 Jeff Bentz | | Stantec | | (602) 438-2300 |
| 2 Debra D. Einweck | | ADOT | 617E | 602 712-6747 |
| 3 John Anderson | | West. Scharf | | 520-884-7911 |
| 4 Eric Scharf | | " | | " |
| 5 JOSEPH R. SALAZAR | | 95966 | 17E | 602 712-7357 |
| 6 Zitao Fang | | 95966 | 17E | 602 712-7357 |
| 7 Joe Warren | | 725D | 614E | 602 712-2895 |
| 8 Tammy Flaitz | | 91506 | 19E | 602 712-9638 |
| 9 Daisy Eldridge | | 91506 | 19E | 602 712-7735 |
| 10 Alisa Sauvageot | | 92206 | 30E | 712 7137 |
| 11 Robert Forrest | | 91506 | 19E | 712 6843 |
| 12 Justin White | | 9150 | F500 | 779 7528 |
| 13 Jeff Kratzke | | Logan Simpson Design | | (602) 743-1000 |
| 14 WILL HERRERA | | Logan Simpson Design | | (800) 967-343 |
| 15 HARRY WOELZLEIN | | ADOT | 617E | 602 712-4262 |
| 16 Michael Shirley | | Logan Simpson Design | | (800) 967-1343 |
| 17 SHERD HOLLAND | | " | | " |
| 18 DAN Woelzlein | | EEC | | (602) 248-7702 |
| 19 GUYVE | | EEC | | 301 248 7702 |
| 20 Davis Robinson | | LSD | | 480-967-7443 |
| 21 STEVE LOWME | | LSD | | 480-967-1343 |
| 22 Judy Mielke | | LSD | | 480-967-1343 |
| 23 ASHLEY KONVALUS | | LSD | | 480-967-1343 |
| 24 PATRICKA MCABE | | LSD | | 480-967-1343 |
| 25 Greg Smith | | LSD | | 480-967-1343 |
| 26 LeRoy Brady | | ADOT | 617E | 602 712-7357 |
| 27 Rick Campbell | | Premier Engr. | | 480 829 6000 |
| 28 KURT MONTEI | | Premier Engr. | | 480 829 6000 |
| 29 Grata Nosesku | | 1150 | 619E | 602 712 6161 |
| 30 | | | | |

APPENDIX E

CONSTRUCTION SWPPP CHECKLIST

This unofficial, optional, form is intended to assist the applicant in the preparation on the Storm Water Pollution Prevention Plan (SWPPP). The CITATION column indicates where the particular requirement can be found in the construction general permit Federal Register. Use the LOCATION column to make a notation as to where the requirement can be found in the SWPPP. In the OK? column, indicate whether you think the SWPPP adequately addresses the corresponding rule. Once this form has been filled out, your SWPPP should meet EPA's minimum requirements. Although this checklist is intended to reflect EPA's requirements for an acceptable SWPPP, all responsibility for a complete SWPPP remains with the permittee. A full description of the required contents of the SWPPP, as well as additional permit requirements, may be found in the Construction General Permit, published in the Federal Register on February 17, 1998. The shaded blocks are subject headers and are not intended to be filled out. SW=Storm Water. ID=identification. ac=acres.

| Federal Citation | Rule Description | OK? | Location in SWPPP & Notes |
|------------------|------------------|-----|---------------------------|
|------------------|------------------|-----|---------------------------|

SITE DESCRIPTION

| | | | |
|----------------|--|--|--|
| Part IV.D.1.a. | description of the nature of the construction activity | | |
| Part IV.D.1.b. | description of the sequence of disturbance activities | | |
| Part IV.D.1.c. | estimates of total area & area to be disturbed including off site borrow and fill areas | | |
| Part IV.D.1.d. | pre and post construction runoff coefficient estimate; soil data or quality of any discharge | | |
| Part IV.D.1.e. | general location map | | |
| Part IV.D.1.e. | <i>SITE MAP WITH:</i> | | |
| | drainage patterns | | |
| | estimated slope after grading | | |
| | area of soil disturbance | | |
| | areas not disturbed | | |
| | location of major structural and nonstructural controls identified in the plan | | |

| Federal Citation | Rule Description | OK? | Location in SWPPP & Notes |
|------------------|---|-----|---------------------------|
| | locations where stabilization practices are expected to occur | | |
| | locations of off-site material | | |
| | waste, borrow or equipment storage areas | | |
| | surface waters (with wetlands) | | |
| | location where SW is discharged to a surface water | | |
| | <i>NARRATIVE SITE DESCRIPTION</i> | | |
| Part IV.D.1.f. | location and description of any discharge associated with non-construction industrial activity | | |
| | location and description of any SW discharges from dedicated asphalt or concrete plants covered by the SW permit | | |
| Part IV.D.1.g. | the name of receiving waters, and areal extent and description of wetlands or other special aquatic sites | | |
| Part IV.D.1.h. | a copy of the permit requirements | | |
| Part IV.D.1.i. | information on whether listed endangered or threatened species, or critical habitat, are found in proximity and if such species may be affected by the SW discharge or discharge-related activities | | |

EROSION AND SEDIMENT CONTROL

| | | | |
|--|----------------------------|--|--|
| | <i>CONTROL DESCRIPTION</i> | | |
|--|----------------------------|--|--|

| | | | |
|-------------|--|--|--|
| art IV.D.2. | for each activity identified in Part IV.D.1.b: Appropriate control measures and general timing that the measures will be implemented; and, Which permittee is responsible for implementation | | |
|-------------|--|--|--|

| Federal Citation | Rule Description | OK? | Location in SWPPP & Notes |
|----------------------|--|-----|---------------------------|
| Part IV.D.2.a.(1) | <i>Goals and Criteria</i> Statements that: | | |
| Part IV.D.2.a.(1)(a) | erosion and sediment controls designed to retain sediment on site to the extent practicable | | |
| Part IV.D.2.a.(1)(b) | all control measures must be selected, installed, and maintained with manufacturers specifications and good engineering practices. | | |
| Part IV.D.2.a.(1)(c) | off-site accumulations of sediment must be removed | | |
| Part IV.D.2.a.(1)(d) | sediment must be removed when from ponds and traps when design capacity has been reduced by 50% | | |
| Part IV.D.2.a.(1)(e) | litter, construction debris, and construction chemicals shall be prevented from becoming pollutant sources | | |
| Part IV.D.2.a.(1)(f) | offsite storage areas used solely by the permittee shall be addressed | | |
| Part IV.D.2.a.(2) | <i>Stabilization Practices</i> | | |
| | interim and permanent stabilization practices | | |
| | site-specific scheduling of implementation | | |
| | ensure that existing vegetation is preserved where attainable | | |

| | | | |
|--|--|--|--|
| | ensure that disturbed portions are stabilized | | |
| | dates when major grading activities occur | | |
| | dates when construction activities temporarily or permanently cease on a portion of the site | | |
| | dates stabilization measures are initiated | | |

| Federal Citation | Rule Description | OK? | Location in SWPPP & Notes |
|---------------------|---|-----|---------------------------|
| Part IV.D.2.a.(3) | <i>Structural Practices</i> | | |
| | description of structural practices to divert flows, store flows, or limit runoff to the degree attainable | | |
| | structural practices should not be placed in the floodplain to the degree attainable | | |
| Part IV.D.2.a(3)(a) | disturbed drainage area ≥ 10 ac, a basin with storage for a 2yr, 24hr storm from each disturbed acre drained, or equivalent measures— <i>OR</i> | | |
| | a basin with 3600 ft ³ of storage per acre; or equivalent measures— <i>OR</i> | | |
| | if detention is not attainable, sediment controls on all sideslope & downslope boundaries as appropriate | | |
| Part IV.D.2.a(3)(b) | disturbed drainage area < 10 ac, smaller sediment basins and/or traps on down slope boundaries — <i>OR</i> | | |

| | | | |
|--|---|--|--|
| | storage for a volume of runoff from a 2yr, 24hr storm — <i>OR</i> | | |
| | 3600 ft ³ of storage per disturbed acre is provided | | |

POST-CONSTRUCTION STORM WATER MANAGEMENT

| | | | |
|---------------|---|--|--|
| Part IV.D.2.b | description of post-construction SW pollution control measures | | |
| | post-construction structural measures placed on upland soils to the degree attainable | | |

| Federal Citation | Rule Description | OK? | Location in SWPPP & Notes |
|-------------------|---|-----|---------------------------|
| Part IV.D.2.b.(1) | explanation of the technical basis used to select the practices to control pollution where flows exceed predevelopment levels | | |
| Part IV.D.2.b.(2) | velocity dissipation devices at outfalls | | |

OTHER CONTROLS

| | | | |
|-------------------|---|--|--|
| Part IV.D.2.c.(1) | no materials discharged to a Water of the US | | |
| Part IV.D.2.c.(2) | minimization of off-site tracking of sediments and dust generation | | |
| Part IV.D.2.c.(3) | demonstration of compliance with State & local waste disposal, sewer, septic regulations | | |
| Part IV.D.2.c.(4) | description of construction and waste materials on-site | | |
| | description of controls to reduce pollutants from waste materials including storage & spill prevention and response | | |

| | | | |
|-------------------|---|--|--|
| Part IV.D.2.c.(5) | description of non-construction pollutant sources | | |
| | description of controls at non-construction pollutant sources to minimize pollutant discharges | | |
| Part IV.D.2.c.(6) | description of measures necessary to protect listed endangered or threatened species, or critical habitat | | |

APPROVED STATE OR LOCAL PLANS

| | | | |
|-------------------|--|--|--|
| Part IV.D.2.d.(1) | procedures/requirements for local compliance due to local rules | | |
| | statement that SWPPP is consistent with requirements specified in applicable sediment & erosion site plans or SW management site plans, or site plans or permits approved by State, Tribal, or local officials | | |

| | | | |
|------------------|------------------|-----|---------------------------|
| Federal Citation | Rule Description | OK? | Location in SWPPP & Notes |
|------------------|------------------|-----|---------------------------|

| | | | |
|-------------------|---|--|--|
| Part IV.D.2.d.(2) | SWPPP updates to remain consistent with changes to protect surface water resources in sediment erosion site plans or site permits, SW management site plans or site permits approved by State, Tribal, or local officials | | |
|-------------------|---|--|--|

MONTHLY INSPECTIONS

| | | | |
|----------------|--|--|--|
| Part IV.D.4.a. | disturbed and material storage areas for evidence or potential for pollutant discharge | | |
| | sediment and erosion control measures operating correctly | | |

| | | | |
|------------------|--|--|--|
| | at accessible discharge points ascertain whether BMPs are effective in preventing significant impacts to receiving waters. Where discharges are inaccessible, inspect nearby downstream locations. | | |
| | sediment tracking at exit and entrance | | |
| Part IV.D.4.b. | documentation of any SWPPP revisions within 7 days of inspection | | |
| Part IV.D.4.c. | report with: summary, inspector's name, qualifications, date, major observations, actions taken. ID of incidents of non-compliance or certification of compliance | | |
| | signature of report in accord with Part VI.G | | |
| Part IV.D.5. | <i>NON-SW DISCHARGES</i> . ID of all sources of non-SW with pollution prevention measures | | |
| SIGNATURE | | | |
| Part IV.B.1. | signature on SWPPP in accord with Part VI.G. | | |

APPENDIX F

ADOT NPDES Inspection Checklist

Project:

Monthly inspection Weekly Inspection Rainfall event inspection

Rainfall: _____ inches

Inspected by: _____ Title: _____ Date: _____

| Yes | No | Does Not Apply | |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are there any BMPs called for on the SWPPP that are either not installed or installed improperly? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are there any operational storm sewer inlets that are not protected from sediment inflow? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Do any structural practices require repair or clean-out to maintain adequate function? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are there any on-site traffic routes, parking and storage of equipment and supplies that are located outside of areas specifically designated for those uses? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Are there any temporary soil stock piles or construction materials located outside of the approved areas? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Do any seeded or landscaped areas require maintenance, irrigation, fertilization, seeding, or mulching? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Is there any evidence that sediment is leaving the site? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Is there any evidence of erosion on cut or fill slopes or in roadside ditches? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Is there any evidence of sediment, debris, or mud on public roads at intersections with site access roads? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Does the Storm Water Prevention Plan require revisions? |

If the answer is YES to any of the above, explain necessary maintenance actions or plan revisions (attach additional sheets if necessary).

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 gathered and evaluated 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 is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____ Date: _____

APPENDIX G



Arizona Department of Transportation

Environmental Planning Group

INTEROFFICE MEMO

To: JOHN LOUIS
Assistant State Engineer
Roadway Group

Date: September 27, 2000

From: ROLAND TANG *R. Tang*
Environmental Planning Group

Subject: National Pollutant Discharge
Elimination System (NPDES)

On September 30, 1999, ADOT was issued an NPDES permit by the US Environmental Protection Agency (EPA) for their municipal separate storm sewer systems (MS4's) located within the Phoenix and Tucson metropolitan areas. This permit (Permit No. AZS000018) authorizes ADOT to discharge storm water from its storm drains into the waters of the United States. The conditions of the permit require ADOT to control pollutants to the maximum extent possible by implementing their own proposed storm water management plan (SWMP) as described in ADOT's, Part 2 Permit Application, dated November, 1992. The permit also requires certain additional control measures as well as reporting requirements.

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.

Please include and implement this requirement by incorporating it in the Roadway Design Manual, as a supplement to the Design Manual, or other guidelines.

If you have any questions regarding this request, or would like a copy of the permit, please contact me at 602.712.7769.

C: Richard M. Duarte, Manager
Tammy Flaitz, Program Manager I
John Hauskins, Phoenix Maintenance District
Perry Powell, Phoenix Construction District
Dennis Alvarez, Tucson District

RT:jjw

APPENDIX H

MAJOR STORM SEWER OUTFALLS (Phoenix Metropolitan Area)

| OUTFALL IDENTIFIER | STORM SEWER DATA | | | | LOCATION DATA | | | | | CONSTRUCTION PLAN DATA | | |
|------------------------------|--------------------------|-----------------|------------------------|----------------------------|-----------------------------------|--|---------------|---------------------------------------|------------------|------------------------|-----------------|------------|
| | ROUTE NO – MILE POST | TYPE | SIZE / DEPTH | MATERIAL | ROUTE NO ROUTE NAME | RECEIVING WATER | LOCATION | STATE PLANE COORDINATES NORTH EAST | CITY | PROJECT I.D. No. | PROJECT STATION | OFFSET L/R |
| 10-130-3 (Papago Channel) | Trapezoidal Open Channel | TW=80' D=10' | Concrete | I-10 Papago Freeway | Agua Fria River | ½ Mile W. of E1 Mirage Rd. & 100' N. of I-10 | 894900 374000 | 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 | 882000 452300 | Phoenix | I-10-3(223) | 7677+00 | R | |
| 10-149.18 (East tunnel) | Circular Tunnel | DIA=21" | Concrete | I-10 Papago Freeway | Salt River | 20 th St. E. side@ N. Bank of Salt River | 880500 462700 | 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 | 880300 468500 | Phoenix | I-10-3(206) | 7936+00 | R | |
| 10-150.45 | Dual Circular Pipes | D=72" | Concrete | I-10 Maricopa Freeway | Salt River | N. Bank of Salt River @ E. side of I-10 | 880500 469100 | Phoenix | I-10-3(206) | 7936+00 | L | |
| 10-151.06 | Circular Pipe | D=66" | Concrete | I-10 Maricopa Freeway | Tempe – 48 th St. rain | N. Quadrant of I-10 & University Traffic Interchange | 878100 471100 | Phoenix | I-10-3(206) | 7945+00 | L | |
| 17-198.48 | Circular Pipe | D=102" | Concrete | I-17 Black Canyon Freeway | Salt River | 2200' S. of Buckeye Rd. & 1700' E. of 27 th Ave. | 878950 440900 | Phoenix | I-17-1(9) | 69+60 | L 6000 | |
| 51-5.45 | Circular Pipe | D=36" | Concrete | S.R. 51 Squaw Peak Parkway | ACDC | 300' N & W of Intersection @ 18 th St. and Ocotillo | 922300 461900 | 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 | 930600 463500 | Phoenix | M-600-Z-502 | 84+50 | L | |
| 101-7.76 | Trapezoidal Open Channel | TW=82' D=8' | Concrete | Loop 101 Agua Fria Freeway | New River | ¼ mile S. of Northern Ave. and 1000' W. of 99 th Ave. | 927000 390800 | 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 | ½ mile N. of Peoria Ave. along E. Bank of New River | 942500 394700 | Peoria | M-600-0-502 | 603+68 | L 920 | |

DIA = Diameter

TW = Top Width

D = Depth

L = Left

R = Right

MAJOR STORM SEWER OUTFALLS (Phoenix Metropolitan Area)

| OUTFALL IDENTIFIER | STORM SEWER DATA | | | | LOCATION DATA | | | | | CONSTRUCTION PLAN DATA | | |
|------------------------------|--------------------------|-----------------|------------------------|----------------------------|-----------------------------------|--|----------|------------------------------------|----------|------------------------|-----------------|------------|
| | ROUTE NO – MILE POST | TYPE | SIZE / DEPTH | MATERIAL | ROUTE NO ROUTE NAME | RECEIVING WATER | LOCATION | STATE PLANE COORDINATES NORTH EAST | CITY | PROJECT I.D. No. | PROJECT STATION | OFFSET L/R |
| 10-130-3 (Papago Channel) | Trapezoidal Open Channel | TW=80' D=10' | Concrete | I-10 Papago Freeway | Agua Fria River | ½ Mile W. of E1 Mirage Rd. & 100' N. of I-10 | 894900 | 374000 | 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 | 882000 | 452300 | Phoenix | I-10-3(223) | 7677+00 | R |
| 10-149.18 (East tunnel) | Circular Tunnel | DIA=21" | Concrete | I-10 Papago Freeway | Salt River | 20 th St. E. side @ N. Bank of Salt River | 880500 | 462700 | 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 | 880300 | 468500 | Phoenix | I-10-3(206) | 7936+00 | R |
| 10-150.45 | Dual Circular Pipes | D=72" | Concrete | I-10 Maricopa Freeway | Salt River | N. Bank of Salt River @ E. side of I-10 | 880500 | 469100 | Phoenix | I-10-3(206) | 7936+00 | L |
| 10-151.06 | Circular Pipe | D=66" | Concrete | I-10 Maricopa Freeway | Tempe – 48 th St. rain | N. Quadrant of I-10 & University Traffic Interchange | 878100 | 471100 | Phoenix | I-10-3(206) | 7945+00 | L |
| 17-198.48 | Circular Pipe | D=102" | Concrete | I-17 Black Canyon Freeway | Salt River | 2200' S. of Buckeye Rd. & 1700' E. of 27 th Ave. | 878950 | 440900 | Phoenix | I-17-1(9) | 69+60 | L 6000 |
| 51-5.45 | Circular Pipe | D=36" | Concrete | S.R. 51 Squaw Peak Parkway | ACDC | 300' N & W of Intersection @ 18 th St. and Ocotillo | 922300 | 461900 | 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 | 930600 | 463500 | Phoenix | M-600-Z-502 | 84+50 | L |
| 101-7.76 | Trapezoidal Open Channel | TW=82' D=8' | Concrete | Loop 101 Agua Fria Freeway | New River | ¼ mile S. of Northern Ave. and 1000' W. of 99 th Ave. | 927000 | 390800 | 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 | ½ mile N. of Peoria Ave. along E. Bank of New River | 942500 | 394700 | Peoria | M-600-0-502 | 603+68 | L 920 |

DIA = Diameter

TW = Top Width

D = Depth

L = Left

R = Right

MAJOR STORM SEWER OUTFALLS (Phoenix Metropolitan Area)

| OUTFALL IDENTIFIER | STORM SEWER DATA | | | | LOCATION DATA | | | | | CONSTRUCTION PLAN DATA | | |
|--------------------|--------------------------|-----------------|--------------|--|---------------------|---|---------------|------------------------------------|---------------|------------------------|-----------------|------------|
| | ROUTE No - MILE POST | TYPE | SIZE / DEPTH | MATERIAL | ROUTE NO ROUTE NAME | RECEIVING WATER | LOCATION | STATE PLANE COORDINATES NORTH EAST | CITY | PROJECT I.D. No. | PROJECT STATION | OFFSET L/R |
| 101-11.85 | Trapezoidal Open Channel | TW=45' D=8' | Concrete | Loop 101 Agua Fria Freeway | New River | ½ Mile S. of Thunderbird Rd. and 300' West | 947000 396500 | Peoria | M-600-0-502 | 658+30 | L 715 | |
| 101-13.44 | Dual Circular Pipes | DIA=42" | Concrete | Loop 101 Agua Fria Freeway | Skunk Creek | 200' S. of S.B. Bridge over Skunk Creek and 80' East | 953100 401600 | 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 | 953900 402000 | 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 | 958700 401800 | 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 | 962000 402600 | 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. | 967900 403900 | 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 | 969600 404700 | 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 | 970200 405000 | Glendale | M-600-0-503 | 917+50 | L 550 | |
| 101-20.19 | Circular Pipe | DIA=36" | Concrete | Loop 101 Agua Fria Freeway | Skunk Creek | ½ Mile S. of Beardsley Rd. at 51st Ave | 968500 423400 | Phoenix | RBA-600-0-505 | 1098+50 | | |
| 101.21.23 | Circular Pipe | DIA=42" | Concrete | Loop 101 Agua Fria Freeway | Skunk Creek | 245 E of 43 rd Ave & N. Side of Beardsley | 971200 429900 | Phoenix | RBA-600-0-505 | 1154+50 | | |
| 101-23.239 | Trapezoidal Open Channel | TW=20' D=2' | Earthen | Loop 101 Agua Fria Freeway (Frontage Road) | Skunk Creek | 260' E of 43 rd Ave & N side of N Frontage Rd. | 971200 429900 | Phoenix | RBA-600-0-505 | 1154+65 | | |

DIA = Diameter

TW = Top Width

D = Depth

L = Left

R = Right

MAJOR STORM SEWER OUTFALLS (Phoenix Metropolitan Area)

| OUTFALL IDENTIFIER | STORM SEWER DATA | | | | LOCATION DATA | | | | CONSTRUCTION PLAN DATA | | | |
|-------------------------------|--------------------------|----------------|--------------|--|---------------------|---|----------|------------------------------------|------------------------|--------------------|-----------------|------------|
| | ROUTE No - MILE POST | TYPE | SIZE / DEPTH | MATERIAL | ROUTE No ROUTE NAME | RECEIVING WATER | LOCATION | STATE PLANE COORDINATES NORTH EAST | CITY | PROJECT I.D. No. | PROJECT STATION | OFFSET L/R |
| 101-21.83 | Circular Pipe | DIA=96" | Concrete | Loop 101 Agua Fria Freeway (Frontage Road) | Scatter Wash | 2000' W. of 35 th Ave. & S. side of S. Frontage Rd. | 970900 | 431900 | Phoenix | RBA-600-0-505 | 1186+00 | |
| 101-21.869 | Circular Pipe | DIA=36" | Concrete | Loop 101 Agua Fria Freeway (Frontage Road) | Scatter Wash | 1600' W. of 35 th Ave & N side of N. Frontage Rd. | 971300 | 432200 | Phoenix | RBA-600-0-505 | 1187+00 | |
| 101-21.873 | Trapezoidal Open Channel | TW=32' D=8' | Concrete | Loop 101 Agua Fria Freeway (Frontage Road) | Scatter Wash | 1500' W of 35 th Ave & N side of N Frontage Rd. | 971300 | 432200 | Phoenix | RBA-600-0-505 | 1188+00 | |
| 101-51.58 Price Rd. Tunnel | Circular Tunnel | DIA=18' | Concrete | Loop 10 Pima Freeway | Salt River | 600' of Van Buren St. & 350; E. of S.R. 143 at relocated old Cross Cut Canal | 885400 | 508500 | Tempe | M-600-1-507 | 2871+00 | L200 |
| 143-2.90 | Circular Pipe | DIA=66" | Concrete | S.R. 143 Hohokam Expressway | Old Cross Cut Canal | 600' N. of Van Buren & 350' E of S.R. 143 at relocated Old Cross Cut Canal | 892400 | 480100 | Phoenix | 143-MA-H-0843-01D | 166+71 | R350 |
| 143.33 | Trapezoidal Open Channel | TW=9' D=4' | Concrete | S.R. 143 Hohokam Expressway | Old Cross Cut Canal | 350' N. of Loop 202 at W. bank of Relocated Old Cross Cut Canal | 894400 | 480000 | Phoenix | 143-MA-H-0843-01D | 189-45 | R270 |
| 202-3.57 | Dual Box Culverts | TW=6' D=4' | Concrete | Loop 20 East Papago Freeway | Old Cross Cut Canal | N.E. Quadrant of S.R. 143 & Loop 202 Traffic Interchange @bank of Relocated Old Cross Cut Canal | 894100 | 480100 | Phoenix | 202L-MA-H-0858-01D | 34+60 | L163 |
| 202.14 | Trapezoidal Open Channel | TW=60' D=5' | Concrete | Loop 20 East Papago Freeway | Salt River | 1800' S. of Washington St. & 2500' W of 56 th St. | 887900 | 484200 | 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 1 st St. | 885900 | 487700 | 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 | 885100 | 496200 | Tempe | 202L-MA-H-0858-01D | 230+10 | R 850 |
| 202-7.98 | Dual Box Culvert | TW=8' D=8' | Concrete | Loop 202 East Papago Freeway | Salt River | 1100' E. of Rural Rd. @ N. Bank of Salt River | 885300 | 498300 | Tempe | 202L-MA-H-0858-01D | 258+60 | R865 |

DIA = Diameter

TW = Top Width

D = Depth

L = Left

R = Right

MAJOR STORM SEWER OUTFALLS (Phoenix Metropolitan Area)

| OUTFALL IDENTIFIER | STORM SEWER DATA | | | | LOCATION DATA | | | | | CONSTRUCTION PLAN DATA | | |
|--------------------|--------------------------|----------------|--------------|------------------------------|------------------------|---|---------------|---------------------------------------|--------------|------------------------|-----------------|------------|
| | ROUTE No – MILE POST | TYPE | SIZE / DEPTH | MATERIAL | ROUTE NO ROUTE NAME | RECEIVING WATER | LOCATION | STATE PLANE COORDINATES NORTH EAST | CITY | PROJECT I.D. No. | PROJECT STATION | OFFSET L/R |
| 60-15.42 | Trapezoidal Open Channel | TW-12' D=8' | Concrete | S.R. 60 Superstition Freeway | East Maricopa Floodway | ½ mile E of Higley Rd. & S.R. 60 Traffic Interchange/N side | 868300 565800 | Mesa | BP-028-1-509 | 815+80 | L 65 | |
| 60-17.63 | Trapezoidal Open Channel | | Concrete | S.R. 60 Superstition Freeway | Sossman Channel | ¼ mile E of Sossman & S.R. 60 traffic interchange | 868100 569600 | Mesa | F-028-1-514 | 939+80 | L 130 | |

DIA = Diameter

TW = Top Width

D = Depth

L = Left

R = Right

MAJOR STORM SEWER OUTFALLS (Tucson Area)

| OUTFALL IDENTIFIER | STORM SEWER DATA | | | | LOCATION DATA | | | | CONSTRUCTION PLAN DATA | | | |
|--------------------|--------------------------|-------------|------------------|-----------------------------------|-----------------------------|--|----------|------------------------------------|------------------------|------------------|----------------------------|------------|
| | ROUTE No – MILE POST | TYPE | SIZE / DEPTH | MATERIAL | ROUTE NO ROUTE NAME | RECEIVING WATER | LOCATION | STATE PLANE COORDINATES NORTH EAST | CITY | PROJECT I.D. No. | PROJECT STATION | OFFSET L/R |
| 10-260.7 | Circular Pipe | DIA=72" | Concrete | I-10 | Julian Wash | N. Side of Julian Wash at 10 th Ave. S. of I-10 | 433500 | 791750 | Tucson | IR-10-5(54) | 10 th Ave 1+100 | |
| 10-261.5 | Circular Pipe | DIA=78" | Concrete | I-10 | Julian Wash | 1400' W. of S. Park Ave., 1300' N. of Ajo Way- E. of SPRR | 430800 | 795750 | Tucson | IR-10-5(54) | Line C 0+00 | |
| 10-264.6 | Oval Pipe | 56" X 42" | Corrugated Metal | I-10 | Julian Wash | 1200' S. of I-10 & Palo Verde Rd. Interchange, W. side of Palo Verde & N. Bank Julian Wash | 422500 | 809500 | Tucson | I-10-5(58)-28 | | |
| 19-59.0 | Circular Pipe | DIA=36" | Corrugated Metal | I-19 Nogales Freeway | Santa Cruz River | 1200' S. of I-19 & Valencia Interchange – S. of Valencia & E. bank Santa Cruz River | 413400 | 787900 | Tucson | I-19-1(15) | 3105+01 | L |
| 19-61.7 | Trapezoidal Open Channel | TW=10' D=2' | Concrete | I-19 Nogales Freeway | Rodeo Wash | 900' S. of I-19 & Ajo Way Interchange – E. side of I-19 & S. Bank of Rodeo Wash | 428700 | 788700 | Tucson | I-19-1(15) | 3270+80 | R |
| 86-171.1 | Circular Pipe | DIA=36" | Corrugated Metal | S.R. 86 Ajo Highway | Santa Cruz River | 1600' S. of I-19 & Ajo Way Interchange @ W. bank of Santa Cruz River S. of Ajo Way | 429500 | 786600 | Tucson | S-222-14 | 1447+78 | R |
| 89-68.2 | Circular Pipe | DIA=42" | Concrete | S.R. 86 Ajo Highway | Bronx Wash | W. of Oracle Rd. Between Adams St. & Lee St. | 452700 | 790250 | Tucson | F-031-1-515 | 6+55 | L |
| 77-71.8 | Circular Pipe | DIA=72" | Concrete | U.S. 77 Tucson – Florence Highway | Rillito River | S. Bank of Rillito River E. of Oracle Road | 471800 | 790250 | Tucson | F-031-1(7) | 6+55 | R |
| 77-78.7 | Open Channel | TW=15' D=4' | Concrete | U.S. 77 Tucson – Florence Highway | Tributary of Canada Del Rio | S.E. Quadrant of U.S. 77 & Greenock Dr. | 507400 | 794400 | Oro Valley | F-031-1(11) | 564+00 | R |
| 77-78.9 | Circular Pipe | DIA=42" | Concrete | U.S. 77 Tucson – Florence Highway | Tributary of Canada Del Rio | N.E. Quadrant of U.S. 77 & Greenock Dr | 507900 | 794700 | Oro Valley | F-031-1(11) | 569+00 | R |
| 77-79.9 | Open Channel | TW=25' D=8' | Concrete | U.S. 77 Tucson – Florence Highway | Tributary of Canada Del Rio | S.E. Quadrant of U.S. 77 and Hanley Road | 511800 | 798200 | Oro Valley | BP-031-1-513 | 620+55 | R |

DIA = Diameter

TW = Top Width

D = Depth

L = Left

R = Right

MAJOR STORM SEWER OUTFALLS (Tucson Area)

| OUTFALL IDENTIFIER | STORM SEWER DATA | | | | LOCATION DATA | | | | | CONSTRUCTION PLAN DATA | | |
|--------------------|----------------------|-----------------|--------------|-----------------------------------|---------------------|--|----------|---------------------------------------|------------|------------------------|------------------|-----------------|
| | ROUTE No – MILE POST | TYPE | SIZE / DEPTH | MATERIAL | ROUTE No ROUTE NAME | RECEIVING WATER | LOCATION | STATE PLANE COORDINATES NORTH EAST | | CITY | PROJECT I.D. No. | PROJECT STATION |
| 77-80.8 | Open Channel | TW=30' D=10' | Concrete | U.S. 77 Tucson – Florence Highway | Canada Del Oro | N.W. Quadrant of U.S. 77 and Canada Del Oro | 515300 | 802200 | Oro Valley | BP-031-1-513 | 675+74 | L |
| 210-1.2 | Circular Pipe | DIA=96" | Concrete | S.R. 210 Aviation Parkway | Arroyo Chico | S.E. of Intersection of 10 th Street & 3 rd Ave. | 445500 | 795000 | Tucson | AZP-824-9-510 | Line A 185+16 | L 234 |
| 210-2.7 | Circular Pipe | DIA=108" | Concrete | S.R. 210 Aviation Parkway | Railroad Wash | N.W. Quadrant @ Intersection of Campbell Ave. & Aviation Parkway | 441000 | 800750 | Tucson | M-824-9-514 | 18+07 | L |

DIA = Diameter

TW = Top Width

D = Depth

L = Left

R = Right

APPENDIX I

PHOENIX DRY WEATHER SCREENING

**SITE REPORT
DRY WEATHER FIELD SCREEN**

Structure Name: Trapezoidal open channel

Outfall Location Code: 101 - 7. 76 L.U.Type Highway
(see manual, pp FCD-1-5) (see reverse)

Receiving Water: New River
(water of the U.S., USGS map waters, or ADEQ designated waters)

Access Instructions: _____
(nearest intersection or landmark)

For discrepancies or omissions only:

Outfall type, shape, material, and dimensions (see manual for codes): open channel 82' wide
8' Depth

Vegetative Growth (circle one): none normal excessive growth inhibited growth

(If no flow but excessive or inhibited growth, schedule additional site visit).

1st Visit

Date/Time: 9/10/01

Precipitation <96 hours? Yes / No

Flow? Yes / No
Flow/standing water From Agriculture

pH: : _____ su Color: # _____
 Cl2: _____ ppm Ammonia: _____ ppm
 Cu: _____ ppm Oil sheen: Y / N
 Phenols: _____ ppm Surface scum: Y / N
 Deterg: _____ ppm Air Temp: _____ °F
 Turbidity: _____ NTU Water Temp: _____ °F

Attach copy of Chain of Custody Record
(see manual for example form)

2nd Visit (>4 hours and <24 hours later)

Date/Time: _____

Precipitation <96 hours? Yes / No

Flow? Yes / No

pH: : _____ su Color: # _____
 Cl2: _____ ppm Ammonia: _____ ppm
 Cu: _____ ppm Oil sheen: Y / N
 Phenols: _____ ppm Surface scum: Y / N
 Deterg: _____ ppm Air Temp: _____ °F
 Turbidity: _____ NTU Water Temp: _____ °F

Attach copy of Chain of Custody Record
(see manual for example form)

Physical Observations (1st Visit):
(circle appropriate descriptors, for "other" write in description)

Deposits: none sediments oily other
 Odor: none musty sewage rotten eggs
 solvent chlorine other

Biological: none fish algae other

Signature: [Signature]

Physical Observations (2nd Visit):
(circle appropriate descriptors, for "other" write in description)

Deposits: none sediments oily other
 Odor: none musty sewage rotten eggs
 solvent chlorine other

Biological: none fish algae other

Signature: _____

1st Visit

Use one of the following:

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

2nd Visit (>4 hours and <24 hours later)

Use one of the following:

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

Photograph of Outfall (record roll number and exposure number)*See photo No. #1***Additional Notes** (sketch, flow data, observations, specify visit as 1st or 2nd):*outflow does have minimal standing water. This water is due to Agriculture Run-off from local farming/fields. Non-storm event water was not sampled.***Land Use (L.U.) Type:** Indicate dominant watershed land use as residential, industrial, commercial, agricultural, mixed, unknown

**SITE REPORT
DRY WEATHER FIELD SCREEN**

| | |
|---|---|
| Structure Name: <u>Circular Pipe</u> | |
| Outfall Location Code: <u>51-7.04</u> <small>(see manual, pp FCD-1-5)</small> | L.U.Type <u>Highway</u> <small>(see reverse)</small> |
| Receiving Water: <u>Dreamy Draw Wash</u> <small>(water of the U.S., USGS map waters, or ADEQ designated waters)</small> | |
| Access Instructions: <u>intersection Rt 51 & Northeen</u> <small>(nearest intersection or landmark)</small> | |
| For discrepancies or omissions only: Outfall type, shape, material, and dimensions (see manual for codes): <u>Concrete Circular Pipe 48" Diameter</u> | |
| Vegetative Growth (circle one): <u>none</u> normal excessive growth inhibited growth <small>(If no flow but excessive or inhibited growth, schedule additional site visit).</small> | |
| 1st Visit Date/Time: <u>9/10/01</u> Precipitation <96 hours? Yes / <u>No</u> Flow? Yes / <u>No</u> | 2nd Visit (>4 hours and <24 hours later) Date/Time: _____ Precipitation <96 hours? Yes / No Flow? Yes / No |
| pH: : _____su Color: # _____ Cl2: _____ppm Ammonia: _____ppm Cu: _____ppm Oil sheen: Y / N Phenols: _____ppm Surface scum: Y / N Deterg: _____ppm Air Temp: _____°F Turbidity: _____NTU Water Temp: _____°F Attach copy of Chain of Custody Record (see manual for example form) | pH: : _____su Color: # _____ Cl2: _____ppm Ammonia: _____ppm Cu: _____ppm Oil sheen: Y / N Phenols: _____ppm Surface scum: Y / N Deterg: _____ppm Air Temp: _____°F Turbidity: _____NTU Water Temp: _____°F Attach copy of Chain of Custody Record (see manual for example form) |
| Physical Observations (1st Visit): (circle appropriate descriptors, for "other" write in description) Deposits: <u>none</u> sediments oily other Odor: <u>none</u> musty sewage rotten eggs solvent chlorine other Biological: <u>none</u> fish algae other Signature: <u>John Bunker</u> | Physical Observations (2nd Visit): (circle appropriate descriptors, for "other" write in description) Deposits: none sediments oily other Odor: none musty sewage rotten eggs solvent chlorine other Biological: none fish algae other Signature: _____ |

1st Visit

Use one of the following:

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

2nd Visit (>4 hours and <24 hours later)

Use one of the following:

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

Photograph of Outfall (record roll number and exposure number)

See photo #2

Additional Notes (sketch, flow data, observations, specify visit as 1st or 2nd):

None

Land Use (L.U.) Type: Indicate dominant watershed land use as residential, industrial, commercial, agricultural, mixed, unknown

**SITE REPORT
DRY WEATHER FIELD SCREEN**

Structure Name: Trapezoidal Open Channel

Outfall Location Code: 101-11.85 L.U.Type Highway
(see manual, pp FCD-1-5) (see reverse)

Receiving Water: New River
(water of the U.S., USGS map waters, or ADEQ designated waters)

Access Instructions: Loop 101, 1/2 mile South of Thunderbird Rd, East side
(nearest intersection or landmark)

For discrepancies or omissions only:
Outfall type, shape, material, and dimensions (see manual for codes): open channel, 45' wide 8' deep

Vegetative Growth (circle one): none normal excessive growth inhibited growth
At out fall

(If no flow but excessive or inhibited growth, schedule additional site visit).

| | | | |
|---|---------------------|---|---------------------|
| 1st Visit | | 2nd Visit (>4 hours and <24 hours later) | |
| Date/Time: <u>9/10/01</u> | | Date/Time: _____ | |
| Precipitation <96 hours? Yes / <u>No</u> | | Precipitation <96 hours? Yes / No | |
| Flow? Yes / <u>No</u> | | 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 scum: Y / N | Phenols: _____ppm | Surface scum: Y / N |
| Deterg: _____ppm | Air Temp: _____°F | Deterg: _____ppm | Air Temp: _____°F |
| Turbidity: _____NTU | Water Temp: _____°F | Turbidity: _____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) | |

| | |
|--|--|
| <p>Physical Observations (1st Visit): (circle appropriate descriptors, for "other" write in description)</p> <p>Deposits: none <u>sediments</u> oily other</p> <p>Odor: <u>none</u> musty sewage rotten eggs solvent chlorine other</p> <p>Biological: none fish algae <u>other</u> <i>Plants/ Cattails/ Brush/ weeds</i></p> <p>Signature: <u>John Bunter</u></p> | <p>Physical Observations (2nd Visit): (circle appropriate descriptors, for "other" write in description)</p> <p>Deposits: none sediments oily other</p> <p>Odor: none musty sewage rotten eggs solvent chlorine other</p> <p>Biological: none fish algae other</p> <p>Signature: _____</p> |
|--|--|

1st Visit

Use one of the following:

A. Free Fall into container:

Volume: (gal) Time: (sec)

B. Channel/pipe Flow (provide sketch):

Depth: (in) Width: (in)Velocity: (ft/sec)Discharge estimate: (gpm)**2nd Visit** (>4 hours and <24 hours later)

Use one of the following:

A. Free Fall into container:

Volume: (gal) Time: (sec)

B. Channel/pipe Flow (provide sketch):

Depth: (in) Width: (in)Velocity: (ft/sec)Discharge estimate: (gpm)**Photograph of Outfall** (record roll number and exposure number)*See photo #4***Additional Notes** (sketch, flow data, observations, specify visit as 1st or 2nd):*Excessive growth at outfall***Land Use (L.U.) Type:** Indicate dominant watershed land use as residential, industrial, commercial, agricultural, mixed, unknown

**SITE REPORT
DRY WEATHER FIELD SCREEN**

| | |
|---|---|
| Structure Name: <u>Circular Pipe</u> | |
| Outfall Location Code: <u>10-151.06</u> <small>(see manual, pp FCD-1-5)</small> | L.U.Type: <u>Highway</u> <small>(see reverse)</small> |
| Receiving Water: <u>Tempe - 48th St. Drain</u> <small>(water of the U.S., USGS map waters, or ADEQ designated waters)</small> | |
| Access Instructions: <u>I-10 and University</u> <small>(nearest intersection or landmark)</small> | |
| For discrepancies or omissions only: Outfall type, shape, material, and dimensions (see manual for codes): <u>Concrete Circular Pipe</u> <u>66" Diameter</u> | |
| Vegetative Growth (circle one): none <input checked="" type="radio"/> normal excessive growth inhibited growth <small>(If no flow but excessive or inhibited growth, schedule additional site visit).</small> | |
| 1st Visit Date/Time: <u>9/10/01</u> Precipitation <96 hours? Yes / <input checked="" type="radio"/> No Flow? Yes / <input checked="" type="radio"/> No pH: : _____su Color: # _____ Cl2: _____ppm Ammonia: _____ppm Cu: _____ppm Oil sheen: Y / N Phenols: _____ppm Surface scum: Y / N Deterg: _____ppm Air Temp: _____°F Turbidity: _____NTU Water Temp: _____°F Attach copy of Chain of Custody Record <small>(see manual for example form)</small> | 2nd Visit (>4 hours and <24 hours later) Date/Time: _____ Precipitation <96 hours? Yes / No Flow? Yes / No pH: : _____su Color: # _____ Cl2: _____ppm Ammonia: _____ppm Cu: _____ppm Oil sheen: Y / N Phenols: _____ppm Surface scum: Y / N Deterg: _____ppm Air Temp: _____°F Turbidity: _____NTU Water Temp: _____°F Attach copy of Chain of Custody Record <small>(see manual for example form)</small> |
| Physical Observations (1st Visit): (circle appropriate descriptors, for "other" write in description) Deposits: none <input checked="" type="radio"/> sediments oily other Odor: <input checked="" type="radio"/> none musty sewage rotten eggs solvent chlorine other Biological: none <input checked="" type="radio"/> fish <input checked="" type="radio"/> algae <input checked="" type="radio"/> other Signature: <u>John Benton</u> | Physical Observations (2nd Visit): (circle appropriate descriptors, for "other" write in description) Deposits: none sediments oily other Odor: none musty sewage rotten eggs solvent chlorine other Biological: none fish algae other Signature: _____ |

| | |
|--|---|
| <p>1st Visit</p> <p>Use one of the following:</p> <p>A. Free Fall into container: Volume: _____ (gal) Time: _____ (sec)</p> <p>B. Channel/pipe Flow (provide sketch): Depth: _____ (in) Width: _____ (in) Velocity: _____ (ft/sec)</p> <p>Discharge estimate: _____ (gpm)</p> | <p>2nd Visit (>4 hours and <24 hours later)</p> <p>Use one of the following:</p> <p>A. Free Fall into container: Volume: _____ (gal) Time: _____ (sec)</p> <p>B. Channel/pipe Flow (provide sketch): Depth: _____ (in) Width: _____ (in) Velocity: _____ (ft/sec)</p> <p>Discharge estimate: _____ (gpm)</p> |
|--|---|

Photograph of Outfall (record roll number and exposure number)

See photo #3

Additional Notes (sketch, flow data, observations, specify visit as 1st or 2nd):

~~None~~ NO FLOW FROM THIS ADOT STORM SEWER. HOWEVER, 48ST DRAIN CONTAINS FLOW, SUPPORTS ABUNDANT FISH POPULATION.

Land Use (L.U.) Type: Indicate dominant watershed land use as residential, industrial, commercial, agricultural, mixed, unknown

**SITE REPORT
DRY WEATHER FIELD SCREEN**

Structure Name: Trapezoidal open Channel

Outfall Location Code: 101 - 13.68 L.U.Type Highway
(see manual, pp FCD-1-5) (see reverse)

Receiving Water: Skunk Creek
(water of the U.S., USGS map waters, or ADEQ designated waters)

Access Instructions: Loop 101 mile marker 13.68, Bridge over Skunk Creek
(nearest intersection or landmark)

For discrepancies or omissions only:
Outfall type, shape, material, and dimensions (see manual for codes): open Channel 22' wide
4' Deep

Vegetative Growth (circle one): none normal excessive growth inhibited growth

(If no flow but excessive or inhibited growth, schedule additional site visit).

| | |
|--|--|
| 1st Visit | 2nd Visit (>4 hours and <24 hours later) |
| Date/Time: <u>9/11/01</u> | Date/Time: _____ |
| Precipitation <96 hours? Yes / <u>No</u> | Precipitation <96 hours? Yes / No |
| Flow? Yes / <u>No</u> | 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 scum: Y / N | Phenols: _____ppm | Surface scum: Y / N |
| Deterg: _____ppm | Air Temp: _____°F | Deterg: _____ppm | Air Temp: _____°F |
| Turbidity: _____NTU | Water Temp: _____°F | Turbidity: _____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: <u>none</u> sediments oily other | Deposits: none sediments oily other |
| Odor: <u>none</u> musty sewage rotten eggs solvent chlorine other | Odor: none musty sewage rotten eggs solvent chlorine other |
| Biological: <u>none</u> fish algae other | Biological: none fish algae other |
| Signature: <u>Joley Bunter</u> | Signature: _____ |

1st Visit

Use one of the following:

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

2nd Visit (>4 hours and <24 hours later)

Use one of the following:

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

Photograph of Outfall (record roll number and exposure number)*See photo #5***Additional Notes** (sketch, flow data, observations, specify visit as 1st or 2nd):*outfall clear/no clogging. Normal vegetation in River Bottom***Land Use (L.U.) Type:** Indicate dominant watershed land use as residential, industrial, commercial, agricultural, mixed, unknown

**SITE REPORT
DRY WEATHER FIELD SCREEN**

Structure Name: Trapezoidal open Channel

Outfall Location Code: 101 - 10.84 L.U.Type Highway
(see manual, pp FCD-1-5) (see reverse)

Receiving Water: New River
(water of the U.S., USGS map waters, or ADEQ designated waters)

Access Instructions: Loop 101, 1/2 mile North of Peoria Ave., East Bank
(nearest intersection or landmark)

For discrepancies or omissions only:
 Outfall type, shape, material, and dimensions (see manual for codes): open Channel, 65' wide, 12' deep

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: <u>9/11/01</u> | Date/Time: _____ |
| Precipitation <96 hours? Yes / <u>No</u> | Precipitation <96 hours? Yes / No |
| Flow? Yes / <u>No</u> | Flow? Yes / No |
| pH: _____ su Color: # _____ | pH: _____ su Color: # _____ |
| Cl ₂ : _____ ppm Ammonia: _____ ppm | Cl ₂ : _____ 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: _____ °F | Deterg: _____ ppm Air Temp: _____ °F |
| Turbidity: _____ NTU Water Temp: _____ °F | Turbidity: _____ 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) |
|--|--|
| <u>Deposits</u> : none <u>sediments</u> oily other | <u>Deposits</u> : none sediments oily other |
| <u>Odor</u> : <u>none</u> musty sewage rotten eggs solvent chlorine other | <u>Odor</u> : none musty sewage rotten eggs solvent chlorine other |
| <u>Biological</u> : none fish algae <u>other</u> → <u>Cottails</u> | <u>Biological</u> : none fish algae other |
| Signature: <u>John Burt</u> | Signature: _____ |

1st Visit

Use one of the following:

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

2nd Visit (>4 hours and <24 hours later)

Use one of the following:

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

Photograph of Outfall (record roll number and exposure number)

See photo #6

Additional Notes (sketch, flow data, observations, specify visit as 1st or 2nd):

Excessive growth, Recommend for maintenance

Land Use (L.U.) Type: Indicate dominant watershed land use as residential, industrial, commercial, agricultural, mixed, unknown

**SITE REPORT
DRY WEATHER FIELD SCREEN**

Structure Name: Circular Pipe

Outfall Location Code: 101-15.18 L.U.Type _____
(see manual, pp FCD-1-5) (see reverse)

Receiving Water: New River
(water of the U.S., USGS map waters, or ADEQ designated waters)

Access Instructions: Loop 101, 4/10 mile North of Bell Rd, 500' west
(nearest intersection or landmark)

For discrepancies or omissions only:
 Outfall type, shape, material, and dimensions (see manual for codes): Circular pipe, 48" Dia.

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: <u>9/11/01</u> | | Date/Time: _____ | |
| Precipitation <96 hours? Yes / <u>No</u> | | Precipitation <96 hours? Yes / No | |
| Flow? Yes / <u>No</u> | | 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 scum: Y / N | Phenols: _____ ppm | Surface scum: Y / N |
| Deterg: _____ ppm | Air Temp: _____ °F | Deterg: _____ ppm | Air Temp: _____ °F |
| Turbidity: _____ NTU | Water Temp: _____ °F | Turbidity: _____ NTU | Water Temp: _____ °F |
| Attach copy of Chain of Custody Record <small>(see manual for example form)</small> | | Attach copy of Chain of Custody Record <small>(see manual for example form)</small> | |

| Physical Observations (1 st Visit): <small>(circle appropriate descriptors, for "other" write in description)</small> | Physical Observations (2 nd Visit): <small>(circle appropriate descriptors, for "other" write in description)</small> |
|---|---|
| Deposits: none <u>sediments</u> oily other | Deposits: none sediments oily other |
| Odor: <u>none</u> musty sewage rotten eggs solvent chlorine other | Odor: none musty sewage rotten eggs solvent chlorine other |
| Biological: none fish algae <u>other</u> <u>Brush</u> | Biological: none fish algae other |
| Signature: <u>John Bunker</u> | Signature: _____ |

1st Visit

Use one of the following:

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

2nd Visit (>4 hours and <24 hours later)

Use one of the following:

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

Photograph of Outfall (record roll number and exposure number)

See photo # 7

Additional Notes (sketch, flow data, observations, specify visit as 1st or 2nd):

Excessive Growth / debris - Recommend for Maintenance

Land Use (L.U.) Type: Indicate dominant watershed land use as residential, industrial, commercial, agricultural, mixed, unknown

**SITE REPORT
DRY WEATHER FIELD SCREEN**

Structure Name: open channel

Outfall Location Code: 101-14.38 L.U.Type Highway
(see manual, pp FCD-1-5) (see reverse)

Receiving Water: New River
(water of the U.S., USGS map waters, or ADEQ designated waters)

Access Instructions: Loop 101, 1200' Sout of Bell Rd & 500' west
(nearest intersection or landmark)

For discrepancies or omissions only:
 Outfall type, shape, material, and dimensions (see manual for codes): concrete channel
28' wide, 10' deep

Vegetative Growth (circle one): none normal excessive growth inhibited growth

(If no flow but excessive or inhibited growth, schedule additional site visit).

| | |
|--|--|
| 1st Visit | 2nd Visit (>4 hours and <24 hours later) |
| Date/Time: <u>9/11/01</u> | Date/Time: _____ |
| Precipitation <96 hours? Yes / <u>No</u> | Precipitation <96 hours? Yes / No |
| Flow? Yes / <u>No</u> | Flow? Yes / No |

| | |
|--|--|
| pH: _____ su Color: # _____ | pH: _____ su Color: # _____ |
| Cl ₂ : _____ ppm Ammonia: _____ ppm | Cl ₂ : _____ 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: _____ °F | Deterg: _____ ppm Air Temp: _____ °F |
| Turbidity: _____ NTU Water Temp: _____ °F | Turbidity: _____ 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)

Deposits: none sediments oily other
Odor: none musty sewage rotten eggs
 solvent chlorine other

Biological: none fish algae other Brush trees

Signature: [Signature]

Physical Observations (2nd Visit):
 (circle appropriate descriptors, for "other" write in description)

Deposits: none sediments oily other
Odor: none musty sewage rotten eggs
 solvent chlorine other

Biological: none fish algae other

Signature: _____

1st Visit

Use one of the following:

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

2nd Visit (>4 hours and <24 hours later)

Use one of the following:

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

Photograph of Outfall (record roll number and exposure number)

See photo #8

Additional Notes (sketch, flow data, observations, specify visit as 1st or 2nd):

Excessive Growth in Channel - Recommend For Maintenance

Land Use (L.U.) Type: Indicate dominant watershed land use as residential, industrial, commercial, agricultural, mixed, unknown

TUCSON DRY WEATHER SCREENING

**SITE REPORT
DRY WEATHER FIELD SCREEN**

| | |
|---|--|
| Structure Name: <u>Concrete lined Channel</u> | |
| Outfall Location Code: <u>SR 77 @ M.P. 78.8</u> <small>(see manual, pp FCD-1-5)</small> | L.U.Type <u>Roadway / Commercial</u> <small>(see reverse)</small> |
| Receiving Water: <u>Tributary of the Canada Del Oro Wash</u> <small>(water of the U.S., USGS map waters, or ADEQ designated waters)</small> | |
| Access Instructions: <u>S/E corner of SR 77 and Greenock Rd.</u> <small>(nearest intersection or landmark)</small> | |
| For discrepancies or omissions only: Outfall type, shape, material, and dimensions (see manual for codes): <u>Shallow, concrete lined, roadside channel</u> | |
| Vegetative Growth (circle one): <u>none</u> normal excessive growth inhibited growth <small>(If no flow but excessive or inhibited growth, schedule additional site visit).</small> | |
| 1st Visit Date/Time: <u>9/18/01 11:30am</u> Precipitation <96 hours? Yes / <u>No</u> Flow? Yes / <u>No</u> | 2nd Visit (>4 hours and <24 hours later) Date/Time: _____ Precipitation <96 hours? Yes / No Flow? Yes / No |
| pH: : _____ su Color: # _____ Cl2: _____ ppm Ammonia: _____ ppm Cu: _____ ppm Oil sheen: <u>Y</u> / N Phenols: _____ ppm Surface scum: <u>Y</u> / N Deterg: _____ ppm Air Temp: _____ °F Turbidity: _____ NTU Water Temp: _____ °F | pH: : _____ su Color: # _____ Cl2: _____ ppm Ammonia: _____ ppm Cu: _____ ppm Oil sheen: Y / N Phenols: _____ ppm Surface scum: Y / N Deterg: _____ ppm Air Temp: _____ °F Turbidity: _____ NTU Water Temp: _____ °F |
| Attach copy of Chain of Custody Record <small>(see manual for example form)</small> | Attach copy of Chain of Custody Record <small>(see manual for example form)</small> |
| Physical Observations (1st Visit): (circle appropriate descriptors, for "other" write in description) Deposits: <u>none</u> sediments oily other Odor: <u>none</u> musty sewage rotten eggs solvent chlorine other Biological: <u>none</u> fish algae other Signature: <u>Michael J. [Signature]</u> | Physical Observations (2nd Visit): (circle appropriate descriptors, for "other" write in description) Deposits: none sediments oily other Odor: none musty sewage rotten eggs solvent chlorine other Biological: none fish algae other Signature: _____ |

1st Visit

Use one of the following:

N/A

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

2nd Visit (>4 hours and <24 hours later)

Use one of the following:

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

Photograph of Outfall (record roll number and exposure number)

Additional Notes (sketch, flow data, observations, specify visit as 1st or 2nd) :

Land Use (L.U.) Type: Indicate dominant watershed land use as residential, industrial, commercial, agricultural, mixed , unknown

1st Visit

Use one of the following:

N/A

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

2nd Visit (>4 hours and <24 hours later)

Use one of the following:

A. Free Fall into container:

Volume: _____ (gal) Time: _____ (sec)

B. Channel/pipe Flow (provide sketch):

Depth: _____ (in) Width: _____ (in)

Velocity: _____ (ft/sec)

Discharge estimate: _____ (gpm)

Photograph of Outfall (record roll number and exposure number)**Additional Notes** (sketch, flow data, observations, specify visit as 1st or 2nd):**Land Use (L.U.) Type:** Indicate dominant watershed land use as residential, industrial, commercial, agricultural, mixed, unknown

**SITE REPORT
DRY WEATHER FIELD SCREEN**

| | |
|---|---|
| Structure Name: <u>Concrete Channel</u> | |
| Outfall Location Code: <u>SR 77 @ M.P. 79.9</u> <small>(see manual, pp FCD-1-5)</small> | L.U. Type: <u>Roadway</u> <small>(see reverse)</small> |
| Receiving Water: <u>Tributary of the Cañada Del Oro Wash</u> <small>(water of the U.S., USGS map waters, or ADEQ designated waters)</small> | |
| Access Instructions: <u>S/E corner of SR 77 and Henley Blvd</u> <small>(nearest intersection or landmark)</small> | |
| For discrepancies or omissions only: Outfall type, shape, material, and dimensions (see manual for codes): _____ <u>Trapezoidal concrete lined, roadside channel.</u> | |
| Vegetative Growth (circle one): none <u>normal</u> excessive growth inhibited growth <small>(If no flow but excessive or inhibited growth, schedule additional site visit).</small> | |
| 1st Visit Date/Time: <u>9/18/01 12:00pm</u> Precipitation <96 hours? Yes / <u>No</u> Flow? Yes / <u>No</u> | 2nd Visit (>4 hours and <24 hours later) Date/Time: _____ Precipitation <96 hours? Yes / No Flow? Yes / No |
| pH: : _____su Color: # _____ Cl2: _____ppm Ammonia: _____ppm Cu: _____ppm Oil sheen: <u>Y/N</u> Phenols: _____ppm Surface scum: <u>Y/N</u> Deterg: _____ppm Air Temp: _____°F Turbidity: _____NTU Water Temp: _____°F | pH: : _____su Color: # _____ Cl2: _____ppm Ammonia: _____ppm Cu: _____ppm Oil sheen: Y / N Phenols: _____ppm Surface scum: Y / N Deterg: _____ppm Air Temp: _____°F Turbidity: _____NTU Water Temp: _____°F |
| Attach copy of Chain of Custody Record <small>(see manual for example form)</small> | Attach copy of Chain of Custody Record <small>(see manual for example form)</small> |
| Physical Observations (1st Visit): <small>(circle appropriate descriptors, for "other" write in description)</small> <u>Deposits:</u> <u>none</u> sediments oily other <u>Odor:</u> <u>none</u> musty sewage rotten eggs solvent chlorine other <u>Biological:</u> <u>none</u> fish algae other Signature: <u>[Signature]</u> | Physical Observations (2nd Visit): <small>(circle appropriate descriptors, for "other" write in description)</small> <u>Deposits:</u> none sediments oily other <u>Odor:</u> none musty sewage rotten eggs solvent chlorine other <u>Biological:</u> none fish algae other Signature: _____ |

APPENDIX J

PHOENIX



Outfall ID: 101-7.76

Location: ¼ mile South of Northern Ave and 1000' West of 99th Ave
Loop 101, Mile Marker 7.76

Photo No. 1

Receiving Waters: New River



Outfall ID: 51-7.04

Location: 400' Southeast of Intersection of Northern Ave and Squaw Peak Highway

Photo No. 2

Receiving Waters: Dreamy Draw Wash



Outfall ID: 10-151.06

Location: North quadrant of I-10 and University traffic interchange

Photo No. 3

Receiving Waters: Tempe – 48th Street Drain



Outfall ID: 101-11.85

Location: ½ mile South of
hunderbird Road and 300' West

Photo No. 4

Receiving Waters: New River



Outfall ID: 101-13.68

Location: 30 North of the northern
ridge over Skunk Creek and 80'
East

Photo No. 5

Receiving Waters: Skunk Creek



September 2001

Outfall ID: 101-10.84

Location: ½ mile North of Peoria
Ave. along East bank of New River

Photo No. 6

Receiving Waters: New River



Outfall ID: 101-15.18

Location: 4/10 of a mile North of Bell Road and 500' West

Photo No. 7

Receiving Waters: New River



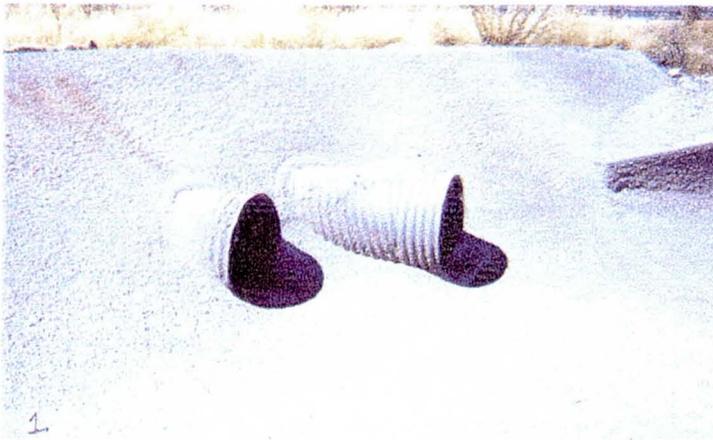
Outfall ID: 101-14.38

Location: 1200' South of Bell Road traffic Interchange and 300' West

Photo No. 8

Receiving Waters: New River

TUCSON



Outfall ID: SR77 at M.P. 78.9

Location: Oro Valley, N/E corner of Greenock Road and SR 77

Photo No. 9

Receiving Waters: Tributary of Canada Del Oro Wash.



Outfall ID: SR77 at M.P. 78.8

Location: Oro Valley, S/E corner of Greenock Road and SR 77

Photo No. 10

Receiving Waters: Tributary of Canada Del Oro Wash.



Outfall ID: SR77 at M.P. 79.9

Location: Oro Valley, S/E corner of Greenock Road and SR 77

Photo No. 11

Receiving Waters: Tributary of Canada Del Oro Wash.