ADOT
Intermodal Transportation

Douglas A. Ducey, Governor
John S. Halikowski, Director
Dallas Hammit, State Engineer
Steve Boschen, Division Director

December 28, 2015

Christopher M. Henninger, Supervisor
Stormwater and General Permits Unit
Surface Water Section
Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, AZ 85007

Subject: AZS0000018-2008 Annual Report

Dear Mr. Henninger:

The Arizona Department of Transportation (ADOT) is submitting the final report for the subject stormwater permit. The period of coverage for this final report is July 1, 2014 through October 31, 2015. Any additional program activities or clarification may come as an amendment or revision to this annual report, as necessary.

Particular attention is called to the transfer of the hybrid permit – from three programs in one permit – to complying with three separate general permits (construction, municipal, and industrial, as applicable). ADOT appreciates the necessary adjustment time for assuring notices of intent for industrial and construction general permits were submitted for active projects and facilities, as required.

One full paper copy of the report is included with an enclosed CD for electronic filing/document storage. Should you need additional copies, or require clarification/modification of any of the contents, please do not hesitate to contact Leigh Padgitt at 602.712.6170 or email at lpadgitt@azdot.gov.

Sincerely,

Wendy Terlizzi

Wendy Terlizzi, CMS4S
Environmental Programs Manager

Enclosures (2)

ANNUAL REPORT

Part 1: General Information

Permittee Name: Arizona Department of Transportation
Permit Number: AZS0000018-2008
Reporting Period: July 1, 2014 – October 31, 2015

Stormwater Management Program Contact:

Leigh Padgitt, CMS4S
Title: Municipal Stormwater Program Coordinator
Mailing Address: 1611 West Jackson Street
City: Phoenix Zip Code: 85007
Telephone Number: 602.712.6170
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Certifying Official (*Refer to permit Section 11.3*):

Wendy Terlizzi, CMS4S
Title: Environmental Programs Manager
Mailing Address: 1611 West Jackson Street
City: Phoenix Zip Code: 85007
Telephone Number: 602.712.8353
Email Address: WTerlizzi@azdot.gov

Part 2: Annual Report Certification

The Annual Report Form must be signed and certified by either a principal executive officer or ranking elected official; or by a "duly authorized representative" of that person in accordance with Section 11.3 of the permit.

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 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.

Wendy Terlizzi
Signature of Certifying Official

12/28/15
Date

Part 3: Narrative Summary of Statewide Stormwater Management Program (SSWMP) Activities

Provide a summary of the status of the SSWMP each year, including a brief description of the implementation and progress of every individual best management practice (BMP). Also, provide an explanation of any significant developments or changes to the number or type of activities, the frequency or schedule of activities, or the priorities or procedures for implementation of specific management practices.

The narrative summary must include the following specifics:

☐ Include a short statement for each of the following documents indicating if a review was completed. Describe any major updates to each document.

- *Erosion and Pollution Control Manual;* Review of the document was completed during August 2014 and August 2015. There were no notable revisions necessary. As a result of the new permit being issued August 17, 2015, ADOT will document in the first annual report for Municipal Separate Storm Sewer System Permit AZS0000018-2015 (**2015 MS4 Permit**) any necessary updates that may be discovered during the 2016 Stormwater Management Program (**2016 SWMP**) update.
- *Maintenance and Facilities Best Management Practices (BMPs) Manual;* Review of the document was completed in Winter 2014 and two potential best management practices may need to be incorporated. ADOT will assess these best management practices during the 2016 SWMP update.
- *Stormwater Monitoring Guidance Manual for MS4 Activities;* Review of the document was completed in Winter 2014 and the manual will require significant revisions due to the 2015 MS4 Permit. A revised document will be completed in the first year of the 2015 MS4 Permit term.
- *Stormwater Monitoring Guidance Manual for Construction Activities;* This document will be archived because construction activities are not authorized by the 2015 MS4 Permit. As such, ADOT completed a Sampling and Analysis Plan template that meets the requirements of the 2013 Construction General Permit.
- *Stormwater Monitoring Guidance Manual for Industrial Activities;* This document will be archived because industrial activities are not authorized by the 2015 MS4 Permit. Depending on the specifics of the industrial status of ADOT facilities, ADOT would include the necessary monitoring requirements within the stormwater pollution prevention plan.
- *Post-Construction Stormwater Control BMP Manual*. This document was revised in 2013 and will be updated for regulatory context with the 2015 MS4 Permit requirements. The updated manual will be available on the ADOT website after February 12, 2016.

- ☐ Provide a summary of updates to the Dry Weather Field Screening Portion of the Stormwater Monitoring Guidance Manual for MS4 Activities (Section 3.2.3.2.(c)); No changes have been made to the Dry Weather Field Screening methods.
- ☐ Provide a list and description of all violations ADOT has determined at construction sites and their resolution, including any enforcement actions taken against ADOT contractors, in accordance with Section 5.3.1 (Section 5.3.4); No violations or enforcement actions against ADOT contractors was taken.
- ☐ Public Comments (3.2.2.3(b)) were not received on ADOTs permit program.
- ☐ Encroachment Permit enforcement (3.2.3.1(b)) was not necessary during the report period.
- ☐ Cross drain connections (3.2.3.2(d)) were not identified during dry weather screening.
- ☐ Dry weather discharges (3.2.3.3(d)) did not need to be reported to ADEQ because all occurrences this year were resolved through the enforcement response plan process.
- ☐ Post-Construction Best Management Practices (3.2.5.2) were not built during the report period. Refer to Part 5, Evaluation of the Statewide Stormwater Management Program for more information.
- ☐ ADOT has reallocated an existing position to address industrial compliance. The position's role is to advise the Materials Group, Grand Canyon National Park Airport and tenants, Durango Sign Factory, and Districts of the requirements of the relevant sector based on industrial stormwater practices.
- ☐ <u>Material Source Site Management:</u> provide a map and summary of the status of each site (Section 6.8.3);

  This final annual report includes a map and summary of the status (inventory) of each site during the report period (6.8.3), a summary of findings, deficiencies, and corrections made to each site (6.8.4.2(a)), and, finally, a table of those same sites indicating how ADOT plans to move forward with the 2015 MS4 Permit and the 2010 Multi-Sector General Permit.

  Refer to Appendix A for the map and inventory for the report period. All sites listed in the inventory were inspected per protocol, quarterly or annually based on Group requirements, and only two required corrective action. MS 6183, Dateland was found to be discharging sediment off the site and required additional control measures. Routine maintenance performed on 9/23/15 included repair of the berm along the northern boundary and installation of new rock check dams at the discharge point. MS 7525, Defiance was also found to be discharging sediment off the site and required additional control measure installation. Maintenance was performed at Defiance on 10/20/14 to include addition of silt basins, repair of rock check dams along the southern boundary, and repair of rip-rap protection along the west boundary.

All material source sites have been evaluated for inclusion in the relevant stormwater program. Of note, MS 5002, Fortuna/Blaisdell, was reclaimed in Summer 2015 and will be placed on the market for sale. The site number, name, standard industrial classification code, if applicable, permit type, receiving water name, distance, and status as Outstanding Arizona Water (O) or Impaired (I), as well as notes identifying ADOT's intent moving forward in 2015 are tabulated below.

Site ID	Source Name	SIC	Permit	Receiving Water	Distance	O/I	Notes
999	Tubac	None	MS4	Santa Cruz	On-Site	No	Excess Land
5002	Fortuna/Blaisdell	None	MS4	Gila River	On-Site	Yes	Excess Land
478	Mohawk	None	MS4	Gila River	On-Site	No	FPPP
1245	Sunset Pass	None	MS4	Jacks Canyon	On-Site	No	FPPP
1662	Tanner	None	MS4	Gila River	On-Site	Yes	FPPP
3591	Carol Spring Mountain	None	MS4	Sycamore Creek	<0.25	No	FPPP
3593	Spring Creek	None	MS4	Spring Creek	<0.25	Yes	FPPP
5058	Picacho	None	MS4	None-Basin	On-Site	No	FPPP
5781	Blue Grade	None	MS4	Beaver Creek	0.25	No	FPPP
6183	Dateland	None	MS4	Gila River	On-Site	No	FPPP
7287	Centennial	None	MS4	None-Basin	On-Site	No	FPPP
7525	Defiance	None	MS4	Queen Creek	<0.25	No	FPPP
7625	Fort Tuthill	None	MS4	Sinclair Wash	On-Site	No	FPPP
7885	Sahuarita	None	MS4	None-Basin	<0.25	No	FPPP
8109	BVD	None	MS4	None-Sheet Flow	<0.50	No	FPPP
8400	Sunflower	None	MS4	Sycamore Creek	<0.25	No	FPPP
3547	Gila Bend North	1499	MSGP	Unnamed	On-Site	No	No discharge
6022	Bowie	1442	MSGP	Happy Camp Wash	On-Site	No	No discharge
6662	Val Vista	1499	MSGP	None-Basin	On-Site	No	No discharge
8135	Warm Springs	1429	MSGP	None-Basin	On-Site	Yes	No discharge
8268	Tiger Wash West	1442	MSGP	Tiger Wash	On-Site	No	No discharge
8569	Dugas	1429	MSGP	Dry Creek	<0.25	No	No discharge
8706	Yucca	1442	MSGP	Rock Creek	On-Site	No	No discharge
2979	Vicksburg	1499	MSGP	Unnamed	<0.25	No	NOI
3043	Squaw Peak	1499	MSGP	Turkey Creek	0.5	No	NOI
3044	Board Tree Saddle	1499	MSGP	Cherry Creek	<0.25	No	NOI
3512	Burnt Corral	1499	MSGP	Apache Lake	0.25	Yes	NOI
5643	Gila Bend South	1442	MSGP	Bender Wash	On-Site	No	NOI
7225	Connor Canyon	1499	MSGP	Rose Creek	<0.25	No	NOI
7810	Crabtree	1499	MSGP	Burnt Corral Draw	0.25	No	NOI - future
8763	Fish Creek	1499	MSGP	Crabtree Wash	0.25	Yes	NOI

Site ID	Source Name	SIC	Permit	Receiving Water	Distance	O/I	Notes
1563	Pole Knoll	1429	MSGP	Fish Creek	0.25	No	Permit will not be renewed
5154	JMP Ranches Inc.	1499	MSGP	Sheet Flow	>0.25	No	Permit will not be renewed
5474	Castle Dome	1442	MSGP	Dome Wash	0.25	No	Permit will not be renewed

SIC-Standard Industrial Classification Code; MS4-Municipal Separate Storm Sewer System; MSGP-Multi-Sector General Permit; FPPP-Facility Pollution Prevention Plan; NOI-Notice of Intent; No discharge-not subject to coverage under MSGP at this time; Excess Land-Land acquired as, or in conjunction with, highway right-of-way and later determined to be inessential for such purposes; Permit will not be renewed-ADOT does not foresee utilizing the site and will commence the disposal/termination process

Part 4: Numeric Summary of Stormwater Management Program Activities

Provide a numeric summary of BMPs and activities performed each year. Every year's Annual Report should include the numbers reported in the previous years.

Do not delete any of the existing measures listed in the table. Insert any additional measurable goals of BMP progress in the rows labeled as *Other numeric measurable goal(s*) or *Numeric measurable goal(s).* Use italic font to clearly identify any additional measurable goals. If no measurable goal has been identified in the table below, the progress of the BMP must be described in Part 3 Narrative Summary of SSWMP Activities.

Section Number	**Stormwater BMP or Activity**	**Report Period**				
		7/1/2010-6/30/2011	7/1/2011-6/30/2012	7/1/2012-6/30/2013	7/1/2013-6/30/2014	7/1/14-10/31/15
MEASURES TO CONTROL DISCHARGES THROUGH EDUCATION						
3.2.2.1(a)(ii)(1)	Train ADOT Employees - Illicit discharges and illegal dumping					
	Number of trainings offered	13	Continuous	Continuous	Continuous	Continuous
	Number of employees trained	33	973	194	136	874
	(*Other numeric measurable goal(s)*)					
3.2.2.1(a)(ii)(2)	Train ADOT Employees - Non-stormwater discharges					
	Number of trainings offered	13	Continuous	Continuous	Continuous	Continuous
	Number of employees trained	33	973	194	136	874
	(*Other numeric measurable goal(s)*)					

Section Number	Stormwater BMP or Activity	Report Period				
		7/1/2010-6/30/2011	7/1/2011-6/30/2012	7/1/2012-6/30/2013	7/1/2013-6/30/2014	7/1/14-10/31/15
3.2.2.1(a)(ii)(3)	Train ADOT Employees- New construction and land disturbances					
	Number of trainings offered	13	Continuous	Continuous	Continuous	Continuous
	Number of employees trained	33	973	168	122	848
	(*Other numeric measurable goal(s)*)					
3.2.2.1(a)(ii)(4)	Train ADOT Employees - New development and significant redevelopment					
	Number of trainings offered	13	Continuous	Continuous	Continuous	Continuous
	Number of employees trained	33	932	168	122	848
	(*Other numeric measurable goal(s)*)					
3.2.2.1(a)(ii)(5)	Train ADOT Employees - Storm sewer system and highway maintenance					
	Number of trainings offered	13	Continuous	Continuous	Continuous	Continuous
	Number of employees trained	33	906	179	129	813
	(*Other numeric measurable goal(s)*)					
3.2.2.1(a)(ii)(6)	Train ADOT Employees - Good housekeeping and material BMPs					
	Spill Prevention and Response - Number of trainings offered	1	Continuous	Continuous	Continuous	Continuous
	Spill Prevention and Response - Number of employees trained	36	654	369	301	1,654
	Pesticides, Herbicides, and Fertilizer Application - Number of trainings offered	1	Continuous	Continuous	Continuous	Continuous
	Pesticides, Herbicides, and Fertilizer Application - Number of employees trained	36	654	141	131	606
	Industrial Sites - Number of trainings offered	1	Continuous	Continuous	Continuous	Continuous
	Industrial Sites - Number of employees trained	36	971	196	127	876
	(*Other numeric measurable goal(s)*)					
3.2.2.1(a)(iii)	Develop Stormwater Library					

Section Number	Stormwater BMP or Activity	Report Period				
		7/1/2010-6/30/2011	7/1/2011-6/30/2012	7/1/2012-6/30/2013	7/1/2013-6/30/2014	7/1/14-10/31/15
	Number of times accessed or visited	Not tracked	365	3,764	2,947	638
	(*Other numeric measurable goal(s)*)					
3.2.2.1(b)	ADOT Construction Contractor Training and Certification					
	Number of trainings offered: 16hr; 6hr refresher	8	11	7; 5	6; 7	11; 6
	Number of ADOT employees trained/certified	34	46	42	36	68
	Number of ADOT employees recertified	5	14	12	20	50
	Number of non-ADOT employees certified	53	132	95	85	208
	Number of non-ADOT employees recertified	Not tracked	Not tracked	51	80	39
	(*Other numeric measurable goal(s)*)					
3.2.2.2(b)(i)	Distribution of Educational Materials Through Public Places					
	Number of materials (posters, brochures, signs, etc.) distributed	5,200	0	1,643	>200	>500
	Number of public events ADOT attended with displays	119	1	6	8	5
	Estimated audience from TV, movie, radio, billboard	4,268,300	16,277,000	3,949,600	850,000	20,051,239
	Educational items (coloring books, wrist bands, magnet)	8,000	0	415	>200	>500
	Seminars	80	20	206	141	None
	(*Other numeric measurable goal(s)*)					
3.2.2.2(b)(ii)	Distribution of Educational Materials Through ADOT's Stormwater Webpage					
	Number of hits on webpage	0	365	5,018	5,870	4,659
	(*Other numeric measurable goal(s)*)					
3.2.2.3(b)	Record and Consider Public Comments					
	Number of public comments received	0	0	1	0	0 – See Part 3

Section Number	Stormwater BMP or Activity	Report Period				
		7/1/2010-6/30/2011	7/1/2011-6/30/2012	7/1/2012-6/30/2013	7/1/2013-6/30/2014	7/1/14-10/31/15
	(*Other numeric measurable goal(s)*)					
3.2.2.3(c)	Implement a Public Reporting System					
	Number of reports received from public	0	0	1	1	2
	Number of reports investigated	0	0	1	1	2
	(*Other numeric measurable goal(s)*)					
3.2.2.3(d)	Develop a Stormwater Component of the Adopt-a-Highway Litter Initiative					
	Number of volunteer groups participating	1,569	1,610	1,560	1,575	1,510
	Number of miles cleaned	3,935	2,052	1,985	3,938	3,288
	Amount of trash collected	224	65 tons	64 tons	56 tons	67 tons
	(*Other numeric measurable goal(s)*)					
3.2.2.3(e)	Continue Implementation of Litter Hotline					
	Number of calls received	2,776	1,763	2,144	2,789	1,152
	(*Other numeric measurable goal(s)*)					
ILLICIT DISCHARGE/ILLEGAL DUMPING DETECTION AND ELIMINATION MEASURES						
3.2.3.1(a)	Maintain Illicit Discharge Authority					
	(*Numeric measurable goal(s)*)					
3.2.3.1(b)	Enforce Standard Encroachment Permit					
	Number of enforcement actions	0	0	0	0	0 – See Part 3
	(*Other Numeric measurable goal(s)*)					
3.2.3.1(d)	Implement Non-Stormwater BMPs					
	(*Numeric measurable goal(s)*)					
3.2.3.2(d)	Inspect Outfalls for Dry Weather Discharges					
	Number of major outfalls inspected	0	51	68	AOC*	AOC*
	Number of priority outfalls inspected	0	0	0	AOC*	AOC*
	Number of storm drain cross connection detected	0	0	3	AOC*	0 – See Part 3
	Number of illicit discharges detected	0	6	1	AOC*	3
	Number of other dry weather flows detected	0	7	7	AOC*	15

Section Number	Stormwater BMP or Activity	Report Period				
		7/1/2010-6/30/2011	7/1/2011-6/30/2012	7/1/2012-6/30/2013	7/1/2013-6/30/2014	7/1/14-10/31/15
	Administrative Order on Consent* Outfalls Identified (*see Part 5)	None	None	222	None	0 – See Part 5
	Administrative Order on Consent* Outfalls Inspected	None	None	218	12	218
	(*Other numeric measurable goal(s)*)					
3.2.3.3(b)	Investigate Illicit Discharges (Source Identification)					
	Number of storm drain cross connection investigated	0	0	4	8	Not applicable
	Number of illicit discharges investigated	7	9	4	5	3
	Number of other dry weather flows investigated	0	7	7	3	15
	(*Other numeric measurable goal(s)*)					
3.2.3.3(c)	Respond to Complaints					
	Number of complaints received	0	0	1	3	4
	Number of complaints responded to	0	0	1	3	4
	Average response time (in days)	0	0	2	2	1
	(*Other numeric measurable goal(s)*)					
3.2.3.3(d)	Report Incidental Dry Weather Discharges					
	Number of discharges reported to ADEQ	0	0	0	0	0 – See Part 3
	(*Other numeric measurable goal(s)*)					
3.2.3.4(a)	Take Action to Eliminate Existing Dry Weather Flows					
	Number of existing dry weather discharges eliminated	0	0	1	2	3
	(*Other numeric measurable goal(s)*)					
3.2.3.4(b)	Take Action to Eliminate Sources of Illicit Discharges					
	Number of storm drain cross connection eliminated	0	0	0	0	Not applicable
	Number of illicit discharges eliminated	7	7	1	4	3

Section Number	Stormwater BMP or Activity	Report Period				
		7/1/2010-6/30/2011	7/1/2011-6/30/2012	7/1/2012-6/30/2013	7/1/2013-6/30/2014	7/1/14-10/31/15
	Number of dry weather discharges eliminated	0	6	1	1	3
	(*Other numeric measurable goal(s)*)					
3.2.3.4(c)	Coordinate with Local Jurisdictions for Complaint Response and Investigation					
	Number of illicit discharges reported to other jurisdictions for follow-up	0	5	6	1	1
	(*Other numeric measurable goal(s)*)					
3.2.3.5	Responding to Spills					
	Number of highway accident spills responded to	180	196	196	213	263
	Number of highway accident spills prioritized (potential for discharge)	10	17	19	17	26
	Hazardous materials released	50	17	19	16	25
	(*Other numeric measurable goal(s)*)					
MEASURES TO CONTROL DISCHARGES FROM NEW DEVELOPMENT AND REDEVELOPMENT						
3.2.5.2	Install Post-Construction Stormwater Control BMPs					
	Number of new post-construction stormwater control BMPs installed	0	0	0	0	0 – See Part 3
	(*Other numeric measurable goal(s)*)					
MEASURES TO CONTROL DISCHARGES FROM ROADWAYS						
3.2.6.1(b)	Inspect Storm Sewer System					
	Number of inspections performed	51	51	6,933	9,310	25,250
	(*Other numeric measurable goal(s)*)					
3.2.6.1(c)	Develop Maintenance Schedules and Priorities					
	(*Numeric measurable goal(s)*)					
3.2.6.1(d)	Perform Repair, Maintenance, and Cleaning					
	Number of miles of roadways repaired/maintained	0	0	26,144	58,941	390
	Number of inlets cleaned	0	0	2,631	11,882	41,337

Section Number	Stormwater BMP or Activity	Report Period				
		7/1/2010-6/30/2011	7/1/2011-6/30/2012	7/1/2012-6/30/2013	7/1/2013-6/30/2014	7/1/14-10/31/15
	Number of drain inlets containing significant materials	0	0	223	84	22
	(*Other numeric measurable goal(s)*)					
3.2.6.2(c)(ii)	Require Certification/License					
	Number of licensed ADOT applicators	40	Unknown	50	65	65
3.2.6.2(d)	Stabilize Roadway Slopes (attach summary of tracking & prioritization)					
	Acres of roadway slopes stabilized	0	0	39	79	37
MEASURES TO CONTROL DISCHARGES FROM ADOT MAINTENANCE FACILITIES						
4.1.5.3	Stencil Drain Inlets at ADOT Facilities					
	Number of new catch basins installed	0	0	0	0	0
	Number of catch basins marked or stenciled	0	0	3	4	3
	(*Other numeric measurable goal(s)*)					

Part 5: Evaluation of the Statewide Stormwater Management Program

In accordance with Section 3.1.5 of the permit, provide an evaluation of the progress and success of the SSWMP each year, including an assessment of the effectiveness of stormwater management practices in reducing the discharge of pollutants to and from the municipal storm sewer system. Major highlights:

<u>Divisional Reorganization</u>

ADOT has modified several divisions resulting in extensive changes in organizational structure. The Office of Environmental Services coalesced with the Environmental Planning Group in September 2014. Ten (10) regional districts were collapsed into Eight (8) in September 2015 and renamed geographically, rather than by major city. Several new positions in management were created and have allowed for promotion and depth. A general organizational chart will be proved in the 2016 SWMP update. In the meantime, Environmental Planning continues to coordinate stormwater activities statewide with respect to regulatory interpretation and guidance, and will act as liaison between federal and state regulators and ADOT units; whereas, tracking and implementation continue to occur regionally in the districts.

Post-Construction Best Management Practices (PCBMP)

There was confusion in the PCBMP program for the past several years and as such, staff was not viewing project requirements consistently. ADOT was issued an Administrative Order on Consent in 2013 and spent the next year updating the guidance manual, mapping the location of existing features, and inspecting the control measures. The next 12 months were spent discussing the new permit and ADEQ issued the 2015 MS4 Permit this past summer. The 2015 MS4 Permit allows for a 180-day PCBMP program finalization, with implementation commencing immediately thereafter. ADOT held a workshop on October 5 to identify key stakeholders concerning the PCBMP program. Additional program outreach is anticipated for December 2015 and includes a stakeholder meeting, guidance manual update, training class update, and implementation as required. The final date of implementation will be recorded in the next annual report, or first under the 2015 MS4 Permit.

Monitoring

ADOT samples at five locations that receive highway runoff and four facilities that discharge to impaired waters. ADOT continues to assess its monitoring program for improvement. Challenges include: unstaffed sites that collect stormwater on nights and weekends, excessive windblown and storm-related sediment that clogs intake tubing or dislodges sensors, extreme heat or cold that drains batteries, and wear and life of equipment. ADOT started with fresh eyes on the wet-weather monitoring program beginning November 1, 2014 and continues to assess process improvements that may augment the sampling program. During this report period, all equipment was evaluated, reprogramming was conducted, and additional staff were contracted and trained. This effort doubled monitoring expenditures over prior years. While more data has been collected, trends have not changed. Assessment of monitoring can be found in Part 11.

Outfalls

In the numeric summary table (Part IV) AOC* has been utilized to express that ADOT proceeded with mapping outfalls per the Administrative Order on Consent as issued by the US Environmental Protection Agency. The outfalls documented to date are tabulated in Appendix B. Fifteen dry weather flows were documented and investigated, in which three new potential illicit discharges were identified. Letters were sent to City of Glendale, Henry Products Incorporated, and Precision Radiator (Appendix C).

Outreach

ADOT relies heavily on municipal interaction and does so through Stormwater Outreach for Regional Municipalities (STORM). ADOT outreach was limited in 2014-2015 and consisted of participation in ADEQ / KAZB (Keep Arizona Beautiful) Environmental Resource Roadshows, Adopt-a-Highway participation at Earth Day 2015 Indian School Park, and by proxy, STORM events.

Billboard (State Route 87 at Loop 202)

Media	Impressions	Totals
Billboard (STORM)	17,101,939	
Movie Advertisement (STORM)	2,145,000	
Bear Essential News (STORM)	800,000	
		20,046,939
Adopt-a-Highway Newsletter (ADOT)	2,200	
Earth Day (ADOT)	2,100	
		4,300
		20,051,239
STORM-www.azstorm.org		

Part 6: Statewide Stormwater Management Program Modifications

In accordance with Section 3.1.6 of the permit, provide a description of modifications to the SSWMP each year as follows:

1. Addition of New BMPs: Summarize the development and implementation of any new stormwater management practices or pollution controls each year. None.

2. Adding Temporary or Experimental BMPs: Describe the initiation and cessation of such BMPs and the perceived success of the temporary or experimental stormwater control. None.

3. Increase of Existing BMPs: Summarize modifications to existing stormwater management practices that increase the number of activities, increase the frequency of activities, or other increases in the level of implementation. None.

4. Replacement of Existing BMPs: Describe modifications to replace an ineffective stormwater management practice with an alternate practice by demonstrating that the change will continue to achieve an equivalent reduction in pollutants and will not cause or contribute to a violation of any applicable water quality standard. Include the following information:

   a. A description of the practice, activity, or control that has been eliminated;
   b. An explanation of why the original practice, activity, or control was ineffective;
   c. An analysis of how the replacement practice is expected to achieve the goals of the practice which was replaced; and
   d. An explanation of how the stormwater management program will continue to achieve a reduction in pollutants, to the maximum extent practicable, with the replacement of the original practice, activity, or control.

ADOT identified two best management practices that will not continue and have been reformatted. The particular details will be outlined in the 2016 SWMP. These two measures are the erosion abatement program and database establishment, Intelex as formerly described.

The former one million dollar subprogram dedicated to erosion abatement projects has been combined into a competitive project nomination pool. Major erosional issues may be identified as standalone or spot improvements combined with other infrastructure needs along same segments of highway. This process streamlines the planning and programming procedures to maximize return on investment.

Intelex was previously identified as the answer to tracking and reporting goals associated with the MS4 Permit. However, in mid-2015 all efforts to rollout Intelex came to a close. Most permit activities are currently tracked in formal databases, managed by single units, and queried annually. The cancellation of the proposed Intelex is not anticipated to have any effect on water quality because the program did not progress beyond beta testing.

Part 7: MS4 Monitoring Locations

Provide a brief description of each stormwater monitoring location (outfall), including the following information:

1. The outfall identification number or name;
2. Address or physical location of the site, including the latitude and longitude of the outfall;
3. Size of outfall's drainage area;
4. Land use(s) with an estimated percentage of each use;
5. Name and description of the receiving water; and
6. Type of monitoring equipment used.

Note: After initial approval by ADEQ, modifications to monitoring locations shall not be implemented without permit modification. Location maps can be found in Appendix D.

Outfall Identification, Latitude, Longitude	Physical Location	Land Use by Percent and Drainage Area	Receiving Water	Equipment Type
Flagstaff 35 11 53.29N 111 39 05.48W	South side of intersection at Business 40 and State Route 180	Urban Highway 80% Commercial Streets 20% 29.3 Acres	AZ15020015-004A Rio de Flag, Partial Body Contact, effluent dependent, assessment inconclusive	Auto-sampler – Avalanche
Sedona 34 51 43.93N 111 45 42.68W	Below western abutment of State Route 179 bridge over Oak Creek	State/Business Route 90% Commercial Streets 10% 7.35 Acres	AZ15060202-018C Oak Creek, Full Body Contact, outstanding Arizona water, impaired water, Fish Consumption, Agricultural Livestock Watering	Auto-sampler – Avalanche
Phoenix 33 37 19.84N 112 14 21.61W	East of State Route 101 on north bank of Skunk Creek	Urban Highway 90% Commercial Streets 10% 17.5 Acres	AZ15070102 Skunk Creek, Partial Body Contact, effluent dependent	Auto-sampler – Model 6712
Tucson 32 15 17.19N 110 59 49.39W	West of Interstate 10 north of Grant Road within ADOT Yard	Urban Highway 90% ADOT Facility 10% 4.8 Acres	AZ15050301-003B Santa Cruz River, Partial Body Contact, effluent dependent	Auto-sampler – Model 6712

Outfall Identification, Latitude, Longitude	Physical Location	Land Use by Percent and Drainage Area	Receiving Water	Equipment Type
Nogales 31 21 02.10N 110 55 24.48W	Morley Road at Intersection of State Route 82	Urban Highway 80% Residential Streets 20% 59.5 Acres	AZ15050301-011 Tributary to Nogales Wash, Partial Body Contact, impaired water	Auto-sampler – Avalanche

Part 8: Storm Event Records (MS4)

For each MS4 outfall monitoring location, provide a summary of all subsequent representative storm events necessary to collect at least one representative stormwater sample (greater than 0.1 inch rainfall) occurring within the reporting period, including the date of each event, the amount of precipitation (inches) for each event, and whether a sample was collected, or if not collected, information on the conditions that prevented sampling. Tables 8.1-8.5 identify the qualifying rain events and status of sampling during the report period.

8.1 Flagstaff Rain Events

Summer 2014	Status*	Inches	Winter 2014-15	Status*	Inches	Summer 2015	Status*	Inches
7/4/14	NS	0.50	12/3/14	SC	0.84	6/5/15	PS	1.07
7/5/14	IF	0.10	12/4/14	NS	0.57	6/28/15	PS	0.53
7/7/14	NS	0.82	12/13/14	NS/EF	0.31	6/29/15	NS	0.20
7/9/14	NS	0.51	12/19/14	NS/IF	0.11	7/2/15	NS/EF	0.19
7/12/14	NS	0.23	1/3/15	NS/EF	0.12	7/3/15	NS/EF	0.55
7/15/14	NS	0.15	1/12/15	NS/IF	0.12	7/18/15	NS/EF	0.57
7/24/14	IF	0.10	1/13/15	NS/EF	0.28	8/7/15	PS	0.44
7/27/14	NS	0.12	1/29/15	NS/IF	0.13	8/25/15	NS	0.19
7/29/14	IF	0.10	1/30/15	NS/IF	0.32	9/4/15	NS	0.58
8/2/14	NS	0.37	2/23/15	NS/EF	0.42	10/16/15	NS	0.55
8/3/14	NS	0.23	2/24/15	NS/IF	0.16	10/20/15	NS	0.53
8/11/14	SC	0.18	2/28/15	NS/IF	0.13	10/21/15	NS	0.42
8/12/14	NS	0.66	3/1/15	SC	0.69	10/29/15	NS	0.10
8/13/14	NS	0.49	3/24/15	NS/IF	0.13	10/31/15	NS	0.23
8/15/14	NS	0.28	4/25/15	SC	0.42			
8/19/14	NS	0.39	5/5/15	NS/IF	0.14			
8/21/14	NS	0.21	5/8/15	NS/IF	0.11			
8/22/14	NS	0.24	5/14/15	NS	0.22			
8/26/14	NS	0.11	5/15/15	NS	0.51			
8/6/14	NS	0.15	5/25/15	NS/IF	0.12			
9/4/14	NS	0.11						
9/5/14	NS	0.78						
9/8/14	NS	0.11						
9/9/14	NS	0.36						
9/26/14	NS	0.14						
9/27/14	NS	0.77						

*Status: SC-Sample Collected; PS-Partial Sample Collected; NS-No Sample Collected; EF-Equipment Failure; IF-Insufficient Flow

Table 8.2 Sedona Rain Events

Summer 2014	Status*	Inches	Winter 2014-15	Status*	Inches	Summer 2015	Status*	Inches
7/3/14	NS/EF	0.64	11/2/14	NS	0.21	6/14/15	PS	Unavailable
7/28/14	IF	0.10	12/2/14	NS/IF	0.22	7/6/15	PS	Unavailable
7/29/14	NS	0.18	12/3/14	SC/EF	0.43	7/14/15	NS/EF	0.11
7/31/14	PS	0.27	12/13/14	SC/EF	0.62	7/17/15	NS	0.13
8/3/14	NS	0.19	12/17/14	NS	0.28	7/18/15	NS	0.77
8/10/14	NS	0.64	1/2/15	NS/EF	0.3	7/19/15	NS	0.40
8/12/14	NS	1.54	1/10/15	NS/EF	0.1	7/31/15	PS	0.18
8/13/14	NS	0.51	1/12/15	NS/EF	0.12	8/11/15	NS	0.24
8/19/14	NS	1.24	1/13/15	NS/EF	0.33	8/12/15	NS	0.18
8/21/14	NS	0.55	1/29/15	NS/EF	0.12	8/25/15	NS	0.42
8/26/14	PS	0.38	1/30/15	NS/EF	0.65	8/26/15	NS	0.23
8/27/14	NS	0.39	2/22/15	NS	2.21	8/30/15	NS	0.19
9/8/14	NS	0.29	2/23/15	SC/EF	1.52	8/31/15	NS	0.12
9/17/14	NS	0.12	3/1/15	NS	1.15	9/5/15	NS	0.17
9/26/14	NS	0.4	3/2/15	NS	1.07	10/4/15	NS	0.17
9/27/14	NS	0.38	4/24/15	SC	0.32	10/5/15	NS	0.19
10/9/14	NS	0.15	4/25/15	NS	0.45	10/6/15	NS	0.12
			4/26/15	NS	0.25	10/18/15	NS	0.14
			5/5/15	NS	0.5			

*Status: SC-Sample Collected; PS-Partial Sample Collected; NS-No Sample Collected; EF-Equipment Failure; IF-Insufficient Flow; Unavailable-Sampler Malfunction

Table 8.3 Phoenix Rain Events

Summer 2014	Status*	Inches	Winter 2014-15	Status*	Inches	Summer 2015	Status*	Inches
7/3/14	NS/EF	0.64	11/20/14	NS	0.13	6/5/15	SC	0.47
7/28/14	IF	0.10	12/4/14	SC	0.67	10/6/15	NS	0.74
8/12/14	SC	0.57	12/12/14	NS	0.12	10/20/15	NS	0.23
8/19/14	NS	0.41	12/13/14	NS	0.22			
9/6/14	NS	0.48	1/26/15	NS/IF	0.46			
9/8/14	NS	2.83	1/29/15	NS	0.13			
9/9/14	NS	0.28	1/30/15	NS	0.33			
9/27/14	NS	0.79	2/23/15	SC	0.21			
9/28/14	IF	0.17	3/2/15	NS	0.32			
			3/19/15	SC	0.71			
			4/24/15	NS	0.15			
			4/25/15	NS	0.1			
			4/26/15	NS	0.14			
			5/4/15	NS	0.16			
			5/15/15	NS	0.13			
			5/16/15	NS	0.16			

*Status: SC-Sample Collected; PS-Partial Sample Collected; NS-No Sample Collected; EF-Equipment Failure; IF-Insufficient Flow

Table 8.4 Tucson Rain Events

Summer 2014	Status*	Inches	Winter 2014-15	Status*	Inches	Summer 2015	Status*	Inches
8/12/14	PS	0.15	12/4/14	SC	0.26	6/30/15	NS/IF	0.24
8/18/14	SC	0.17	12/13/14	NS	0.64	7/5/15	NS	0.56
9/4/14	NS	0.65	12/17/14	NS	0.51	7/22/15	NS/IF	0.20
9/7/14	NS	0.16	12/31/14	NS/IF	0.45	7/23/15	NS/IF	0.14
9/8/14	NS	0.99	1/8/15	NS	0.24	7/28/15	PS	0.37
			1/27/15	NS/IF	0.11	8/1/15	PS	0.10
			1/30/15	NS	1.16	8/7/15	PS	0.19
			1/31/15	NS	0.58	8/11/15	NS	0.35
			3/2/15	NS	0.15	8/23/15	NS	0.11
			3/18/15	NS	0.1	9/14/15	NS	0.17
			3/19/15	SC	0.01	9/21/15	NS	0.68
			4/26/15	NS/IF	0.19	10/6/15	NS	0.12
			5/4/15	NS	0.29	10/16/15	NS	0.25
						10/17/15	NS	0.49
						10/21/15	NS	0.61
						10/30/15	NS	0.44

*Status: SC-Sample Collected; PS-Partial Sample Collected; NS-No Sample Collected; EF-Equipment Failure; IF-Insufficient Flow

Table 8.5 Nogales Rain Events

Summer 2014	Status*	Inches	Winter 2014-15	Status*	Inches	Summer 2015	Status*	Inches
8/10/14	SC	0.64	12/17/14	NS/IF	0.21	6/9/15	NS/EF	0.23
8/12/14	NS	0.34	1/12/15	NS/IF	0.12	6/29/15	NS/EF	0.13
8/15/14	NS	0.13	1/30/15	NS/EF	1.2	7/1/15	NS/EF	0.48
8/19/14	NS	0.39	1/31/15	NS	0.27	7/9/15	NS/EF	0.14
8/21/14	NS	0.28	2/15/15	SC	1.15	7/12/15	NS/EF	1.47
8/25/14	NS	0.51	3/18/15	NS/IF	0.14	7/14/15	NS/EF	0.30
9/4/14	NS	0.39	3/31/15	NS/IF	0.17	7/15/15	NS/EF	0.23
9/6/14	NS	0.53	4/12/15	NS	0.5	7/18/15	NS/EF	0.24
9/12/14	NS	0.25				7/23/15	NS/EF	0.16
9/15/14	IF	0.21				7/28/15	PS	0.42
9/16/14	NS	0.26				7/31/15	NS/EF	0.16
9/17/14	NS	2.61				8/20/15	PS	0.96
9/18/14	NS	0.63				8/24/15	NS	0.38
10/7/14	NS	0.27				9/21/15	NS	1.87
10/8/14	NS	0.53				10/6/15	NS	0.19
						10/15/15	NS	0.12
						10/16/15	NS	0.34
						10/17/15	NS	0.14

*Status: SC-Sample Collected; PS-Partial Sample Collected; NS-No Sample Collected; EF-Equipment Failure; IF-Insufficient Flow

Part 9: Summary of MS4 Monitoring Data (By Location)

Use a separate table for each outfall monitoring location. Provide the outfall identification number, the receiving water, designated uses, and the lowest surface water quality standards applicable to the receiving water. Enter the analytical results for the stormwater samples collected for each season of the reporting period for each year. Enter subsequent monitoring data for each location on the same form. Include, as an attachment, the laboratory reports for stormwater samples. Tables 9.1-9.5 identify parameters and the results of analytical testing of stormwater over the past five years. Pollutant trends are discussed in Part 11.

Table 9.1 Flagstaff – See Part 7 for location		Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015
SAMPLING DATE[1]:		None	System Start	NS/EF	10/12/12	1/25/13	8/21/13	IF	8/11/14	12/3/14 3/1/15 4/25/15	6/5/15 6/28/15 8/7/15
Monitoring Parameters [2]	**WQS**										
Flow [3]	NNS	NS	NS	NS/EF	45.5	18.35	84.34	IF	1,643	1,089.1	332.9
pH	5.0-9.0	NS	NS	NS/EF	7.36	7.62	7	IF	7.35	8.16	8.59
Temperature (^{o}C)	NNS	NS	NS	NS/EF	68.4	52.4	72.23	IF	71.23	41.0	61.52
Hardness	NNS	NS	NS	NS/EF	67	120	34	IF	280	41	153
Specific conductance	NNS	NS	NS	NS/EF	160	220	120	IF	92	668	313
Total Dissolved Solids (TDS) (mg/L)	500.00	NS	NS	NS/EF	100	120	110	IF	110	372	205
Total Suspended Solids (TSS) (mg/L)	NNS	NS	NS	NS/EF	95	260	65	IF	110	1112	816
Turbidity	NNS	NS	NS	NS/EF	33	180	96	IF	63	305	432
Biochemical Oxygen Demand (BOD) (mg/L)	NNS	NS	NS	NS/EF	<5.00	15	28	IF	34	9	68
Chemical Oxygen Demand (COD) (mg/L)	NNS	NS	NS	NS/EF	44	200	100	IF	160	180	209
Surfactants	NNS	NS	NS	NS/EF	0.13	<0.10	0.45	IF	0.22	NS	0.68
Inorganics											
Cyanide, total (µg/L)	0.20	NS	NS	NS/EF	<0.0050	0.016	<0.0050	IF	<0.0050	<0.010	<0.010
Sulfates	250.00	NS	NS	NS/EF	<5.0	<5.0	8.8	IF	<5.0	<5.0	16.3
Nutrients (mg/L)											
Nitrite (NO_2-N)	10.00	NS	NS	NS/EF	0.63	0.08	0.05	IF	0.59	672	0.38
Nitrate (NO_3-N)	1.00	NS	NS	NS/EF	0.19	0.08	0.05	IF	<0.10	<0.10	<0.10
Ammonia as N	NNS	NS	NS	NS/EF	0.12	0.34	0.73	IF	0.52	672	<1.00
Total Kjeldahl Nitrogen (TKN)	NNS	NS	NS	NS/EF	1.1	3.2	2.8	IF	<1.2	<1.00	4.99
Total Phosphorus	NNS	NS	NS	NS/EF	0.34	2	0.31	IF	0.29	0.39	1.43
Ortho-P	NNS	NS	NS	NS/EF	0.18	0.36	NA/IS	IF	0.35	0.14	0.2
Sodium	NNS	NS	NS	NS/EF	13	30	13	IF	8.1	6	23
Calcium	NNS	NS	NS	NS/EF	18	31	9.8	IF	10	18	39
Chloride	NNS	NS	NS	NS/EF	14	36	11	IF	5.9	<25.0	<10.0
Microbiological											
Escherichia coli (E. coli) (CFU/100 mg or MPN)	NNS	NS	NS	NS/EF	<9700	120	23000	IF	2419.6	TNTC	TNTC
Fecal Coliform	100.00	NS	NS	NS/EF	<9700	140	3900	IF	298.7	224.7	119.8

Table 9.1 Flagstaff – See Part 7 for location		Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015
SAMPLING DATE[1]:		None	System Start	NS/EF	10/12/12	1/25/13	8/21/13	IF	8/11/14	12/3/14 3/1/15 4/25/15	6/5/15 6/28/15 8/7/15
Monitoring Parameters [2]	**WQS**										
Total Metals (µg/L) [4]											
Antimony	0.006	NS	NS	NS/EF	<0.020	<0.020	<0.020	IF	<0.020	0.0041	<0.0050
Arsenic	0.050	NS	NS	NS/EF	<0.020	<0.020	<0.020	IF	<0.020	<0.0001	<0.0100
Barium	2.000	NS	NS	NS/EF	0.070	0.260	0.044	IF	0.042	0.12	0.35
Beryllium	0.004	NS	NS	NS/EF	<0.0020	<0.0040	<0.0020	IF	<0.0020	<0.002	<0.002
Cadmium	0.005	NS	NS	NS/EF	<0.0050	<0.0050	<0.0050	IF	<0.0050	0.0003	<0.0010
Chromium	0.100	NS	NS	NS/EF	<0.010	0.015	<0.010	IF	<0.010	0.011	0.029
Copper	1.300	NS	NS	NS/EF	<0.020	0.044	<0.020	IF	0.025	0.05	0.11
Lead	0.015	NS	NS	NS/EF	<0.0050	0.037	0.0063	IF	<0.0050	0.0122	0.0301
Mercury	0.002	NS	NS	NS/EF	<0.0002	<0.0002	<0.0020	IF	<00020	<0.0002	<0.0002
Nickel	0.140	NS	NS	NS/EF	<0.020	<0.020	<0.020	IF	<0.020	<0.02	0.04
Selenium	0.020	NS	NS	NS/EF	<0.020	<0.020	<0.020	IF	<0.020	<0.0020	<0.0200
Silver	NNS	NS	NS	NS/EF	<0.010	<0.010	<0.010	IF	<0.010	<0.0001	<0.0010
Zinc	2.10	NS	NS	NS/EF	0.085	<0.30	0.089	IF	0.089	0.32	0.55
Organic Toxic Pollutants											
Total Petroleum Hydrocarbons (TPH) (mg/L)	NNS	NS	NS	NS/EF	0.86	0.14	1.6	IF	2.06	NS	<5.00
Total Oil and Grease (mg/L)	NNS	NS	NS	NS/EF	<5.0	7.6	19	IF	<5.0	10	<5.00
Chlorine	0.70000	NS	NS	NS/EF	<0.10	0.14	0.34	IF	0.62	<0.1	0.16

NS-No Sample; EF-Equipment Failure; IF-Insufficient Flow for Collection; IS-Insufficient Flow for Analysis; NNS-Non-numeric Standard; TNTC-Too Many to Count; CONF; [1]The sampling frequency for conventional parameters, cyanide, nutrients, *Escherichia coli* (*E. coli)*, TPH, oil and grease, total phenols, and metals is once each season for each year in the permit term at each monitoring location (outfall). The sampling frequency for VOCs, semi-VOCs, and pesticides is once each season for permit years 1 and 3 at each monitoring location (outfall). However, ADOT shall continue to monitor for VOCs, semi-VOCs, and pesticides in subsequent years as necessary to sample each monitoring location (outfall) for at least two summer and two winter wet seasons during this permit term. [2]Analytical results shall be reported in the units specified for each category or parameter. [3]Report the average flow rate for the sampling period (no more than 3 hours). [4]Metals shall be analyzed for total metals (a 1:1 ratio of total to dissolved is assumed).

Table 9.2 Sedona – See Part 7 for Location		Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015
SAMPLING DATE[1]:		None	None	System Start	NS/EF	1/25/13	NS/IF	NS/IF	7/31/14 8/26/14	4/24/15	6/14/15 7/6/15 7/31/15
Monitoring Parameters [2]	**WQS**										
Flow [3]	NNS	NS	NS	NS	NS/IF	<5	NS/IF	NS/IF	3.9	216.6	SM
pH	5.0-9.0	NS	NS	NS	NS/IF	7.47	NS/IF	NS/IF	7.63	8.2	9.17
Temperature (^{o}C)	NNS	NS	NS	NS	NS/IF	54.3	NS/IF	NS/IF	70.4	56.3	64.04
Hardness	NNS	NS	NS	NS	NS/IF	190	NS/IF	NS/IF	54	241	81
Specific conductance	NNS	NS	NS	NS	NS/IF	160	NS/IF	NS/IF	110	173.7	5.8
Total Dissolved Solids (TDS) (mg/L)	500.00	NS	NS	NS	NS/IF	180	NS/IF	NS/IF	171	236	204
Total Suspended Solids (TSS) (mg/L)	NNS	NS	NS	NS	NS/IF	1200	NS/IF	NS/IF	80	732	389
Turbidity	NNS	NS	NS	NS	NS/IF	1100	NS/IF	NS/IF	240	NS	118
Biochemical Oxygen Demand (BOD) (mg/L)	NNS	NS	NS	NS	NS/IF	<5	NS/IF	NS/IF	23	NS	51
Chemical Oxygen Demand (COD) (mg/L)	NNS	NS	NS	NS	NS/IF	84	NS/IF	NS/IF	220	NS	154
Surfactants	NNS	NS	NS	NS	NS/IF	<0.10	NS/IF	NS/IF	1.4	NS	0.834
Inorganics											
Cyanide, total (µg/L)	NR	NS	NS	NS/IF	0.16	NS/IF	NS/IF	<0.010	<0.010	<0.0050	NR
Sulfates	NR	NS	NS	NS/IF	8	NS/IF	NS/IF	8.2	7.7	6.1	NR
Nutrients (mg/L)											
Nitrite (NO_2-N)	10.00	NS	NS	NS	NS/IF	0.85	NS/IF	NS/IF	0.92	NS	0.594
Nitrate (NO_3-N)	1.00	NS	NS	NS	NS/IF	0.85	NS/IF	NS/IF	<0.10	NS	0.594
Ammonia as N	NNS	NS	NS	NS	NS/IF	0.85	NS/IF	NS/IF	<1.00	NS	1.08
Total Kjeldahl Nitrogen (TKN)	NNS	NS	NS	NS	NS/IF	2.5	NS/IF	NS/IF	3.92	6.12	2.7
Total Phosphorus	NNS	NS	NS	NS	NS/IF	5.7	NS/IF	NS/IF	0.22	1.36	0.779
Ortho-P	NNS	NS	NS	NS	NS/IF	0.21	NS/IF	NS/IF	0.15	NS	0.084
Sodium	NNS	NS	NS	NS	NS/IF	3.5	NS/IF	NS/IF	4	6	3.93
Calcium	NNS	NS	NS	NS	NS/IF	53	NS/IF	NS/IF	18	71	39.1
Chloride	NNS	NS	NS	NS	NS/IF	11	NS/IF	NS/IF	5	<5.00	2.46
Microbiological											
Escherichia coli (E. coli) (CFU/100 mg or MPN)	NNS	NS	NS	NS	NS/IF	<9	NS/IF	NS/IF	>20,000	NS	TNTC
Fecal Coliform	100.00	NS	NS	NS	NS/IF	4	NS/IF	NS/IF	42	NS	118.7

Table 9.2 Sedona – See Part 7 for Location		Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015
SAMPLING DATE[1]:		None	None	System Start	NS/EF	1/25/13	NS/IF	NS/IF	7/31/14 8/26/14	4/24/15	6/14/15 7/6/15 7/31/15
Monitoring Parameters [2]	**WQS**										
Total Metals (µg/L) [4]											
Antimony	0.006	NS	NS	NS	NS/IF	<0.020	NS/IF	NS/IF	0.0021	<0.0005	<0.0200
Arsenic	0.050	NS	NS	NS	NS/IF	<0.020	NS/IF	NS/IF	<0.0010	<0.0010	<0.0200
Barium	2.000	NS	NS	NS	NS/IF	0.08	NS/IF	NS/IF	0.04	0.36	0.157
Beryllium	0.004	NS	NS	NS	NS/IF	<0.0020	NS/IF	NS/IF	<0.002	<0.002	<0.0020
Cadmium	0.005	NS	NS	NS	NS/IF	<0.0050	NS/IF	NS/IF	0.0001	<0.0001	<0.0050
Chromium	0.100	NS	NS	NS	NS/IF	<0.010	NS/IF	NS/IF	<0.005	0.022	0.0102
Copper	1.300	NS	NS	NS	NS/IF	0.046	NS/IF	NS/IF	0.03	0.13	0.0622
Lead	0.015	NS	NS	NS	NS/IF	0.83	NS/IF	NS/IF	0.0015	<0.0010	0.0291
Mercury	0.002	NS	NS	NS	NS/IF	0.00037	NS/IF	NS/IF	<0.0002	<0.0002	<0.0002
Nickel	0.140	NS	NS	NS	NS/IF	<0.020	NS/IF	NS/IF	<0.02	0.05	<0.0200
Selenium	0.020	NS	NS	NS	NS/IF	<0.020	NS/IF	NS/IF	<0.0020	<0.0020	<0.0200
Silver	NNS	NS	NS	NS	NS/IF	<0.010	NS/IF	NS/IF	<0.0001	<0.0001	<0.0200
Zinc	2.10	NS	NS	NS	NS/IF	0.36	NS/IF	NS/IF	0.15	0.92	0.52
Organic Toxic Pollutants											
Total Petroleum Hydrocarbons (TPH) (mg/L)	NNS	NS	NS	NS	NS/IF	0.13	NS/IF	NS/IF	8.1	NS	ND
Total Oil and Grease (mg/L)	NNS	NS	NS	NS	NS/IF	<5.0	NS/IF	NS/IF	<5.0	NS	7.22, ND
Chlorine	0.70000	NS	NS	NS	NS/IF	1.5	NS/IF	NS/IF	0.03	NS	0.02

NS-No Sample; EF-Equipment Failure; IF-Insufficient Flow for Collection; IS-Insufficient Flow for Analysis; NNS-Non-numeric Standard; TNTC-Too Many to Count; CONF; [1]The sampling frequency for conventional parameters, cyanide, nutrients, *Escherichia coli* (*E. coli)*, TPH, oil and grease, total phenols, and metals is once each season for each year in the permit term at each monitoring location (outfall). The sampling frequency for VOCs, semi-VOCs, and pesticides is once each season for permit years 1 and 3 at each monitoring location (outfall). However, ADOT shall continue to monitor for VOCs, semi-VOCs, and pesticides in subsequent years as necessary to sample each monitoring location (outfall) for at least two summer and two winter wet seasons during this permit term. [2]Analytical results shall be reported in the units specified for each category or parameter. [3]Report the average flow rate for the sampling period (no more than 3 hours). [4]Metals shall be analyzed for total metals (a 1:1 ratio of total to dissolved is assumed).

Table 9.3 Phoenix – See Part 7 for Location		Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015
SAMPLING DATE[1]:		None	None	11/5/11	System Start	12/14/12	9/8/13	11/22/13	8/12/14	12/4/14 2/23/15 3/19/15	6/5/15
Monitoring Parameters [2]	**WQS**										
Flow [3]	NNS	NS	NS	42	NS/EF	24.5	72.5	39.5	840.0	505.3	105
pH	5.0-9.0	NS	NS	7.23	NS/EF	7.2	7.2	7.6	7.57	8.16	7.93
Temperature (^{o}C)	NNS	NS	NS	57.2	NS/EF	56.2	82.9	55.6	79.2	62.9	78.6
Hardness	NNS	NS	NS	IS	NS/EF	130.0	67.0	41.0	41.0	54	81
Specific conductance	NNS	NS	NS	IS	NS/EF	320.0	200.0	100.0	120	118	220
Total Dissolved Solids (TDS) (mg/L)	500.00	NS	NS	IS	NS/EF	310.0	230.0	80.0	150.0	132	240
Total Suspended Solids (TSS) (mg/L)	NNS	NS	NS	IS	NS/EF	53.0	24.0	26.0	49.0	58	57
Turbidity	NNS	NS	NS	IS	NS/EF	130.0	30.0	16.0	65.0	39	54
Biochemical Oxygen Demand (BOD) (mg/L)	NNS	NS	NS	IS	NS/EF	68.0	22.0	9.3	14.0	17	80
Chemical Oxygen Demand (COD) (mg/L)	NNS	NS	NS	IS	NS/EF	420.0	220.0	72.0	130.0	166	220
Surfactants	NNS	NS	NS	IS	NS/EF	0.9	1.0	0.4	0.2	0.56	0.74
Inorganics											
Cyanide, total (µg/L)	0.20	NS	NS	<0.0080	NS/EF	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	ND
Sulfates	250.00	NS	NS	IS	NS/EF	26.0	31.0	6.2	8.2	8.2	17
Nutrients (mg/L)											
Nitrite (NO_2-N)	10.00	NS	NS	IS	NS/EF	2.5	2.8	0.5	1.0	1.27	2.5
Nitrate (NO_3-N)	1.00	NS	NS	IS	NS/EF	0.3	0.4	<0.10	<0.10	0.13	0.2
Ammonia as N	NNS	NS	NS	IS	NS/EF	4.1	1.0	0.8	0.26	5.49	2.5
Total Kjeldahl Nitrogen (TKN)	NNS	NS	NS	IS	NS/EF	9.1	3.5	1.9	2.9	4.09	5.9
Total Phosphorus	NNS	NS	NS	IS	NS/EF	0.9	0.2	0.1	0.33	0.49	0.63
Ortho-P	NNS	NS	NS	IS	NS/EF	1.8	<0.12	0.1	0.26	0.12	ND
Sodium	NNS	NS	NS	IS	NS/EF	15.0	10.0	5.6	4.3	7	10
Calcium	NNS	NS	NS	IS	NS/EF	41.0	22.0	12.0	15.0	17	26
Chloride	NNS	NS	NS	IS	NS/EF	16.0	10.0	2.4	4.4	<5.00	10
Microbiological											
Escherichia coli (E. coli) (CFU/100 mg or MPN)	NNS	NS	NS	IS	NS/EF	>400	1100000	>600	560,000	46000	CONF
Fecal Coliform	100.00	NS	NS	170	NS/EF	>2400	63.0	1100	20.0	>2419.6	770

Table 9.3 Phoenix – See Part 7 for Location		Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015
SAMPLING DATE[1]:		None	None	11/5/11	System Start	12/14/12	9/8/13	11/22/13	8/12/14	12/4/14 2/23/15 3/19/15	6/5/15
Monitoring Parameters [2]	**WQS**										
Total Metals (µg/L) [4]											
Antimony	0.006	NS	NS	IS	NS/EF	<0.020	<0.020	<0.020	<0.020	0.0046	0.0058
Arsenic	0.050	NS	NS	IS	NS/EF	<0.020	<0.020	<0.020	<0.020	<0.001	ND
Barium	2.000	NS	NS	IS	NS/EF	0.1	0.042	0.022	0.064	0.05	0.083
Beryllium	0.004	NS	NS	IS	NS/EF	<0.0020	<0.0020	<0.0020	<0.0020	<0.002	ND
Cadmium	0.005	NS	NS	IS	NS/EF	<0.0050	<0.0050	<0.0050	<0.0050	0.0001	ND
Chromium	0.100	NS	NS	IS	NS/EF	0.023	<0.010	<0.010	<0.010	<0.005	ND
Copper	1.300	NS	NS	IS	NS/EF	0.1	0.045	<0.020	0.035	0.04	0.061
Lead	0.015	NS	NS	IS	NS/EF	0.0084	<0.0050	<0.0050	0.0083	0.0028	ND
Mercury	0.002	NS	NS	IS	NS/EF	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	ND
Nickel	0.140	NS	NS	IS	NS/EF	0.025	<0.020	<0.020	<0.020	<0.02	ND
Selenium	0.020	NS	NS	IS	NS/EF	<0.020	<0.020	<0.020	<0.020	<0.002	ND
Silver	NNS	NS	NS	IS	NS/EF	<0.010	<0.010	<0.010	<0.010	<0.0001	ND
Zinc	2.10	NS	NS	IS	NS/EF	0.25	0.08	0.061	0.12	0.10	0.16
Organic Toxic Pollutants											
Total Petroleum Hydrocarbons (TPH) (mg/L)	NNS	NS	NS	0.29	NS/EF	<5.0	6	2.2	2.8	<5.00	<5.00
Total Oil and Grease (mg/L)	NNS	NS	NS	7.3	NS/EF	<5.0	<5.3	<5.7	<5.6	<5.00	<5.00
Chlorine	0.70000	NS	NS	IS	NS/EF	NS	<0.10	<0.10	0.39	0.3	ND

NS-No Sample; EF-Equipment Failure; IF-Insufficient Flow for Collection; IS-Insufficient Flow for Analysis; NNS-Non-numeric Standard; TNTC-Too Many to Count; CONF; [1]The sampling frequency for conventional parameters, cyanide, nutrients, *Escherichia coli* (*E. coli)*, TPH, oil and grease, total phenols, and metals is once each season for each year in the permit term at each monitoring location (outfall). The sampling frequency for VOCs, semi-VOCs, and pesticides is once each season for permit years 1 and 3 at each monitoring location (outfall). However, ADOT shall continue to monitor for VOCs, semi-VOCs, and pesticides in subsequent years as necessary to sample each monitoring location (outfall) for at least two summer and two winter wet seasons during this permit term. [2]Analytical results shall be reported in the units specified for each category or parameter. [3]Report the average flow rate for the sampling period (no more than 3 hours). [4]Metals shall be analyzed for total metals (a 1:1 ratio of total to dissolved is assumed).

Table 9.5 Tucson – See Part 7 for Location		Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015
SAMPLING DATE[1]:		None	None	System Start	8/22/12	12/13/12	7/19/13 8/2/13	11/26/13	8/12/14 8/18/14	12/4/14 3/19/15	7/28/15 8/1/15 8/7/15
Monitoring Parameters [2]	**WQS**										
Flow [3]	NNS	NS	NS	276	27.0	<10	<10	<10	236	20,667	276.5
pH	6.5-8.5	NS	NS	7.1	8.57	7.54	7.46	7.86	7.4	7.7	8.59 8.48
Temperature (^{o}C)	NNS	NS	NS	65.1	81.6	61.22	83.47	64.7	77.2	NS	87.62 90.8
Hardness	NNS	NS	NS	IS	35.0	28	IS	IS	42	70	55, 68
Specific conductance	500	NS	NS	235	92.0	89	59	IS	108	177	120, 117
Total Dissolved Solids (TDS) (mg/L)	500	NS	NS	IS	72.0	66	82	IS	112	186	110, 114
Total Suspended Solids (TSS) (mg/L)	NNS	NS	NS	IS	65.0	69	350	IS	14	88	16, 110, 186
Turbidity	NNS	NS	NS	IS	82.0	46	230	IS	6.53	104	40, 95.8
Biochemical Oxygen Demand (BOD) (mg/L)	NNS	NS	NS	IS	<5.0	5.8	7.2	IS	8	27	27
Chemical Oxygen Demand (COD) (mg/L)	NNS	NS	NS	IS	62.0	95	IS	IS	108	273	78, 147
Surfactants	NNS	NS	NS	IS	0.1	0.122	<.05	IS	0.30	0.30	0.70
Inorganics											
Cyanide, total (µg/L)	0.2	NS	NS	<0.0080	IS	<0.050	<0.050	<0.010	<0.010	<0.010	ND, <0.01
Sulfates	250	NS	NS	IS	4.2	7.5	2.2	IS	9.5	16.6	6.8, 8.8
Nutrients (mg/L)											
Nitrite (NO_2-N)	1	NS	NS	IS	1.0	IS	0.50	IS	0.62	1.31	1.1, 1.49
Nitrate (NO_3-N)	10	NS	NS	IS	<0.20	IS	<0.2	IS	0.18	<0.10	0.19, 0.16
Ammonia as N	NNS	NS	NS	IS	<0.50	<0.50	IS	IS	<1	5.83	ND, 4.24
Total Kjeldahl Nitrogen (TKN)	NNS	NS	NS	IS	1.0	1.6	IS	IS	2.17	4.52	1.8, 2.59
Total Phosphorus	NNS	NS	NS	IS	0.2	0.18	IS	IS	0.05	1.38	0.27, 0.3
Ortho-P	NNS	NS	NS	IS	<0.20	<0.20	<0.20	IS	<0.05	0.10	ND, 0.2
Sodium	NNS	NS	NS	IS	3.5	4.9	IS	IS	5	8	3.8, 4
Calcium	NNS	NS	NS	IS	14.0	11	IS	IS	15	24	19, 22
Chloride	10	NS	NS	IS	<2.0	2.8	<2	IS	<5	<5.00	ND, <5

Table 9.5 Tucson – See Part 7 for Location		Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015
SAMPLING DATE[1]:		None	None	System Start	8/22/12	12/13/12	7/19/13 8/2/13	11/26/13	8/12/14 8/18/14	12/4/14 3/19/15	7/28/15 8/1/15 8/7/15
Monitoring Parameters [2]	**WQS**										
Microbiological											
Escherichia coli (E. coli) (CFU/100 mg or MPN)	NNS	NS	NS	IS	<1	2200	IS	IS	>20,000	>200	CONF
Fecal Coliform	100.00	NS	NS	<2	300	300	IS	650	5.2	980	790
Total Metals (µg/L) [4]											
Antimony	0.0060	NS	NS	IS	<0.0030	0.0045	IS	IS	0.0019	0.0078	ND, 0.0033
Arsenic	0.0500	NS	NS	IS	<0.10	<0.10	IS	IS	<0.0010	0.0025	0.0034, <0.0050
Barium	2	NS	NS	IS	0.1	0.070	IS	IS	0.03	0.11	0.058, 0.09
Beryllium	0.0040	NS	NS	IS	<0.0010	<0.0010	IS	IS	<0.002	<0.002	ND, <0.002
Cadmium	0.0050	NS	NS	IS	<0.0010	<0.0010	IS	IS	0.0001	0.0005	ND, <0.0005
Chromium	0.1	NS	NS	IS	<0.010	<0.010	IS	IS	<0.005	0.005	ND, 0.007
Copper	1.3	NS	NS	IS	0.050	0.080	IS	IS	0.04	0.23	0.068, 0.091
Lead	0.015	NS	NS	IS	<0.015	<0.015	IS	IS	0.0014	0.0167	ND, <0.1
Magnesium	-	NS	NS	IS	2.0	<2.0	IS	IS	1	NS	2, 3
Mercury	0.0020	NS	NS	IS	<0.0002 0	<0.0002 0	IS	IS	<0.0002	<0.0002	ND, <0.0002
Nickel	0.1400	NS	NS	IS	<0.010	<0.010	IS	IS	<0.02	<0.02	ND, <0.02
Selenium	0.0200	NS	NS	IS	<0.0020	<0.0030	IS	IS	<0.0020	<0.0020	ND, <0.01
Silver	NNS	NS	NS	IS	<0.010	<0.010	IS	IS	0.0002	0.0004	ND, <0.0005
Zinc	2.1	NS	NS	IS	0.1	0.13	IS	IS	0.07	0.27	0.16, 0.21
Organic Toxic Pollutants	2.1										
Total Petroleum Hydrocarbons (TPH) (mg/L)		NS	NS	1.8	IS	IS	IS	4200	10.6	5.3	<5.00
Total Oil and Grease (mg/L)	NNS	NS	NS	9.9	11	<5.0	8.5	<5	<5	8.4	1.4, 0.70, 6

Table 9.5 Tucson – See Part 7 for Location		Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015
SAMPLING DATE[1]:		None	None	System Start	8/22/12	12/13/12	7/19/13 8/2/13	11/26/13	8/12/14 8/18/14	12/4/14 3/19/15	7/28/15 8/1/15 8/7/15
Monitoring Parameters [2]	**WQS**										
Chlorine	NNS	NS	NS	IS	0.13	<0.050	IS	IS	0.23	NS	0.13

NS-No Sample; EF-Equipment Failure; IF-Insufficient Flow for Collection; IS-Insufficient Flow for Analysis; NNS-Non-numeric Standard; TNTC-Too Many to Count; CONF; [1]The sampling frequency for conventional parameters, cyanide, nutrients, *Escherichia coli* (*E. coli)*, TPH, oil and grease, total phenols, and metals is once each season for each year in the permit term at each monitoring location (outfall). The sampling frequency for VOCs, semi-VOCs, and pesticides is once each season for permit years 1 and 3 at each monitoring location (outfall). However, ADOT shall continue to monitor for VOCs, semi-VOCs, and pesticides in subsequent years as necessary to sample each monitoring location (outfall) for at least two summer and two winter wet seasons during this permit term. [2]Analytical results shall be reported in the units specified for each category or parameter. [3]Report the average flow rate for the sampling period (no more than 3 hours). [4]Metals shall be analyzed for total metals (a 1:1 ratio of total to dissolved is assumed).

Table 9.5 Nogales – See Part 7 for Location		Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015
SAMPLING DATE[1]:		None	None	System Start	NS	12/14/12	7/19/13	NS/IF	8/10/14	2/15/15	8/20/15
Monitoring Parameters [2]	**WQS**										
Flow [3]	NNS	NS	NS	NS/EF	NS	<10	<10	NS/IF	2,757	2,372.3	1895.7
pH	5.0-9.0	NS	NS	NS/EF	NS	7.33	7.21	NS/IF	7.46	9.32	8.78
Temperature (^{o}C)	NNS	NS	NS	NS/EF	NS	64.7	81.3	NS/IF	80.3	51.8	74.5
Hardness	NNS	NS	NS	NS/EF	NS	NS	IS	NS/IF	64	99	67
Specific conductance	NNS	NS	NS	NS/EF	NS	NS	59	NS/IF	130	63.9	66.4
Total Dissolved Solids (TDS) (mg/L)	500.00	NS	NS	NS/EF	NS	NS	82	NS/IF	121	43	81
Total Suspended Solids (TSS) (mg/L)	NNS	NS	NS	NS/EF	NS	NS	350	NS/IF	54	1330	718
Turbidity	NNS	NS	NS	NS/EF	NS	NS	230	NS/IF	47	508	450
Biochemical Oxygen Demand (BOD) (mg/L)	NNS	NS	NS	NS/EF	NS	NS	7.2	NS/IF	6	NS	9.9
Chemical Oxygen Demand (COD) (mg/L)	NNS	NS	NS	NS/EF	NS	NS	IS	NS/IF	56	497	303
Surfactants	NNS	NS	NS	NS/EF	NS	NS	<0.05	NS/IF	0.10	NS	<0.100
Inorganics											
Cyanide, total (µg/L)	0.20	NS	NS	NS/EF	NS	<0.050	<0.050	NS/IF	<0.010	<0.010	<0.010
Sulfates	250.00	NS	NS	NS/EF	NS	NS	2.2	NS/IF	5.6	6.8	<5.0
Nutrients (mg/L)											
Nitrite (NO_2-N)	10.00	NS	NS	NS/EF	NS	NS	0.5	NS/IF	2.31	1.33	0.89
Nitrate (NO_3-N)	1.00	NS	NS	NS/EF	NS	NS	IS	NS/IF	<0.10	<0.10	<0.10
Ammonia as N	NNS	NS	NS	NS/EF	NS	NS	IS	NS/IF	<1.0	5.14	<1.00
Total Kjeldahl Nitrogen (TKN)	NNS	NS	NS	NS/EF	NS	NS	IS	NS/IF	<1.0	3.81	2.9
Total Phosphorus	NNS	NS	NS	NS/EF	NS	NS	IS	NS/IF	0.42	3.40	2.75
Ortho-P	NNS	NS	NS	NS/EF	NS	NS	IS	NS/IF	0.29	<0.05	0.18
Sodium	NNS	NS	NS	NS/EF	NS	NS	IS	NS/IF	4	2	2
Calcium	NNS	NS	NS	NS/EF	NS	NS	IS	NS/IF	21	28	19
Chloride	NNS	NS	NS	NS/EF	NS	NS	IS	NS/IF	<5	<5.00	<5.00
Microbiological											
Escherichia coli (E. coli) (CFU/100 mg or MPN)	NNS	NS	NS	NS/EF	NS	20000	IS	NS/IF	>2,000	NS	125000
Fecal Coliform	100.00	NS	NS	NS/EF	NS	9000	2400	NS/IF	1,986.3	NS	≥1600

Table 9.5 Nogales – See Part 7 for Location		Winter 2010-11	Summer 2011	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015
SAMPLING DATE[1]:		None	None	System Start	NS	12/14/12	7/19/13	NS/IF	8/10/14	2/15/15	8/20/15
Monitoring Parameters [2]	**WQS**										
Total Metals (µg/L) [4]											
Antimony	0.006	NS	NS	NS/EF	NS	NS	IS	NS/IF	0.0016	<0.0025	0.0011
Arsenic	0.050	NS	NS	NS/EF	NS	NS	IS	NS/IF	0.003	0.0069	0.0046
Barium	2.000	NS	NS	NS/EF	NS	NS	IS	NS/IF	0.04	0.26	0.14
Beryllium	0.004	NS	NS	NS/EF	NS	NS	IS	NS/IF	<0.002	<0.002	<0.002
Cadmium	0.005	NS	NS	NS/EF	NS	NS	IS	NS/IF	<0.0001	0.0007	0.0005
Chromium	0.100	NS	NS	NS/EF	NS	NS	IS	NS/IF	<0.005	0.016	0.01
Copper	1.300	NS	NS	NS/EF	NS	NS	IS	NS/IF	0.02	0.09	0.065
Lead	0.015	NS	NS	NS/EF	NS	NS	IS	NS/IF	0.007	0.0654	0.038
Mercury	0.002	NS	NS	NS/EF	NS	NS	IS	NS/IF	<0.0002	<0.0002	<0.0002
Nickel	0.140	NS	NS	NS/EF	NS	NS	IS	NS/IF	<0.02	0.02	<0.02
Selenium	0.020	NS	NS	NS/EF	NS	NS	IS	NS/IF	<0.0020	<0.0100	<0.0020
Silver	NNS	NS	NS	NS/EF	NS	NS	IS	NS/IF	<0.0001	<0.0005	<0.0001
Zinc	2.10	NS	NS	NS/EF	NS	NS	IS	NS/IF	0.04	0.28	0.19
Organic Toxic Pollutants											
Total Petroleum Hydrocarbons (TPH) (mg/L)	NNS	NS	NS	NS/EF	NS	NS	<5.2	NS/IF	0.70	<5.00	<5.00
Total Oil and Grease (mg/L)	NNS	NS	NS	NS/EF	NS	**5.7**	<5	NS/IF	<5.0	6.20	6.7
Chlorine	0.70000	NS	NS	NS/EF	NS	NS	<0.050	NS/IF	0.30	<0.08	0.32

NS-No Sample; EF-Equipment Failure; IF-Insufficient Flow for Collection; IS-Insufficient Flow for Analysis; NNS-Non-numeric Standard; TNTC-Too Many to Count; CONF; [1]The sampling frequency for conventional parameters, cyanide, nutrients, *E. coli*, TPH, oil and grease, total phenols, and metals is once each season for each year in the permit term at each monitoring location (outfall). The sampling frequency for VOCs, semi-VOCs, and pesticides is once each season for permit years 1 and 3 at each monitoring location (outfall). However, ADOT shall continue to monitor for VOCs, semi-VOCs, and pesticides in subsequent years as necessary to sample each monitoring location (outfall) for at least two summer and two winter wet seasons during this permit term. [2]Analytical results shall be reported in the units specified for each category or parameter. [3]Report the average flow rate for the sampling period (no more than 3 hours). [4]Metals shall be analyzed for total metals (a 1:1 ratio of total to dissolved is assumed).

Part 10: Summary of Industrial and Construction Monitoring Data

Monitoring was performed at one of two industrial facilities, one construction site, and three maintenance yards. The Grand Canyon National Park Airport did not conduct de-icing during the report period; therefore, wet-weather monitoring was not required. The results of monitoring are in Tables 10.1-10.5. Discharge Monitoring Reports for the construction project and laboratory results for the Durango Sign Factory and three maintenance yards are included in Appendix E.

Table 10.1 Construction Project (AZCON 532819)

Monitoring Point	Turbidity 8/13/14	Turbidity 9/28/14
1	No discharge	No discharge
2	No discharge	No discharge
3	254 NTU	628 NTU
4	157 NTU	468 NTU
5	No discharge	No discharge

NTU-Nephelometric Turbidity Unit

Table 10.2 Durango Sign Factory

Parameter	WQS mg/L	8/13/14	1/13/15	1/30/15	7/6/15	9/1/15
Report Number	-	L710650	5010991	5012400	550-47246-1	550-50378-1
Total Suspended Solids	100	42	NS	NS	76	NS
Nitrate/Nitrogen	0.68	0.99	3.81	NS	ND	NS
Aluminum	0.75	1.72	NS	0.20	NS	1.7
Iron	1.0	1.2	NS	0.1	NS	1.8
Zinc	0.12	0.42	NS	1.77	NS	1.7

WQS-water quality standard; NS-not sampled; ND-no detection

Table 10.3 Superior Yard

Parameter	WQS	8/13/14	12/4/14	6/5/15
Report Number	-	L716047	4120563	5060635
Total Dissolved Solids	500	220	436	240
Total Suspended Solids	NNS	15	8	26
Total Petroleum Hydrocarbons	NNS	BDL	<5.00	<5.00
Copper	1.3	BDL	NS	NS

WQS-water quality standard; NNS-no numeric standard; BDL-below detection limit; NS-not sampled

Table 10.4 Superior Fuel Yard

Parameter	WQS	8/13/14	12/4/14	6/5/15
Report Number	-	L716049	4120560	506035
Total Dissolved Solids	500	170	282	191
Total Suspended Solids	NNS	250	90	46
Total Petroleum Hydrocarbons	NNS	BDL	<5.00	<5.00
Copper	1.3	0.14	NS	NS

WQS-water quality standard; NNS-no numeric standard; BDL-below detection limit; NS-not sampled

Table 10.5 Nogales Maintenance Yard

Parameter	WQS	8/11/14	12/17/14	7/13/15
Report Number	-	4080993	4121603	550-47783-1
Total Dissolved Solids	500	229	340	330
Total Suspended Solids	NNS	28	494	1000
Total Petroleum Hydrocarbons	NNS	0.86	<5.00	1.13
E. Coli	100	172.3	NS	NS

WQS-water quality standard; NNS-no numeric standard; BDL-below detection limit; NS-not sampled

Part 11: Assessment of Monitoring Data

A. Stormwater Quality: Provide an evaluation of the sampling results for each outfall monitoring location, including an assessment of any trends, improvements, or degradation of stormwater quality from each drainage area. Discuss possible explanations for stormwater quality trends, including the implementation of stormwater management practices to reduce the discharge of pollutants to and from the storm sewer system.

Sampling occurred during Summer 2014, Winter-Summer 201415, and Summer 2015. Table 11.1 summarizes sample collection dates and laboratory reports, which are found in Appendix G.

Table 11.1 Summary of Lab Reports

Sampling Location (Type)	Sampling Season	Collection Date	Report Number	Report Date
Flagstaff (Grab)	Summer 2014	8/11/14	L715314	8/20/14
Flagstaff (Grab)	Summer 2014	8/11/14	FLAG-081114G	8/11/14
Flagstaff (Comp)	Summer 2014	8/11/14	L715403	8/22/14
Flagstaff (Comp)	Winter 2014-15	12/3/14	14-2073	12/4/14
Flagstaff (Comp)	Winter 2014-15	12/3/14	14-4980	12/4/14
Flagstaff (Comp)	Winter 2014-15	12/3/14	14-4979	12/4/14
Flagstaff (Both)	Winter 2014-15	12/3/14	4120578	12/18/14
Flagstaff (Grab)	Summer 2015	6/5/15	5060650	6/12/15
Flagstaff (Comp)	Summer 2015	6/6/15	5060649	6/17/15
Flagstaff (Comp)	Summer 2015	6/28/15	150527	6/29/15
Flagstaff (Grab)	Summer 2015	7/6/15	150576	7/7/15
Flagstaff (Comp)	Summer 2015	8/7/15	150726	8/10/15
Sedona (Comp)	Summer 2014	7/31/14	4080041	8/18/14
Sedona (Comp)	Winter 2014-15	12/3/14	14-4992	12/4/14
Sedona (Comp)	Winter 2014-15	12/13/14	4121491	12/30/14
Sedona (Grab)	Winter 2014-15	12/12/14	4121491	12/30/14
Sedona (Both)	Winter 2014-15	12/17/14	4121692	12/31/14
Sedona (Comp)	Summer 2015	6/14/15	L771324	6/16/15
Sedona (Comp)	Summer 2015	7/6/15	L775690	7/8/15
Sedona (Grab)	Summer 2015	7/31/15	150693	8/3/15
Sedona (Grab)	Summer 2015	7/31/15	5080300	8/3/15
Phoenix (Comp)	Summer 2014	8/12/14	L715784	8/25/14
Phoenix (Grab)	Winter 2014-15	12/4/14	4120485	12/15/14
Phoenix (Comp)	Winter 2014-15	12/4/14	4120515	12/29/14

Sampling Location (Type)	Sampling Season	Collection Date	Report Number	Report Date
Phoenix (Comp)	Winter 2014-15	3/14/15	550-41870-1	3/28/15
Phoenix (Grab)	Summer 2015	6/5/15	5060635	6/12/15
Phoenix (Both)	Summer 2015	6/6/15	550-45905-1	6/25/15
Tucson (Grab)	Summer 2014	8/12/14	4081080	8/27/14
Tucson (Comp)	Summer 2014	8/18/14	4081543	8/28/14
Tucson (Comp)	Winter 2014-15	12/4/14	4120488	12/29/14
Tucson (Comp)	Winter 2014-15	3/19/15	550-41928-1	3/31/15
Tucson (Comp)	Summer 2015	7/28/15	550-48573-1	8/12/15
Tucson (Grab)	Summer 2015	7/28/15	550-48572-1	8/12/15
Tucson (Comp)	Summer 2015	8/7/15	5080720	8/19/15
Tucson (Comp)	Summer 2015	8/1/15	550-48762-1	8/20/15
Nogales (Both)	Summer 2014	8/10/14	4080996	9/8/14
Nogales (Grab)	Winter 2014-15	1/30/15	5012401	2/10/15
Nogales (Grab)	Summer 2015	8/20/15	550-48574-1	8/17/15
Nogales (Comp)	Summer 2015	8/20/15	550-49906-1	8/28/15
Nogales (Grab)	Summer 2015	8/20/15	5081950	9/8/15
Type: Comp-composite; Both-grab and composite				

MS4 monitoring data for the past five (5) years is tabulated in Part 10. The following trends provide an evaluation of the data.

- Flagstaff – *E. coli* is elevated in five of seven sampling events. This stormwater outfall is directly downstream of a community park, which may contribute the pollutant due to animal feces. However, the past three sampling seasons have resulted in a significant decrease in *E. coli* count. Potential reasons for the decline are increased local awareness, increased maintenance at the site by consultant staff, and local sampling staff to expedite collection and analyzation of samples. All these reasons could reduce the proliferation of bacteria. Because water quality appears to be improving no actions are proposed at this time.

- Flagstaff – Lead has shown up twice in the past four years of sampling; yet, no correlations can be made. One exceedance was during Winter 2012-2013 and one during Summer 2015; both results came in over double the water quality standard. It is proposed that ADOT and the City of Flagstaff collaborate prior to June 1, 2016, regarding potential sources of lead that could be mobilizing in stormwater.

- Sedona – *E. coli* has historically been low (Winter 2012-2013 and Summer 2014); however, the last two sample seasons have shown increasing colonies of bacteria resulting in exceedance of water quality standards. Several years ago ADOT installed a stormceptor to treat roadway runoff prior to discharge and the equipment is currently maintained under an intergovernmental agreement with the City of Sedona. Plausible explanations for the increasing bacteria include inadequate maintenance of the stormceptor, increased transient animal populations, and upstream degradation within the watershed. It is proposed that ADOT and the City of Sedona collaborate regarding pet waste, wildlife, and transient populations that may be utilizing local amenities and may contribute to the slight exceedances found these past two cycles. It may benefit the community for ADEQ to conduct testing of the *E. coli* to determine whether wildlife, canine, or human sourcing is prevalent.

- Sedona – Lead presence in Sedona samples is correlating to Flagstaff in that exceedances occurred coincidentally in Winter 2012-2013 and Summer 2015. It is proposed that ADOT and the City of Sedona collaborate prior to June 1, 2016, regarding potential sources of lead that could be mobilizing in stormwater.

- Phoenix – *E. coli* has been present in nearly every sample on record, while colony size has fluctuated drastically. Summer samples coincidentally have shown lower concentrations (in the hundreds) compared to most winter samples (in the thousands). ADOT has observed transient human populations in the area and often requests police escort when performing equipment inspections. The possible increase in bacterial detections may be due to moderate winter temperatures bringing human transients to the region and may result in higher *E. coli* concentration in winter due to social behavior.

- Tucson – *E. coli* was present in nearly every sample taken in the last four years. The general trend indicates an exponential increase in the proliferation of bacteria from 300 in 2012-2013 to 600 in 2013-2014, and 700-900 in 2014-2015; yet, Summer 2015 realized a slight dip. Because the majority of the drainage area is composed of urban highway and an ADOT maintenance facility there is little to no human/animal migratory populations. ADOT recommends coordinating with local municipalities in the Tucson area by June 1, 2016, to document any similar local trends.

- Tucson – Nitrate hovers around “1” and, yet, in the past two cycles has increased above the water quality standard. With construction in the vicinity it is plausible that fertilizers to support vegetative stabilization are the culprit. ADOT will review fertilizer applications in the vicinity of the sampler prior to June 1, 2016 to determine whether there is any substance to that claim.

- Nogales – *E. coli* has been historically prevalent in this impaired water. A potential source of this pollutant is airborne sediment from the adjacent desert and within the watershed. Sediment contributions and inflow of polluted stormwater from Mexico are outside the purview of ADOT. It may benefit the community for ADEQ to conduct testing of the *E. coli* to determine whether wildlife, canine, or human sourcing is prevalent.

- Nogales – Lead has been elevated in the past two seasons, and it is recommended that ADOT share sampling results with the Border Coalition to determine whether the data is consistent with our findings.

B. Water Quality Standards (WQS): Compare the sampling results for each outfall monitoring location with the applicable surface water quality standards for the receiving water. Provide an assessment of stormwater quality relative to water quality standards, including the progress towards reducing the discharge of pollutants to the maximum extent practicable and protecting receiving water quality.

Over half of the exceedances reported in the last five years do not appear as trends, but rather as isolated, single events or repeated only twice. Because exceedances of *E. coli*, lead, and nitrate are pollutants that have been commonly documented in ADOT runoff these elements will be discussed here.

E. coli persists in the desert environment and is seen at all five sample sites. Flagstaff conditions are improving overall, Sedona samples slightly exceed the numeric standard, Phoenix is erratic, Tucson is on an up stroke, and Nogales appears stable. Communities could share data with resource agencies to pinpoint appropriate action.

Lead concentrations have doubled and exceedances were found in four of five locations. Two exceedances occurred in Summer (northern samplers – Flagstaff and Sedona) and two exceedances occurred in Winter (southern samplers – Tucson and Nogales). It is possible tourism is responsible for this trend; increased traffic may equal increased brake wear and deposition on the roadway.

Nitrate exceedances were recorded in three samples (Flagstaff – Winter 2014-2015; Tucson – Winter 2014-2015 and Summer 2015). While Tucson exceedances were slight, the Flagstaff exceedance was significantly higher (numeric standard is 10 and the sample detected 672 mg/L of the pollutant.) More data is needed.

In all cases, outreach and intergovernmental coordination should inform the program to determine whether new/additional practices are warranted.

C. Exceeding a WQS: Describe any exceedance of a surface water quality standard during the reporting year, including, at a minimum, the following information 1) Sampling date; 2) Monitoring location (outfall identification number); 3) Receiving water and water quality standard which was exceeded; 4) Outfall monitoring results (laboratory reports); 5) A description of the circumstances that may have caused or contributed to the exceedance of an applicable water quality standard; 6) Proposed revisions to the stormwater management program consisting of additional and/or revised management practices or pollution controls to prevent the discharge from causing or contributing to an exceedance of a water quality standard in the future; and 7) A schedule for implementing the proposed stormwater or non-stormwater management practices or pollution controls.

Table 11.2 compiles the exceedances during the report period. The minimum information is presented below, or in text in 11A, as identified. Where an exceedance has not been repeated, that is, has not been recorded more than once in the history of ADOT sampling, ADOT has not proposed any circumstances, proposed practices, or schedule to implement a best management practice (see 9.1.4e of AZS0000018-2008).

Location	Sample Season	Receiving Water Standard	Monitoring Result	Circumstances	Proposed BMP	Schedule to Implement BMP
Flagstaff	Winter 14-15	Nitrate 10mg/L	672 (comp)	Unknown	None	None
Flagstaff	Winter 14-15	*E. coli* MPN/100mL	224 (comp) 2,420 (grab)	See Part 11A		
Flagstaff	Summer 15	*E. coli* MPN/100mL	120 (comp) 147 (grab)			
Flagstaff	Summer 15	Lead 0.015mg/L	0.0301 (comp)	See Part 11A		
Sedona	Winter 14-15	*E. coli* MPN/100mL	117 (grab)	See Part 11A		
Sedona	Summer 15	*E. coli* MPN/100mL	119 (comp)			
Sedona	Summer 15	pH 5.0-9.0	9.17 (comp)	Unknown	None	None
Sedona	Summer 15	Lead 0.015mg/L	0.0291 (comp)	Unknown	None	None
Phoenix	Winter 14-15	*E. coli* MPN/100mL	>2,400 (comp)	See Part 11A		
Phoenix	Summer 15	*E. coli* MPN/100mL	770 (comp) 680 (grab)			
Tucson	Winter 14-15	Nitrate 1mg/L	1.31 (comp)	See Part 11A		
Tucson	Summer 15	Nitrate 1mg/L	1.1 (comp) 1.49 (comp)			
Tucson	Winter 14-15	*E. coli* MPN/100mL	980 (comp)	See Part 11A		
Tucson	Summer 15	*E. coli* MPN/100mL	790 (comp) 150 (grab)			
Tucson	Winter 14-15	Antimony 0.006mg/L	0.0078 (comp)	Unknown	None	None

Location	Sample Season	Receiving Water Standard	Monitoring Result	Circumstances	Proposed BMP	Schedule to Implement BMP
Tucson	Winter 14-15	Lead 0.015mg/L	0.0167 (comp)	Unknown	None	None
Nogales	Winter 14-15	*E. coli* MPN/100mL	1,986 (comp) 344 (grab)	See Part 11A		
Nogales	Summer 15	*E. coli* MPN/100mL	>1,600 (comp) 620 (grab) 1600 (grab)			
Nogales	Winter 14-15	pH 5.0-9.0	9.32 (comp)	Unknown	None	None
Nogales	Winter 14-15	Lead 0.015mg/L	0.0654 (comp)	See Part 11A		
Nogales	Summer 15	Lead 0.015mg/L	0.038 (comp)			
mg/L-milligram per liter; BMP-best management practice; comp-composite; MPN-most probable number						

C. Total Maximum Daily Loads: Assess the effectiveness of BMPs in meeting wasteload allocations or load allocations associated with any TMDL established for any receiving water. None of the five locations is associated with a TMDL and therefore, cannot be assessed properly due to lack of specific data for the receiving water relative to any assigned allocation.

Part 12: Assessment of Pollutant Loadings

In accordance with Section 8.7.7 of the permit, provide an estimate of the pollutant loadings each year from the storm sewer system to waters of the U.S. for each constituent detected by stormwater monitoring within the permit term. Include an estimate of the event mean concentration of each pollutant for a representative storm event each year. Provide the seasonal (winter and summer) and annual (total) pollutant loadings. Pollutant loadings and event mean concentrations may be estimated from sampling data collected at the representative monitoring locations, taking into consideration land uses and drainage areas for the outfall. Include a description of the procedures for estimating pollutant loads and concentrations, including any modeling, data analysis, and calculation methods. Compare the pollutant loadings estimated each year to previous estimates of pollutant loadings to identify trends in stormwater quality.

Pollutant loading tables are included in Appendix H for the past three sampling seasons. A snippet of pollutant loading among the three years for all five sites is included in Table 12.1 for trend discussion. These pollutants were selected because they are generally associated with highway runoff. Where multiple samples were taken, the highest value is reflected for purposes of discussion – and provides the worst/best case scenario.

Table 12.1 Pollutant Loading Trends

Location	Pollutant	Summer 2014	Winter 2014-2015	Summer 2015	Trend
Flagstaff	BOD	24	225	1,837	UP
Flagstaff	Calcium	0	450	1,054	UP
Flagstaff	Chloride	0	625	270	
Flagstaff	COD	111	4,501	5,646	UP
Flagstaff	Copper	0	1	3	UP
Flagstaff	*E. coli*	94,698	2,560,594	1,474,916	UP
Flagstaff	Lead	0	0	1	UP
Flagstaff	Oil/Grease	3	250	135	
Flagstaff	Phosphorous	0	10	39	UP
Flagstaff	Sodium	0	150	621	UP
Flagstaff	TDS	77	9,301	5,538	
Flagstaff	TKN	1	25	135	UP
Flagstaff	TSS	77	27,804	22,043	
Flagstaff	Zinc	0	8	15	UP
Sedona	BOD	9	0	361	UP
Sedona	Calcium	0	1,130	277	
Sedona	Chloride	0	80	17	
Sedona	COD	84	0	1,091	UP
Sedona	Copper	0	2	0	
Sedona	*E. coli*	7,340	0	383,391	UP
Sedona	Lead	0	0	0	UP
Sedona	Oil/Grease	2	0	51	UP
Sedona	Phosphorous	0	22	6	
Sedona	Sodium	0	96	28	
Sedona	TDS	66	3,757	1,446	
Sedona	TKN	2	97	19	
Sedona	TSS	31	11,654	2,757	
Sedona	Zinc	0	15	4	
Phoenix	BOD	27	249	538	

Location	Pollutant	Summer 2014	Winter 2014-2015	Summer 2015	Trend
Phoenix	Calcium	0	249	175	
Phoenix	Chloride	0	73	67	
Phoenix	COD	251	2,436	1,480	
Phoenix	Copper	0	1	0	
Phoenix	*E. coli*	17,569	16,183,584	2,361,485	UP
Phoenix	Lead	0	0	0	
Phoenix	Oil/Grease	11	73	34	
Phoenix	Phosphorous	1	7	4	
Phoenix	Sodium	0	103	67	
Phoenix	TDS	289	1,937	1,615	
Phoenix	TKN	6	60	40	
Phoenix	TSS	94	851	384	
Phoenix	Zinc	0	1	1	
Tucson	BOD	1	125	147	UP
Tucson	Calcium	0	111	119	UP
Tucson	Chloride	0	23	27	UP
Tucson	COD	15	1261	798	
Tucson	Copper	0	1	0	UP
Tucson	*E. coli*	330	2,063,004	1,953,564	
Tucson	Lead	0	0	1	UP
Tucson	Oil/Grease	1	39	33	
Tucson	Phosphorous	0	6	2	
Tucson	Sodium	0	37	22	
Tucson	TDS	16	859	619	
Tucson	TKN	0	21	14	
Tucson	TSS	2	406	1,009	UP
Tucson	Zinc	0	1	1	
Nogales	BOD	44	0	1,011	UP
Nogales	Calcium	0	1410	1,940	UP
Nogales	Chloride	0	252	510	UP

Location	Pollutant	Summer 2014	Winter 2014-2015	Summer 2015	Trend
Nogales	COD	412	25028	30,935	UP
Nogales	Copper	0	5	7	UP
Nogales	*E. coli*	6,661,087	0	74,448,037	UP
Nogales	Lead	0	3	4	UP
Nogales	Oil/Grease	37	312	684	UP
Nogales	Phosphorous	3	171	281	UP
Nogales	Sodium	0	3	204	UP
Nogales	TDS	890	2165	8,270	UP
Nogales	TKN	9	192	296	UP
Nogales	TSS	397	66976	73,304	UP
Nogales	Zinc	0	14	19	UP

Values are expressed in mg/L except *e. coli* (most probable number); BOD-biological oxygen demand; COD-chemical oxygen demand; *E. coli-Escherichia coli;* TDS-total dissolved solids; TKN-total Kjeldahl nitrogen; TSS-total suspended solids

Part 13: Annual Expenditures

Provide a summary of the expenditures incurred each reporting period to implement and maintain the stormwater management program, including associated monitoring and reporting activities. Provide the estimated budget for implementing and maintaining the stormwater program in the subsequent reporting period. Include a brief description of the funding sources used to support program expenditures.

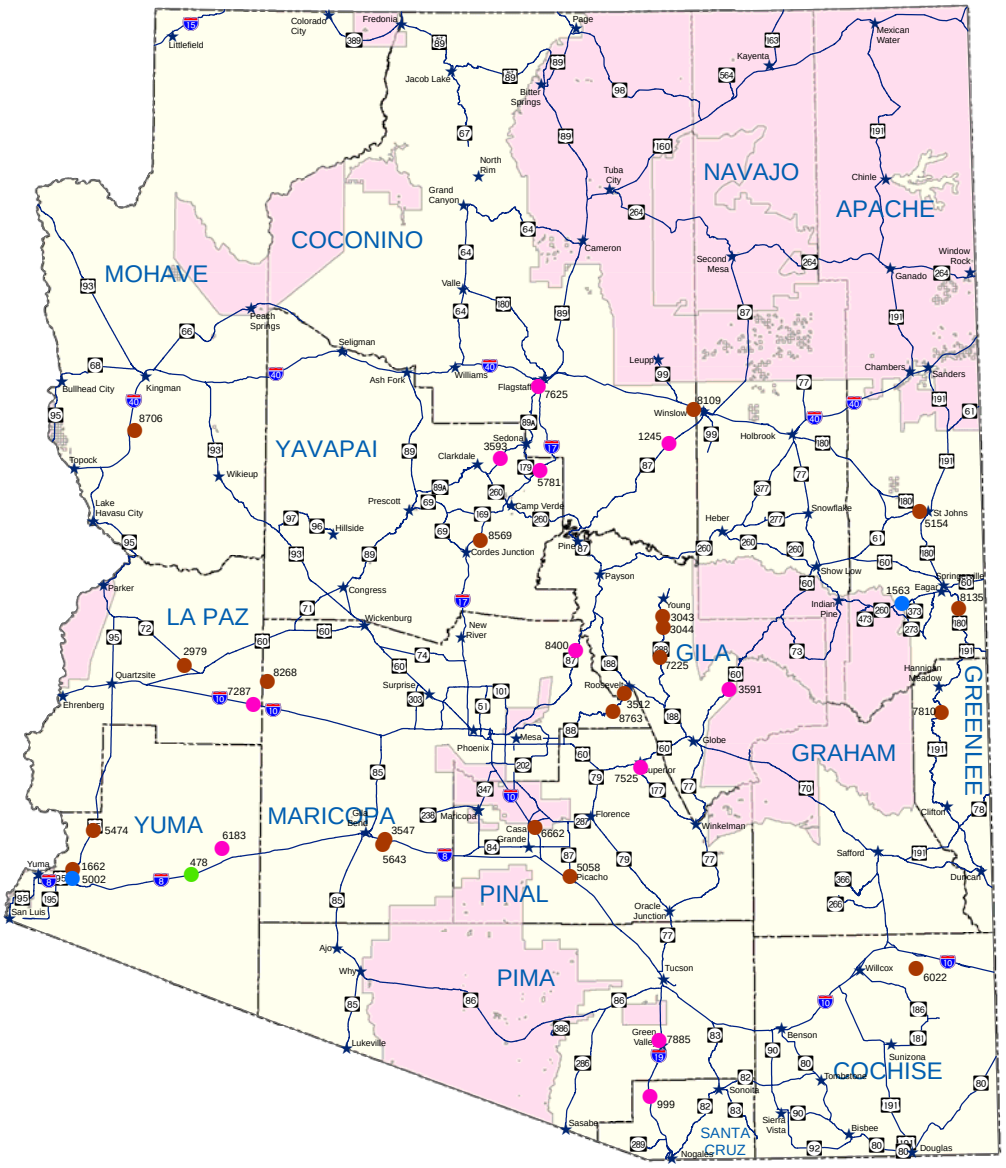
Type	Details	Cost
Construction	Erosion control	4,087,845
	Seeding	3,314,097
	Earthwork	64,263
Maintenance	Drainage inspections, repair, stabilization, seeding, litter and debris removal, anti- and de-icing	19,012,041
Stormwater subprogram	Erosion abatement program	940,000
	Outfall and PCBMP inspections	35,000
	MS4 and yard analytical monitoring	185,000
Total		**27,606,746**

Part 14: Attachments

Appendix A – Material Source Map and Inventory
Appendix B – Outfall Inspection Table
Appendix C – Illicit Discharge Letters
Appendix D – MS4 Sampler Location Maps
Appendix E – Industrial Compliance Evaluation Reports and Laboratory Reports
Appendix F – Discharge Monitoring Reports for Construction
Appendix G – MS4 Laboratory Reports
Appendix H – Pollutant Loading Calculations

Appendix A
Material Source Map and Inventory

ADOT-Licensed Material Sources Inventory Location Map



0 25 50 100 Miles

Permit Year 7

- Group_A
- Group_B
- Group_C
- Group_I

Legend

- AZ_state
- counties
- map_book_cities
- AmerInd_ft_2005

Note:
The State of Arizona makes no claims concerning the accuracy of this map nor assumes any liability resulting from the use of the information herein.

Prepared by:
Arizona Department of Transportation
Bridge Group - Geotechnical Operations
Phone: 602-712-8558

Date: October 31, 2015

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ADOT-Licensed Material Sources Inventory

Material Source (MS) No.	Source Name	ADOT District	County	Owner Code	Town-ship	Range	Sec	Hwy	MP	Latitude ° - ' - " N	Longitude ° - ' - " W	Total Acres	SIC Code	Site Use	Non-Exclusive Use	Potential Non-SW Discharge	Stockpiled Material	Water of US	Distance to Waters (miles)	U / I Waters
GROUP A : A materials source in this group will include a place where work or other activities related to the extraction, processing, removal or recovery of minerals is being conducted. Group A may also include a site or portion of site where mining has occurred in the past, yet currently mining is not being actively undertaken and the facility may or may not be covered by an active mining permit issued by the landowner(s), applicable State or Federal government agency.																				
A1. These sources are expected to be used at least annually. Inspections are conducted at least quarterly.																				
8109	BVD	Northcentral	Coconino	1,5	19 N	15 E	21	I-40	250	35-01-54.56	110-45-32.79	80	1499	20,22,23	No	HH,MM,NN	Yes	Yes	>0.50	No
5154	JMP Ranches Inc.	Northeast	Apache	7	13 N	28 E	30	180	366	34-30-29.37	109-24-52.86	80	1499	22	No	HH	No	Yes	<0.25	No
6662	Val Vista	Southcentral	Pinal	4	05 S	06 E	23	I-10	187	32-58-35.18	111-43-04.41	120	1499	22,23	Yes	HH	No	Yes	On-site	No
3043	Squaw Peak	Southeast	Gila	3	08 N	14 E	30	288	298	34-00-41.82	110-57-24.16	4	1499	20	Yes	HH	Yes	Yes	0.25	No
3044	Board Tree Saddle	Southeast	Gila	3	07 N	14 E	7	288	294	33-57-37.32	110-57-11.80	3	1499	20	Yes	HH	Yes	Yes	<0.25	No
3512	Burnt Corral	Southeast	Maricopa	3	03 N	11 E	1	88	236	33-38-04.52	111-11-18.65	11	1499	20	Yes	HH	Yes	Yes	0.25	No
7225	Connor Canyon	Southeast	Gila	3	06 N	13 E	36	288	280	33-48-45.14	110-58-31.83	5	1499	20	Yes	HH	Yes	Yes	< 0.25	No
7810	Crabtree	Southeast	Greenlee	3	02 N	29 E	14	191	217	33-31-04.55	109-18-59.02	5	1499	20,22	Yes	HH	Yes	Yes	0.25	No
8763	Fish Creek	Southeast	Maricopa	3	02 N	11 E	5	88	227	33-32-39.06	111-15-15.76	4	1499	20	Yes	HH,JJ	Yes	Yes	0.25	No
1662	Tanner	Southwest	Yuma	4	08 S	21 W	9	95	38	32-44-35.30	114-25-33.55	25	1499	20,22,24	Yes	HH,II,JJ	Yes	Yes	On-site	No
2979	Vicksburg	Southwest	La Paz	4	05 N	15 W	23	72	44	33-45-45.94	113-47-39.44	60	1499	20	Yes	HH	Yes	Yes	<0.25	No
3547	Gila Bend North	Southwest	Maricopa	4	06 S	03 W	7	I-8	124	32-54-57.00	112-35-53.80	19	1499	20,22	Yes	HH	No	Yes	On-site	No
5474	Castle Dome	Southwest	Yuma	9	06 S	20 W	3	95	53	32-56-15.13	114-18-32.26	14	1442	20,22	No	HH	Yes	Yes	0.25	No
A2. These sources are used less than annually. Inspections are conducted at least annually.																				
8135	Warm Springs	Northeast	Apache	3	07 N	30 E	5	180	411	34-01-33.25	109-11-53.27	42	1429	20,24	Yes	HH	Yes	Yes	On-site	No
8569	Dugas	Northwest	Yavapai	3	12 N	03 E	27	I-17	270	34-23-29.20	112-02-26.61	40	1429	20	Yes	HH	Yes	Yes	<0.25	No
8706	Yucca	Northwest	Mohave	1,2,4,7	18 N	17 W	30	I-40	29	34-55-04.24	114-07-02.16	133	1442	20,23	Yes	HH,MM	Yes	Yes	On-site	No
5058	Picacho	Southcentral	Pinal	1	08 S	08 E	15	87	115	32-43-49.69	111-30-43.93	52	1429	20	No	HH,MM	Yes	Yes	On-site	No
6022	Bowie	Southeast	Cochise	2,4	13 S	28 E	32	I-10	365	32-15-20.64	109-30-02.93	134	1442	20,23	Yes	HH,MM	Yes	Yes	On-site	No
5643	Gila Bend South	Southwest	Maricopa	4	06 S	03 W	19	I-8	123	32-53-16.92	112-36-42.77	256	1442	20,23	Yes	HH,MM	Yes	Yes	On-site	No
8268	Tiger Wash West	Southwest	Maricopa	4	04 N	10 W	16	I-10	73	33-41-29.35	113-18-02.48	69	1442	20,23	Yes	HH	Yes	Yes	On-site	No
TOTAL SITES IN GROUP A = 20																				
GROUP B : A material source in this group will include a site or portion of a site where mining occurred in the past but is not an active facility. A site that is no longer being used will remain in this group until it can be reclaimed, at which time it would be moved to Group C.																				
478	Mohawk	Southwest	Yuma	4	08 S	14 W	17	I-8	54	32-43-55.92	113-43-53.95	20	1499	26	Yes	N/A	No	Yes	On-site	No
TOTAL SITES IN GROUP B = 1																				
GROUP C : Includes activities intended to return the land to its pre-mining state. (Once a site is reclaimed, it will be removed from this Group)																				
1563	Pole Knoll	Northeast	Apache	3	08 N	27 E	30	260	381	34-03-21.83	109-31-58.04	5	1429	18,20,22	No	HH,LL	Yes	Yes	0.25	No
5002	Fortuna/Blaisdell	Southwest	Yuma	1	08 S	21 W	33	95	33	32-41-57.32	114-25-34.73	40	Not 14XX	18,20,25	No	HH,MM	Yes	Yes	On-site	No
TOTAL SITES IN GROUP C = 2																				
GROUP I : Non-Mining Sites. These regulated stockpile sites will be inspected at least quarterly.																				
8400	Sunflower	Central	Maricopa	3	06 N	09 E	19	87	217	33-51-03.28	111-28-30.29	2	Not 14XX	20	Yes	HH	Yes	Yes	<0.25	No
1245	Sunset Pass	Northcentral	Coconino	2,7	17 N	13 E	13	87	325	34-51-59.87	110-54-29.34	10	Not 14XX	20,22	No	HH,LL,MM	Yes	Yes	On-site	No
3593	Spring Creek	Northcentral	Yavapai	3	16 N	04 E	9	89A	362	34-48-00.20	111-55-23.80	5	Not 14XX	20,22	Yes	HH,LL,MM	Yes	Yes	<0.25	Yes
5781	Blue Grade	Northcentral	Yavapai	3	16 N	06 E	35	I-17	304	34-44-17.12	111-40-58.62	9	Not 14XX	20,22	Yes	HH,LL,MM	Yes	Yes	0.25	No
7625	Fort Tuthill	Northcentral	Coconino	1,3	21 N	07 E	31	89A	400	35-09-11.40	111-41-33.75	80	Not 14XX	20,22	No	HH,LL,MM	Yes	Yes	On-site	No
999	Tubac	Southcentral	Santa Cruz	1	20 S	13 E	31	I-19	24	31-38-42.19	111-03-19.16	14	Not 14XX	20,22	No	HH,MM	Yes	Yes	On-site	No
7885	Sahuarita	Southcentral	Pima	1	17 S	13 E	27	I-19	44	31-55-09.96	111-00-01.88	37	Not 14XX	20,22	No	HH,MM	Yes	Yes	<0.25	No
3591	Carol Spring Mountain	Southeast	Gila	3	04 N	17 E	33	60	278	33-39-05.12	110-34-06.08	6	Not 14XX	20,22	No	HH,LL,MM	Yes	Yes	<0.25	No
7525	Defiance	Southeast	Pinal	3	2 S	12 E	11	177	167	33-16-04.92	111-05-38.06	7	Not 14XX	20	Yes	HH,MM	Yes	Yes	< 0.25	No
6183	Dateland	Southwest	Yuma	2	06 S	13 W	36	I-8	67	32-51-32.30	113-33-07.68	85	Not 14XX	20,22	Yes	HH,MM	Yes	Yes	On-site	No
7287	Centennial	Southwest	La Paz	1	03 N	11 W	27	I-10	68	33-34-34.62	113-22-48.65	40	Not 14XX	20	No	HH,MM	Yes	Yes	On-site	No
TOTAL SITES IN GROUP I = 11																				

ADOT-Licensed Material Sources Inventory

Definitions:

Group A : A materials source in this group will include a place where work or other activities related to the extraction, processing, removal or recovery of minerals is being conducted. Group A may also include a site or portion of a site where mining has occurred in the past, yet currently mining is not being actively undertaken and the facility may or may not be covered by an active mining permit issued by the landowner(s), applicable State or Federal government agency.

Group B : A material source in this group will include a site or portion of a site where mining occurred in the past but is not an active facility. A site that is no longer being used will remain in this group until it can be reclaimed, at which time it would be moved to Group C.

Group C : Includes activities intended to return the land to its pre-mining state. (Once a site is reclaimed, it will be removed from this Group).

Group I : Non-mining sites.These regulated stockpile sites will be inspected at least quarterly.

Waters of the US: **Based on review of topographic maps and/or on-site review**

Latitude/Longitude: **Latitude/Longitude are expressed in NAD 83**

N/A: **Not Applicable**

Site Use Codes:

1	Expired permit or license
2	Never used - will not be inspected until pit is developed
18	Undergoing reclamation
19	Requires revegetation or contouring
20	Stockpiles present
21	Released from site by land owner/manager
22	Maintenance only
23	Construction only
24	Multiple permitees
25	To be sold
26	Requires further evaluation

Standard Industrial Classification (SIC) Codes:

1429	Crushed and broken stone (basalt and volcanic rock)
1442	Sand and gravel
1499	Borrow or fill dirt
Not 14XX	Non-mining sites; material storage area only

Ownership Codes:

1	ADOT
2	Arizona State Land Department
3	USDA Forest Service
4	Bureau of Land Management
5	Tribal
7	Private
9	Department of the Army

Non-Stormwater Discharge Codes:

HH	Water for dust control (not wastewater)
II	Uncontaminated groundwater
JJ	Diverted stream flow
KK	Coring and drilling water - without additives
LL	Deicing chemicals or products
MM	Petroleum-containing materials
NN	Fertilizers - herbicide application to invasives

ADOT Districts:	Address:	District Engineers:	Phone:	E - Mail:
Northcentral District	1801 S. Milton Road, Flagstaff, AZ 86001	Audra Merrick	928-774-1491	amerrick@azdot.gov
Northeast District	2407 E. Navajo Blvd., Holbrook, AZ 86025	Lynn Johnson	928-524-5408	ljohnson@azdot.gov
Central District (Construction/Maintenance)	2140 W. Hilton Ave., Phoenix, AZ 85009-3740	Madhu Reddy	602-712-8965	mreddy@azdot.gov
Northwest District	1109 Commerce Drive, Prescott, AZ 86305	Alvin Stump	928-777-5861	astump@azdot.gov
Southeast District	2082 U.S. Hwy. 70, Safford, AZ 85546	Bill Harmon	928-428-5470	bharmon@azdot.gov
Southcentral District	1221 South 2nd Ave., Tucson, AZ 85713-1602	Roderick Lane	520-388-4219	rlane@azdot.gov
Southwest District	2243 East Gila Ridge Road, Yuma, AZ 85365-2101	Paul Patane	928-777-5861	ppatane@azdot.gov

Appendix B
Outfall Inspection Table

2015 Outfall Inspection Findings

ADOT District	FIS Asset ID	Water Quality	Water Body ID	Inspection Date	Flow	Smell	Floatables	Maintenance Notes
Flagstaff	1432797	Municipal	AZ15020015	2/11/2015	No	None	None	Sediment
Flagstaff	1059732	Impaired	AZ15060202	2/12/2015	No	None	None	
Flagstaff	1423391	Municipal	AZ15020015	2/11/2015	Yes (ice)	None	None	Sediment
Flagstaff	1433627	Impaired	AZ15060202	2/11/2015	No	None	None	
Flagstaff	898997	Impaired	AZ15010010	2/10/2015	No	None	None	
Flagstaff	1059127	Impaired	AZ15060202	2/12/2015	No	None	None	
Flagstaff	1058415	Impaired	AZ15060202	2/12/2015	No	None	None	Vegetation
Flagstaff	1058413	Impaired	AZ15060202	2/12/2015	No	None	None	
Flagstaff	889241	Impaired	AZ15060202	2/12/2015	No	None	None	
Flagstaff	1031696	Impaired	AZ15060202	2/12/2015	No	None	None	
Flagstaff	1443218	Impaired	AZ15060202	2/11/2015	No	None	None	
Flagstaff	1433577	Impaired	AZ15060202	2/11/2015	No	None	None	
Flagstaff	1433625	Impaired	AZ15060202	2/11/2015	No	None	None	
Flagstaff	1433709	Impaired	AZ15060202	2/11/2015	No	None	None	
Flagstaff	1433633	Impaired	AZ15060202	2/11/2015	No	None	None	
Flagstaff	1062738	Impaired	AZ15060202	2/11/2015	No	None	None	
Flagstaff	1069545	Impaired	AZ15010010	2/10/2015	No	None	None	
Flagstaff	1069543	Impaired	AZ15010010	2/10/2015	No	None	None	
Flagstaff	1443296	Impaired	AZ15060202	2/11/2015	No	None	None	
Flagstaff	1069544	Impaired	AZ15010010	2/12/2015	No	None	None	
Flagstaff	1062690	Impaired	AZ15060202	2/11/2015	No	None	None	
Flagstaff	1069546	Impaired	AZ15010010	2/12/2015	No	None	None	
Flagstaff	1069547	Impaired	AZ15010010	2/10/2015	No	None	None	Sediment
Flagstaff	1069548	Impaired	AZ15010010	2/10/2015	No	None	None	Sediment
Flagstaff	1062471	Impaired	AZ15060202	2/11/2015	No	None	None	
Flagstaff	1062492	Impaired	AZ15060202	2/11/2015	No	None	None	
Flagstaff	1062689	Impaired	AZ15060202	2/12/2015	No	None	None	
Flagstaff	1069550	Impaired	AZ15010010	2/10/2015	No	None	None	
Globe	904023	Impaired	AZ15060103	3/10/2015	No	None	None	
Globe	1434001	Impaired	AZ15050100	3/10/2015	No	None	None	Debris and sediment
Globe	1496507	Impaired	AZ15050100	3/10/2015	No	None	None	Debris and sediment
Globe	1017164	Impaired	AZ15050100	3/10/2015	No	None	None	
Globe	906718	Impaired	AZ15060103	3/10/2015	No	None	None	
Globe	1472215	Impaired	AZ15060103	3/10/2015	No	None	None	Structure
Globe	1433930	Impaired	AZ15050100	3/10/2015	No	None	None	
Globe	1487638	Outstanding	AZ15020001	3/11/2015	No	None	None	
Globe	1434002	Impaired	AZ15050100	3/10/2015	No	None	None	
Globe	1421495	Impaired	AZ15060103	3/10/2015	No	None	None	
Globe	1485179	Impaired	AZ15020001	3/11/2015	No	None	None	
Globe	1467618	Impaired	AZ15050100	3/10/2015	No	None	None	
Globe	1484925	Impaired	AZ15020001	3/11/2015	No	None	None	

2015 Outfall Inspection Findings

ADOT District	FIS Asset ID	Water Quality	Water Body ID	Inspection Date	Flow	Smell	Floatables	Maintenance Notes
Globe	1470354	Impaired	AZ15050100	3/10/2015	No	None	None	
Globe	937069	Impaired	AZ15020001	3/11/2015	No	None	None	
Globe	936727	Impaired	AZ15020001	3/11/2015	No	None	None	
Globe	1487636	Outstanding	AZ15020001	3/11/2015	No	None	None	
Globe	1487639	Outstanding	AZ15020001	3/11/2015	Yes	None	None	
Globe	905446	Impaired	AZ15050100	3/10/2015	No	None	None	Debris and sediment
Globe	905465	Impaired	AZ15050100	3/10/2015	No	None	None	
Globe	1433928	Impaired	AZ15050100	3/10/2015	No	None	None	
Phoenix	1512481	Municipal	N/A	2/9/2015	No	None	None	
Phoenix	1512546	Municipal	AZ15060106	1/23/2015	No	None	None	
Phoenix	1512486	Municipal	AZ15060106	2/5/2015	Yes	None	None	Ponding
Phoenix	2000213	Municipal	AZ15070102	1/21/2015	Yes	None	None	Ponding
Phoenix	2000215	Municipal	AZ15070102	1/21/2015	No	None	None	
Phoenix	1512557	Municipal	AZ15070102	1/20/2015	No	None	None	Other
Phoenix	2000216	Municipal	AZ15070102	1/20/2015	No	None	None	
Phoenix	1512556	Municipal	AZ15070102	1/20/2015	Moderate	Sewage	Soap Suds	Vegetation
Phoenix	1512555	Municipal	AZ15070102	1/20/2015	No	None	None	
Phoenix	1512554	Municipal	AZ15070102	1/20/2015	No	None	None	
Phoenix	1512553	Municipal	AZ15070102	1/20/2015	No	None	None	
Phoenix	1512552	Municipal	AZ15070102	1/20/2015	No	None	None	
Phoenix	1512551	Municipal	AZ15070102	1/20/2015	No	None	None	
Phoenix	1512549	Municipal	AZ15070102	1/20/2015	No	None	None	
Phoenix	1512550	Municipal	AZ15070102	1/20/2015	No	None	None	
Phoenix	1512548	Municipal	AZ15070102	1/20/2015	No	None	None	
Phoenix	1512547	Municipal	AZ15070102	1/20/2015	No	None	None	
Phoenix	1512543	Municipal	AZ15070102	1/23/2015	No	None	None	
Phoenix	1443908	Municipal	AZ15070102	1/23/2015	No	None	None	Other
Phoenix	1512478	Municipal	AZ15060106	2/9/2015	Yes	None	None	Ponding
Phoenix	1512485	Municipal	AZ15060106	2/9/2015	Yes	None	None	Ponding
Phoenix	1512483	Municipal	AZ15060106	2/12/2015	No	None	None	Vegetation and debris
Phoenix	1512484	Municipal	AZ15060106	2/12/2015	No	None	None	Vegetation and debris
Phoenix	1512482	Municipal	AZ15060106	2/12/2015	No	None	None	Debris and sediment
Phoenix	1512487	Municipal	AZ15060106	2/5/2015	Fast	None	None	Debris
Phoenix	1457599	Municipal	AZ15070102	1/21/2015	Fast	Sewage	Algae Suds	
Phoenix	1457599	Municipal	AZ15070102	3/26/2015	Fast	Sewage	Algae Suds	
Phoenix	1458156	Municipal	AZ15070102	1/21/2015	No	None	None	
Phoenix	1512480	Municipal	AZ15060106	3/26/2015	No	None	None	Unable to access
Phoenix	1512479	Impaired	AZ15060106	2/9/2015	No	None	None	
Phoenix	1512544	Municipal	AZ15060106	1/23/2015	No	None	None	
Phoenix	1512477	Municipal	AZ15060106	2/5/2015	Yes	None	None	Ponding
Phoenix	1512545	Municipal	AZ15060106	3/26/2015	No	None	None	Unable to access

2015 Outfall Inspection Findings

ADOT District	FIS Asset ID	Water Quality	Water Body ID	Inspection Date	Flow	Smell	Floatables	Maintenance Notes
Phoenix	2000218	Municipal	AZ15060106	2/6/2015	No	None	None	Other
Phoenix	1512473	Municipal	AZ15060106	2/6/2015	Yes	None	None	Ponding
Phoenix	2000246	Municipal	AZ15060106	2/6/2015	No	None	None	
Phoenix	1512474	Municipal	AZ15060106	2/6/2015	No	None	None	
Phoenix	1512475	Municipal	AZ15060106	2/6/2015	No	None	None	
Phoenix	1512476	Municipal	AZ15060106	2/6/2015	No	None	None	
Phoenix	1512540	Municipal	AZ15060106	1/23/2015	No	None	None	
Phoenix	1512542	Municipal	AZ15060106	1/23/2015	No	None	None	
Phoenix	1512536	Municipal	AZ15060106	1/23/2015	No	None	None	
Phoenix	1512537	Municipal	AZ15060106	1/23/2015	No	None	None	Other
Phoenix	1512538	Municipal	AZ15060106	1/23/2015	No	None	None	Other
Phoenix	1512558	Municipal	AZ15060106	1/23/2015	No	None	None	Other
Phoenix	1459344	Municipal	AZ15050100	2/5/2015	Yes	None	None	Ponding
Phoenix	1512470	Municipal	AZ15050100	1/23/2015	No	None	None	
Phoenix	1512472	Municipal	AZ15060106	2/5/2015	Fast	None	None	
Phoenix	967547	Impaired	AZ15060106	3/10/2015	No	None	None	
Phoenix	967549	Impaired	AZ15060106	3/10/2015	No	None	None	
Phoenix	1512541	Municipal	AZ15060106	1/23/2015	No	None	None	
Prescott	1017230	Impaired	AZ15060203	3/17/2015	No	None	None	
Prescott	1486907	Municipal	AZ15060202	3/17/2015	No	None	None	
Prescott	TBD	Municipal	AZ15060202	3/17/2015	No	None	None	
Prescott	1488481	Municipal	AZ15070102	3/17/2015	No	None	None	
Prescott	1486090	Impaired	AZ15060202	3/17/2015	No	None	None	Vegetation
Prescott	972229	Impaired	AZ15060203	3/17/2015	No	None	None	
Prescott	975334	Impaired	AZ15060105	3/17/2015	No	None	None	
Prescott	972160	Impaired	AZ15060105	3/17/2015	No	None	None	
Prescott	972140	Impaired	AZ15060105	3/17/2015	No	None	None	
Prescott	1486086	Impaired	AZ`5060202	3/17/2015	No	None	None	
Prescott	1486085	Impaired	AZ15060202	3/17/2015	No	None	None	Vegetation
Prescott	1486083	Impaired	AZ15060202	3/17/2015	No	None	None	
Prescott	1486080	Impaired	AZ15060202	3/17/2015	No	None	None	
Prescott	1485571	Impaired	AZ15060202	3/17/2015	No	None	None	Vegetation
Prescott	1017197	Impaired	AZ15060202	3/17/2015	No	None	None	
Prescott	1486123	Impaired	AZ15060202	3/17/2015	No	None	None	
Prescott	1486123-TBD	Impaired	AZ15060202	3/17/2015	No	None	None	
Prescott	TBD	Impaired	AZ15060202	N/A				
Prescott	1461558	Impaired	AZ15060202	3/17/2015	No	None	None	
Prescott	974993	Impaired	AZ15060105	3/17/2015	No	None	None	
Prescott	969092	Impaired	AZ15060203	3/17/2015	No	None	None	
Prescott	1461556	Impaired	AZ15060202	3/17/2015	No	None	None	
Prescott	916008	Impaired	AZ15060202	3/17/2015	No	None	None	

2015 Outfall Inspection Findings

ADOT District	FIS Asset ID	Water Quality	Water Body ID	Inspection Date	Flow	Smell	Floatables	Maintenance Notes
Prescott	1488480	Municipal	AZ15070102	3/17/2015	No	None	None	
Prescott	916305	Impaired	AZ15060202	3/17/2015	No	None	None	
Safford	982696	Impaired	AZ15050202	2/19/2015	No	None	None	
Safford	1518809	Impaired	AZ15050202	2/19/2015	No	None	None	Sediment
Safford	982322	Impaired	AZ15050202	2/19/2015	No	None	None	
Safford	1510609	Municipal	AZ15050202	2/18/2015	No	None	None	
Safford	1510611	Municipal	AZ15050202	2/18/2015	No	None	None	
Safford	1518815	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1518831	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1510607	Municipal	AZ15050202	2/18/2015	No	None	None	Vegetation
Safford	1510612	Municipal	AZ15050202	2/18/2015	No	None	None	
Safford	1518816	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1518818	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1518821	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1510625	Impaired	AZ15040002	3/11/2015	No	None	None	Vegetation
Safford	1518825	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	981558	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1518835	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1510605	Municipal	AZ15050202	2/18/2015	No	None	None	Sediment
Safford	1518823	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1518829	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1518847	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1518846	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1518841	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1518840	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	979028	Impaired	AZ15040002	3/11/2015	No	None	None	
Safford	1518811	Impaired	AZ15080301	2/19/2015	No	None	None	Sediment
Safford	1518849	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1510626	Impaired	AZ15040002	3/11/2015	No	None	None	Structure
Safford	1518838	Impaired	AZ15080301	2/19/2015	No	None	None	Structure
Safford	1518813	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1518814	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1518827	Impaired	AZ15080301	2/19/2015	No	None	None	
Safford	1510629	Impaired	AZ15040002	3/11/2015	No	None	None	
Safford	1510628	Impaired	AZ15040002	3/11/2015	No	None	None	Debris and sediment
Safford	982481	Impaired	AZ15050202	2/19/2015	No	None	None	
Safford	978990	Impaired	AZ15040002	3/11/2015	No	None	None	Vegetation
Tucson	1510601	Municipal	AZ15050301	2/17/2015	No	None	None	
Tucson	1510602	Municipal	AZ15050301	2/17/2015	No	None	None	
Tucson	1510600	Municipal	AZ15050301	2/17/2015	No	None	None	
Tucson	1516713	Impaired	AZ15050301	2/18/2015	No	None	None	Vegetation

2015 Outfall Inspection Findings

ADOT District	FIS Asset ID	Water Quality	Water Body ID	Inspection Date	Flow	Smell	Floatables	Maintenance Notes
Tucson	1516714	Municipal	AZ15050301	2/19/2015	No	None	None	Vegetation
Tucson	1510585	Municipal	AZ15050301	2/17/2015	No	None	None	
Tucson	1510543	Municipal	AZ15050301	2/17/2015	No	None	None	Vegetation
Tucson	1510542	Municipal	AZ15050301	2/17/2015	No	None	None	Debris and sediment
Tucson	TBD	Municipal	AZ15050302	2/17/2015	No	None	None	
Tucson	TBD	Municipal	AZ15050302	2/17/2015	No	None	None	
Tucson	1510548	Municipal	AZ15050301	2/17/2015	No	None	None	
Tucson	1510550	Municipal	AZ15050301	2/17/2015	No	None	None	Vegetation
Tucson	1518523	Municipal	AZ15050301	2/17/2015	No	None	None	
Tucson	1510551	Municipal	AZ15050301	2/17/2015	No	None	None	
Tucson	1519149	Impaired	AZ15050301	2/18/2015	No	None	None	Structure
Tucson	1510544	Municipal	AZ15050301	2/17/2015	Moderate	None	None	
Tucson	1510579	Impaired	AZ15050301	2/18/2015	No	None	None	Structure
Tucson	1510576	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	1510575	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	994155	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	1510581	Impaired	AZ15050301	2/18/2015	No	None	None	Vegetation
Tucson	1510566	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	1510564	Impaired	AZ15050301	2/18/2015	No	None	None	Sediment
Tucson	1510588	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	1510586	Impaired	AZ15050301	2/18/2015	No	None	None	Sediment
Tucson	1510567	Impaired	AZ15050301	2/18/2015	No	None	None	Sediment
Tucson	1510559	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	1510583	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	1510555	Impaired	Az15050301	2/18/2015	No	None	None	Sediment
Tucson	1519157	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	1510569	Impaired	AZ15050301	2/18/2015	No	None	None	Sediment
Tucson	1510568	Impaired	AZ15050301	2/18/2015	No	None	None	Vegetation
Tucson	1510571	Impaired	AZ15050301	2/18/2015	No	None	None	Vegetation and sediment
Tucson	1519156	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	993795	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	1519153	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	1519151	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	1519150	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	1519160	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	1510565	Impaired	AZ15050301	2/18/2015	No	None	None	Sediment
Tucson	1508340	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	1520160	MS4	AZ15050302	2/17/2015	No	None	None	Debris
Tucson	1510590	Outstanding	AZ15050302	2/17/2015	No	None	None	
Tucson	1510592	Outstanding	AZ15050302	2/17/2015	No	None	None	
Tucson	1510594	Outstanding	AZ15050302	2/17/2015	No	None	None	

2015 Outfall Inspection Findings

ADOT District	FIS Asset ID	Water Quality	Water Body ID	Inspection Date	Flow	Smell	Floatables	Maintenance Notes
Tucson	1510596	Outstanding	AZ15050302	2/17/2015	No	None	None	Debris
Tucson	1510597	Outstanding	AZ15050302	2/17/2015	No	None	None	
Tucson	985778	Outstanding	AZ15050302	2/17/2015	No	None	None	
Tucson	1508352	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	1508341	Impaired	AZ15050301	2/18/2015	No	None	None	Vegetation
Tucson	1006274	Outstanding	AZ15050302	2/17/2015	No	None	None	
Tucson	1508343	Impaired	AZ15050301	2/18/2015	No	None	None	
Tucson	1508346	Impaired	AZ15050301	2/18/2015	No	None	None	Vegetation
Tucson	1519162	Impaired	AZ15050301	2/18/2015	No	None	None	Vegetation
Tucson	1516715	Municipal	AZ15050301	2/17/2015	No	None	None	
Tucson	1508344	Impaired	AZ15050301	2/18/2015	No	None	None	Sediment
Yuma	928777	Impaired	AZ15030107	1/22/2015	No	None	None	
Yuma	915335	Impaired	AZ15070101	1/22/2015	No	None	None	Other
Yuma	928778	Impaired	AZ15030107	1/22/2015	No	None	None	

Municipal-municipal separate storm sewer system; N/A-not applicable; TBD-to be documented

Appendix C
Illicit Discharge Letters

ADOT
Intermodal Transportation

Janice K. Brewer, Governor
John S. Halikowski, Director
Jennifer Toth, State Engineer
Robert Samour, Senior Deputy State Engineer, Operations
Dallas Hammit, Senior Deputy State Engineer, Development

October 8, 2014

Performance Radiator
21 North 20th Street
Phoenix, AZ 85034

NOTICE OF POTENTIAL ILLEGAL DISCHARGE OR CONNECTION

Dear Owner:

The Arizona Department of Transportation (ADOT) is responsible for maintaining not only roadways, but also the extensive storm drain network located within the State rights-of-way. The Arizona Pollutant Discharge Elimination System (AZPDES) Program, which is a component of the Clean Water Act of 1972, requires ADOT to control the amount of pollutants entering the drainage system. Part of this charge is the detection and elimination of potential illegal discharges or connections to the system that may contain pollutants or are otherwise not allowed. Left uncorrected, any pollutants entering the system will ultimately impact nearby streams, as storm drainage is not treated at any sort of treatment facility. In addition, neighboring property owners are not allowed to occupy, use or interfere with public right of way without permission (Arizona Administrative Code A.A.C. R17-3-502). Any discharge/connection without permission is an illegal encroachment on ADOT right of way.

This letter is intended to address a recent incident originating from Performance Radiator whereby ADOT staff noted pumping of a substance from 21 North 20th Street through a hose onto ADOT property on September 30. Additional observations included a berm and trench to direct the flow through a pipe. A follow-up communication between ADOT environmental staff and the General Manager documents that recent property flooding required pumping of water. ADOT declared that future pumping is subject to permitting and best management practices to satisfy the AZPDES program requirements. Continued or periodic discharges may be addressed by contacting David Loy, Permits Supervisor, at 602-712-7522 or by visiting Phoenix Maintenance District Encroachment Permit Office at 2140 West Hilton Avenue, Phoenix, AZ 85009.

ADOT appreciates the cooperation and thanks you for assisting in keeping transportation safe, efficient, and cost-effective for the residents and travelers in Arizona.

Sincerely,

Wendy Terlizzi, CMS4S
Compliance and Reporting Manager

cc: Paul O'Brien, ADOT Environmental Planning
Lisa Andersen, ADOT Phoenix Maintenance District
James Windsor, ADOT Phoenix Maintenance District

February 12, 2015

Mr. Mark Norgaard
General Manager
Henry Products Incorporated
302 S. 23rd Avenue
Phoenix, AZ 85009

Mr. Norgaard,

The Arizona Department of Transportation (ADOT) is responsible for maintaining not only roadways, but also the extensive storm drain network located within the State rights-of-way. The Arizona Pollutant Discharge Elimination System (AZPDES) Program, which is a component of the Clean Water Act of 1972, requires ADOT to control the amount of pollutants entering the drainage system. Part of this charge is the detection and elimination of illegal discharges or connections to the system that may contain pollutants or are otherwise not allowed. Left uncorrected, any pollutants entering the system will ultimately impact nearby streams, as storm drainage is not treated at any sort of treatment facility. In addition, neighboring property owners are not allowed to occupy, use or interfere with public right of way without permission. Any discharge/connection without permission is an illegal encroachment on ADOT right of way.

This letter is intended to address a recent non-stormwater discharge originating from Henry Products Incorporated. On February 6, 2015, a City of Phoenix inspector noted free-flowing liquid discharging from the Henry Products property into ADOT's storm drain system. A subsequent visit on February 11, 2015 showed that the discharge has ceased.

I have enclosed an aerial photograph showing the location of this discharge. In addition, photographs of this discharge are enclosed.

If your facility has an AZPDES Multi-Sector General Permit (MSGP) authorization letter from the Arizona Department of Environmental Quality (ADEQ) please provide ADOT with that information to the email address below. In addition to the ADEQ authorization, Henry Products is also required to apply for and receive an encroachment permit from the local ADOT District Office for that water to enter ADOT's property. Further information can be found at http://azdot.gov/business/Permits/encroachment-permits.

If Henry Products is not authorized by ADEQ to discharge, please make sure control measures are in place to ensure the flow does not leave the property and enter our storm drain.

If you do not understand this notice, or you disagree that an illegal discharge existed at your property, please contact me with further details or explanation by calling 602.712.8353 or by email at wterlizzi@azdot.gov.

Sincerely,

Wendy Terlizzi
Compliance and Reporting Manager

cc: Paul O'Brien, ADOT Environmental Planning Group
Jim Windsor, ADOT Phoenix Maintenance District Engineer
Lisa Andersen, ADOT Phoenix Maintenance District Environmental Coordinator

Enclosures (2) Location map and photos of observed discharge

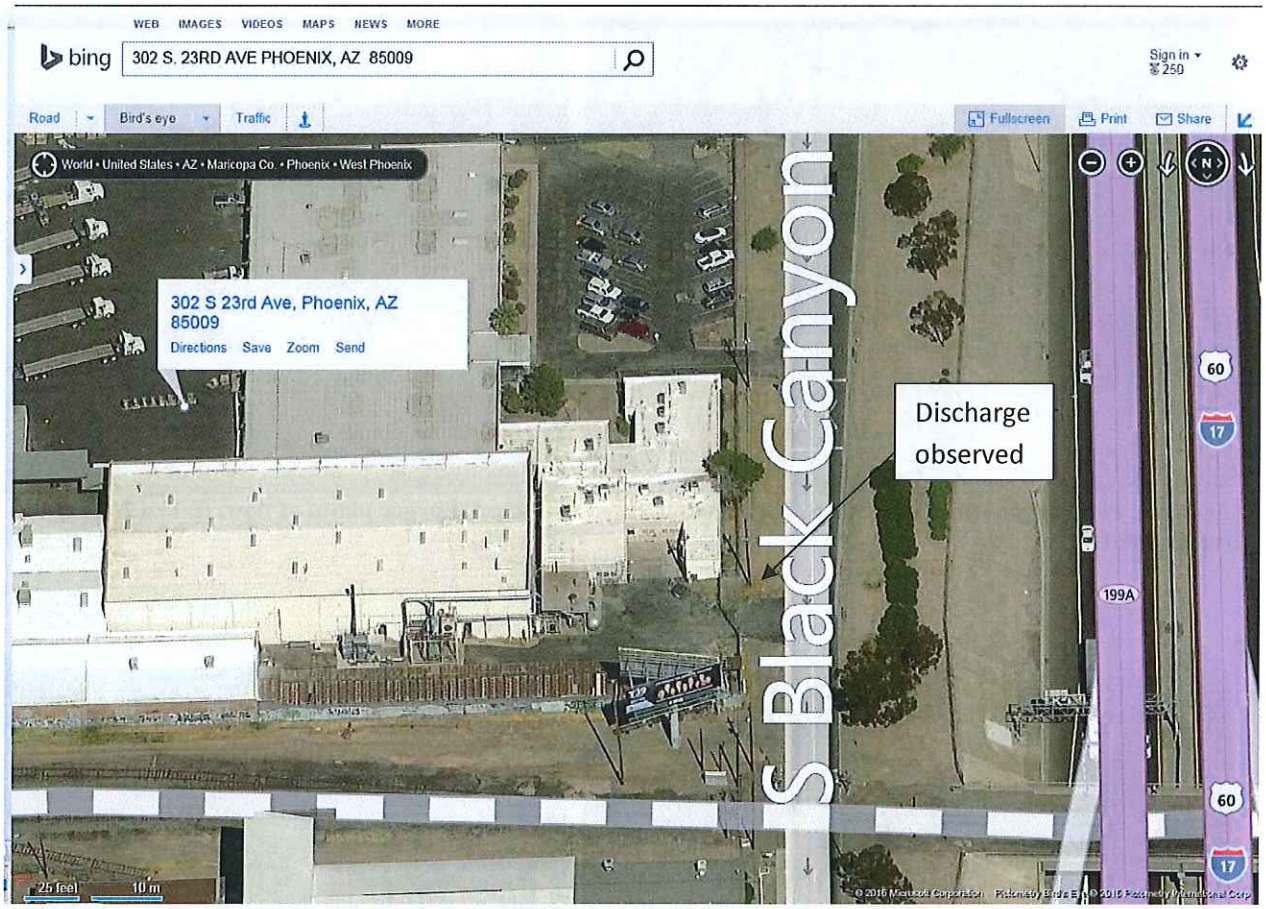


Figure 1. Location map. Arrow shows location of ADOT's storm drain.

Figure 2. Flow originating from 302 S. 23rd Ave. (taken 2/6/15)

Figure 4. Larger photo of flow. (taken 2/6/15)

Figure 3. Flow shown in Figure 1 entering ADOT's storm drain (asset 1534057) (taken 2/6/15)

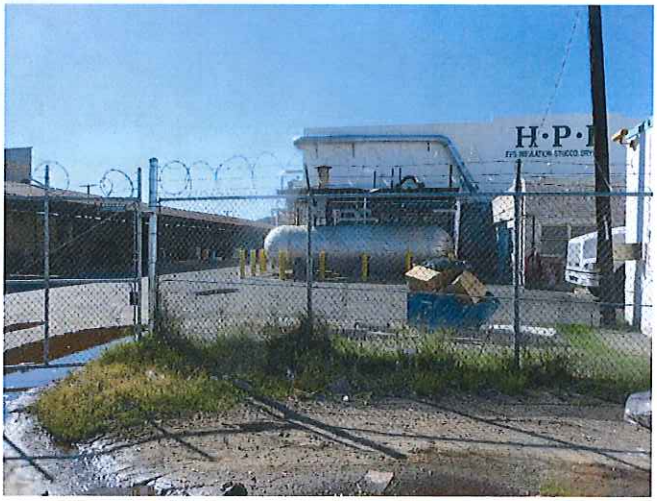


Figure 5. Showing flow origination from HPI. (taken 2/6/15)

Figure 6. ADOT's storm drain (asset 1534057) (taken 2/11/15)

Figure 8. ADOT's storm drain (asset 1534057), depression is evident where flow occurred (taken 2/11/15)

Figure 7. Standing water just inside HPI gate. (taken 2/11/15)

GLENDALE AZ

Via Certified Mail # 7008 1830 0002 1433 7696

February 27, 2015

Ms. Wendy Terlizzi, CMS4S
Compliance and Reporting Manager
Arizona Department of Transportation
206 S. 17th Avenue
Phoenix, AZ 85007

Subject: Response to ADOT's Notice of Illegal Discharge or Connection Letter Dated February 4, 2015

Dear Ms. Terlizzi:

In response to your letter titled "Notice of Illegal Discharge or Connection" dated February 4, 2015, the City of Glendale Water Services Department conducted a thorough illicit discharge detection and elimination (IDDE) investigation of the green discharge referenced in your letter. While the green color made the discharge quite noticeable, as explained more fully below, nothing in the discharge violates the City's Municipal Separate Storm Sewer System (MS4) permit or poses any potential threat to human health or the environment. Further, despite the benign nature of the discharge, the City fully expects to complete the remediation ADOT requested by the date demanded in your letter.

Staff traced the source of this discharge to the University of Phoenix Stadium. It was tied to discharges from irrigation water originating from the football field. The stadium was designed to discharge irrigation water from the football field to the Grand Canal Linear Park, which then discharges to the Arizona Department of Transportation's channel.

During the two mega events, the Pro Bowl and the Super Bowl, a new field was brought in from out of state. Information provided by the National Football League indicated that a green colorant was used in the preparation of the playing field for one of the two mega events. This green field colorant was discharged to the storm water outlet east of 95th Avenue, north of Bethany Home Road. This outlet is named by the City of Glendale and will be referred to in this letter as "GCLP4."

The City of Glendale Pretreatment Program conducted a field investigation on February 5, 2015. The green discharge was observed at outlet GCLP4 and staff initiated field sampling immediately upon arrival.

As required by the City of Glendale's Municipal Separate Storm Sewer System (MS4) permit, staff performed field tests for total copper, phenols, detergents, total chlorine, pH, and temperature as well as a visual observation of a sample. Follow up field sampling was also conducted on February 19, 2015. The results for both of the sampling events are as follows:

Date	pH (Standard Units)	Temperature (Celsius)	Total Chlorine (mg/L)	Total Copper (mg/L)	Phenols (mg/L)	Detergents (mg/L)
2/5/2015	6.90	21.5	0	0	0	0
2/19/2015	7.95	26.4	0	0	0	0

The field tests did not reveal any abnormal parameters for the required permit sampling. However, visual observations indicated a potential pollutant was present. The visual sample observed on February 5th was clear with a noticeable green tint. The visual sample observed on February 19th was clear with a very light, almost unnoticeable green tint.

In addition, a green discoloration was observed in the outlet channel. The green discharge was traced upstream to a storm water manhole, outdoors and adjacent to the retractable football field. This storm sewer line discharges to two large "Vortechnics" storm water interceptors prior to discharging to GCLP4.

Upon discovery of this illicit discharge, Pretreatment staff contacted the Arizona Cardinals organization, the primary tenant of the stadium. Per the City of Glendale's storm water enforcement response plan, staff issued verbal and email notice February 6 and a written notice on February 18 via a certified letter requesting action to Mr. John Drum, Vice President of Stadium Operations for the Arizona Cardinals.

The National Football League is also working closely in this matter with the City of Glendale and the Arizona Cardinals to resolve this issue. The National Football League has provided the City with a safety data sheet for the green colorant. The colorant is identified as a non-toxic substance on the safety data sheet.

Because remaining residual green colorant could be trapped in the storm water interceptors, Glendale requested stadium staff pump out the two interceptors. This took place on February 25-26, 2015. This action should resolve any issues with residual material.

The City of Glendale is committed to solving this issue and will continue to follow up and monitor the GCLP4 outlet with due diligence. If you have any questions or need additional information please contact Monica Rabb, Environmental Program Manager via email at mrabb@glendaleaz.com or by phone at 623-930-4133.

Sincerely,

Craig Johnson, P.E.
Director, Glendale Water Services

Cc: Jennifer Campbell, Glendale Assistant City Manager
Nancy Mangone, Glendale Assistant City Attorney
Douglas E. Kupel, Ph.D., Glendale Deputy Water Services Director
Monica Rabb, Glendale Environmental Program Manager
John Drum, Arizona Cardinals Vice President of Stadium Operations
Heather Davis, National Football League Associate Counsel

February 4, 2015

Ms. Megan Sheldon
Environmental Program Manager
City of Glendale
7070 W Northern Ave
Glendale, AZ 85303

NOTICE OF ILLEGAL DISCHARGE OR CONNECTION

Dear Ms. Sheldon:

The Arizona Department of Transportation (ADOT) is responsible for maintaining not only roadways, but also the extensive storm drain network located within the State rights-of-way. The Arizona Pollutant Discharge Elimination System (AZPDES) Program, which is a component of the Clean Water Act of 1972, requires ADOT to control the amount of pollutants entering the drainage system. Part of this charge is the detection and elimination of illegal discharges or connections to the system that may contain pollutants or are otherwise not allowed. Left uncorrected, any pollutants entering the system will ultimately impact nearby streams, as storm drainage is not treated at any sort of treatment facility. In addition, neighboring property owners are not allowed to occupy, use or interfere with public right of way without permission. Any discharge/connection without permission is an illegal encroachment on ADOT right of way.

On January 21, 2015 during an outfall inspection (FIS Asset ID 1457599) and subsequent follow-up inspections occurring January 22, 2015 and January 26, 2015 dry weather flows were identified in ADOT's Bethany Home Channel. During the original observation, the flow did not appear to have any color, but did have a sewage odor. However, during the follow-up visits, the color of the water was distinctly green with little odor. In the process of tracing the discharge up to its source, ADOT was able to identify two areas where the water was originating from. One discharge was observed flowing from the State Route 101 drainage channel and is most likely agricultural water. The second discharge originated from outlets adjacent to the University of Phoenix Stadium. These outlets and associated green discharge are the focus of this letter. ADOT is aware that during the last two inspections, preparations for a rather large event were on-going and potential contributing factor to the flow.

This discharge is not documented in the ADOT records as allowable. As such, the discharge must be removed within 30 days (March 6, 2015). ADOT will conduct a follow-up investigation to ensure the discharge has ceased. If the situation is not corrected, ADOT will take corrective measures, including but not limited to sending this matter to the Arizona Office of the Attorney General so that a lawsuit may be filed. In the alternative, ADOT may remove the discharge/connection and bill you directly pursuant to A.R.S. § 28-7053.

If the discharge cannot be remediated within 30 days, or you do not understand this notice, or you disagree that an illegal discharge exists from your property, please contact me at 602.712-8353 with further details or explanation.

Sincerely,

Wendy Terlizzi, CMS4S
Compliance and Reporting Manager

cc: Paul O'Brien, ADOT Environmental Planning Group
Jim Windsor, ADOT Phoenix Maintenance District Engineer
Lisa Andersen, ADOT Phoenix Maintenance District Environmental Coordinator

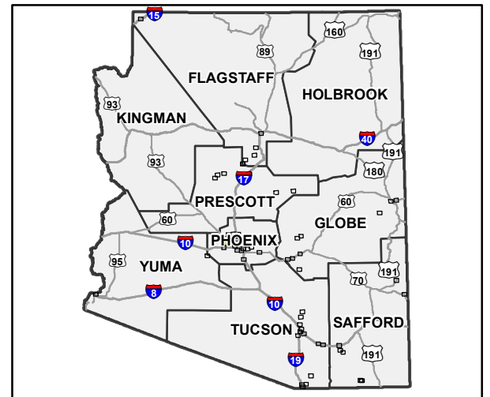
Enclosures (2) Photos and map of discharge location

FIS Asset ID:1458156
Structure Type: Channel
Waterbody ID: AZ15070102
Impairment: N/A
Flow Direction: SW

New River

ARIZONA LOOP 101

FIS Asset ID:1457599
Structure Type: Channel
Waterbody ID: AZ15070102
Impairment: N/A
Flow Direction: SW



ADOT District Overview

Legend

- ADOT Outfall Location
- State Highways
- Impaired Waters
- Outstanding Waters
- Streams
- Impaired Lakes

Image Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

0 1,000 2,000 4,000 Feet

N

Arizona Department of Transportation
Statewide Outfall Locations

Phoenix District
Map 2 of 18

Job No.	15-2012-3016
PM:	DT
Date:	3/7/2014
Scale:	1" = 2000 feet

Path: X:\Projects\2012 Projects\15201230\16 ADOT Outfall Identification & Determination\MXD\Outfall_Inventory\OutfallMaps_DetailMaps_PhoenixGlobe.mxd

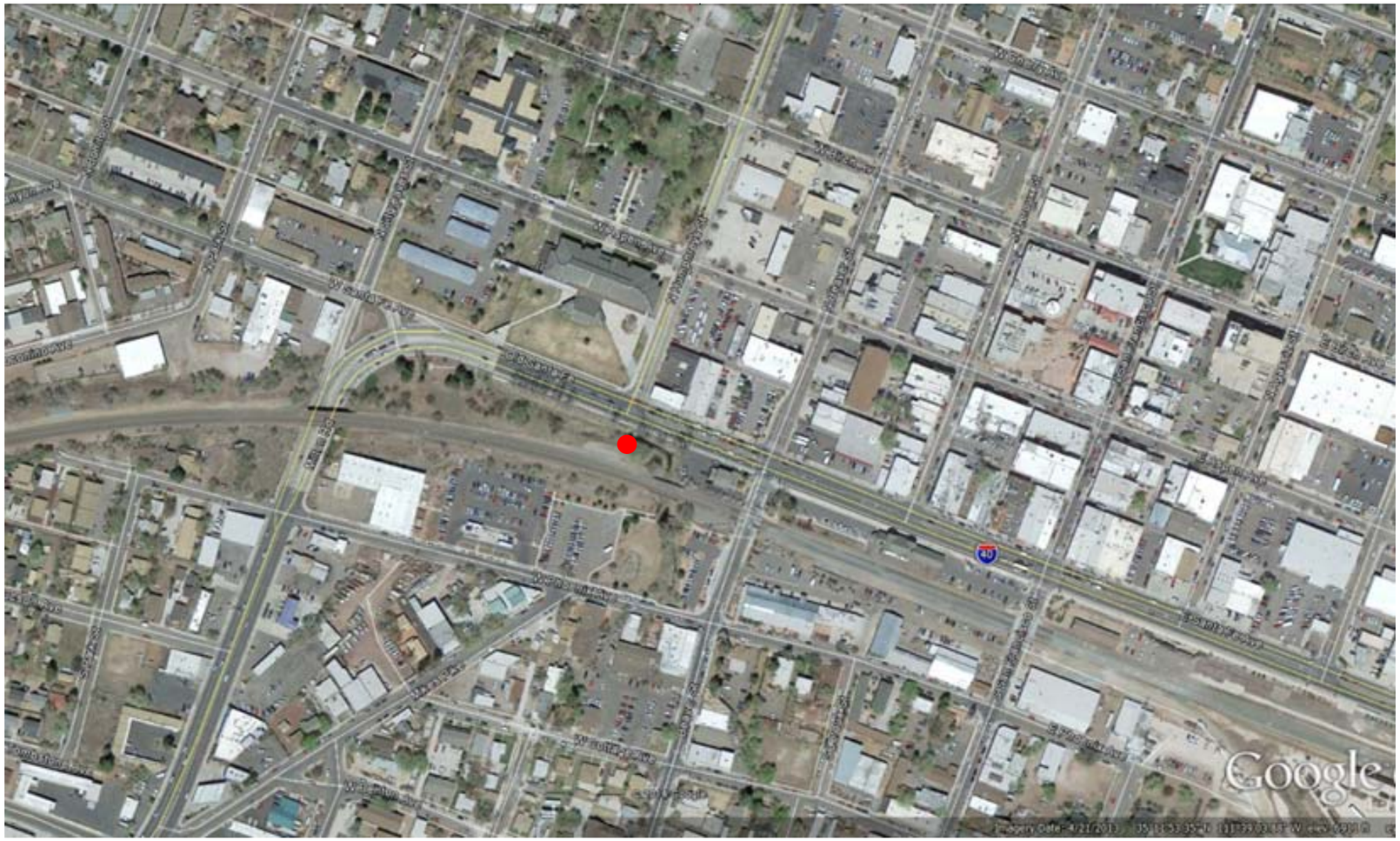
Figure 1. Looking east (upstream) away from New River and towards Loop 101 (taken 1/21/15).

Figure 2. Looking east (upstream) of the Bethany Home Channel (west of 99th avenue). Dry weather flow on right side of photo (taken 1/26/15).

Figure 3. Bethany Home cannel interchange (looking downstream, Loop 101 in background) with SR101 drainage channel (to right in photo) and the drainage channel from Grand Canal Linear Park. Discharge water contained emerald green sediment (taken 1/26/15).

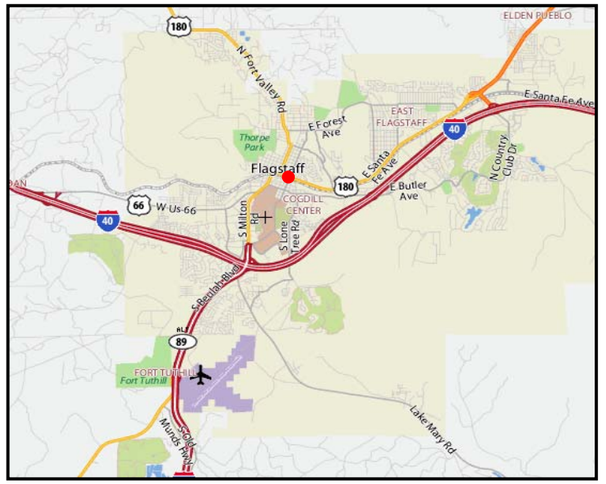
Figure 4. Grand Canal Linear Park drainage channel adjacent Cardinals Stadium southwestern parking lot. Eastern most outlet from Cardinals Stadium adjacent 95th Avenue overpass. The point of discharge is from the outfall just to the right of the photograph. (taken 1/26/15).

Appendix D
MS4 Sampler Location Maps



0 400 800 1600 Feet

Vicinity Map



Photograph: Looking south at sampling location along north bank of Rio de Flag in Flagstaff, AZ

MS4 Sampling Location
Flagstaff, Arizona

Legend

- Stormwater Sampling Location

N W E S

ADOT

ARIZONA DEPARTMENT OF TRANSPORTATION
AZPDES STORM WATER MONITORING SITE

eec Engineering and Environmental Consultants, Inc.
7740 North 16th Street, Suite 135, Phoenix, AZ 85020

0 600 1,200 Feet

N
W E
S

Legend

- Stormwater Sampling Location
- Oak Creek
- State Routes 89 & 179

ADOT

ARIZONA DEPARTMENT OF TRANSPORTATION
STORMWATER MONITORING SITE

Vicinity Map

Photograph: Looking southwest at west bank of Oak Creek beneath SR179 Bridge over Oak Creek, Sedona, AZ

MS4 Sampling Location
Sedona, AZ

eec Engineering and Environmental Consultants, Inc.
7740 North 16th Street, Suite 135, Phoenix, AZ 85020

0 50

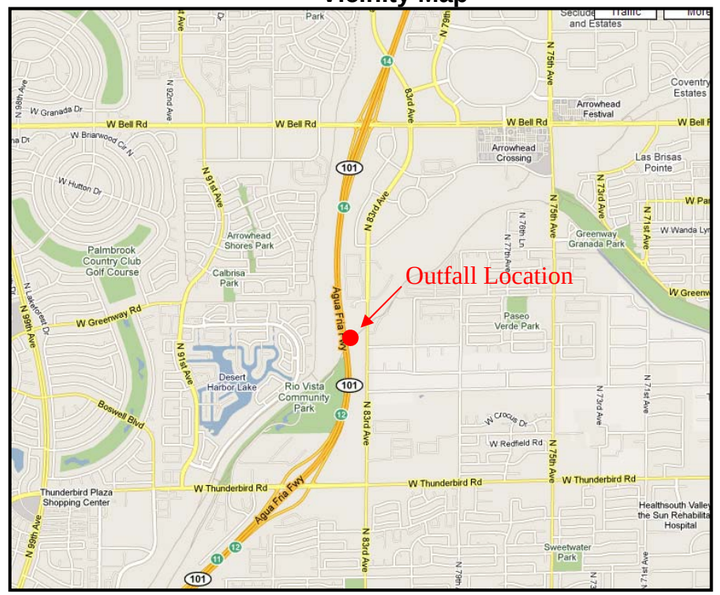
ADOT Outfall 101-13.68
Northeast Corner of Loop 101 and Skunk Creek Bridge, Peoria, Arizona

Legend

- Stormwater Sampling Location

ARIZONA DEPARTMENT OF TRANSPORTATION
STORMWATER MONITORING SITE

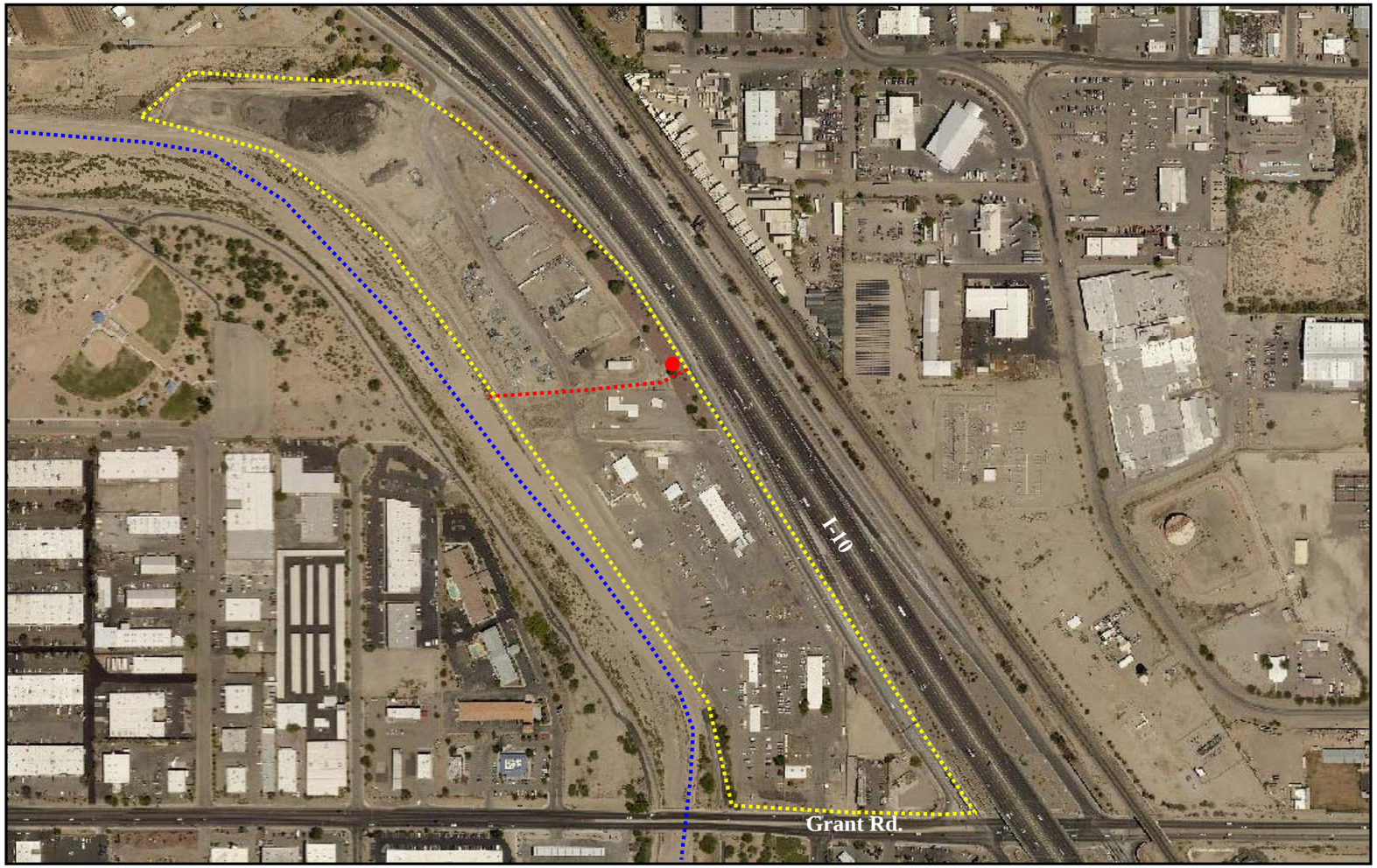
Vicinity Map



Photograph: Looking south along north bank of Skunk Creek

MS4 Sampling Location
Phoenix. Arizona

Engineering and Environmental Consultants, Inc.
7740 North 16th Street, Suite 135, Phoenix, AZ 85020



0 400 800 1600 Feet

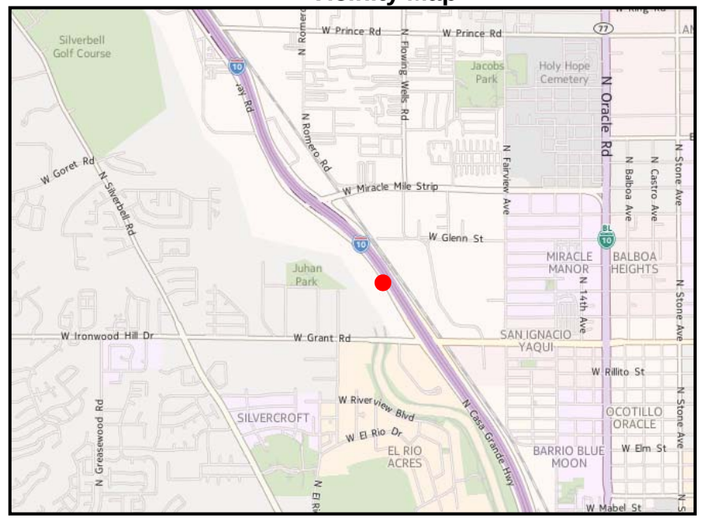
1444 West Grant Road
Tucson, Arizona 85745

Arizona Department of Transportation
MS4 Stormwater Monitoring Site

Legend

- Stormwater Sampling Location
- Santa Cruz
- Stormwater Conveyance
- ADOT Grant Road Maintenance Yard

Vicinity Map



Photograph: Looking north at sampling location located within ADOT Grant Road Maintenance Yard in Tucson, AZ

MS4 Sampling Location
Tucson, Arizona

Engineering and Environmental Consultants, Inc.
7740 North 16th Street, Suite 135, Phoenix, AZ 85020

0 300 600 1200 Feet

N W E S

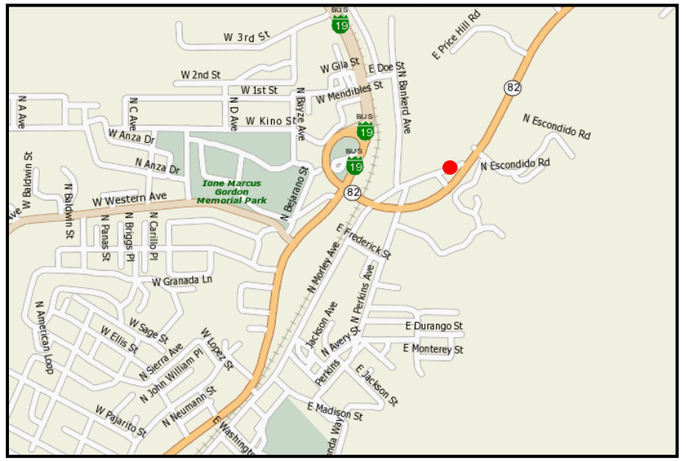
ADOT

ARIZONA DEPARTMENT OF TRANSPORTATION
STORMWATER MONITORING SITE

Legend

- Stormwater Sampling Location
- Nogales Wash
- Stormwater Conveyance

Vicinity Map



Photograph: Looking north at sampling location along north side of SR 82 in Nogales, AZ

MS4 Sampling Location
Nogales, Arizona

eec Engineering and Environmental Consultants, Inc.
7740 North 16th Street, Suite 135, Phoenix, AZ 85020

Appendix E
Industrial Compliance Evaluation and Laboratory Reports

LEGEND
Technical Services, Inc.
www.legend-group.com

17631 North 25th Avenue • Phoenix, AZ 85023
P (602) 324-6100 • F (602) 324-6101

12 December 2014

Nora Clark
Arizona Game & Fish Deptartment
5000 W. Carefree Highway
Phoenix, AZ 85086

RE: Maintenance Yard & Sign Factory Locations

Laboratory Work Order No.: 4120563

Legend Technical Services of Arizona, Inc. is pleased to provide the enclosed analytical results for the aforementioned project. These results relate only to the items tested. This cover letter and the accompanying pages represent the full report for these analyses and should only be reproduced in full. Samples for this project were received by the laboratory on 12/04/14 10:55.

The samples were processed in accordance with the Chain of Custody document and the results presented relate only to the samples tested. The Chain of Custody is considered part of this report.

All samples will be retained by LEGEND for 30 days from the date of this report and then discarded unless other arrangements are made.

This entire report was reviewed and approved for release by the undersigned. If you have any questions concerning this report, please feel free to contact me.

Sincerely,
LEGEND TECHNICAL SERVICES OF ARIZONA, INC.

Carling Olson

Carling Olson
Client Services Representative
(602) 324-6100

This laboratory report is confidential and is intended for the sole use of LEGEND and it's client.

Arizona Game & Fish Deptartment	Project:	Maintenance Yard & Sign Factory Locations	
5000 W. Carefree Highway	Project Number:	Superior Maintenance grab site 12/4/14	**Reported:**
Phoenix, AZ 85086	Project Manager:	Nora Clark	12/12/14 11:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
AGFD - SUPMAINT (Superior Maintenance grab site)	4120563-01	Storm Water	Grab	12/04/14 02:13	12/04/14 10:55

Sample Condition Upon Receipt:

Temperature: 2.00 C

All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.

QA/QC Criteria: All analyses met method requirements unless otherwise qualified.

Certifications: AZ(PHX)0004, AZ(TUC)OOO4, AIHA#102982, CDC ELITE Member.

Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.

Comments: There were no problems encountered during the processing of the samples, unless otherwise noted. All samples were analyzed on a "wet" basis unless designated as "dry weight".

AGFD - SUPMAINT (Superior Maintenance grab site) (4120563-01) Storm Water (Grab) Sampled: 12/04/14 02:13
Received: 12/04/14 10:55

Legend Technical Services of Arizona, Inc.

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Inorganic Chemistry									
Total Dissolved Solids	**436**	1	mg/L	1	B4L0207	**12/08/14 14:00**	**12/08/14 14:00**	SM 2540 C	
Total Suspended Solids	**8**	1	mg/L	1	B4L0199	**12/08/14 08:55**	**12/08/14 08:55**	SM 2540 D	
Semi-Volatile Organic Compounds									
HEM (Oil & Grease)	<5.00	5.00	mg/L	1	B4L0206	**12/08/14 08:00**	**12/08/14 08:00**	EPA 1664B	
SGT-HEM (TPH)	<5.00	5.00	mg/L	1	B4L0206	**12/08/14 08:00**	**12/08/14 08:00**	EPA 1664B	N7

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4L0199 - NO PREP										
Blank (B4L0199-BLK1)				*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	<1	1	mg/L							
Duplicate (B4L0199-DUP1)	**Source: 4120425-02**			*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	<1	1	mg/L		0				5	
Duplicate (B4L0199-DUP2)	**Source: 4120492-01**			*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	<1	1	mg/L		0				5	
Duplicate (B4L0199-DUP3)	**Source: 4120537-01**			*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	<1	1	mg/L		0				5	
Duplicate (B4L0199-DUP4)	**Source: 4120563-01**			*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	8	1	mg/L		8			0	5	
Duplicate (B4L0199-DUP5)	**Source: 4120581-01**			*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	5210	1	mg/L		5160			1	5	
Duplicate (B4L0199-DUP6)	**Source: 4120650-01**			*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	73	1	mg/L		70			4	5	
Duplicate (B4L0199-DUP7)	**Source: 4120667-01**			*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	128	1	mg/L		132			3	5	
Batch B4L0207 - NO PREP										
Blank (B4L0207-BLK1)				*Prepared & Analyzed: 12/08/14*						
Total Dissolved Solids	<1	1	mg/L							

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4L0207 - NO PREP										
Duplicate (B4L0207-DUP1)	**Source: 4120536-01**			*Prepared & Analyzed: 12/08/14*						
Total Dissolved Solids	876	1	mg/L		840			4	5	

Semi-Volatile Organic Compounds - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4L0206 - NO PREP										
Blank (B4L0206-BLK1)				*Prepared & Analyzed: 12/08/14*						
HEM (Oil & Grease)	<5.00	5.00	mg/L							
SGT-HEM (TPH)	<5.00	5.00	mg/L							
LCS (B4L0206-BS1)				*Prepared & Analyzed: 12/08/14*						
HEM (Oil & Grease)	36.5	5.00	mg/L	40.0		91	78-114			
SGT-HEM (TPH)	15.2	5.00	mg/L	20.0		76	64-132			
LCS Dup (B4L0206-BSD1)				*Prepared & Analyzed: 12/08/14*						
HEM (Oil & Grease)	34.8	5.00	mg/L	40.0		87	78-114	5	20	
SGT-HEM (TPH)	14.8	5.00	mg/L	20.0		74	64-132	3	20	
Matrix Spike (B4L0206-MS1)	**Source: 4120539-03**			*Prepared & Analyzed: 12/08/14*						
HEM (Oil & Grease)	36.2	5.00	mg/L	40.0	2.70	84	78-114			
SGT-HEM (TPH)	15.6	5.00	mg/L	20.0	2.30	66	64-132			

Notes and Definitions

N7	Additional analysis was not performed based on the "Total" result which was below the requested analyte's MCL/Action Level/Trigger Level.
BLK	Method Blank
LCS/Dup	Laboratory Control Sample/Laboratory Fortified Blank/Duplicate
MS/Dup	Matrix Spike/Duplicate
Dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Laboratory Sample ID: 4120563

CHAIN OF CUSTODY RECORD

LEGEND Technical Services, Inc.
www.legend-group.com

☑ 17631 N. 25th Avenue • Phoenix, AZ 85023 • (602) 324-6100 • Fax (602) 324-6101
☐ 4585 S. Palo Verde Rd, Ste 423 • Tucson, AZ 85714 • (520) 327-1234 • Fax (520) 327-0518

Page 1 of 1

Please Print Clearly

CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax Number or Email Address
AZGFD	5000 W. Carefree Highway	Phoenix	AZ	85086	928-245-8792	

Project Name	Project Number	Contact	P.O. No.		
Superior Maintenance Grab Site		Nora Clark		Fax Results ☐ / Email Results ☐	QC Report ☐ EDD ☐ / Special Detection Limits ☐

SAMPLE TYPE CODES

DW=Drinking Water, S=Soil/Solid, T=Travel Blank, WW=Wastewater, F=Food, SW=Surface Water, G=Sludge/Biosolids, GW=Groundwater, O=Other Stormwater

TURN AROUND TIME

Laboratory Authorization Required for Rush

☐ Standard 7-10 Day
☐ Other ____________

REQUESTED ANALYSES: ~~Oil + Grease~~; TPH; TDS + TSS

Client's Sample Identification	Date	Time	Sample Location	Composite	Grab	Sample Type	Compliance	No. of Containers	pH ✓ (Lab Use Only!)	~~Oil + Grease~~	TPH	TDS + TSS	LAB NO.
AGFD-SUPMAINT	12-4-14	0213	Superior Maintenance grab site		X	O		3			X	X	01

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions:

SAMPLE CONDITION UPON RECEIPT (Lab Use)	
No. of Containers	3
Temperature	2.0 °C
Custody Seals	Y (N)
Seals Intact	Y N
Preserved	(Y) N

	RELINQUISHED BY	Date / Time	SAMPLES RECEIVED BY	Date / Time
①	Sampler Signature: [signature] / Sampler Printed Name: Michael Ingraldi	Date 12/4/14 / Time 10:55	Signature: Carling Olson / Printed Name: Carling Olson	Date 12/4/14 / Time 1055
②	Signature / Printed Name	Date / Time	Signature / Printed Name	Date / Time
③	Signature / Printed Name	Date / Time	Signature / Printed Name	Date / Time

WHITE-LAB YELLOW-CLIENT

FORM GEN-170 (12/13)

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

John Burton
Engineering & Env. Consultants, INC. -AZ
7740 N. 16th Street, Ste 135
Phoenix, AZ 85020

Report Summary

Thursday August 21, 2014

Report Number: L716047
Samples Received: 08/14/14
Client Project: 14514.03

Description: Superior Maintenance Yard

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: Daphne R Richards

Daphne Richards , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

ESC LAB SCIENCES
YOUR LAB OF CHOICE

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7740 N. 16th Street, Ste 135
Phoenix, AZ 85020

August 21, 2014

ESC Sample # : L716047-01

Site ID :

Project # : 14514.03

Date Received : August 14, 2014
Description : Superior Maintenance Yard

Sample ID : SPMY081314

Collected By : Oliver Sullivan
Collection Date : 08/13/14 14:48

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Hardness, Total (mg/L as CaCO3)	42.	30.	mg/l	130.1	08/21/14	1
Dissolved Solids	220	10.	mg/l	2540 C-2011	08/20/14	1
Suspended Solids	15.	2.5	mg/l	2540 D-2011	08/19/14	1
TPH - Oil & Grease	BDL	5.9	mg/l	1664A	08/19/14	1
Copper	BDL	0.020	mg/l	6010B	08/19/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 08/21/14 16:17 Printed: 08/21/14 16:18

Summary of Remarks For Samples Printed
08/21/14 at 16:18:11

TSR Signing Reports: 288
R5 - Desired TAT

Baker Exxon Proj 105022.01 Ken & Mel's Proj 105022.02 MCAA Proj 305007.05 -ALL require TO-15+GRO on ALL AIR SAMPLES ENGENVPAZ-122012S NO CHARGE TBs

Sample: L716047-01 Account: ENGENVPAZ Received: 08/14/14 09:00 Due Date: 08/21/14 00:00 RPT Date: 08/21/14 16:17

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Engineering & Env. Consultants, INC. -AZ
John Burton
7740 N. 16th Street, Ste 135

Phoenix, AZ 85020

Quality Assurance Report
Level II

L716047

August 21, 2014

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Suspended Solids	< 2.5	mg/l			WG737733	08/19/14 14:54
Copper	< .02	mg/l			WG738034	08/19/14 13:46
TPH - Oil & Grease	< 5	mg/l			WG738036	08/19/14 16:54
Dissolved Solids	< 10	mg/l			WG737977	08/20/14 14:13
Hardness, Total (mg/L as CaCO3)	< 30	mg/l			WG738356	08/21/14 15:10

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Suspended Solids	mg/l	6350	6390	0.628	5	L716097-03	WG737733
Suspended Solids	mg/l	27.6	28.2	2.39	5	L716110-01	WG737733
Dissolved Solids	mg/l	5800	5960	2.72	5	L715953-06	WG737977
Hardness, Total (mg/L as CaCO3)	mg/l	76.0	75.0	1.32	20	L716049-01	WG738356
Hardness, Total (mg/L as CaCO3)	mg/l	73.0	79.0	7.89	20	L714679-02	WG738356

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Suspended Solids	mg/l	773	792.	102.	85-115	WG737733
Copper	mg/l	1	0.996	100.	80-120	WG738034
TPH - Oil & Grease	mg/l	20	16.5	82.5	78-114	WG738036
Dissolved Solids	mg/l	8800	8690	98.8	85-115	WG737977
Hardness, Total (mg/L as CaCO3)	mg/l	200	230.	115.	85-115	WG738356

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Suspended Solids	mg/l	764.	792.	99.0	85-115	3.60	5	WG737733
Copper	mg/l	0.991	0.996	99.0	80-120	0.0	20	WG738034
TPH - Oil & Grease	mg/l	16.4	16.5	82.0	78-114	0.608	18	WG738036
Dissolved Solids	mg/l	8580	8690	98.0	85-115	1.27	5	WG737977

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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John Burton
7740 N. 16th Street, Ste 135

Phoenix, AZ 85020

Quality Assurance Report
Level II

L716047

August 21, 2014

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
Hardness, Total (mg/L as CaCO3)	mg/l	230.	230.	115.	85-115	0.0	20	WG738356

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Hardness, Total (mg/L as CaCO3)	mg/l	282.	148.	150	89.0	80-120	L715034-03	WG738356

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Hardness, Total (mg/L as CaCO3)	mg/l	271.	282.	82.0	80-120	3.98	20	L715034-03	WG738356

Batch number /Run number / Sample number cross reference

WG737733: R2977970: L716047-01
WG738034: R2978022: L716047-01
WG738036: R2978089: L716047-01
WG737977: R2978556: L716047-01
WG738356: R2979203: L716047-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

ESC
L·A·B S·C·I·E·N·C·E·S
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John Burton
7740 N. 16th Street, Ste 135

Phoenix, AZ 85020

Quality Assurance Report
Level II

L716047

August 21, 2014

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Company Name/Address:
EEC
7740 B 16th St Suite 135
Phoenix AZ 85020

Billing Information:

Report to: John Burton

Email To: jburton@eecphx.com

Project Description: **Superior Maintenance Yard**

City/State Collected:

Phone: 602-248-7702
Fax: 602-248-7851

Client Project # 14514.03

Lab Project #

Collected by (print): Oliver Sullivan

Site/Facility ID #

P.O. #

Collected by (signature):
Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No __Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total Dissolved Solids/ 250mL HDPE/ No Pres	Total Suspended Solids/ 1L HDPE/ No Pres	Total Copper and Hardness/ 500mL HDPE/ HNO3 <2	TPHOGHEX/ 1L clear/ HCl	Rem./Contaminant	Sample # (lab only)
~~SPFY081314~~	~~G~~	~~GW~~		~~8/13/14~~	~~2:48~~		~~X~~	~~XXX~~		~~X~~		~~G~~
SPMY081314	G	GW		8/13/14	2:48		X	XXX		X		-01

Chain of Custody Page 1 of 1

ESC LABORATORIES
YOUR LAB OF CHOICE
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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L716047

H084

Acctnum: ENGENVPAZ
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

6127 6739 7927

Hold #

	Date:	Time:	
Relinquished by : (Signature)	8/13/14	1600	Received by: (Signature)
Relinquished by : (Signature)	8/13/14	1830	Received by: (Signature) FedEx
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____
Temp: 3.7 °C Bottles Received: 4
Date: 8/14/14 Time: 0900

Condition: ✓ (lab use only) (OW)
COC Seal Intact: ____Y ____N ____NA
pH Checked: <2 NCF:

LEGEND
Technical Services, Inc.
www.legend-group.com

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P (602) 324-6100 • F (602) 324-6101

12 June 2015

Nora Clark
Arizona Game & Fish Deptartment
5000 W. Carefree Highway
Phoenix, AZ 85086

RE: Stormwater Monitoring

Laboratory Work Order No.: 5060635

Legend Technical Services of Arizona, Inc. is pleased to provide the enclosed analytical results for the aforementioned project. These results relate only to the items tested. This cover letter and the accompanying pages represent the full report for these analyses and should only be reproduced in full. Samples for this project were received by the laboratory on 06/05/15 15:10.

The samples were processed in accordance with the Chain of Custody document and the results presented relate only to the samples tested. The Chain of Custody is considered part of this report.

All samples will be retained by LEGEND for 30 days from the date of this report and then discarded unless other arrangements are made.

This entire report was reviewed and approved for release by the undersigned. If you have any questions concerning this report, please feel free to contact me.

Sincerely,
LEGEND TECHNICAL SERVICES OF ARIZONA, INC.

Carling Olson

Carling Olson
Client Services Representative
(602) 324-6100

This laboratory report is confidential and is intended for the sole use of LEGEND and it's client.

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
AZGFD-SUPFUEL (Superior Fuel Yard)	5060635-01	Storm Water	Grab	06/05/15 10:47	06/05/15 15:10
AZGFD-SUPMAINT (Superior Maintenance Yard)	5060635-02	Storm Water	Grab	06/05/15 10:47	06/05/15 15:10
AZGFD-PHXMACH (Skunk Creek Comp.)	5060635-03	Storm Water	Composite	06/05/15 06:30	06/05/15 15:10

Sample Condition Upon Receipt:

Temperature: 2.00 C

All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.

QA/QC Criteria: All analyses met method requirements unless otherwise qualified.

Certifications: AZ(PHX)0004, AZ(TUC)OOO4, AIHA#102982, CDC ELITE Member.

Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.

Comments: There were no problems encountered during the processing of the samples, unless otherwise noted. All samples were analyzed on a "wet" basis unless designated as "dry weight".

AZGFD-SUPFUEL (Superior Fuel Yard) (5060635-01) Storm Water (Grab) Sampled: 06/05/15 10:47 Received: 06/05/15 15:10

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Legend Technical Services of Arizona, Inc.								
Inorganic Chemistry									
Total Dissolved Solids	**191**	1	mg/L	1	B5F0369	06/11/15 16:50	06/11/15 16:50	SM 2540 C	
Total Suspended Solids	**46**	1	mg/L	1	B5F0227	06/08/15 09:45	06/08/15 09:45	SM 2540 D	
Semi-Volatile Organic Compounds									
HEM (Oil & Grease)	<5.00	5.00	mg/L	1	B5F0359	06/11/15 10:00	06/11/15 10:00	EPA 1664B	
SGT-HEM (TPH)	<5.00	5.00	mg/L	1	B5F0359	06/11/15 10:00	06/11/15 10:00	EPA 1664B	N7

AZGFD-SUPMAINT (Superior Maintenance Yard) (5060635-02) Storm Water (Grab) Sampled: 06/05/15 10:47 Received: 06/05/15 15:10

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Legend Technical Services of Arizona, Inc.								
Inorganic Chemistry									
Total Dissolved Solids	**240**	1	mg/L	1	B5F0369	06/11/15 16:50	06/11/15 16:50	SM 2540 C	
Total Suspended Solids	**26**	1	mg/L	1	B5F0227	06/08/15 09:45	06/08/15 09:45	SM 2540 D	
Semi-Volatile Organic Compounds									
HEM (Oil & Grease)	<5.00	5.00	mg/L	1	B5F0359	06/11/15 10:00	06/11/15 10:00	EPA 1664B	
SGT-HEM (TPH)	<5.00	5.00	mg/L	1	B5F0359	06/11/15 10:00	06/11/15 10:00	EPA 1664B	N7

AZGFD-PHXMACH (Skunk Creek Comp.) (5060635-03) Storm Water (Composite) Sampled: 06/05/15 06:30 Received: 06/05/15 15:10

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Legend Technical Services of Arizona, Inc.								
Semi-Volatile Organic Compounds									
HEM (Oil & Grease)	<5.00	5.00	mg/L	1	B5F0359	06/11/15 10:00	06/11/15 10:00	EPA 1664B	
SGT-HEM (TPH)	<5.00	5.00	mg/L	1	B5F0359	06/11/15 10:00	06/11/15 10:00	EPA 1664B	N7

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B5F0227 - NO PREP										
Blank (B5F0227-BLK1)				*Prepared & Analyzed: 06/08/15*						
Total Suspended Solids	<1	1	mg/L							
Duplicate (B5F0227-DUP1)	**Source: 5060419-02**			*Prepared & Analyzed: 06/08/15*						
Total Suspended Solids	1	1	mg/L		0			200	5	R9
Duplicate (B5F0227-DUP2)	**Source: 5060451-01**			*Prepared & Analyzed: 06/08/15*						
Total Suspended Solids	16	1	mg/L		12			29	5	R9
Duplicate (B5F0227-DUP3)	**Source: 5060585-02**			*Prepared & Analyzed: 06/08/15*						
Total Suspended Solids	2	1	mg/L		2			0	5	
Duplicate (B5F0227-DUP4)	**Source: 5060618-04**			*Prepared & Analyzed: 06/08/15*						
Total Suspended Solids	161	1	mg/L		157			3	5	
Duplicate (B5F0227-DUP5)	**Source: 5060624-03**			*Prepared & Analyzed: 06/08/15*						
Total Suspended Solids	<1	1	mg/L		0				5	
Batch B5F0369 - NO PREP										
Blank (B5F0369-BLK1)				*Prepared & Analyzed: 06/11/15*						
Total Dissolved Solids	<1	1	mg/L							
Duplicate (B5F0369-DUP1)	**Source: 5060635-02**			*Prepared & Analyzed: 06/11/15*						
Total Dissolved Solids	241	1	mg/L		240			0.4	5	

Semi-Volatile Organic Compounds - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B5F0359 - NO PREP										
Blank (B5F0359-BLK1)				*Prepared & Analyzed: 06/11/15*						
HEM (Oil & Grease)	<5.00	5.00	mg/L							
SGT-HEM (TPH)	<5.00	5.00	mg/L							
LCS (B5F0359-BS1)				*Prepared & Analyzed: 06/11/15*						
HEM (Oil & Grease)	34.2	5.00	mg/L	40.0		86	78-114			
LCS Dup (B5F0359-BSD1)				*Prepared & Analyzed: 06/11/15*						
HEM (Oil & Grease)	33.8	5.00	mg/L	40.0		84	78-114	1	20	
Matrix Spike (B5F0359-MS1)	**Source: 5060627-01**			*Prepared & Analyzed: 06/11/15*						
HEM (Oil & Grease)	33.5	5.00	mg/L	40.0	<5.00	84	78-114			

Notes and Definitions

R9	Sample RPD exceeded the laboratory acceptance limit.
N7	Additional analysis was not performed based on the "Total" result which was below the requested analyte's MCL/Action Level/Trigger Level.
BLK	Method Blank
LCS/Dup	Laboratory Control Sample/Laboratory Fortified Blank/Duplicate
MS/Dup	Matrix Spike/Duplicate
Dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Laboratory Sample ID: 5060635

CHAIN OF CUSTODY RECORD

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Page 1 of 1

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CLIENT INFORMATION

Client Name	Report Mailing Address	City	State	Zip	Phone	Email Address
AZGame and Fish	5000 West Carefree Hwy	Phoenix	AZ	85086		nclark@azgfd.gov

Project Name	Project Number	Contact Name	Purchase Order No.	
		Nora Clark		EDD ☐

Email Results ☐ Special Detection Limits ☐

SAMPLE TYPE CODES

DW=Drinking Water; WW=Wastewater; SW=Surface Water; GW=Groundwater; O=Other Stormwater
S=Soil/Solid; T=Travel Blank; F=Food; G=Sludge/Biosolids

TURN AROUND TIME

Laboratory Authorization Required for Rush

☐ Standard 7-10 Day
☐ Other _____

REQUESTED ANALYSES

Client's Sample Identification	Sample Date	Sample Time	Sample Location	Composite	Grab	Sample Type	Compliance	No. of Containers	pH ✓ (Lab Use Only)	TDS	TPH	LAB NO.
AZGFD-SUPFUEL	6-5-15	1047	Superior Fuel Yard		✓		✓	4		X	X	01
AZGFD-SUPMAINT	6-5-15	1047	Superior Maint. Yard		✓		✓	4		X	X	02
AZGFD-PHXMACH	6-5-15	630	Skunk Creek Comp.	✓			✓	1			X	03

CORRECTION MADE BY CLIENT OR COURIER PRIOR TO SAMPLE RECEIPT AT LEGEND
6/9/15

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions:

SAMPLE CONDITION UPON RECEIPT (Lab Use)

No. of Containers	9	
Temperature	2.6	°C
Custody Seals	Y	(N)
Seals Intact	Y	N
Preserved	(Y)	N

	RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Sampler Signature: Michael Ingalls	Date: 6/5/15 Time: 14:12	Signature: Renee Wilcox	Date: 6-5-15 Time: 1412 ②
	Sampler Printed Name: Michael Ingalls		Printed Name: Renee Wilcox	
③	Signature: Renee Wilcox	Date: 6-5-15 Time: 1510	Signature: [illegible]	Date: 6/5/15 Time: 1516 ④
	Printed Name: Renee Wilcox		Printed Name: [illegible]	
⑤	Signature	Date	Signature	Date ⑥
	Printed Name	Time	Printed Name	Time

WHITE-LAB YELLOW-CLIENT

FORM GEN-170 (12/14)

LEGEND
Technical Services, Inc.
www.legend-group.com

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P (602) 324-6100 • F (602) 324-6101

12 December 2014

Nora Clark
Arizona Game & Fish Deptartment
5000 W. Carefree Highway
Phoenix, AZ 85086

RE: Maintenance Yard & Sign Factory Locations

Laboratory Work Order No.: 4120560

Legend Technical Services of Arizona, Inc. is pleased to provide the enclosed analytical results for the aforementioned project. These results relate only to the items tested. This cover letter and the accompanying pages represent the full report for these analyses and should only be reproduced in full. Samples for this project were received by the laboratory on 12/04/14 10:55.

The samples were processed in accordance with the Chain of Custody document and the results presented relate only to the samples tested. The Chain of Custody is considered part of this report.

All samples will be retained by LEGEND for 30 days from the date of this report and then discarded unless other arrangements are made.

This entire report was reviewed and approved for release by the undersigned. If you have any questions concerning this report, please feel free to contact me.

Sincerely,
LEGEND TECHNICAL SERVICES OF ARIZONA, INC.

Carling Olson

Carling Olson
Client Services Representative
(602) 324-6100

This laboratory report is confidential and is intended for the sole use of LEGEND and it's client.

Arizona Game & Fish Deptartment	Project: Maintenance Yard & Sign Factory Locations	
5000 W. Carefree Highway	Project Number: Superior Fuel grab Site 12/4/14	**Reported:**
Phoenix, AZ 85086	Project Manager: Nora Clark	12/12/14 11:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
AGFD - SUPFUEL (Superior Fuel grab site)	4120560-01	Storm Water	Grab	12/04/14 02:13	12/04/14 10:55

Sample Condition Upon Receipt:

Temperature: 2.00 C

All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.

QA/QC Criteria: All analyses met method requirements unless otherwise qualified.

Certifications: AZ(PHX)0004, AZ(TUC)OOO4, AIHA#102982, CDC ELITE Member.

Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.

Comments: There were no problems encountered during the processing of the samples, unless otherwise noted. All samples were analyzed on a "wet" basis unless designated as "dry weight".

Arizona Game & Fish Deptartment	Project: Maintenance Yard & Sign Factory Locations	
5000 W. Carefree Highway	Project Number: Superior Fuel grab Site 12/4/14	**Reported:**
Phoenix, AZ 85086	Project Manager: Nora Clark	12/12/14 11:57

AGFD - SUPFUEL (Superior Fuel grab site) (4120560-01) Storm Water (Grab) Sampled: 12/04/14 02:13 Received: 12/04/14 10:55

Legend Technical Services of Arizona, Inc.

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Inorganic Chemistry									
Total Dissolved Solids	**282**	1	mg/L	1	B4L0207	**12/08/14 14:00**	**12/08/14 14:00**	SM 2540 C	
Total Suspended Solids	**90**	1	mg/L	1	B4L0199	**12/08/14 08:55**	**12/08/14 08:55**	SM 2540 D	
Semi-Volatile Organic Compounds									
HEM (Oil & Grease)	<5.00	5.00	mg/L	1	B4L0206	**12/08/14 08:00**	**12/08/14 08:00**	EPA 1664B	
SGT-HEM (TPH)	<5.00	5.00	mg/L	1	B4L0206	**12/08/14 08:00**	**12/08/14 08:00**	EPA 1664B	N7

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4L0199 - NO PREP										
Blank (B4L0199-BLK1)				*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	<1	1	mg/L							
Duplicate (B4L0199-DUP1)	**Source: 4120425-02**			*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	<1	1	mg/L		0				5	
Duplicate (B4L0199-DUP2)	**Source: 4120492-01**			*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	<1	1	mg/L		0				5	
Duplicate (B4L0199-DUP3)	**Source: 4120537-01**			*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	<1	1	mg/L		0				5	
Duplicate (B4L0199-DUP4)	**Source: 4120563-01**			*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	8	1	mg/L		8			0	5	
Duplicate (B4L0199-DUP5)	**Source: 4120581-01**			*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	5210	1	mg/L		5160			1	5	
Duplicate (B4L0199-DUP6)	**Source: 4120650-01**			*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	73	1	mg/L		70			4	5	
Duplicate (B4L0199-DUP7)	**Source: 4120667-01**			*Prepared & Analyzed: 12/08/14*						
Total Suspended Solids	128	1	mg/L		132			3	5	
Batch B4L0207 - NO PREP										
Blank (B4L0207-BLK1)				*Prepared & Analyzed: 12/08/14*						
Total Dissolved Solids	<1	1	mg/L							

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4L0207 - NO PREP										
Duplicate (B4L0207-DUP1)	**Source: 4120536-01**			*Prepared & Analyzed: 12/08/14*						
Total Dissolved Solids	876	1	mg/L		840			4	5	

Semi-Volatile Organic Compounds - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4L0206 - NO PREP										
Blank (B4L0206-BLK1)				*Prepared & Analyzed: 12/08/14*						
HEM (Oil & Grease)	<5.00	5.00	mg/L							
SGT-HEM (TPH)	<5.00	5.00	mg/L							
LCS (B4L0206-BS1)				*Prepared & Analyzed: 12/08/14*						
HEM (Oil & Grease)	36.5	5.00	mg/L	40.0		91	78-114			
SGT-HEM (TPH)	15.2	5.00	mg/L	20.0		76	64-132			
LCS Dup (B4L0206-BSD1)				*Prepared & Analyzed: 12/08/14*						
HEM (Oil & Grease)	34.8	5.00	mg/L	40.0		87	78-114	5	20	
SGT-HEM (TPH)	14.8	5.00	mg/L	20.0		74	64-132	3	20	
Matrix Spike (B4L0206-MS1)	**Source: 4120539-03**			*Prepared & Analyzed: 12/08/14*						
HEM (Oil & Grease)	36.2	5.00	mg/L	40.0	2.70	84	78-114			
SGT-HEM (TPH)	15.6	5.00	mg/L	20.0	2.30	66	64-132			

Notes and Definitions

N7	Additional analysis was not performed based on the "Total" result which was below the requested analyte's MCL/Action Level/Trigger Level.
BLK	Method Blank
LCS/Dup	Laboratory Control Sample/Laboratory Fortified Blank/Duplicate
MS/Dup	Matrix Spike/Duplicate
Dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Laboratory Sample ID: 4120560

CHAIN OF CUSTODY RECORD

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Page 1 of 1

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CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax Number or Email Address
AZGFD	5000W. Carefree Hwy	Phoenix	AZ	85086	928-245-8792	

Project Name	Project Number	Contact	P.O. No.	
Superior Fuel grab Site		Nora Clark		Fax Results ☐ Email Results ☐ QC Report ☐ EDD ☐ Special Detection Limits ☐

SAMPLE TYPE CODES

DW=Drinking Water; WW=Wastewater; SW=Surface Water; GW=Groundwater; O=Other stormwater
S=Soil/Solid; T=Travel Blank; F=Food; G=Sludge/Biosolids

TURN AROUND TIME

Laboratory Authorization Required for Rush
☐ Standard 7-10 Day
☐ Other _____

REQUESTED ANALYSES

Client's Sample Identification	Date	Time	Sample Location	Composite	Grab	Sample Type	Compliance	No. of Containers	pH ✓ (Lab Use Only!)	TPH	TDS + TSS	LAB NO.
AGFD-SUPFUEL	12-4-14	0243	Superior Fuel grab Site		X	WATER		3		X	X	01

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions:

SAMPLE CONDITION UPON RECEIPT (Lab Use)		
No. of Containers	3	
Temperature	2.0 °C	
Custody Seals	Y	(N)
Seals Intact	Y	N
Preserved	(Y)	N

WHITE-LAB YELLOW-CLIENT

	RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Sampler Signature: Michael Ingraldi	Date: 12/4/14	Signature: Carling Olson	Date: 12/4/14
	Sampler Printed Name: Michael Ingraldi	Time: 10:55	Printed Name: Carling Olson	Time: 1055
②	Signature	Date	Signature	Date
	Printed Name	Time	Printed Name	Time
③	Signature	Date	Signature	Date
	Printed Name	Time	Printed Name	Time

FORM GEN-170 (12/13)

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Est. 1970

John Burton
Engineering & Env. Consultants, INC. -AZ
7740 N. 16th Street, Ste 135
Phoenix, AZ 85020

Report Summary

Thursday August 21, 2014

Report Number: L716049
Samples Received: 08/14/14
Client Project: 14514.03

Description: Superior Fuel Yard

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: Daphne R Richards

Daphne Richards , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7740 N. 16th Street, Ste 135
Phoenix, AZ 85020

August 21, 2014

ESC Sample # : L716049-01

Site ID :

Project # : 14514.03

Date Received : August 14, 2014
Description : Superior Fuel Yard

Sample ID : SPFY081314

Collected By : Oliver Sullivan
Collection Date : 08/13/14 15:09

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Hardness, Total (mg/L as CaCO3)	75.	30.	mg/l	130.1	08/21/14	1
Dissolved Solids	170	10.	mg/l	2540 C-2011	08/20/14	1
Suspended Solids	250	2.5	mg/l	2540 D-2011	08/19/14	1
TPH - Oil & Grease	BDL	5.7	mg/l	1664A	08/19/14	1
Copper	0.14	0.020	mg/l	6010B	08/19/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 08/21/14 16:18 Printed: 08/21/14 16:18

Summary of Remarks For Samples Printed
08/21/14 at 16:18:17

TSR Signing Reports: 288
R5 - Desired TAT

Baker Exxon Proj 105022.01 Ken & Mel's Proj 105022.02 MCAA Proj 305007.05 -ALL require TO-15+GRO on ALL AIR SAMPLES ENGENVPAZ-122012S NO CHARGE TBs

Sample: L716049-01 Account: ENGENVPAZ Received: 08/14/14 09:00 Due Date: 08/21/14 00:00 RPT Date: 08/21/14 16:18

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Engineering & Env. Consultants, INC. -AZ
John Burton
7740 N. 16th Street, Ste 135

Phoenix, AZ 85020

Quality Assurance Report
Level II

L716049

August 21, 2014

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Suspended Solids	< 2.5	mg/l			WG737733	08/19/14 14:54
Copper	< .02	mg/l			WG738034	08/19/14 13:46
TPH - Oil & Grease	< 5	mg/l			WG738036	08/19/14 16:54
Dissolved Solids	< 10	mg/l			WG737977	08/20/14 14:13
Hardness, Total (mg/L as CaCO3)	< 30	mg/l			WG738356	08/21/14 15:10

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Suspended Solids	mg/l	6350	6390	0.628	5	L716097-03	WG737733
Suspended Solids	mg/l	27.6	28.2	2.39	5	L716110-01	WG737733
Dissolved Solids	mg/l	5800	5960	2.72	5	L715953-06	WG737977
Hardness, Total (mg/L as CaCO3)	mg/l	76.0	75.0	1.32	20	L716049-01	WG738356
Hardness, Total (mg/L as CaCO3)	mg/l	73.0	79.0	7.89	20	L714679-02	WG738356

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Suspended Solids	mg/l	773	792.	102.	85-115	WG737733
Copper	mg/l	1	0.996	100.	80-120	WG738034
TPH - Oil & Grease	mg/l	20	16.5	82.5	78-114	WG738036
Dissolved Solids	mg/l	8800	8690	98.8	85-115	WG737977
Hardness, Total (mg/L as CaCO3)	mg/l	200	230.	115.	85-115	WG738356

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Suspended Solids	mg/l	764.	792.	99.0	85-115	3.60	5	WG737733
Copper	mg/l	0.991	0.996	99.0	80-120	0.0	20	WG738034
TPH - Oil & Grease	mg/l	16.4	16.5	82.0	78-114	0.608	18	WG738036
Dissolved Solids	mg/l	8580	8690	98.0	85-115	1.27	5	WG737977

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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John Burton
7740 N. 16th Street, Ste 135
Phoenix, AZ 85020

Quality Assurance Report
Level II

L716049

August 21, 2014

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
Hardness, Total (mg/L as CaCO3)	mg/l	230.	230.	115.	85-115	0.0	20	WG738356

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Hardness, Total (mg/L as CaCO3)	mg/l	282.	148.	150	89.0	80-120	L715034-03	WG738356

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Hardness, Total (mg/L as CaCO3)	mg/l	271.	282.	82.0	80-120	3.98	20	L715034-03	WG738356

Batch number /Run number / Sample number cross reference

WG737733: R2977970: L716049-01
WG738034: R2978022: L716049-01
WG738036: R2978089: L716049-01
WG737977: R2978556: L716049-01
WG738356: R2979203: L716049-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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Engineering & Env. Consultants, INC. -AZ
John Burton
7740 N. 16th Street, Ste 135

Phoenix, AZ 85020

Quality Assurance Report
Level II

L716049

August 21, 2014

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Company Name/Address:
EEC
7740 B 16th St Suite 135
Phoenix AZ 85020

Billing Information:

Report to:

Email To:

Project Description: **Superior Fuel Yard**

City/State Collected:

Phone: 602-248-7702
Fax: 602-248-7851

Client Project # 14517.03

Lab Project #

Collected by (print): Oliver Sullivan

Site/Facility ID #

P.O. #

Collected by (signature):
Immediately
Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No __Yes
FAX? ___No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Total Dissolved Solids/ 250mL HDPE/ No Pres	Total Suspended Solids/ 1L HDPE/ No Pres	Total Copper and Hardness/ 500mL HDPE/ HNO3 L2	TPHOGHEX/ 1L clear/ HCl	Rem./Contaminant	Sample # (lab only)
SPFY083114	G	GW		8/13/14	3:09		X	1	X	X		-01

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
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L# L716049

H085

Acctnum: ENGENVPAZ
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

6127 6739 7927

Hold #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	8-13-14	1610	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	8-13-14	1830	Fed Ex
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____
Temp: 3.7 °C Bottles Received: 4
Date: 8/14/14 Time: 0911

Condition: F (lab use only) (ow)
COC Seal Intact: ___Y ___N ___NA
pH Checked: L2 NCF:

LEGEND
Technical Services, Inc.
www.legend-group.com

17631 North 25th Avenue • Phoenix, AZ 85023
P (602) 324-6100 • F (602) 324-6101

12 June 2015

Nora Clark
Arizona Game & Fish Deptartment
5000 W. Carefree Highway
Phoenix, AZ 85086

RE: Stormwater Monitoring

Laboratory Work Order No.: 5060635

Legend Technical Services of Arizona, Inc. is pleased to provide the enclosed analytical results for the aforementioned project. These results relate only to the items tested. This cover letter and the accompanying pages represent the full report for these analyses and should only be reproduced in full. Samples for this project were received by the laboratory on 06/05/15 15:10.

The samples were processed in accordance with the Chain of Custody document and the results presented relate only to the samples tested. The Chain of Custody is considered part of this report.

All samples will be retained by LEGEND for 30 days from the date of this report and then discarded unless other arrangements are made.

This entire report was reviewed and approved for release by the undersigned. If you have any questions concerning this report, please feel free to contact me.

Sincerely,
LEGEND TECHNICAL SERVICES OF ARIZONA, INC.

Carling Olson

Carling Olson
Client Services Representative
(602) 324-6100

This laboratory report is confidential and is intended for the sole use of LEGEND and it's client.

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
AZGFD-SUPFUEL (Superior Fuel Yard)	5060635-01	Storm Water	Grab	06/05/15 10:47	06/05/15 15:10
AZGFD-SUPMAINT (Superior Maintenance Yard)	5060635-02	Storm Water	Grab	06/05/15 10:47	06/05/15 15:10
AZGFD-PHXMACH (Skunk Creek Comp.)	5060635-03	Storm Water	Composite	06/05/15 06:30	06/05/15 15:10

Sample Condition Upon Receipt:

Temperature: 2.00 C

All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.

QA/QC Criteria: All analyses met method requirements unless otherwise qualified.

Certifications: AZ(PHX)0004, AZ(TUC)OOO4, AIHA#102982, CDC ELITE Member.

Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.

Comments: There were no problems encountered during the processing of the samples, unless otherwise noted. All samples were analyzed on a "wet" basis unless designated as "dry weight".

AZGFD-SUPFUEL (Superior Fuel Yard) (5060635-01) Storm Water (Grab) Sampled: 06/05/15 10:47 Received: 06/05/15 15:10

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Legend Technical Services of Arizona, Inc.								
Inorganic Chemistry									
Total Dissolved Solids	**191**	1	mg/L	1	B5F0369	06/11/15 16:50	06/11/15 16:50	SM 2540 C	
Total Suspended Solids	**46**	1	mg/L	1	B5F0227	06/08/15 09:45	06/08/15 09:45	SM 2540 D	
Semi-Volatile Organic Compounds									
HEM (Oil & Grease)	<5.00	5.00	mg/L	1	B5F0359	06/11/15 10:00	06/11/15 10:00	EPA 1664B	
SGT-HEM (TPH)	<5.00	5.00	mg/L	1	B5F0359	06/11/15 10:00	06/11/15 10:00	EPA 1664B	N7

AZGFD-SUPMAINT (Superior Maintenance Yard) (5060635-02) Storm Water (Grab) Sampled: 06/05/15 10:47 Received: 06/05/15 15:10

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Legend Technical Services of Arizona, Inc.								
Inorganic Chemistry									
Total Dissolved Solids	**240**	1	mg/L	1	B5F0369	06/11/15 16:50	06/11/15 16:50	SM 2540 C	
Total Suspended Solids	**26**	1	mg/L	1	B5F0227	06/08/15 09:45	06/08/15 09:45	SM 2540 D	
Semi-Volatile Organic Compounds									
HEM (Oil & Grease)	<5.00	5.00	mg/L	1	B5F0359	06/11/15 10:00	06/11/15 10:00	EPA 1664B	
SGT-HEM (TPH)	<5.00	5.00	mg/L	1	B5F0359	06/11/15 10:00	06/11/15 10:00	EPA 1664B	N7

AZGFD-PHXMACH (Skunk Creek Comp.) (5060635-03) Storm Water (Composite) Sampled: 06/05/15 06:30 Received: 06/05/15 15:10

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Legend Technical Services of Arizona, Inc.								
Semi-Volatile Organic Compounds									
HEM (Oil & Grease)	<5.00	5.00	mg/L	1	B5F0359	06/11/15 10:00	06/11/15 10:00	EPA 1664B	
SGT-HEM (TPH)	<5.00	5.00	mg/L	1	B5F0359	06/11/15 10:00	06/11/15 10:00	EPA 1664B	N7

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B5F0227 - NO PREP										
Blank (B5F0227-BLK1)				*Prepared & Analyzed: 06/08/15*						
Total Suspended Solids	<1	1	mg/L							
Duplicate (B5F0227-DUP1)	**Source: 5060419-02**			*Prepared & Analyzed: 06/08/15*						
Total Suspended Solids	1	1	mg/L		0			200	5	R9
Duplicate (B5F0227-DUP2)	**Source: 5060451-01**			*Prepared & Analyzed: 06/08/15*						
Total Suspended Solids	16	1	mg/L		12			29	5	R9
Duplicate (B5F0227-DUP3)	**Source: 5060585-02**			*Prepared & Analyzed: 06/08/15*						
Total Suspended Solids	2	1	mg/L		2			0	5	
Duplicate (B5F0227-DUP4)	**Source: 5060618-04**			*Prepared & Analyzed: 06/08/15*						
Total Suspended Solids	161	1	mg/L		157			3	5	
Duplicate (B5F0227-DUP5)	**Source: 5060624-03**			*Prepared & Analyzed: 06/08/15*						
Total Suspended Solids	<1	1	mg/L		0				5	
Batch B5F0369 - NO PREP										
Blank (B5F0369-BLK1)				*Prepared & Analyzed: 06/11/15*						
Total Dissolved Solids	<1	1	mg/L							
Duplicate (B5F0369-DUP1)	**Source: 5060635-02**			*Prepared & Analyzed: 06/11/15*						
Total Dissolved Solids	241	1	mg/L		240			0.4	5	

Semi-Volatile Organic Compounds - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B5F0359 - NO PREP										
Blank (B5F0359-BLK1)				*Prepared & Analyzed: 06/11/15*						
HEM (Oil & Grease)	<5.00	5.00	mg/L							
SGT-HEM (TPH)	<5.00	5.00	mg/L							
LCS (B5F0359-BS1)				*Prepared & Analyzed: 06/11/15*						
HEM (Oil & Grease)	34.2	5.00	mg/L	40.0		86	78-114			
LCS Dup (B5F0359-BSD1)				*Prepared & Analyzed: 06/11/15*						
HEM (Oil & Grease)	33.8	5.00	mg/L	40.0		84	78-114	1	20	
Matrix Spike (B5F0359-MS1)	**Source: 5060627-01**			*Prepared & Analyzed: 06/11/15*						
HEM (Oil & Grease)	33.5	5.00	mg/L	40.0	<5.00	84	78-114			

Notes and Definitions

R9	Sample RPD exceeded the laboratory acceptance limit.
N7	Additional analysis was not performed based on the "Total" result which was below the requested analyte's MCL/Action Level/Trigger Level.
BLK	Method Blank
LCS/Dup	Laboratory Control Sample/Laboratory Fortified Blank/Duplicate
MS/Dup	Matrix Spike/Duplicate
Dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Laboratory Sample ID: 5060635

CHAIN OF CUSTODY RECORD

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Page 1 of 1

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CLIENT INFORMATION

Client Name	Report Mailing Address	City	State	Zip	Phone	Email Address
AZGame and Fish	5000 West Carefree Hwy	Phoenix	AZ	85086		nclark@azgfd.gov

Project Name	Project Number	Contact Name	Purchase Order No.	
		Nora Clark		EDD ☐

Email Results ☐ Special Detection Limits ☐

SAMPLE TYPE CODES

DW=Drinking Water; WW=Wastewater; SW=Surface Water; GW=Groundwater; O=Other Stormwater
S=Soil/Solid; T=Travel Blank; F=Food; G=Sludge/Biosolids

TURN AROUND TIME

Laboratory Authorization Required for Rush

☐ Standard 7-10 Day
☐ Other _____

REQUESTED ANALYSES

Client's Sample Identification	Sample Date	Sample Time	Sample Location	Composite	Grab	Sample Type	Compliance	No. of Containers	pH ✓ (Lab Use Only)	TDS	TPH	LAB NO.
AZGFD-SUPFUEL	6-5-15	1047	Superior Fuel Yard		✓		✓	4		X	X	01
AZGFD-SUPMAINT	6-5-15	1047	Superior Maint. Yard		✓		✓	4		X	X	02
AZGFD-PHXMACH	6-5-15	630	Skunk Creek Comp.	✓			✓	1			X	03

CORRECTION MADE BY CLIENT OR COURIER PRIOR TO SAMPLE RECEIPT AT LEGEND
6/9/15

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions:

SAMPLE CONDITION UPON RECEIPT (Lab Use)

No. of Containers	9	
Temperature	2.6	°C
Custody Seals	Y	(N)
Seals Intact	Y	N
Preserved	(Y)	N

	RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Sampler Signature: Michael Ingalls	Date: 6/5/15 Time: 14:12	Signature: Renee Wilcox	Date: 6-5-15 Time: 1412 ②
	Sampler Printed Name: Michael Ingalls		Printed Name: Renee Wilcox	
③	Signature: Renee Wilcox	Date: 6-5-15 Time: 1510	Signature: [illegible]	Date: 6/5/15 Time: 1516 ④
	Printed Name: Renee Wilcox		Printed Name: [illegible]	
⑤	Signature	Date	Signature	Date ⑥
	Printed Name	Time	Printed Name	Time

WHITE-LAB YELLOW-CLIENT

FORM GEN-170 (12/14)

LEGEND
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www.legend-group.com

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30 December 2014

Nora Clark
Arizona Game & Fish Deptartment
5000 W. Carefree Highway
Phoenix, AZ 85086

RE: Maintenance Yard & Sign Factory Locations

Laboratory Work Order No.: 4121603

Legend Technical Services of Arizona, Inc. is pleased to provide the enclosed analytical results for the aforementioned project. These results relate only to the items tested. This cover letter and the accompanying pages represent the full report for these analyses and should only be reproduced in full. Samples for this project were received by the laboratory on 12/17/14 14:30.

The samples were processed in accordance with the Chain of Custody document and the results presented relate only to the samples tested. The Chain of Custody is considered part of this report.

All samples will be retained by LEGEND for 30 days from the date of this report and then discarded unless other arrangements are made.

This entire report was reviewed and approved for release by the undersigned. If you have any questions concerning this report, please feel free to contact me.

Sincerely,
LEGEND TECHNICAL SERVICES OF ARIZONA, INC.

Carling Olson

Carling Olson
Client Services Representative
(602) 324-6100

This laboratory report is confidential and is intended for the sole use of LEGEND and it's client.

Arizona Game & Fish Deptartment	Project: Maintenance Yard & Sign Factory Locations	
5000 W. Carefree Highway	Project Number: Nogales Yard Grab 12/17/14	**Reported:**
Phoenix, AZ 85086	Project Manager: Nora Clark	12/30/14 12:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
NOGYARD (Nogales Yard ADOT)	4121603-01	Storm Water	Grab	12/17/14 12:15	12/17/14 14:30

Sample Condition Upon Receipt:

Temperature: 5.10 C

All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.

QA/QC Criteria: All analyses met method requirements unless otherwise qualified.

Certifications: AZ(PHX)0004, AZ(TUC)OOO4, AIHA#102982, CDC ELITE Member.

Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.

Comments: There were no problems encountered during the processing of the samples, unless otherwise noted. All samples were analyzed on a "wet" basis unless designated as "dry weight".

Arizona Game & Fish Deptartment	Project: Maintenance Yard & Sign Factory Locations	
5000 W. Carefree Highway	Project Number: Nogales Yard Grab 12/17/14	**Reported:**
Phoenix, AZ 85086	Project Manager: Nora Clark	12/30/14 12:27

NOGYARD (Nogales Yard ADOT) (4121603-01) Storm Water (Grab) Sampled: 12/17/14 12:15 Received: 12/17/14 14:30

Legend Technical Services of Arizona, Inc.

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Inorganic Chemistry									
Total Dissolved Solids	**340**	1	mg/L	1	B4L0548	**12/21/14 14:20**	**12/21/14 14:20**	SM 2540 C	
Total Suspended Solids	**494**	1	mg/L	1	B4L0505	**12/18/14 08:00**	**12/18/14 08:00**	SM 2540 D	
Semi-Volatile Organic Compounds									
HEM (Oil & Grease)	<5.00	5.00	mg/L	1	B4L0702	**12/29/14 07:30**	**12/29/14 07:30**	EPA 1664B	
SGT-HEM (TPH)	<5.00	5.00	mg/L	1	B4L0702	**12/29/14 07:30**	**12/29/14 07:30**	EPA 1664B	N7

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4L0505 - NO PREP										
Blank (B4L0505-BLK1)				*Prepared & Analyzed: 12/18/13*						
Total Suspended Solids	<1	1	mg/L							
Duplicate (B4L0505-DUP1)	**Source: 4121276-01**			*Prepared & Analyzed: 12/18/13*						
Total Suspended Solids	<1	1	mg/L		0				5	
Duplicate (B4L0505-DUP2)	**Source: 4121407-01**			*Prepared & Analyzed: 12/18/13*						
Total Suspended Solids	<1	1	mg/L		0				5	
Duplicate (B4L0505-DUP3)	**Source: 4121470-01**			*Prepared & Analyzed: 12/18/13*						
Total Suspended Solids	1	1	mg/L		1			0	5	
Duplicate (B4L0505-DUP4)	**Source: 4121482-03**			*Prepared & Analyzed: 12/18/13*						
Total Suspended Solids	3	1	mg/L		2			40	5	R9
Duplicate (B4L0505-DUP5)	**Source: 4121512-02**			*Prepared & Analyzed: 12/18/13*						
Total Suspended Solids	<1	1	mg/L		0				5	
Duplicate (B4L0505-DUP6)	**Source: 4121576-02**			*Prepared & Analyzed: 12/18/13*						
Total Suspended Solids	2	1	mg/L		1			67	5	R9
Duplicate (B4L0505-DUP7)	**Source: 4121610-01**			*Prepared & Analyzed: 12/18/13*						
Total Suspended Solids	52	1	mg/L		42			21	5	R9
Batch B4L0548 - NO PREP										
Blank (B4L0548-BLK1)				*Prepared & Analyzed: 12/21/14*						
Total Dissolved Solids	<1	1	mg/L							

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4L0548 - NO PREP										
Duplicate (B4L0548-DUP1)	**Source: 4121603-01**			*Prepared & Analyzed: 12/21/14*						
Total Dissolved Solids	331	1	mg/L		340			3	5	

Semi-Volatile Organic Compounds - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4L0702 - NO PREP										
Blank (B4L0702-BLK1)				*Prepared & Analyzed: 12/29/14*						
HEM (Oil & Grease)	<5.00	5.00	mg/L							
SGT-HEM (TPH)	<5.00	5.00	mg/L							N7
LCS (B4L0702-BS1)				*Prepared & Analyzed: 12/29/14*						
HEM (Oil & Grease)	36.5	5.00	mg/L	40.0		91	78-114			
LCS Dup (B4L0702-BSD1)				*Prepared & Analyzed: 12/29/14*						
HEM (Oil & Grease)	35.7	5.00	mg/L	40.0		89	78-114	2	20	
Matrix Spike (B4L0702-MS1)	**Source: 4121241-01**			*Prepared & Analyzed: 12/29/14*						
HEM (Oil & Grease)	38.1	5.00	mg/L	40.0	1.50	92	78-114			

Notes and Definitions

R9	Sample RPD exceeded the laboratory acceptance limit.
N7	Additional analysis was not performed based on the "Total" result which was below the requested analyte's MCL/Action Level/Trigger Level.
BLK	Method Blank
LCS/Dup	Laboratory Control Sample/Laboratory Fortified Blank/Duplicate
MS/Dup	Matrix Spike/Duplicate
Dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Laboratory Sample ID: 4121603

CHAIN OF CUSTODY RECORD

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Page 1 of 1

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CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax Number or Email Address
Arizona Game & Fish Dept	5000 W Carefree Hwy	Phx	AZ	85086	928-345-8792	—

Project Name	Project Number	Contact	P.O. No.		
Nogales Yard Grab		Nora Clark		Fax Results ☐ / Email Results ☐	QC Report ☐ EDD ☐ / Special Detection Limits ☐

SAMPLE TYPE CODES

DW=Drinking Water, WW=Wastewater, SW=Surface Water, GW=Groundwater, O=Other; S=Soil/Solid, T=Travel Blank, F=Food, G=Sludge/Biosolids

TURN AROUND TIME

Laboratory Authorization Required for Rush

☐ Standard 7-10 Day
☐ Other ______

REQUESTED ANALYSES: TSS, TDS, THP

Client's Sample Identification	Date	Time	Sample Location	Composite	Grab	Sample Type	Compliance	No. of Containers	pH ✓ (Lab Use Only!)	TSS	TDS, THP	LAB NO.
NOGYARD	12/17/4	12:15	Nogales Yard ADOT		X	SW				X	X	-01

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions: Email Results to Nclark@azgfd.gov

SAMPLE CONDITION UPON RECEIPT (Lab Use)

No. of Containers	3	
Temperature	~~4.7 °F~~ 5.1 °C	
Custody Seals	Y	(N)
Seals Intact	Y	N
Preserved	(Y)	N

	RELINQUISHED BY	Date/Time	SAMPLES RECEIVED BY	Date/Time
①	Sampler Signature: Shawn Lovery [signature]; Sampler Printed Name: Shawn Lovery	12/17/14 1430	Signature: [signature]; Printed Name: Amanda Fish	12/17/14 1430
②	Signature: [signature]; Printed Name: Amanda Fish	12/17/14 1600	Signature: Courier; Printed Name:	12/17/14 1600
③	Signature: ; Printed Name: Courier	12/18/14 800	Signature: [signature]; Printed Name: [illegible]	12/18/14 800

WHITE-LAB YELLOW-CLIENT

FORM GEN-170 (12/13)

LEGEND
Technical Services, Inc.
www.legend-group.com

4585 S. Palo Verde Rd., Ste. 423 • Tucson, AZ 85714
P (520) 327-1234 • F (520) 327-0518

22 August 2014

John Burton
EEC, Inc.
7740 N. 16th Street
Phoenix, AZ 85020

RE: Nogales Maintenance Yard

Laboratory Work Order No.: 4080993

Legend Technical Services of Arizona, Inc. is pleased to provide the enclosed analytical results for the aforementioned project. These results relate only to the items tested. This cover letter and the accompanying pages represent the full report for these analyses and should only be reproduced in full. Samples for this project were received by the laboratory on 08/12/14 11:25.

The samples were processed in accordance with the Chain of Custody document and the results presented relate only to the samples tested. The Chain of Custody is considered part of this report.

All samples will be retained by LEGEND for 30 days from the date of this report and then discarded unless other arrangements are made.

This entire report was reviewed and approved for release by the undersigned. If you have any questions concerning this report, please feel free to contact me.

Sincerely,
LEGEND TECHNICAL SERVICES OF ARIZONA, INC.

P. Brian Merritt

P. Brian Merritt
Client Services Representative
(602) 324-6100

This laboratory report is confidential and is intended for the sole use of LEGEND and it's client.

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
Nogales-ADOT Yard (ADOT Main Yard)	4080993-01	Surface Water	Grab	08/11/14 12:00	08/12/14 11:25

Sample Condition Upon Receipt:

Temperature: 5.40 C

All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.

QA/QC Criteria: All analyses met method requirements unless otherwise qualified.

Certifications: AZ(PHX)0004, AZ(TUC)OOO4, AIHA#102982, CDC ELITE Member.

Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.

Comments: There were no problems encountered during the processing of the samples, unless otherwise noted. All samples were analyzed on a "wet" basis unless designated as "dry weight".

This report contains data that were produced by a subcontracted laboratory certified for the fields of testing performed.

ESC AZ0612
Daphne Richards
800.767.5859

Nogales-ADOT Yard (ADOT Main Yard) (4080993-01) Surface Water (Grab) Sampled: 08/11/14 12:00 Received: 08/12/14 11:25

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
			Legend Technical Services of Arizona, Inc.						
Microbiology									
E. coli, MPN (SW-Colilert)	**172.3**	1.0	MPN/100 mL	1	B4H0371	**08/12/14 12:06**	**08/12/14 12:06**	SM 9223B	H3
Total Metals									
Calcium	**35**	1	mg/L	1	B4H0376	**08/13/14 16:55**	**08/14/14 11:38**	EPA 200.7	
Copper	**0.01**	0.01	mg/L	1	B4H0376	**08/13/14 16:55**	**08/14/14 11:38**	EPA 200.7	
Magnesium	**10**	1	mg/L	1	B4H0376	**08/13/14 16:55**	**08/14/14 11:38**	EPA 200.7	
Calcium Hardness as CaCO3	**88**	2	mg/L	1	[CALC]	**08/13/14 16:55**	**08/14/14 11:38**	SM2340B	
Magnesium Hardness as CaCO3	**39**	4	mg/L	1	[CALC]	**08/13/14 16:55**	**08/14/14 11:38**	SM2340B	
Total Hardness as CaCO3	**127**	4	mg/L	1	[CALC]	**08/13/14 16:55**	**08/14/14 11:38**	SM2340B	
Inorganic Chemistry									
Residual Chlorine	**0.28**	0.04	mg/L	1	B4H0401	**08/14/14 14:55**	**08/14/14 14:55**	HACH 8167	H5
Ammonia as N	<1.00	1.00	mg/L	1	B4H0340	**08/13/14 12:57**	**08/13/14 12:57**	EPA 350.1	
Total Dissolved Solids	**229**	1	mg/L	1	B4H0461	**08/17/14 16:00**	**08/17/14 16:00**	SM 2540 C	
Total Suspended Solids	**28**	1	mg/L	1	B4H0381	**08/14/14 09:45**	**08/14/14 09:45**	SM 2540 D	
			ESC AZ0612						
SV8015									
C10-C28 Diesel Range	**0.63**	0.10	mg/l	1	WG736920		**08/15/14 20:47**	SV8015	
C28-C40 Oil Range	**0.23**	0.10	mg/l	1	WG736920		**08/15/14 20:47**	SV8015	
Surrogate: o-Terphenyl		*76.1 %*		-	*WG736920*		*08/15/14*	*SV8015*	

Microbiology - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4H0371 - micro_prep										
Blank (B4H0371-BLK1)				*Prepared & Analyzed: 08/12/14*						
E. coli, MPN (SW-Colilert)	<1.0	1.0	MPN/100 mL							

Total Metals - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4H0376 - EPA 200.7										
Blank (B4H0376-BLK1)				*Prepared: 08/13/14 Analyzed: 08/14/14*						
Calcium	<1	1	mg/L							
Copper	<0.01	0.01	mg/L							
Magnesium	<1	1	mg/L							
LCS (B4H0376-BS1)				*Prepared: 08/13/14 Analyzed: 08/14/14*						
Calcium	21	1	mg/L	20.0		103	85-115			
Copper	1.01	0.01	mg/L	1.00		101	85-115			
Magnesium	21	1	mg/L	20.0		104	85-115			
LCS Dup (B4H0376-BSD1)				*Prepared: 08/13/14 Analyzed: 08/14/14*						
Calcium	20	1	mg/L	20.0		102	85-115	0.9	20	
Copper	1.01	0.01	mg/L	1.00		101	85-115	0.6	20	
Magnesium	21	1	mg/L	20.0		103	85-115	1	20	
Matrix Spike (B4H0376-MS1)		**Source: 4081194-01**		*Prepared: 08/13/14 Analyzed: 08/14/14*						
Calcium	112	1	mg/L	20.0	89	113	70-130			
Copper	1.08	0.01	mg/L	1.00	0.04	104	70-130			
Magnesium	44	1	mg/L	20.0	21	115	70-130			
Matrix Spike Dup (B4H0376-MSD1)		**Source: 4081194-01**		*Prepared: 08/13/14 Analyzed: 08/14/14*						
Calcium	112	1	mg/L	20.0	89	114	70-130	0.3	20	
Copper	1.07	0.01	mg/L	1.00	0.04	104	70-130	0.2	20	
Magnesium	44	1	mg/L	20.0	21	116	70-130	0.4	20	

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4H0340 - NO PREP										
Blank (B4H0340-BLK1)				*Prepared & Analyzed: 08/13/14*						
Ammonia as N	<1.00	1.00	mg/L							
Blank (B4H0340-BLK2)				*Prepared & Analyzed: 08/13/14*						
Ammonia as N	<1.00	1.00	mg/L							
Blank (B4H0340-BLK3)				*Prepared & Analyzed: 08/13/14*						
Ammonia as N	<1.00	1.00	mg/L							
Blank (B4H0340-BLK4)				*Prepared & Analyzed: 08/13/14*						
Ammonia as N	<1.00	1.00	mg/L							
Blank (B4H0340-BLK5)				*Prepared & Analyzed: 08/13/14*						
Ammonia as N	<1.00	1.00	mg/L							
Blank (B4H0340-BLK6)				*Prepared & Analyzed: 08/13/14*						
Ammonia as N	<1.00	1.00	mg/L							
LCS (B4H0340-BS1)				*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.3	1.00	mg/L	10.0		103	90-110			
LCS (B4H0340-BS2)				*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.3	1.00	mg/L	10.0		103	90-110			
LCS (B4H0340-BS3)				*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.4	1.00	mg/L	10.0		104	90-110			
LCS Dup (B4H0340-BSD1)				*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.4	1.00	mg/L	10.0		104	90-110	1	20	

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4H0340 - NO PREP										
LCS Dup (B4H0340-BSD2)				*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.2	1.00	mg/L	10.0		102	90-110	1	20	
LCS Dup (B4H0340-BSD3)				*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.3	1.00	mg/L	10.0		103	90-110	1	20	
Matrix Spike (B4H0340-MS1)		**Source: 4080462-02**		*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.3	1.00	mg/L	10.0	<1.00	103	90-110			
Matrix Spike (B4H0340-MS2)		**Source: 4080636-01**		*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.3	1.00	mg/L	10.0	<1.00	103	90-110			
Matrix Spike (B4H0340-MS3)		**Source: 4080644-01**		*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.3	1.00	mg/L	10.0	<1.00	103	90-110			
Matrix Spike (B4H0340-MS4)		**Source: 4080689-05**		*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.1	1.00	mg/L	10.0	<1.00	101	90-110			
Matrix Spike (B4H0340-MS5)		**Source: 4080911-01**		*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.1	1.00	mg/L	10.0	<1.00	101	90-110			
Matrix Spike (B4H0340-MS6)		**Source: 4081049-02**		*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.2	1.00	mg/L	10.0	<1.00	102	90-110			
Matrix Spike Dup (B4H0340-MSD1)		**Source: 4080462-02**		*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.3	1.00	mg/L	10.0	<1.00	103	90-110	0	20	
Matrix Spike Dup (B4H0340-MSD2)		**Source: 4080636-01**		*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.1	1.00	mg/L	10.0	<1.00	101	90-110	2	20	

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4H0340 - NO PREP										
Matrix Spike Dup (B4H0340-MSD3)		**Source: 4080644-01**		*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.2	1.00	mg/L	10.0	<1.00	102	90-110	1	20	
Matrix Spike Dup (B4H0340-MSD4)		**Source: 4080689-05**		*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.1	1.00	mg/L	10.0	<1.00	101	90-110	0	20	
Matrix Spike Dup (B4H0340-MSD5)		**Source: 4080911-01**		*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.1	1.00	mg/L	10.0	<1.00	101	90-110	0	20	
Matrix Spike Dup (B4H0340-MSD6)		**Source: 4081049-02**		*Prepared & Analyzed: 08/13/14*						
Ammonia as N	10.2	1.00	mg/L	10.0	<1.00	102	90-110	0	20	
Batch B4H0381 - NO PREP										
Blank (B4H0381-BLK1)				*Prepared & Analyzed: 08/14/14*						
Total Suspended Solids	<1	1	mg/L							
Duplicate (B4H0381-DUP1)		**Source: 4080844-02**		*Prepared & Analyzed: 08/14/14*						
Total Suspended Solids	<1	1	mg/L		0				5	
Duplicate (B4H0381-DUP2)		**Source: 4080893-02**		*Prepared & Analyzed: 08/14/14*						
Total Suspended Solids	<1	1	mg/L		0				5	
Duplicate (B4H0381-DUP3)		**Source: 4081000-01**		*Prepared & Analyzed: 08/14/14*						
Total Suspended Solids	<1	1	mg/L		0				5	
Duplicate (B4H0381-DUP4)		**Source: 4081064-03**		*Prepared & Analyzed: 08/14/14*						
Total Suspended Solids	6420	1	mg/L		6420			0	5	

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4H0381 - NO PREP										
Duplicate (B4H0381-DUP5)		**Source: 4081093-02**		*Prepared & Analyzed: 08/14/14*						
Total Suspended Solids	6	1	mg/L		6			0	5	
Duplicate (B4H0381-DUP6)		**Source: 4081174-02**		*Prepared & Analyzed: 08/14/14*						
Total Suspended Solids	<1	1	mg/L		0				5	
Duplicate (B4H0381-DUP7)		**Source: 4081177-02**		*Prepared & Analyzed: 08/14/14*						
Total Suspended Solids	<1	1	mg/L		0				5	
Batch B4H0401 - NO PREP										
Blank (B4H0401-BLK1)				*Prepared & Analyzed: 08/14/14*						
Residual Chlorine	<0.04	0.04	mg/L							
LCS (B4H0401-BS1)				*Prepared & Analyzed: 08/14/14*						
Residual Chlorine	0.72	0.04	mg/L	0.750		96	80-120			
LCS Dup (B4H0401-BSD1)				*Prepared & Analyzed: 08/14/14*						
Residual Chlorine	0.72	0.04	mg/L	0.750		96	80-120	0.1	20	
Matrix Spike (B4H0401-MS1)		**Source: 4081247-01**		*Prepared & Analyzed: 08/14/14*						
Residual Chlorine	0.18	0.04	mg/L	0.750	0.10	11	80-120			M2
Matrix Spike Dup (B4H0401-MSD1)		**Source: 4081247-01**		*Prepared & Analyzed: 08/14/14*						
Residual Chlorine	0.18	0.04	mg/L	0.750	0.10	11	80-120	0	20	M2
Batch B4H0461 - NO PREP										
Blank (B4H0461-BLK1)				*Prepared & Analyzed: 08/17/14*						
Total Dissolved Solids	<1	1	mg/L							

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4H0461 - NO PREP										
Duplicate (B4H0461-DUP1)		**Source: 4081406-01**		*Prepared & Analyzed: 08/17/14*						
Total Dissolved Solids	1580	1	mg/L		1490			6	5	R1

Notes and Definitions

R1	RPD/RSD exceeded the method control limit.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
H5	This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.
H3	Sample was received and /or anlaysis was requested past holding time.
BLK	Method Blank
LCS/Dup	Laboratory Control Sample/Laboratory Fortified Blank/Duplicate
MS/Dup	Matrix Spike/Duplicate
Dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Legend Technical Services of AZ
4585 S. Palo Verde
Ste 423
Tucson, AZ 85714

Billing Information:
Legend Technical Services
Attn: Accounts Payable
17631 N. 25th Ave
Phoenix, AZ 85023

Report to: Brian Merritt
Email to: bmerritt@legend-group.com

Project Description:
City/State Collected
Phone: (520) 327-1234
FAX:
Client Project #: 4080993
ESC Key:
Collected by: Client Rep
Site/Facility ID#:
P.O.#:
Collected by (signature):
Immediately Packed on Ice N Y

Rush? (Lab MUST Be Notified)
____ Same Day.....200%
____ Next Day.....100%
____ Two Day.....50%
____ Three Day.....25%

Date Results Needed:
Email? __No✓Yes
FAX? ✓No__Yes

Analysis/Container/Preservative

Chain of Custody Page 1 of 1

ESC LABORATORY SCIENCES
12065 Lebanon Road
Mt. Juliet, TN 37122
Phone: (800) 767-5859
Phone: (615) 758-5858
Fax: (615) 758-5859

CoCode (lab use only)
Template/Prelogin
Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	MBAS Surfactants	8015 DRO/ORO	Remarks/Contaminant	Sample # (lab only)
4080993-01	Grab	Other	*C below	8/11/14	1200			x		
4080996-01	Grab	Other	*C below	8/10/14	0100			x		
4080996-02	Comp	Other	*C below	8/10/14	0100		x			

Invoice:
Customer :
Phone : (615)758-5858
SAT Del : N
Date : 22May13
Weight : 10 LBS
COD :
DV :
Svcs: STANDARD OVERNIGHT
TRCK: 8622 3975 3608

Shipping :	0.00	
Special :	0.00	
Handling :	0.00	0.00
Total :	0.00	

*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____

Remarks: *Other = Surface Water *OK to run past hold-time.- PBM 8/12/14

Flow _____ Other _____

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐	Condition: (lab use only)
	8/12/14	1700	Fed Ex		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: / Bottles Received:	CoC Seals Intact: ____ Y ____ N ____ NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: / Time:	pH Checked: / NCF:

Laboratory Sample ID: 4080993

CHAIN OF CUSTODY RECORD

LEGEND Technical Services, Inc.
www.legend-group.com

☐ 17631 N. 25th Avenue • Phoenix, AZ 85023 • (602) 324-6100 • Fax (602) 324-6101
☐ 4585 S. Palo Verde Rd, Ste 423 • Tucson, AZ 85714 • (520) 327-1234 • Fax (520) 327-0518

Page 1 of 1

Please Print Clearly

CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax Number or Email Address
EEC	7740 N. 16th St, STE 135	Phoenix	AZ	85020	602-248-7702	jburton@eecphx.com

Project Name	Project Number	Contact	P.O. No.		
Nogales Maintenance Yard		John Burton		Fax Results ☐ / Email Results ☐	QC Report ☐ EDD ☐ / Special Detection Limits ☐

SAMPLE TYPE CODES

DW=Drinking Water, WW=Wastewater, SW=Surface Water, G=Groundwater, O=Other
S=Soil/Solid, T=Travel Blank, F=Food, G=Sludge/Biosolids

TURN AROUND TIME

Laboratory Authorization Required for Rush
☐ Standard 10 - 15 Day
☐ Other

REQUESTED ANALYSES

Client's Sample Identification	Date	Time	Sample Location	Composite	Grab	Sample Type	Compliance	No. of Containers	pH ✓ (Lab Use Only!)	TDS	TSS	8015 (DRO/ORO)	Copper	Hardness	Ammonia	E. coli	Chlorine	LAB NO.
Nogales-ADOT-Yard	8/11/14	1200	ADOT maint yard		Y	SW		7	✓	X	X	X	X	X	X	X	X	01

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions: * - Client cross-out OK to run analyses posthold - [illegible]

SAMPLE CONDITION UPON RECEIPT (Lab Use)	
No. of Containers	7
Temperature	5.4 °C
Custody Seals	Y (N)
Seals Intact	Y N
Preserved	(Y) N

	RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Sampler Signature: [signature]	Date 8/12/14	Signature: [signature]	Date 8/12/14
	Sampler Printed Name: Thomas J. Ker	Time 1125	Printed Name: Brian Merritt	Time 1125
②	Signature: [signature]	Date 8/12/14	Signature: Courier	Date 8/12/14
	Printed Name: Brian Merritt	Time 1600	Printed Name	Time 1600
③	Signature	Date 8/13/14	Signature: [signature]	Date 8/13/14
	Printed Name: Courier	Time 800	Printed Name: [illegible]	Time 800

WHITE-LAB YELLOW-CLIENT

FORM GEN-170 (05/06)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

TestAmerica Job ID: 550-47783-1
TestAmerica Sample Delivery Group: Nogales Yard
Client Project/Site: Arizona Game and Fish Department

For:
Arizona Game and Wildlife Department
5000 W. Carefree Hwy
Phoenix, Arizona 85086

Attn: Nora Clark

Authorized for release by:
7/22/2015 4:36:49 PM

Carlene McCutcheon, Project Manager II
(602)659-7612
carlene.mccutcheon@testamericainc.com

Table of Contents

Definitions/Glossary

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47783-1
SDG: Nogales Yard

Qualifiers

General Chemistry

Qualifier	Qualifier Description
D2	Sample required dilution due to high concentration of analyte.
R8	Sample RPD exceeded the method acceptance limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 550-47783-1

Laboratory: TestAmerica Phoenix

Narrative

Job Narrative
550-47783-1

Comments
No additional comments.

Receipt
The samples were received on 7/14/2015 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.3º C and 2.8º C.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with Batch 68154.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47783-1
SDG: Nogales Yard

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-47783-1	Nogalas Yard	Stormwater	07/13/15 16:15	07/14/15 10:15

Detection Summary

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47783-1
SDG: Nogales Yard

Client Sample ID: Nogalas Yard

Lab Sample ID: 550-47783-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
ORO (C22-C32)	0.79		0.20		mg/L	1		8015D	Total/NA
DRO (C10-C22)	0.34		0.10		mg/L	1		8015D	Total/NA
Total Dissolved Solids	330	D2	40		mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	1000	D2	40		mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47783-1
SDG: Nogales Yard

Client Sample ID: Nogalas Yard

Date Collected: 07/13/15 16:15
Date Received: 07/14/15 10:15

Lab Sample ID: 550-47783-1

Matrix: Stormwater

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ORO (C22-C32)	0.79		0.20		mg/L		07/16/15 10:19	07/17/15 11:47	1
DRO (C10-C22)	0.34		0.10		mg/L		07/16/15 10:19	07/17/15 11:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*116*		*37 - 140*	*07/16/15 10:19*	*07/17/15 11:47*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	330	D2	40		mg/L			07/16/15 15:57	1
Total Suspended Solids	1000	D2	40		mg/L			07/16/15 18:47	1

Surrogate Summary

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47783-1
SDG: Nogales Yard

Method: 8015D - Diesel Range Organics (DRO) (GC)

Matrix: Stormwater **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	OTPH (37-140)								
550-47783-1	Nogalas Yard	116								

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Method: 8015D - Diesel Range Organics (DRO) (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	OTPH (37-140)								
LCS 550-68154/4-A	Lab Control Sample	115								
LCSD 550-68154/5-A	Lab Control Sample Dup	121								
MB 550-68154/1-A	Method Blank	114								

Surrogate Legend

OTPH = o-Terphenyl (Surr)

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 550-68154/1-A
Matrix: Water
Analysis Batch: 68251

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 68154

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ORO (C22-C32)	ND		0.20		mg/L		07/16/15 10:19	07/17/15 10:44	1
DRO (C10-C22)	ND		0.10		mg/L		07/16/15 10:19	07/17/15 10:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*114*		*37 - 140*	*07/16/15 10:19*	*07/17/15 10:44*	*1*

Lab Sample ID: LCS 550-68154/4-A
Matrix: Water
Analysis Batch: 68251

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 68154

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
ORO (C22-C32)			1.60	1.39		mg/L		87	65 - 120		
DRO (C10-C22)			0.400	0.392		mg/L		98	14 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl (Surr)	*115*		*37 - 140*

Lab Sample ID: LCSD 550-68154/5-A
Matrix: Water
Analysis Batch: 68251

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 68154

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
ORO (C22-C32)			1.60	1.50		mg/L		94	65 - 120	8	20
DRO (C10-C22)			0.400	0.413		mg/L		103	14 - 120	5	24

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl (Surr)	*121*		*37 - 140*

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 550-68203/1
Matrix: Water
Analysis Batch: 68203

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		20		mg/L			07/16/15 15:57	1

Lab Sample ID: LCS 550-68203/2
Matrix: Water
Analysis Batch: 68203

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			1000	986		mg/L		99	90 - 110		

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCSD 550-68203/3
Matrix: Water
Analysis Batch: 68203

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids			1000	962		mg/L		96	90 - 110	2	10

Lab Sample ID: 550-47739-A-1 DU
Matrix: Water
Analysis Batch: 68203

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	16000	D2		15500	D2	mg/L				0.5	10

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 550-68223/1
Matrix: Water
Analysis Batch: 68223

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		10		mg/L			07/16/15 18:47	1

Lab Sample ID: LCS 550-68223/2
Matrix: Water
Analysis Batch: 68223

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			200	215		mg/L		108	90 - 110		

Lab Sample ID: LCSD 550-68223/3
Matrix: Water
Analysis Batch: 68223

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids			200	203		mg/L		102	90 - 110	6	10

Lab Sample ID: 550-47779-A-1 DU
Matrix: Water
Analysis Batch: 68223

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	210	R8 D2		240	D2 R8	mg/L				15	10

QC Association Summary

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47783-1
SDG: Nogales Yard

GC Semi VOA

Prep Batch: 68154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-47783-1	Nogalas Yard	Total/NA	Stormwater	3510C	
LCS 550-68154/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 550-68154/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 550-68154/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 68251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-47783-1	Nogalas Yard	Total/NA	Stormwater	8015D	68154
LCS 550-68154/4-A	Lab Control Sample	Total/NA	Water	8015D	68154
LCSD 550-68154/5-A	Lab Control Sample Dup	Total/NA	Water	8015D	68154
MB 550-68154/1-A	Method Blank	Total/NA	Water	8015D	68154

General Chemistry

Analysis Batch: 68203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-47739-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	
550-47783-1	Nogalas Yard	Total/NA	Stormwater	SM 2540C	
LCS 550-68203/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 550-68203/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
MB 550-68203/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 68223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-47779-A-1 DU	Duplicate	Total/NA	Water	SM 2540D	
550-47783-1	Nogalas Yard	Total/NA	Stormwater	SM 2540D	
LCS 550-68223/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 550-68223/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
MB 550-68223/1	Method Blank	Total/NA	Water	SM 2540D	

Lab Chronicle

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47783-1
SDG: Nogales Yard

Client Sample ID: Nogalas Yard

Date Collected: 07/13/15 16:15
Date Received: 07/14/15 10:15

Lab Sample ID: 550-47783-1

Matrix: Stormwater

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			68154	07/16/15 10:19	CPA	TAL PHX
Total/NA	Analysis	8015D		1	68251	07/17/15 11:47	JGM	TAL PHX
Total/NA	Analysis	SM 2540C		1	68203		YAF	TAL PHX
					(Start)	07/16/15 15:57		
					(End)	07/17/15 19:20		
Total/NA	Analysis	SM 2540D		1	68223		YAF	TAL PHX
					(Start)	07/16/15 18:47		
					(End)	07/17/15 15:25		

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Certification Summary

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47783-1
SDG: Nogales Yard

Laboratory: TestAmerica Phoenix

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0728	06-09-16

Analysis Method	Prep Method	Matrix	Analyte

Method Summary

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47783-1
SDG: Nogales Yard

Method	Method Description	Protocol	Laboratory
8015D	Diesel Range Organics (DRO) (GC)	SW846	TAL PHX
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PHX
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL PHX

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (12/08)

CHAIN OF COUSTODY FORM 550-47783

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 2520 E. Sunset, Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Page ____ of ____

Client Name / Address: AZ GAME & FISH DEPT. — CONTRACTS BRANCH 5000 W. CAREFREE HWY. PHOENIX, AZ 85086

Project / PO Number:

Project Manager: NORA CLARK

Phone Number: (928) 245-8792

Sampler: DENNIS ABBATE

Fax Number:

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	TPH	TSS	TDS							Special Instructions
NOGALES YARD	SW		3	7/13	1615		X	X	X							
~~NOGALES YARD 2~~	~~SW~~		~~1~~	~~7/13~~		DA 7/14										

550-47783 Chain of Custody

Relinquished By:	Date / Time:	Received By:	Date / Time:	Turnaround Time: (Check)
Denni Abbate	7/14/15 1015	[signature]	7-14-15 1015	same day ____ 72 hours ____
Relinquished By: [signature]	Date / Time: 7-14-15 1530	Received By:	Date / Time:	24 hours ____ 5 days ____ 48 hours ____ normal X
Relinquished By:	Date / Time:	Received in Lab By:	Date / Time:	Sample Integrity: (Check) intact X on ice X

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

2.3

2.8°

Login Sample Receipt Checklist

Client: Arizona Game and Wildlife Department

Job Number: 550-47783-1
SDG Number: Nogales Yard

Login Number: 47783
List Number: 1
Creator: Gaska, Kristinena

List Source: TestAmerica Phoenix

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

TestAmerica Job ID: 550-50378-1
Client Project/Site: AZGFD-DURFACT

For:
Arizona Game and Wildlife Department
5000 W. Carefree Hwy
Phoenix, Arizona 85086

Attn: Nora Clark

Authorized for release by:
9/3/2015 6:06:45 PM

Carlene McCutcheon, Project Manager II
(602)659-7612
carlene.mccutcheon@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Client: Arizona Game and Wildlife Department
Project/Site: AZGFD-DURFACT

TestAmerica Job ID: 550-50378-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 550-50378-1

Laboratory: TestAmerica Phoenix

Narrative

Job Narrative
550-50378-1

Comments
No additional comments.

Receipt
The sample was received on 9/1/2015 9:56 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: Arizona Game and Wildlife Department
Project/Site: AZGFD-DURFACT

TestAmerica Job ID: 550-50378-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-50378-1	AZGFD-DURFACT	Water	09/01/15 09:11	09/01/15 09:56

Detection Summary

Client: Arizona Game and Wildlife Department
Project/Site: AZGFD-DURFACT

TestAmerica Job ID: 550-50378-1

Client Sample ID: AZGFD-DURFACT

Lab Sample ID: 550-50378-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	1.7		0.10		mg/L	1		200.7 Rev 4.4	Total/NA
Iron	1.8		0.10		mg/L	1		200.7 Rev 4.4	Total/NA
Zinc	1.7		0.050		mg/L	1		200.7 Rev 4.4	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Arizona Game and Wildlife Department
Project/Site: AZGFD-DURFACT

TestAmerica Job ID: 550-50378-1

Client Sample ID: AZGFD-DURFACT
Date Collected: 09/01/15 09:11
Date Received: 09/01/15 09:56

Lab Sample ID: 550-50378-1
Matrix: Water

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.7		0.10		mg/L		09/01/15 16:40	09/02/15 18:22	1
Iron	1.8		0.10		mg/L		09/01/15 16:40	09/02/15 18:22	1
Zinc	1.7		0.050		mg/L		09/01/15 16:40	09/02/15 18:22	1

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 550-72130/1-A
Matrix: Water
Analysis Batch: 72295

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72130

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.10		mg/L		09/01/15 16:40	09/02/15 17:50	1
Iron	ND		0.10		mg/L		09/01/15 16:40	09/02/15 17:50	1
Zinc	ND		0.050		mg/L		09/01/15 16:40	09/02/15 17:50	1

Lab Sample ID: LCS 550-72130/2-A
Matrix: Water
Analysis Batch: 72295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72130

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aluminum			2.00	1.96		mg/L		98	85 - 115		
Iron			1.00	1.01		mg/L		101	85 - 115		
Zinc			1.00	1.04		mg/L		104	85 - 115		

Lab Sample ID: LCSD 550-72130/3-A
Matrix: Water
Analysis Batch: 72295

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 72130

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum			2.00	1.95		mg/L		97	85 - 115	0	20
Iron			1.00	1.00		mg/L		100	85 - 115	1	20
Zinc			1.00	1.04		mg/L		104	85 - 115	0	20

Lab Sample ID: 550-50368-G-1-A MS
Matrix: Water
Analysis Batch: 72295

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 72130

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aluminum	0.35		2.00	2.35		mg/L		100	70 - 130		
Iron	0.28		1.00	1.23		mg/L		94	70 - 130		
Zinc	ND		1.00	1.03		mg/L		102	70 - 130		

Lab Sample ID: 550-50368-G-1-B MSD
Matrix: Water
Analysis Batch: 72295

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 72130

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	0.35		2.00	2.35		mg/L		100	70 - 130	0	20
Iron	0.28		1.00	1.20		mg/L		92	70 - 130	2	20
Zinc	ND		1.00	1.02		mg/L		101	70 - 130	1	20

QC Association Summary

Client: Arizona Game and Wildlife Department
Project/Site: AZGFD-DURFACT

TestAmerica Job ID: 550-50378-1

Metals

Prep Batch: 72130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-50368-G-1-A MS	Matrix Spike	Total/NA	Water	200.7	
550-50368-G-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7	
550-50378-1	AZGFD-DURFACT	Total/NA	Water	200.7	
LCS 550-72130/2-A	Lab Control Sample	Total/NA	Water	200.7	
LCSD 550-72130/3-A	Lab Control Sample Dup	Total/NA	Water	200.7	
MB 550-72130/1-A	Method Blank	Total/NA	Water	200.7	

Analysis Batch: 72295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-50368-G-1-A MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	72130
550-50368-G-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	72130
550-50378-1	AZGFD-DURFACT	Total/NA	Water	200.7 Rev 4.4	72130
LCS 550-72130/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	72130
LCSD 550-72130/3-A	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	72130
MB 550-72130/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	72130

Lab Chronicle

Client: Arizona Game and Wildlife Department
Project/Site: AZGFD-DURFACT

TestAmerica Job ID: 550-50378-1

Client Sample ID: AZGFD-DURFACT
Date Collected: 09/01/15 09:11
Date Received: 09/01/15 09:56

Lab Sample ID: 550-50378-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.7			72130	09/01/15 16:40	JTG	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	72295	09/02/15 18:22	AJC	TAL PHX

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Certification Summary

Client: Arizona Game and Wildlife Department
Project/Site: AZGFD-DURFACT

TestAmerica Job ID: 550-50378-1

Laboratory: TestAmerica Phoenix

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0728	06-09-16

Method Summary

Client: Arizona Game and Wildlife Department
Project/Site: AZGFD-DURFACT

TestAmerica Job ID: 550-50378-1

Method	Method Description	Protocol	Laboratory
200.7 Rev 4.4	Metals (ICP)	40CFR136A	TAL PHX

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

TestAmerica Phoenix
4625 E. Cotton Center Blvd.
Suite 189
Phoenix, AZ 85040
Phone: 602.437.3340 Fax:

Chain of Custody Record

094458

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

9/3/2015

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Nora Clark	Site Contact:	Date:	COC No:
Company Name: AZ Game & Fish Dept	Tel/Fax: (928) 245-8792	Lab Contact:	Carrier:	____ of ____ COCs
Address: 5000 W. Carefree Hwy	Analysis Turnaround Time			Sampler: Kari Ogren
City/State/Zip: Phoenix, AZ 85086	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: (623) 236-7660	TAT if different from Below ____			Walk-in Client:
Fax: (623) 236-7315	☐ 2 weeks			Lab Sampling:
Project Name: AZGFD - ~~DURFACT~~	☐ 1 week			
Site: AZGFD - DURFACT	☐ 2 days			Job / SDG No.:
PO#	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Metals: Al, Fe, Zn	Sample Specific Notes:
AZGFD - DURFACT -1	9/1	9:11	G	W	1	N	N	X	

550-50378 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

2.8°C

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

	Company	Date/Time		Company	Date/Time
Relinquished by: Kari Ogren	AZ Game & Fish Dept	9/1/15 9:56	Received by:		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time: 9-1-15 0956

ADOT Stormwater Sampling - Visual Inspection Data Form
Arizona Game and Fish Department

SAMPLING LOCATION INFORMATION[1]

Composite Machine Site: __FLAGMACH; __SEDMACH; __PHXMACH; __TUCMACH; __NOGMACH
Composite Grab Site: __FLAGGRAB; __SEDGRAB; __PHXGRAB; __TUCGRAB; __NOGGRAB
Maintenance Yard Grab Site: X DURFACT; __SUPFUEL; __SUPMAINT; __NOGYARD

COLLECTOR INFORMATION

Collector: [illegible] Collection Date: [illegible] Collection Time: [illegible]

WEATHER INFORMATION

☒ Clear ☐ Cloudy ☐ Raining Last rain event: ☐ more than 72 hrs ago ☐ w/in 72 hrs

Sample Collected: ☐ during discharge ☒ w/in 30 min ☐ 30 min - 60 min ☐ 60 min +

If no sample collected, or not collected within 30 min, explain: ☐ absense of discharge ☐ adverse conditions ☐ inactive/unstaffed site

SAMPLE OBSERVATIONS

	Description	Severity
COLOR	☐ clear ☒ brown ☐ green ☐ gray ☐ red	☒ 1 - Faint ☐ 2 - Clearly Visible ☐ 3 - Obvious
ODOR	☐ sewage ☐ rancid/sour ☐ gas ☐ other:	☐ 1 - Faint ☐ 2 - Easily Detected ☐ 3 - Noticeable from a distance
CLARITY	☒ clear ☐ turbid	☒ 1 - Slightly cloudy ☐ 2 - Cloudy ☐ 3 - Opaque
FLOATING SOLIDS	☒ Sewage ☐ Algae ☐ other:	☒ 1 - Sparse ☐ 2 - Intermittent ☐ 3 - Dense
SETTLED SOLIDS	☒ present ☐ absent	☒ 1 - Sparse ☐ 2 - Intermittent ☐ 3 - Dense
SUSPENDED SOLIDS	☒ present ☐ absent	☒ 1 - Sparse ☐ 2 - Intermittent ☐ 3 - Dense
FOAM	☐ present ☒ absent	☐ 1 - Partial ☐ 2 - Complete
OIL SHEEN	☐ present ☒ absent	☐ 1 - Partial ☐ 2 - Complete
OTHER OBSERVATIONS		

[1]Site / Sample Labeling Convention:
NOGMS4 - Nogales Composite Machine
NOGGRAB - Nogales Composite Grab
SEDMS4 - Sedona Composite Machine
SEDGRAB - Sedona Composite Grab
TUCMS4 - Tucson Composite Machine
TUCGRAB - Tucson Composite Grab
FLAGMS4 - Flagstaff Composite Machine
FLAGGRAB - Flagstaff Composite Grab
PHXMS4 - Phoenix Composite Machine
PHXGRAB - Phoenix Composite Grab

NOGYARD - Nogales Maintenance Yard Grab
DURFACT - Durango Sign Factory Grab
SUPFUEL - Superior Storage and Fuel Yard Grab (West)
SUPMAINT - Superior Maintenance Yard Grab (East)

Login Sample Receipt Checklist

Client: Arizona Game and Wildlife Department

Job Number: 550-50378-1

Login Number: 50378
List Number: 1
Creator: Shoemaker, Cory M

List Source: TestAmerica Phoenix

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	Check done at department level as required.

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

John Burton
Engineering & Env. Consultants, INC. -AZ
7740 N. 16th Street, Ste 135
Phoenix, AZ 85020

Report Summary

Thursday August 21, 2014

Report Number: L716050
Samples Received: 08/14/14
Client Project: 14514.03

Description: Durango Sign Factory

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: Daphne R Richards

Daphne Richards , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

ESC LAB SCIENCES
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REPORT OF ANALYSIS

John Burton
Engineering & Env. Consultants, INC
7740 N. 16th Street, Ste 135
Phoenix, AZ 85020

August 21, 2014

ESC Sample # : L716050-01

Site ID :

Project # : 14514.03

Date Received : August 14, 2014
Description : Durango Sign Factory

Sample ID : DURANGO-081314

Collected By : Oliver Sullivan
Collection Date : 08/13/14 13:12

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate-Nitrite	0.99	0.10	mg/l	353.2	08/20/14	1
Suspended Solids	42.	2.5	mg/l	2540 D-2011	08/19/14	1
Aluminum	1.4	0.10	mg/l	6010B	08/19/14	1
Iron	1.2	0.10	mg/l	6010B	08/19/14	1
Zinc	0.42	0.050	mg/l	6010B	08/19/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 08/21/14 08:51 Printed: 08/21/14 08:51

Summary of Remarks For Samples Printed
08/21/14 at 08:51:37

TSR Signing Reports: 288
R5 - Desired TAT

Baker Exxon Proj 105022.01 Ken & Mel's Proj 105022.02 MCAA Proj 305007.05 -ALL require TO-15+GRO on ALL AIR SAMPLES ENGENVPAZ-122012S NO CHARGE TBs

Sample: L716050-01 Account: ENGENVPAZ Received: 08/14/14 09:00 Due Date: 08/21/14 00:00 RPT Date: 08/21/14 08:51

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Engineering & Env. Consultants, INC. -AZ
John Burton
7740 N. 16th Street, Ste 135
Phoenix, AZ 85020

Quality Assurance Report
Level II

L716050

August 21, 2014

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Suspended Solids	< 2.5	mg/l			WG737733	08/19/14 14:54
Aluminum	< .1	mg/l			WG738034	08/19/14 13:46
Iron	< .1	mg/l			WG738034	08/19/14 13:46
Zinc	< .05	mg/l			WG738034	08/19/14 13:46
Nitrate-Nitrite	< .1	mg/l			WG738490	08/20/14 06:35

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Suspended Solids	mg/l	6350	6390	0.628	5	L716097-03	WG737733
Suspended Solids	mg/l	27.6	28.2	2.39	5	L716110-01	WG737733
Nitrate-Nitrite	mg/l	7.90	7.90	0.0	20	L715990-01	WG738490
Nitrate-Nitrite	mg/l	0.0	0.0	0.0	20	L715881-03	WG738490

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Suspended Solids	mg/l	773	792.	102.	85-115	WG737733
Aluminum	mg/l	1	1.04	104.	80-120	WG738034
Iron	mg/l	1	1.06	106.	80-120	WG738034
Zinc	mg/l	1	1.06	106.	80-120	WG738034
Nitrate-Nitrite	mg/l	5	5.10	102.	90-110	WG738490

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Suspended Solids	mg/l	764.	792.	99.0	85-115	3.60	5	WG737733
Aluminum	mg/l	1.04	1.04	104.	80-120	0.0	20	WG738034
Iron	mg/l	1.05	1.06	105.	80-120	1.00	20	WG738034
Zinc	mg/l	1.06	1.06	106.	80-120	0.0	20	WG738034
Nitrate-Nitrite	mg/l	5.17	5.10	103.	90-110	1.36	20	WG738490

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Nitrate-Nitrite	mg/l	6.03	0.990	5	100.	90-110	L716050-01	WG738490

Matrix Spike Duplicate

Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Nitrate-Nitrite	mg/l	6.05	6.03	101.	90-110	0.331	20	L716050-01	WG738490

Batch number /Run number / Sample number cross reference

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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John Burton
7740 N. 16th Street, Ste 135

Phoenix, AZ 85020

Quality Assurance Report
Level II

L716050

August 21, 2014

WG737733: R2977970: L716050-01
WG738034: R2978022: L716050-01
WG738490: R2978729: L716050-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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7740 N. 16th Street, Ste 135

Phoenix, AZ 85020

Quality Assurance Report
Level II

L716050

August 21, 2014

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Company Name/Address:
EEC
7740 B 16th St Suite 135
Phoenix AZ 85020

Billing Information:

Report to: John Burton
Email To: jburton@eecphx.com

Project Description: **Durango Sign Factory**
City/State Collected:

Phone: 602-248-7702
Fax: 602-248-7851
Client Project # 14514.03
Lab Project #

Collected by (print): Oliver Sullivan
Site/Facility ID #
P.O. #

Collected by (signature):
Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Nitrate + Nitrite/ 250mL HDPE/ H2SO4 <2	Total Suspended Solids/ 1L HDPE/ No Pres	Total Al, Fe, Zn/ 500mL HDPE/ HNO3 <2	Rem./Contaminant	Sample # (lab only)
~~Durango~~											
Durango-081314	G	GW		8/13/14	1:12pm	3	X	X	X		-01

Chain of Custody Page 1 of 1

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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L716050
H086
Acctnum: ENGENVPAZ
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

6127 6739 7927
Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8-13-14	1610	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/13/14	1830	Fedex
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Date: 8/14/14 Time: 0900

Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐ _____
Temp: 3.7 °C Bottles Received: 3

Condition: F (lab use only) (OK)
COC Seal Intact: ___Y ___N ___NA
pH Checked: <2 NCF:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

TestAmerica Job ID: 550-47246-1
TestAmerica Sample Delivery Group: Durango Sign Factory
Client Project/Site: Arizona Game and Fish Department

For:
Arizona Game and Wildlife Department
5000 W. Carefree Hwy
Phoenix, Arizona 85086

Attn: Nora Clark

Authorized for release by:
7/16/2015 11:10:15 AM

Carlene McCutcheon, Project Manager II
(602)659-7612
carlene.mccutcheon@testamericainc.com

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47246-1
SDG: Durango Sign Factory

Job ID: 550-47246-1

Laboratory: TestAmerica Phoenix

Narrative

Job Narrative
550-47246-1

Comments
No additional comments.

Receipt
The sample was received on 7/6/2015 8:54 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.1º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47246-1
SDG: Durango Sign Factory

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-47246-1	AZGFD - DURAFACT	Water	07/06/15 08:15	07/06/15 08:54

Detection Summary

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47246-1
SDG: Durango Sign Factory

Client Sample ID: AZGFD - DURAFACT

Lab Sample ID: 550-47246-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	76		10		mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47246-1
SDG: Durango Sign Factory

Client Sample ID: AZGFD - DURAFACT

Date Collected: 07/06/15 08:15
Date Received: 07/06/15 08:54

Lab Sample ID: 550-47246-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.10		mg/L			07/06/15 18:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	**76**		10		mg/L			07/09/15 17:25	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 550-67378/2
Matrix: Water
Analysis Batch: 67378

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.10		mg/L			07/06/15 15:43	1

Lab Sample ID: LCS 550-67378/5
Matrix: Water
Analysis Batch: 67378

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	4.00	4.20		mg/L		105	90 - 110

Lab Sample ID: LCSD 550-67378/6
Matrix: Water
Analysis Batch: 67378

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	4.00	4.23		mg/L		106	90 - 110	1	20

Lab Sample ID: 550-47248-A-2 MS
Matrix: Water
Analysis Batch: 67378

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	ND		4.00	4.23		mg/L		106	80 - 120

Lab Sample ID: 550-47248-A-2 MSD
Matrix: Water
Analysis Batch: 67378

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	ND		4.00	4.27		mg/L		107	80 - 120	1	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 550-67661/1
Matrix: Water
Analysis Batch: 67661

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		10		mg/L			07/09/15 17:25	1

Lab Sample ID: LCS 550-67661/2
Matrix: Water
Analysis Batch: 67661

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	200	198		mg/L		99	90 - 110

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCSD 550-67661/3
Matrix: Water
Analysis Batch: 67661

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids			200	195		mg/L		98	90 - 110	2	10

Lab Sample ID: 550-47351-A-1 DU
Matrix: Water
Analysis Batch: 67661

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	48			45.0		mg/L				6	10

QC Association Summary

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47246-1
SDG: Durango Sign Factory

HPLC/IC

Analysis Batch: 67378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-47246-1	AZGFD - DURAFACT	Total/NA	Water	300.0	
550-47248-A-2 MS	Matrix Spike	Total/NA	Water	300.0	
550-47248-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 550-67378/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-67378/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 550-67378/2	Method Blank	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 67661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-47246-1	AZGFD - DURAFACT	Total/NA	Water	SM 2540D	
550-47351-A-1 DU	Duplicate	Total/NA	Water	SM 2540D	
LCS 550-67661/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 550-67661/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
MB 550-67661/1	Method Blank	Total/NA	Water	SM 2540D	

Lab Chronicle

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47246-1
SDG: Durango Sign Factory

Client Sample ID: AZGFD - DURAFACT

Date Collected: 07/06/15 08:15
Date Received: 07/06/15 08:54

Lab Sample ID: 550-47246-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	67378	07/06/15 18:03	KLH	TAL PHX
Total/NA	Analysis	SM 2540D		1	67661		YAF	TAL PHX
					(Start)	07/09/15 17:25		
					(End)	07/10/15 10:30		

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Certification Summary

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47246-1
SDG: Durango Sign Factory

Laboratory: TestAmerica Phoenix

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0728	06-09-16

Method Summary

Client: Arizona Game and Wildlife Department
Project/Site: Arizona Game and Fish Department

TestAmerica Job ID: 550-47246-1
SDG: Durango Sign Factory

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PHX
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL PHX

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

TestAmerica Phoenix
4625 E. Cotton Center Blvd.
Suite 189
Phoenix, AZ 85040
Phone: 602.437.3340 Fax:

Chain of Custody Record

094459

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

7/16/2015

550-47246

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Nora Clark	Site Contact:	Date:	COC No:
Company Name: AZ Game and Fish Dept.	Tel/Fax: (928) 245-8792	Lab Contact:	Carrier:	1 of 1 COCs
Address: 5000 W. Carefree Hwy	Analysis Turnaround Time			Sampler: S Springer
City/State/Zip: Phoenix, AZ 85086	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 623-236-7660	TAT if different from Below _____			Walk-in Client:
Fax: 623-236-7318	☐ 2 weeks			Lab Sampling:
Project Name: Arizona Game and Fish Dept.	☐ 1 week			
Site: Durango Sign Factory	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	NO_3	TSS	Metals	Sample Specific Notes:
AZGFD-DURAFACT	7/6/15	0815	G		1			X	X		

550-47246 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

3.1 C

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	AGFD	7/6 0834			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time: 7/6/15 0834

Login Sample Receipt Checklist

Client: Arizona Game and Wildlife Department

Job Number: 550-47246-1
SDG Number: Durango Sign Factory

Login Number: 47246
List Number: 1
Creator: Shoemaker, Cory M

List Source: TestAmerica Phoenix

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	

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06 February 2015

Nora Clark
Arizona Game & Fish Deptartment
5000 W. Carefree Highway
Phoenix, AZ 85086

RE: Stormwater Monitoring

Laboratory Work Order No.: 5012400

Legend Technical Services of Arizona, Inc. is pleased to provide the enclosed analytical results for the aforementioned project. These results relate only to the items tested. This cover letter and the accompanying pages represent the full report for these analyses and should only be reproduced in full. Samples for this project were received by the laboratory on 01/30/15 10:35.

The samples were processed in accordance with the Chain of Custody document and the results presented relate only to the samples tested. The Chain of Custody is considered part of this report.

All samples will be retained by LEGEND for 30 days from the date of this report and then discarded unless other arrangements are made.

This entire report was reviewed and approved for release by the undersigned. If you have any questions concerning this report, please feel free to contact me.

Sincerely,
LEGEND TECHNICAL SERVICES OF ARIZONA, INC.

Carling Olson

Carling Olson
Client Services Representative
(602) 324-6100

This laboratory report is confidential and is intended for the sole use of LEGEND and it's client.

Arizona Game & Fish Deptartment	Project: Stormwater Monitoring	
5000 W. Carefree Highway	Project Number: Durango Sign Factory 1/30/2015	**Reported:**
Phoenix, AZ 85086	Project Manager: Nora Clark	02/06/15 16:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
AGFD Durafact (Durango Sign Factory)	5012400-01	Storm Water	Grab	01/30/15 07:00	01/30/15 10:35

Sample Condition Upon Receipt:

Temperature: 2.00 C

All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.

QA/QC Criteria: All analyses met method requirements unless otherwise qualified.

Certifications: AZ(PHX)0004, AZ(TUC)OOO4, AIHA#102982, CDC ELITE Member.

Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.

Comments: There were no problems encountered during the processing of the samples, unless otherwise noted. All samples were analyzed on a "wet" basis unless designated as "dry weight".

Arizona Game & Fish Deptartment	Project: Stormwater Monitoring	
5000 W. Carefree Highway	Project Number: Durango Sign Factory 1/30/2015	**Reported:**
Phoenix, AZ 85086	Project Manager: Nora Clark	02/06/15 16:56

AGFD Durafact (Durango Sign Factory) (5012400-01) Storm Water (Grab) Sampled: 01/30/15 07:00 Received: 01/30/15 10:35

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Legend Technical Services of Arizona, Inc.									
Total Metals									
Aluminum	<0.20	0.20	mg/L	1	B5B0047	02/02/15 17:00	02/03/15 16:20	EPA 200.7	
Iron	**0.10**	0.05	mg/L	1	B5B0047	02/02/15 17:00	02/03/15 16:20	EPA 200.7	
Zinc	**1.77**	0.02	mg/L	1	B5B0047	02/02/15 17:00	02/03/15 16:20	EPA 200.7	

Total Metals - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B5B0047 - EPA 200.7										
Blank (B5B0047-BLK1)				*Prepared: 02/02/15 Analyzed: 02/03/15*						
Aluminum	<0.20	0.20	mg/L							
Iron	<0.05	0.05	mg/L							
Zinc	<0.02	0.02	mg/L							
LCS (B5B0047-BS1)				*Prepared: 02/02/15 Analyzed: 02/03/15*						
Aluminum	1.99	0.20	mg/L	2.00		100	85-115			
Iron	1.03	0.05	mg/L	1.00		103	85-115			
Zinc	0.98	0.02	mg/L	1.00		98	85-115			
LCS Dup (B5B0047-BSD1)				*Prepared: 02/02/15 Analyzed: 02/03/15*						
Aluminum	2.00	0.20	mg/L	2.00		100	85-115	0.4	20	
Iron	1.04	0.05	mg/L	1.00		104	85-115	0.4	20	
Zinc	0.98	0.02	mg/L	1.00		98	85-115	0.001	20	
Matrix Spike (B5B0047-MS1)		**Source: 5012441-02**		*Prepared: 02/02/15 Analyzed: 02/03/15*						
Aluminum	2.18	0.20	mg/L	2.00	0.118	103	70-130			
Iron	1.17	0.05	mg/L	1.00	0.19	98	70-130			
Zinc	0.97	0.02	mg/L	1.00	0.008	96	70-130			
Matrix Spike Dup (B5B0047-MSD1)		**Source: 5012441-02**		*Prepared: 02/02/15 Analyzed: 02/03/15*						
Aluminum	2.18	0.20	mg/L	2.00	0.118	103	70-130	0.05	20	
Iron	1.17	0.05	mg/L	1.00	0.19	98	70-130	0.4	20	
Zinc	0.96	0.02	mg/L	1.00	0.008	95	70-130	0.5	20	

Notes and Definitions

BLK	Method Blank
LCS/Dup	Laboratory Control Sample/Laboratory Fortified Blank/Duplicate
MS/Dup	Matrix Spike/Duplicate
Dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Laboratory Sample ID: 5012400

CHAIN OF CUSTODY RECORD

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☐ 4585 S. Palo Verde Rd, Ste 423 • Tucson, AZ 85714 • (520) 327-1234 • Fax (520) 327-0518

Page 1 of 1

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CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax Number or Email Address
Arizona Game and Fish Dept.	5000 Carefree Hwy	Phoenix	AZ	85086	928-245-8792	623-236-7918

Project Name	Project Number	Contact	P.O. No.	Fax Results ☐	QC Report ☐	EDD ☐
Durango Sign Factory		Nora Clark		Email Results ☐	Special Detection Limits ☐	

SAMPLE TYPE CODES

DW=Drinking Water; WW=Wastewater; SW=Surface Water; GW=Groundwater; S=Soil/Solid; T=Travel Blank; F=Food; G=Sludge/Biosolids; O=Other: D=Stormwater

TURN AROUND TIME

Laboratory Authorization Required for Rush

☐ Standard 7-10 Day
☐ Other _____

REQUESTED ANALYSES

Client's Sample Identification	Date	Time	Sample Location	Composite	Grab	Sample Type	Compliance	No. of Containers	pH ✓ (Lab Use Only)	Metals	LAB NO.
ASFD-DURAFACT	1-30	7am	Durango Sign Factory		X		X	1	✓	X	01

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions: *Al Zn Fe

SAMPLE CONDITION UPON RECEIPT (Lab Use)		
No. of Containers	1	
Temperature	2.0 °C	
Custody Seals	Y	(N)
Seals Intact	Y	N
Preserved	(Y)	N

WHITE-LAB YELLOW-CLIENT

	RELINQUISHED BY			SAMPLES RECEIVED BY	
①	Sampler Signature: Renee Wilcox	Date: 1-30-15		Signature: [signature]	Date: 1/30/15
	Sampler Printed Name: Renee Wilcox	Time: 10:35		Printed Name: [illegible]	Time: 1035
②	Signature	Date		Signature	Date
	Printed Name	Time		Printed Name	Time
③	Signature	Date		Signature	Date
	Printed Name	Time		Printed Name	Time

FORM GEN-170 (12/13)

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21 January 2015

Nora Clark
Arizona Game & Fish Deptartment
5000 W. Carefree Highway
Phoenix, AZ 85086

RE: Stormwater Monitoring

Laboratory Work Order No.: 5010991

Legend Technical Services of Arizona, Inc. is pleased to provide the enclosed analytical results for the aforementioned project. These results relate only to the items tested. This cover letter and the accompanying pages represent the full report for these analyses and should only be reproduced in full. Samples for this project were received by the laboratory on 01/13/15 14:01.

The samples were processed in accordance with the Chain of Custody document and the results presented relate only to the samples tested. The Chain of Custody is considered part of this report.

All samples will be retained by LEGEND for 30 days from the date of this report and then discarded unless other arrangements are made.

This entire report was reviewed and approved for release by the undersigned. If you have any questions concerning this report, please feel free to contact me.

Sincerely,
LEGEND TECHNICAL SERVICES OF ARIZONA, INC.

Carling Olson

Carling Olson
Client Services Representative
(602) 324-6100

This laboratory report is confidential and is intended for the sole use of LEGEND and it's client.

Arizona Game & Fish Deptartment	Project:	Stormwater Monitoring	
5000 W. Carefree Highway	Project Number:	Stormwater- Updated Durango Sign Factory	**Reported:**
Phoenix, AZ 85086	Project Manager:	Nora Clark	01/21/15 11:55

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
AGFD - Durfact (Durango Sign Factory)	5010991-01	Storm Water	Grab	01/13/15 11:31	01/13/15 14:01

Sample Condition Upon Receipt:

Temperature: 4.40 C

All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.

QA/QC Criteria: All analyses met method requirements unless otherwise qualified.

Certifications: AZ(PHX)0004, AZ(TUC)OOO4, AIHA#102982, CDC ELITE Member.

Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.

Comments: There were no problems encountered during the processing of the samples, unless otherwise noted. All samples were analyzed on a "wet" basis unless designated as "dry weight".

AGFD - Durfact (Durango Sign Factory) (5010991-01) Storm Water (Grab) Sampled: 01/13/15 11:31 Received: 01/13/15 14:01

Legend Technical Services of Arizona, Inc.

Inorganic Chemistry

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Nitrogen	**12.4**	1.00	mg/L	1	[CALC]	01/20/15 11:30	01/20/15 11:30	Calculation	
Nitrate + Nitrite as N	**3.81**	0.20	mg/L	1	B5A0477	01/20/15 11:30	01/20/15 11:30	SM 4500 NO3 F	
Total Kjeldahl Nitrogen	**8.63**	1.00	mg/L	1	B5A0412	01/16/15 10:10	01/16/15 14:55	EPA 351.2	

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B5A0412 - NO PREP										
Blank (B5A0412-BLK1)				*Prepared & Analyzed: 01/16/15*						
Total Kjeldahl Nitrogen	<1.00	1.00	mg/L							
Blank (B5A0412-BLK2)				*Prepared & Analyzed: 01/16/15*						
Total Kjeldahl Nitrogen	<1.00	1.00	mg/L							
Blank (B5A0412-BLK3)				*Prepared & Analyzed: 01/16/15*						
Total Kjeldahl Nitrogen	<1.00	1.00	mg/L							
LCS (B5A0412-BS1)				*Prepared & Analyzed: 01/16/15*						
Total Kjeldahl Nitrogen	5.00	1.00	mg/L	5.00		100	90-110			
LCS (B5A0412-BS2)				*Prepared & Analyzed: 01/16/15*						
Total Kjeldahl Nitrogen	5.11	1.00	mg/L	5.00		102	90-110			
LCS Dup (B5A0412-BSD1)				*Prepared & Analyzed: 01/16/15*						
Total Kjeldahl Nitrogen	5.02	1.00	mg/L	5.00		100	90-110	0.4	20	
LCS Dup (B5A0412-BSD2)				*Prepared & Analyzed: 01/16/15*						
Total Kjeldahl Nitrogen	5.10	1.00	mg/L	5.00		102	90-110	0.2	20	
Matrix Spike (B5A0412-MS1)		**Source: 5010881-02**		*Prepared & Analyzed: 01/16/15*						
Total Kjeldahl Nitrogen	6.80	1.00	mg/L	5.00	1.47	107	90-110			
Matrix Spike (B5A0412-MS2)		**Source: 5010960-01**		*Prepared & Analyzed: 01/16/15*						
Total Kjeldahl Nitrogen	6.13	1.00	mg/L	5.00	1.06	101	90-110			
Matrix Spike (B5A0412-MS3)		**Source: 5010981-01**		*Prepared & Analyzed: 01/16/15*						
Total Kjeldahl Nitrogen	5.61	1.00	mg/L	5.00	0.802	96	90-110			

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B5A0412 - NO PREP										
Matrix Spike Dup (B5A0412-MSD1)		**Source: 5010881-02**		*Prepared & Analyzed: 01/16/15*						
Total Kjeldahl Nitrogen	6.84	1.00	mg/L	5.00	1.47	107	90-110	0.6	20	
Matrix Spike Dup (B5A0412-MSD2)		**Source: 5010960-01**		*Prepared & Analyzed: 01/16/15*						
Total Kjeldahl Nitrogen	6.15	1.00	mg/L	5.00	1.06	102	90-110	0.3	20	
Matrix Spike Dup (B5A0412-MSD3)		**Source: 5010981-01**		*Prepared & Analyzed: 01/16/15*						
Total Kjeldahl Nitrogen	5.60	1.00	mg/L	5.00	0.802	96	90-110	0.2	20	
Batch B5A0477 - NO PREP										
Blank (B5A0477-BLK1)				*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	<0.20	0.20	mg/L							
Blank (B5A0477-BLK2)				*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	<0.20	0.20	mg/L							
Blank (B5A0477-BLK3)				*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	<0.20	0.20	mg/L							
Blank (B5A0477-BLK4)				*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	<0.20	0.20	mg/L							
Blank (B5A0477-BLK5)				*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	<0.20	0.20	mg/L							
Blank (B5A0477-BLK6)				*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	<0.20	0.20	mg/L							

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B5A0477 - NO PREP										
LCS (B5A0477-BS1)				*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	10.3	0.20	mg/L	10.0		103	90-110			
LCS (B5A0477-BS2)				*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	10.4	0.20	mg/L	10.0		104	90-110			
LCS (B5A0477-BS3)				*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	10.7	0.20	mg/L	10.0		107	90-110			
LCS Dup (B5A0477-BSD1)				*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	10.4	0.20	mg/L	10.0		104	90-110	1	20	
LCS Dup (B5A0477-BSD2)				*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	10.3	0.20	mg/L	10.0		103	90-110	1	20	
LCS Dup (B5A0477-BSD3)				*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	10.8	0.20	mg/L	10.0		108	90-110	0.9	20	
Matrix Spike (B5A0477-MS1)		**Source: 5010835-01**		*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	17.0	0.20	mg/L	10.0	4.87	121	80-120			M1
Matrix Spike (B5A0477-MS2)		**Source: 5010968-01**		*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	19.8	0.20	mg/L	10.0	9.39	104	80-120			
Matrix Spike (B5A0477-MS3)		**Source: 5010968-03**		*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	15.6	0.20	mg/L	10.0	4.31	113	80-120			
Matrix Spike (B5A0477-MS4)		**Source: 5010968-04**		*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	16.3	0.20	mg/L	10.0	5.09	112	80-120			

Inorganic Chemistry - Quality Control

Legend Technical Services of Arizona, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B5A0477 - NO PREP										
Matrix Spike (B5A0477-MS5)	**Source: 5010989-01**			*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	13.8	0.20	mg/L	10.0	3.29	105	80-120			
Matrix Spike (B5A0477-MS6)	**Source: 5011122-01**			*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	17.7	0.20	mg/L	10.0	7.61	101	80-120			
Matrix Spike Dup (B5A0477-MSD1)	**Source: 5010835-01**			*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	16.4	0.20	mg/L	10.0	4.87	115	80-120	4	20	
Matrix Spike Dup (B5A0477-MSD2)	**Source: 5010968-01**			*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	20.0	0.20	mg/L	10.0	9.39	106	80-120	1	20	
Matrix Spike Dup (B5A0477-MSD3)	**Source: 5010968-03**			*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	15.9	0.20	mg/L	10.0	4.31	116	80-120	2	20	
Matrix Spike Dup (B5A0477-MSD4)	**Source: 5010968-04**			*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	16.5	0.20	mg/L	10.0	5.09	114	80-120	1	20	
Matrix Spike Dup (B5A0477-MSD5)	**Source: 5010989-01**			*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	13.8	0.20	mg/L	10.0	3.29	105	80-120	0	20	
Matrix Spike Dup (B5A0477-MSD6)	**Source: 5011122-01**			*Prepared & Analyzed: 01/20/15*						
Nitrate + Nitrite as N	17.8	0.20	mg/L	10.0	7.61	102	80-120	0.6	20	

Notes and Definitions

M1	Matrix spike recovery was high; the method control sample recovery was acceptable.
BLK	Method Blank
LCS/Dup	Laboratory Control Sample/Laboratory Fortified Blank/Duplicate
MS/Dup	Matrix Spike/Duplicate
Dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Laboratory Sample ID: 5010991

CHAIN OF CUSTODY RECORD

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Page 1 of 1

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CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax Number or Email Address
AZ Game and Fish Dept.	5000 West Carefree Hwy	Phoenix	AZ	85086	928-245-8792	623-236-7918

Project Name	Project Number	Contact	P.O. No.	
Durango Sign Factory		Nora Clark		Fax Results ☐ Email Results ☐ QC Report ☐ EDD ☐ Special Detection Limits ☐

SAMPLE TYPE CODES

DW=Drinking Water; WW=Wastewater; SW=Surface Water; GW=Groundwater; O=Other Stormwater Surface W: Parking lot
S=Soil/Solid; T=Travel Blank; F=Food; G=Sludge/Biosolids

TURN AROUND TIME

Laboratory Authorization Required for Rush

☐ Standard 7-10 Day
☐ Other _____

Client's Sample Identification	Date	Time	Sample Location	Composite	Grab	Sample Type	Compliance	No. of Containers	pH ✓ (Lab Use Only)	Nitrogen	LAB NO.
AGFD-DURFACT	1-13	11:31	Durang Sign Factory		✓	SW	✓	1	✓	X	01

REQUESTED ANALYSES

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions: Client made correction to chain prior to Legend receipt. co 1/15/15

SAMPLE CONDITION UPON RECEIPT (Lab Use)

No. of Containers	1	
Temperature	4.4	°C
Custody Seals	Y	(N)
Seals Intact	Y	N
Preserved	(Y)	N

	RELINQUISHED BY			SAMPLES RECEIVED BY	
①	Sampler Signature: Renee Wilcox	Date: 1-13-15	Signature: Howard Ward	Date: 1/13/15	
	Sampler Printed Name: Renee Wilcox	Time: 1401	Printed Name: Howard Ward	Time: 1401	
②	Signature	Date	Signature	Date	
	Printed Name	Time	Printed Name	Time	
③	Signature	Date	Signature	Date	
	Printed Name	Time	Printed Name	Time	

WHITE-LAB YELLOW-CLIENT

FORM GEN-170 (12/13)

COMPREHENSIVE FACILITY INSPECTION FORM
ADOT Grand Canyon National Park Airport
State Route 64, Milepost 234.5, Tusayan, Arizona 86023

Inspector(s) Michael Cockrum/David Mack	**Date/Time** 4/8/15
Title and Qualifications of Inspector(s) David Mack, CHMM, CPESC, LEED, AP Industrial Stormwater Coordinator	
Weather information for the period since the last inspection Precipitation: (circle one) Rain (Snow) Runoff: (circle one) Yes (No) Other: Unknown/Unstaffed	
Weather information and a description of discharges occurring at the time of inspection Precipitation: (circle one) Rain Snow Runoff: (circle one) Yes No Other: None	
Location of discharges of sediment or other pollutants from the site (illustrate on attached site map) Southmain discharge, water is washing around Rocks removing Dirt/Sediment	
Location of BMPs that need to be maintained, that failed to operate as designed, or proved inadequate for a particular location (illustrate on attached site map) Southmain discharge out to Rain tank, Add rock	
Location where additional BMPs are needed that didn't exist at the time of inspection (illustrate on attached site map) None	
Corrective action required, including any changes to the FPPP necessary and the anticipated implementation dates/schedule Add Rock/Remove excess Sediment at main South property discharge to Rain tank. Remove Debris from Intake by Gate 114.	

Identify all non-stormwater discharges and the associated BMPs

Walked all Sites

Identify material storage areas and evidence of or potential for pollutant discharges from these areas

None

☐ No issues of non-compliance were observed during this Annual Comprehensive Facility Inspection.

☑ Issues of non-compliance were observed during this Annual Comprehensive Facility Inspection, as noted above.

I certify that the information in this inspection report is accurate to the best of my knowledge.

Signature: Michael Cockrum Date: 4/8/15

Printed Name: Michael Cockrum

Title: Operations Manager

STORMWATER POLLUTION PREVENTION PLAN INSPECTION
ADOT DURANGO SIGN FACTORY
2104 South 22nd Avenue, Phoenix, Arizona 85009

GENERAL INFORMATION		
INSPECTOR NAME:	LES TANG	THOMAS ERICKSON
INSPECTOR TITLE:	STOREKEEPER	SIGN TECH II
SIGNATURE:		
DATE OF INSPECTION:	4/28/15	4-28-15
WEATHER: (Check one)	☐ Prior to forecast rain ☐ After rain event	~~☑ Monthly~~ ANNUAL

BEST MANAGEMENT PRACTICE	YES	NO
Are all culverts/Dry Wells/ Stormwater Inlets Free of Debris?	X	
Comment: DAVID IS LOOKING INTO CLEANING OUT SAND BUILD UP IN DRAINS		
Action Taken (if any):		
Are general good housekeeping practices in use?	X	
Comment:		
Action Taken (if any): PICKED UP LIGHT DEBRIS IN YARD.		
Is waste/garbage properly stored and disposed?	X	
Comment:		
Action Taken: MARK ALL TRASH BINS IN YARD.		
Are spill control kits labeled and available where needed?	X	
Comment:		
Action Taken (if any):		
Are chemicals, equipment, or other materials with potential chemical residues stored under cover with secondary containment?	X	
Comment:		
Action Taken (if any):		
Are sands, aggregate and other materials prevented from entering stormwater drainageways?		N/A
Comment: N/A		
Action Taken:		
Are there any visible discharges to stormwater drainageways (oily sheen)?		X
Comment:		
Action Taken (if any):		

* DAVID MACK WAS PRESENT WHEN DOING INSPECTION

Appendix F
Discharge Monitoring Reports for Construction

Stormwater Construction General Permit AZG2013-001
Discharge Monitoring Report (DMR) Form

ADEQ Arizona Department of Environmental Quality

Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

I. Authorization # AZCON-532819 Project/Site Name: US-60 Silver King

Monitoring Period (yr/mo/day): 5 12/14 to 10 13/14

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the Inspection/Sampling
Name: Monte Crawford
Title: ECC - CPESC
Address: 4632 S. 36 St
Phx, Az 85040
Phone Number: 480-671-7085

V. Pollutants / Parameters Monitored

III. Monitoring Location	IV. Sample Date/Time	A. Visual Assessment: Sheen	Color	Foam	Solids (Susp or Settled)	Odor (specify)	Other (specify)	Other (specify)	B. Analytical Monitoring: TSS (Units)	Turbidity (Units = NTU)	pH	Other (specify)	Other (specify)
MP-3	9-28-14 11-	N	gray	N	N	N				628			
MP-4	9-28-14 11:30	N	tan	N	N	N				468			
MP-1	9-28-14 10-	N	N	N	N	N				—			
MP-2	9-28-14 10:30	N	N	N	N	N				—			
MP-5	9-28-14 12-	N	N	N	N	N				—			

VI. ATTACHMENTS: Y ☒ N ☐ IF "YES," LIST: Monitoring Points Locations

VII. CERTIFICATION:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is 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."

Printed Name: Monte Crawford Title: ECC - CPESC Phone: 480-671-9085

Signature: Date: 10-9-14

June 2013

sites MP-1, MP-2 & MP-5 have had no discharge at any inspection. There is no historical data for them.

Stormwater Construction General Permit AZG2013-001
Discharge Monitoring Report (DMR) Form

ADEQ Arizona Department of Environmental Quality

Arizona Department of Environmental Quality
Stormwater & General Permits Unit, Mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

I. Authorization # AZCON-532812 Project/Site Name: US-60 Silver King

Monitoring Period (yr/mo/day): 5 / 12 / 14 to 10 / 3 / 14

Use this form for reporting analytical and visual monitoring anytime a pollutant is known or suspected to discharge from the construction site (Permit Parts 4, 7 & 8).

II. Person making the inspection/Sampling
Name: Monte Crawford
Title: CPESC - ECC
Address: 4632 S. 36 St
Phx, AZ 85040
Phone Number: 480-671-9085

V. Pollutants / Parameters Monitored

III. Monitoring Location	IV. Sample Date/Time	A. Visual Assessment: Sheen	Color	Foam	Solids (Susp or Settled)	Odor	Other (specify)	Other (specify)	B. Analytical Monitoring: TSS (Units)	Turbidity (Units = NTU)	pH	Other (specify)	Other (specify)
MP-3	8-13-14 11AM	N	tan	N	N	N				254			
MP-4	8-13-14 11:30	N	gray	N	N	N				157			
MP-1	8-13-14 10	N	N	N	N	N				—			
MP-2	8-13-14 10:30	N	N	N	N	N				—			
MP-5	8-13-14 12	N	N	N	N	N				—			

VI. ATTACHMENTS: Y ☒ N ☐ IF "YES," LIST: Monitoring Point locations

VII. CERTIFICATION:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, I believe the information submitted is 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."

Printed Name: Monte Crawford Title: CPESC - ECC Phone: 480-671-9085

Signature: [signature] Date: 10-9-14

Appendix G
MS4 Laboratory Reports
(TOO NUMEROUS – REQUEST at 602.712.6170)

Appendix H
Pollutant Loading Calculations

Pollutant Loading: Tucson MS4 - Winter Season - 12/4/14, 3/19/15

Pollutant	Unit Conversion Factor	Runnoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Total Dissolved Solids (TDS) (mg/L)	0.226	4.2579	186	4.80	859.128
Total Suspended Solids (TSS) (mg/L)	0.226	4.2579	88	4.80	406.469
Biochemical Oxygen Demand (BOD) (mg/L)	0.226	4.2579	27	4.80	124.712
Chemical Oxygen Demand (COD) (mg/L)	0.226	4.2579	273	4.80	1,260.979
Surfactants (mg/L)	0.226	4.2579	0.30	4.80	1.386
Cyanide, total (mg/L)	0.226	4.2579	<0.010	4.80	0.05*
Sulfates (mg/L)	0.226	4.2579	16.6	4.80	76.675
Nitrate (mg/L)	0.226	4.2579	1.31	4.80	6.051
Nitrite (mg/L)	0.226	4.2579	<0.10	4.80	0.46*
Total Ammonia (mg/L)	0.226	4.2579	5.83	4.80	26.929
Total Kjeldahl Nitrogen (TKN) (mg/L)	0.226	4.2579	4.52	4.80	20.878
Total Phosphorous (mg/L)	0.226	4.2579	1.38	4.80	6.374
Phosphate, Ortho (mg/L)	0.226	4.2579	0.10	4.80	0.462
Sodium (mg/L)	0.226	4.2579	8	4.80	36.952
Calcium (mg/L)	0.226	4.2579	24	4.80	110.855
Chloride (mg/L)	0.226	4.2579	<5.00	4.80	23.09*
Coliform, fecal (CFU/100 ml)	103	4.2579	>200	4.80	421,021.15**
E.Coli (MPN/100 ml)	103	4.2579	980	4.80	2,063,003.645
Antimony (mg/L)	0.226	4.2579	0.0078	4.80	0.036
Arsenic (mg/L)	0.226	4.2579	0.0025	4.80	0.012
Barium (mg/L)	0.226	4.2579	0.11	4.80	0.508
Beryllium (mg/L)	0.226	4.2579	<0.002	4.80	0.01*
Cadmium (mg/L)	0.226	4.2579	0.0005	4.80	0.002
Chromium (mg/L)	0.226	4.2579	0.005	4.80	0.023
Copper (mg/L)	0.226	4.2579	0.23	4.80	1.062
Lead (mg/L)	0.226	4.2579	0.0167	4.80	0.077
Magnesium (mg/L)	0.226	4.2579	NS	4.80	0.00
Mercury (mg/L)	0.226	4.2579	<0.0002	4.80	0.00*
Nickel (mg/L)	0.226	4.2579	<0.02	4.80	0.09*
Selenium (mg/L)	0.226	4.2579	<0.0020	4.80	0.01*
Silver (mg/L)	0.226	4.2579	0.0004	4.80	0.002
Zinc (mg/L)	0.226	4.2579	0.27	4.80	1.247
Total Petroleum Hydrobarbons (mg/L)	0.226	4.2579	5.3	4.80	24.481
Oil & Grease (Hexane Extr) (mg/L)	0.226	4.2579	8.4	4.80	38.799
Chlorine, residual (mg/L)	0.226	4.2579	NS	4.80	0.00

Drainage Area (acres)	4.8
Winter Runoff	4.2579
Winter Rainfall	4.98
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

* - Maximum value for trace detections (values with < amounts)

** - Minimum value for trace detections (values with > amounts)

Note: E. Coli pollutant loading result is in billion colonies

Simple Method Pollutant Calculation: L=0.226*R*C*A

Simple Method Bacteria Calculation: L=103*R*C*A

Pollutant Loading: Tucson MS4 - Summer Season - 7/28, 8/1, 8/7

Pollutant	Unit Conversion Factor	Runnoff or R value (inches)	Pollutant Concentration	Area (acres)	Pollutant (lbs)
Total Dissolved Solids (mg/L)	0.226	5.00175	114	(acres)	618.55
Total Suspended Solids (mg/L)	0.226	5.00175	186	4.80	1009.22
Biochemical Oxygen Demand (mg/L)	0.226	5.00175	27	4.80	146.50
Chemical Oxygen Demand (mg/L)	0.226	5.00175	147	4.80	797.61
Surfactants (mg/L)	0.226	5.00175	0.7	4.80	3.80
Cyanide, total (mg/L)	0.226	5.00175	<0.010	4.80	54.26*
Sulfates (mg/L)	0.226	5.00175	8.8	4.80	47.75
Nitrate (mg/L)	0.226	5.00175	1.49	4.80	8.08
Nitrite (mg/L)	0.226	5.00175	0.19	4.80	0.87
Total Ammonia (mg/L)	0.226	5.00175	4.24	4.80	23.01
Total Kjeldahl Nitrogen (TKN) (mg/L)	0.226	5.00175	2.59	4.80	14.05
Total Phosphorous (mg/L)	0.226	5.00175	0.3	4.80	1.63
Phosphate, Ortho (mg/L)	0.226	5.00175	0.2	4.80	1.09
Sodium (mg/L)	0.226	5.00175	4	4.80	21.70
Calcium (mg/L)	0.226	5.00175	22	4.80	119.37
Chloride (mg/L)	0.226	5.00175	<5.00	4.80	27.13*
Coliform, fecal (CFU/100 ml)	103	5.00175	CONF	4.80	CONF
E.Coli (MPN/100 ml)	103	5.00175	790	4.80	1953563.51
Antimony (mg/L)	0.226	5.00175	0.0033	4.80	0.02
Arsenic (mg/L)	0.226	5.00175	<0.0050	4.80	0.03*
Barium (mg/L)	0.226	5.00175	0.09	4.80	0.49
Beryllium (mg/L)	0.226	5.00175	<0.002	4.80	0.01*
Cadmium (mg/L)	0.226	5.00175	<0.0005	4.80	0.00*
Chromium (mg/L)	0.226	5.00175	0.007	4.80	0.04
Copper (mg/L)	0.226	5.00175	0.091	4.80	0.49
Lead (mg/L)	0.226	5.00175	<0.100	4.80	0.54*
Magnesium (mg/L)	0.226	5.00175	3	4.80	16.28
Mercury (mg/L)	0.226	5.00175	<0.0002	4.80	0.00*
Nickel (mg/L)	0.226	5.00175	<0.02	4.80	0.11*
Selenium (mg/L)	0.226	5.00175	<0.0100	4.80	0.05*
Silver (mg/L)	0.226	5.00175	<0.0005	4.80	0.00*
Zinc (mg/L)	0.226	5.00175	0.21	4.80	1.14
Total Petroleum Hydrobarbons (mg/L)	0.226	5.00175	<5.00	4.80	27.13*
Oil & Grease (Hexane Extr) (mg/L)	0.226	5.00175	6	4.80	32.56
Chlorine, residual (mg/L)	0.226	5.00175	0.13	4.80	0.71

Drainage Area (acres)	4.8
Summer Runoff	5.00175
Summer Rainfall	5.85
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

KEY

* - Maximum value for trace detections (for those values with < amounts)

** - Minimum value for trace detections (for those values with > amounts)

ND - Not Detected

CONF - Confluent bacteria growth observed, accurate colony count of the presence or non-presence of Fecal Coliforms could not be determined

TNTC - Too Numerous To Count

Pollutant Loading: Sedona MS4 - Winter Season - 4/24/2015

Pollutant	Unit Conversion Factor	Runnoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Total Dissolved Solids (TDS) (mg/L)	0.226	9.58455	236	7.35	3,757.33
Total Suspended Solids (TSS) (mg/L)	0.226	9.58455	732	7.35	11,654.10
Biochemical Oxygen Demand (BOD) (mg/L)	0.226	9.58455	NS	7.35	0.00
Chemical Oxygen Demand (COD) (mg/L)	0.226	9.58455	NS	7.35	0.00
Surfactants (mg/L)	0.226	9.58455	NS	7.35	0.00
Cyanide (mg/L)	0.226	9.58455	<0.010	7.35	0.16*
Sulfates (mg/L)	0.226	9.58455	7.7	7.35	122.59
Nitrate (mg/L)	0.226	9.58455	NS	7.35	0.00
Nitrite (mg/L)	0.226	9.58455	NS	7.35	0.00
Total Ammonia (mg/L)	0.226	9.58455	NS	7.35	0.00
Total Kjeldahl Nitrogen (TKN) (mg/L)	0.226	9.58455	6.12	7.35	97.44
Total Phosphorous (mg/L)	0.226	9.58455	1.36	7.35	21.65
Phosphate, Ortho (mg/L)	0.226	9.58455	NS	7.35	0.00
Sodium (mg/L)	0.226	9.58455	6	7.35	95.53
Calcium (mg/L)	0.226	9.58455	71	7.35	1,130.38
Chloride (mg/L)	0.226	9.58455	<5.00	7.35	79.60*
Coliform, fecal (col/100 ml)	103	9.58455	NS	7.35	0.00
E.Coli (cfu/100 ml)	103	9.58455	NS	7.35	0.00
Antimony (mg/L)	0.226	9.58455	<0.0005	7.35	0.01*
Arsenic (mg/L)	0.226	9.58455	<0.0010	7.35	0.02*
Barium (mg/L)	0.226	9.58455	0.36	7.35	5.73
Beryllium (mg/L)	0.226	9.58455	<0.002	7.35	0.03*
Cadmium (mg/L)	0.226	9.58455	<0.0001	7.35	0.00*
Chromium (mg/L)	0.226	9.58455	0.022	7.35	0.35
Copper (mg/L)	0.226	9.58455	0.13	7.35	2.07
Lead (mg/L)	0.226	9.58455	<0.0010	7.35	0.02*
Mercury (mg/L)	0.226	9.58455	<0.0002	7.35	0.00*
Nickel (mg/L)	0.226	9.58455	0.05	7.35	0.80
Selenium (mg/L)	0.226	9.58455	<0.0020	7.35	0.03*
Silver (mg/L)	0.226	9.58455	<0.0001	7.35	0.00*
Zinc (mg/L)	0.226	9.58455	0.92	7.35	14.65
Total Petroleum Hydrocarbons (mg/L)	0.226	9.58455	NS	7.35	0.00
Oil & Grease (Hexane Extr) (mg/L)	0.226	9.58455	NS	7.35	0.00
Chlorine, residual (mg/L)	0.226	9.58455	NS	7.35	0.00

Drainage Area (acres)	7.35
Winter Runoff	9.58455
Winter Rainfall	11.21
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

* - Maximum value for trace detections (for those values with < amounts)

Note: E. Coli pollutant loading result is in billion colonies

Simple Method Pollutant Calculation: L=0.226*R*C*A

Simple Method Bacteria Calculation: L=103*R*C*A

Pollutant Loading: Sedona MS4 - Summer Season - 6/14/15, 7/6/15, 7/31/15

Pollutant	Unit Conversion Factor	Runnoff or R value (inches)	Pollutant Concentration	Area (acres)	Pollutant (lbs)
Total Dissolved Solids (TDS) (mg/L)	0.226	4.26645	204	7.35	1445.75
Total Suspended Solids (TSS) (mg/L)	0.226	4.26645	389	7.35	2756.84
Biochemical Oxygen Demand (BOD) (mg/L)	0.226	4.26645	51	7.35	361.44
Chemical Oxygen Demand (COD) (mg/L)	0.226	4.26645	154	7.35	1091.40
Surfactants (mg/L)	0.226	4.26645	0.834	7.35	5.91
Cyanide (mg/L)	0.226	4.26645	<0.00500	7.35	0.04*
Sulfates (mg/L)	0.226	4.26645	6.1	7.35	43.23
Nitrate (mg/L) and Nitrite (mg/L) combined	0.226	4.26645	0.594	7.35	4.21
Total Ammonia (mg/L)	0.226	4.26645	1.08	7.35	7.65
Total Kjeldahl Nitrogen (TKN) (mg/L)	0.226	4.26645	2.7	7.35	19.13
Total Phosphorous (mg/L)	0.226	4.26645	0.779	7.35	5.52
Phosphate, Ortho (mg/L)	0.226	4.26645	0.084	7.35	0.60
Sodium (mg/L)	0.226	4.26645	3.93	7.35	27.85
Calcium (mg/L)	0.226	4.26645	39.1	7.35	277.10
Chloride (mg/L)	0.226	4.26645	2.46	7.35	17.43
Coliform, fecal (col/100 ml)	103	4.26645	TNTC	7.35	TNTC
E.Coli (cfu/100 ml)	103	4.26645	118.7	7.35	383391.03
Antimony (mg/L)	0.226	4.26645	<0.0200	7.35	0.14*
Arsenic (mg/L)	0.226	4.26645	<0.0200	7.35	0.14*
Barium (mg/L)	0.226	4.26645	0.157	7.35	1.11
Beryllium (mg/L)	0.226	4.26645	<0.00200	7.35	0.01*
Cadmium (mg/L)	0.226	4.26645	<0.00500	7.35	0.04*
Chromium (mg/L)	0.226	4.26645	0.0102	7.35	0.07
Copper (mg/L)	0.226	4.26645	0.0622	7.35	0.44
Lead (mg/L)	0.226	4.26645	0.0291	7.35	0.21
Mercury (mg/L)	0.226	4.26645	<0.000200	7.35	0.00*
Nickel (mg/L)	0.226	4.26645	<0.0200	7.35	0.14*
Selenium (mg/L)	0.226	4.26645	<0.0200	7.35	0.14*
Silver (mg/L)	0.226	4.26645	<0.0200	7.35	0.14*
Zinc (mg/L)	0.226	4.26645	0.52	7.35	3.69
Total Petroleum Hydrocarbons (mg/L)	0.226	4.26645	ND	7.35	0.00
Oil & Grease (Hexane Extr) (mg/L)	0.226	4.26645	7.22	7.35	51.17
Chlorine, residual (mg/L)	0.226	4.26645	0.02	7.35	0.14

Drainage Area (acres)	7.35
Summer Runoff	4.26645
***Summer Rainfall	4.99
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

KEY

* - Maximum value for trace detections (for those values with < amounts)

** - Minimum value for trace detections (for those values with > amounts)

*** - Summer rainfall amount includes rainfall for 7/8/2015 - 10/31/2015

ND - Not Detected

CONF - Confluent bacteria growth observed

TNTC - Too Numerous To Count

N/A - Not Applicable

Pollutant Loading: Phoenix MS4 - Winter Season - 12/4/14, 2/23/15, 3/19/15

Pollutant	Unit Conversion Factor	Runnoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Total Dissolved Solids	0.226	3.7107	132	17.50	1,937.21
Total Suspended Solids	0.226	3.7107	58	17.50	851.20
Biochemical Oxygen Demand	0.226	3.7107	17	17.50	249.49
Chemical Oxygen Demand	0.226	3.7107	166	17.50	2,436.19
Surfactants	0.226	3.7107	0.56	17.50	8.22
Cyanide	0.226	3.7107	<0.010	17.50	0.15*
Sulfates	0.226	3.7107	8.2	17.50	120.34
Nitrate	0.226	3.7107	1.27	17.50	18.64
Nitrite	0.226	3.7107	0.13	17.50	1.91
Total Ammonia (mg/L)	0.226	3.7107	5.49	17.50	80.57
Total Kjeldahl Nitrogen (TKN) (mg/L)	0.226	3.7107	4.09	17.50	60.02
Total Phosphorous (mg/L)	0.226	3.7107	0.49	17.50	7.19
Phosphate, Ortho (mg/L)	0.226	3.7107	0.12	17.50	1.76
Sodium (mg/L)	0.226	3.7107	7	17.50	102.73
Calcium (mg/L)	0.226	3.7107	17	17.50	249.49
Chloride (mg/L)	0.226	3.7107	<5.00	17.50	73.38*
Coliform, fecal (col/100 ml)	103	3.7107	46000	17.50	307,672,690.50
E.Coli (MPN/100 ml)	103	3.7107	>2419.6	17.50	16,183,583.52**
Antimony (mg/L)	0.226	3.7107	0.0046	17.50	0.07
Arsenic (mg/L)	0.226	3.7107	<0.0010	17.50	0.01*
Barium (mg/L)	0.226	3.7107	0.05	17.50	0.73
Beryllium (mg/L)	0.226	3.7107	<0.002	17.50	0.03*
Cadmium (mg/L)	0.226	3.7107	0.0001	17.50	0.00
Chromium (mg/L)	0.226	3.7107	<0.005	17.50	0.07*
Copper (mg/L)	0.226	3.7107	0.04	17.50	0.59
Lead (mg/L)	0.226	3.7107	0.0028	17.50	0.04
Mercury (mg/L)	0.226	3.7107	<0.0002	17.50	0.00*
Nickel (mg/L)	0.226	3.7107	<0.02	17.50	0.29*
Selenium (mg/L)	0.226	3.7107	<0.0020	17.50	0.03*
Silver (mg/L)	0.226	3.7107	<0.0001	17.50	0.00*
Zinc (mg/L)	0.226	3.7107	0.10	17.50	1.47
Total Petroleum Hydrocarbons (mg/L)	0.226	3.7107	<5.00	17.50	73.38*
Oil & Grease (Hexane Extr) (mg/L)	0.226	3.7107	<5.00	17.50	73.38*
Chlorine, residual (mg/L)	0.226	3.7107	0.3	17.50	4.40

Drainage Area (acres)	17.5
Winter Runoff	3.7107
Winter Rainfall	4.34
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

* - Maximum value for trace detections (for those values with < amounts)

** - Minimum value for trace detections (for those values with > amounts)

Note: E. Coli pollutant loading result is in billion colonies

Simple Method Pollutant Calculation: L=0.226*R*C*A

Simple Method Bacteria Calculation: L=103*R*C*A

Note - Oil & Grease and TPH were nondetect at <5; therefore 5 mg/L used

Pollutant Loading: Phoenix MS4 - Summer Season - 6/5/15

Pollutant	Unit Conversion Factor	Runnoff or R value (inches)	Pollutant Concentration	Area (acres)	Pollutant (lbs)
Total Dissolved Solids (mg/L)	0.226	1.70145	240	17.50	1615.02
Total Suspended Solids (mg/L)	0.226	1.70145	57	17.50	383.57
Biochemical Oxygen Demand (mg/L)	0.226	1.70145	80	17.50	538.34
Chemical Oxygen Demand (mg/L)	0.226	1.70145	220	17.50	1480.43
Surfactants (mg/L)	0.226	1.70145	0.74	17.50	4.98
Cyanide (mg/L)	0.226	1.70145	ND	17.50	0.00
Sulfates (mg/L)	0.226	1.70145	17	17.50	114.40
Nitrate (mg/L)	0.226	1.70145	2.5	17.50	16.82
Nitrite (mg/L)	0.226	1.70145	0.2	17.50	1.35
Total Ammonia (mg/L)	0.226	1.70145	2.5	17.50	16.82
Total Kjeldahl Nitrogen (TKN) (mg/L)	0.226	1.70145	5.9	17.50	39.70
Total Phosphorous (mg/L)	0.226	1.70145	0.63	17.50	4.24
Phosphate, Ortho (mg/L)	0.226	1.70145	ND	17.50	0.00
Sodium (mg/L)	0.226	1.70145	10	17.50	67.29
Calcium (mg/L)	0.226	1.70145	26	17.50	174.96
Chloride (mg/L)	0.226	1.70145	10	17.50	67.29
Coliform, fecal (col/100 ml)	103	1.70145	CONF	17.50	CONF
E.Coli (MPN/100 ml)	103	1.70145	770	17.50	2361484.99
Antimony (mg/L)	0.226	1.70145	0.0058	17.50	0.04
Arsenic (mg/L)	0.226	1.70145	ND	17.50	0.00
Barium (mg/L)	0.226	1.70145	0.083	17.50	0.56
Beryllium (mg/L)	0.226	1.70145	ND	17.50	0.00
Cadmium (mg/L)	0.226	1.70145	ND	17.50	0.00
Chromium (mg/L)	0.226	1.70145	ND	17.50	0.00
Copper (mg/L)	0.226	1.70145	0.061	17.50	0.41
Lead (mg/L)	0.226	1.70145	ND	17.50	0.00
Mercury (mg/L)	0.226	1.70145	ND	17.50	0.00
Nickel (mg/L)	0.226	1.70145	ND	17.50	0.00
Selenium (mg/L)	0.226	1.70145	ND	17.50	0.00
Silver (mg/L)	0.226	1.70145	ND	17.50	0.00
Zinc (mg/L)	0.226	1.70145	0.16	17.50	1.08
Total Petroleum Hydrocarbons (mg/L)	0.226	1.70145	<5.00	17.50	33.65*
Oil & Grease (Hexane Extr) (mg/L)	0.226	1.70145	<5.00	17.50	33.65*
Chlorine, residual (mg/L)	0.226	1.70145	ND	17.50	0.00

Drainage Area (acres)	17.5
Summer Runoff	1.70145
Summer Rainfall	1.99
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

KEY

* - Maximum value for trace detections (for those values with < amounts)

** - Minimum value for trace detections (for those values with > amounts)

ND - Not Detected

CONF - Confluent bacteria growth observed, accurate colony count of the presence or non-presence of Fecal Coliforms could not be determined

TNTC - Too Numerous To Count

Pollutant Loading: Phoenix MS4 - Winter Season - 12/4/14, 2/23/15, 3/19/15

Pollutant	Unit Conversion Factor	Runnoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Total Dissolved Solids	0.226	3.7107	132	17.50	1,937.21
Total Suspended Solids	0.226	3.7107	58	17.50	851.20
Biochemical Oxygen Demand	0.226	3.7107	17	17.50	249.49
Chemical Oxygen Demand	0.226	3.7107	166	17.50	2,436.19
Surfactants	0.226	3.7107	0.56	17.50	8.22
Cyanide	0.226	3.7107	<0.010	17.50	0.15*
Sulfates	0.226	3.7107	8.2	17.50	120.34
Nitrate	0.226	3.7107	1.27	17.50	18.64
Nitrite	0.226	3.7107	0.13	17.50	1.91
Total Ammonia (mg/L)	0.226	3.7107	5.49	17.50	80.57
Total Kjeldahl Nitrogen (TKN) (mg/L)	0.226	3.7107	4.09	17.50	60.02
Total Phosphorous (mg/L)	0.226	3.7107	0.49	17.50	7.19
Phosphate, Ortho (mg/L)	0.226	3.7107	0.12	17.50	1.76
Sodium (mg/L)	0.226	3.7107	7	17.50	102.73
Calcium (mg/L)	0.226	3.7107	17	17.50	249.49
Chloride (mg/L)	0.226	3.7107	<5.00	17.50	73.38*
Coliform, fecal (col/100 ml)	103	3.7107	46000	17.50	307,672,690.50
E.Coli (MPN/100 ml)	103	3.7107	>2419.6	17.50	16,183,583.52**
Antimony (mg/L)	0.226	3.7107	0.0046	17.50	0.07
Arsenic (mg/L)	0.226	3.7107	<0.0010	17.50	0.01*
Barium (mg/L)	0.226	3.7107	0.05	17.50	0.73
Beryllium (mg/L)	0.226	3.7107	<0.002	17.50	0.03*
Cadmium (mg/L)	0.226	3.7107	0.0001	17.50	0.00
Chromium (mg/L)	0.226	3.7107	<0.005	17.50	0.07*
Copper (mg/L)	0.226	3.7107	0.04	17.50	0.59
Lead (mg/L)	0.226	3.7107	0.0028	17.50	0.04
Mercury (mg/L)	0.226	3.7107	<0.0002	17.50	0.00*
Nickel (mg/L)	0.226	3.7107	<0.02	17.50	0.29*
Selenium (mg/L)	0.226	3.7107	<0.0020	17.50	0.03*
Silver (mg/L)	0.226	3.7107	<0.0001	17.50	0.00*
Zinc (mg/L)	0.226	3.7107	0.10	17.50	1.47
Total Petroleum Hydrocarbons (mg/L)	0.226	3.7107	<5.00	17.50	73.38*
Oil & Grease (Hexane Extr) (mg/L)	0.226	3.7107	<5.00	17.50	73.38*
Chlorine, residual (mg/L)	0.226	3.7107	0.3	17.50	4.40

Drainage Area (acres)	17.5
Winter Runoff	3.7107
Winter Rainfall	4.34
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

* - Maximum value for trace detections (for those values with < amounts)

** - Minimum value for trace detections (for those values with > amounts)

Note: E. Coli pollutant loading result is in billion colonies

Simple Method Pollutant Calculation: L=0.226*R*C*A

Simple Method Bacteria Calculation: L=103*R*C*A

Note - Oil & Grease and TPH were nondetect at <5; therefore 5 mg/L used

Pollutant Loading: Nogales MS4 - Summer Season - 8/20/15

Pollutant	Unit Conversion Factor	Runnoff or R value (inches)	Pollutant Concentration	Area (acres)	Pollutant (lbs)
Total Dissolved Solids (mg/L)	0.226	7.5924	81	59.50	8,269.70
Total Suspended Solids (mg/L)	0.226	7.5924	718	59.50	73,304.21
Biochemical Oxygen Demand (mg/L)	0.226	7.5924	9.9	59.50	1,010.74
Chemical Oxygen Demand (mg/L)	0.226	7.5924	303	59.50	30,934.79
Surfactants (mg/L)	0.226	7.5924	<0.100	59.50	10.21*
Cyanide (mg/L)	0.226	7.5924	<0.010	59.50	1.02*
Sulfates (mg/L)	0.226	7.5924	<5.0	59.50	510.48
Nitrate (mg/L)	0.226	7.5924	0.89	59.50	90.86
Nitrite (mg/L)	0.226	7.5924	<0.10	59.50	10.21*
Total Ammonia (mg/L)	0.226	7.5924	<1.00	59.50	102.10*
Total Kjeldahl Nitrogen (mg/L)	0.226	7.5924	2.9	59.50	296.08
Total Phosphorous (mg/L)	0.226	7.5924	2.75	59.50	280.76
Phosphate, Ortho (mg/L)	0.226	7.5924	0.18	59.50	18.38
Sodium (mg/L)	0.226	7.5924	2	59.50	204.19
Calcium (mg/L)	0.226	7.5924	19	59.50	1,939.81
Chloride (mg/L)	0.226	7.5924	<5.00	59.50	510.48*
Coliform, fecal (CFU/100 ml)	103	7.5924	125000	59.50	5,816,252,925.00
E.Coli (MPN/100 ml)	103	7.5924	> or = 1600	59.50	74,448,037.44**
Antimony (mg/L)	0.226	7.5924	0.0011	59.50	0.11
Arsenic (mg/L)	0.226	7.5924	0.0046	59.50	0.47
Barium (mg/L)	0.226	7.5924	0.14	59.50	14.29
Beryllium (mg/L)	0.226	7.5924	<0.002	59.50	0.20*
Cadmium (mg/L)	0.226	7.5924	0.0005	59.50	0.05
Chromium (mg/L)	0.226	7.5924	0.01	59.50	1.02
Copper (mg/L)	0.226	7.5924	0.065	59.50	6.64
Lead (mg/L)	0.226	7.5924	0.038	59.50	3.88
Mercury (mg/L)	0.226	7.5924	<0.0002	59.50	0.02*
Nickel (mg/L)	0.226	7.5924	<0.02	59.50	2.04*
Selenium (mg/L)	0.226	7.5924	<0.0020	59.50	0.20*
Silver (mg/L)	0.226	7.5924	<0.0001	59.50	0.01*
Zinc (mg/L)	0.226	7.5924	0.19	59.50	19.40
Total Petroleum Hydrocarbons (mg/L)	0.226	7.5924	<5.00	59.50	510.48*
Oil & Grease (Hexane Extr) (mg/L)	0.226	7.5924	6.7	59.50	684.04
Chlorine, residual (mg/L)	0.226	7.5924	0.32	59.50	32.67

Drainage Area (acres)	59.5
Summer Runoff	7.5924
Summer Rainfall	8.88
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

KEY

* - Maximum value for trace detections (for those values with < amounts)

** - Minimum value for trace detections (for those values with > amounts)

ND - Not Detected

CONF - Confluent bacteria growth observed, accurate colony count of the presence or non-presence of Fecal Coliforms could not be determined

TNTC - Too Numerous To Count

Pollutant Loading: Flagstaff MS4 - Winter Season - 12/3/14, 3/1/15, 4/25/15

Pollutant	Unit Conversion Factor	Runnoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Total Dissolved Solids (TDS) (mg/L)	0.226	5.53185	372	20.00	9,301.47
Total Suspended Solids (TSS) (mg/L)	0.226	5.53185	1112	20.00	27,804.41
Biochemical Oxygen Demand (BOD) (mg/L)	0.226	5.53185	9	20.00	225.04
Chemical Oxygen Demand (COD) (mg/L)	0.226	5.53185	180	20.00	4,500.71
Surfactants (mg/L)	0.226	5.53185	NS	20.00	0.00
Cyanide (mg/L)	0.226	5.53185	<0.010	20.00	0.25*
Sulfates (mg/L)	0.226	5.53185	<5.0	20.00	125.02*
Nitrate (mg/L)	0.226	5.53185	672	20.00	16,802.66
Nitrite (mg/L)	0.226	5.53185	<0.10	20.00	2.50*
Total Ammonia (mg/L)	0.226	5.53185	672	20.00	25.00*
Total Kjeldahl Nitrogen (TKN) (mg/L)	0.226	5.53185	<1.00	20.00	25.00*
Total Phosphorous (mg/L)	0.226	5.53185	0.39	20.00	9.75
Phosphate, Ortho (mg/L)	0.226	5.53185	0.14	20.00	3.50
Sodium (mg/L)	0.226	5.53185	6	20.00	150.02
Calcium (mg/L)	0.226	5.53185	18	20.00	450.07
Chloride (mg/L)	0.226	5.53185	<25.0	20.00	625.10*
Coliform, fecal (MPN/100 ml)	103	5.53185	TNTC	20.00	TNTC
E.Coli (MPN/100 ml)	103	5.53185	224.7	20.00	2,560,593.79
Antimony (mg/L)	0.226	5.53185	0.0041	20.00	0.10
Arsenic (mg/L)	0.226	5.53185	<0.00010	20.00	0.00*
Barium (mg/L)	0.226	5.53185	0.12	20.00	3.00
Beryllium (mg/L)	0.226	5.53185	<0.002	20.00	0.05*
Cadmium (mg/L)	0.226	5.53185	0.0003	20.00	0.01
Chromium (mg/L)	0.226	5.53185	0.011	20.00	0.28
Copper (mg/L)	0.226	5.53185	0.05	20.00	1.25
Lead (mg/L)	0.226	5.53185	0.0122	20.00	0.31
Mercury (mg/L)	0.226	5.53185	<0.0002	20.00	0.01*
Nickel (mg/L)	0.226	5.53185	<0.02	20.00	0.50*
Selenium (mg/L)	0.226	5.53185	<0.0020	20.00	0.05*
Silver (mg/L)	0.226	5.53185	<0.0001	20.00	0.00*
Zinc (mg/L)	0.226	5.53185	0.32	20.00	8.00
Total Petroleum Hydrocarbons (mg/L)	0.226	5.53185	NS	20.00	0.00
Oil & Grease (Hexane Extr) (mg/L)	0.226	5.53185	10	20.00	250.04
Chlorine (mg/L)	0.226	5.53185	<0.1	20.00	2.50*

Drainage Area (acres)	20
Winter Runoff	5.53185
Winter Rainfall	6.47
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

TNTC - Too Numerous To Count

* - Maximum value for trace detections (for those values with < amounts)

Note: E. Coli pollutant loading result is in billion colonies

Simple Method Pollutant Calculation: L=0.226*R*C*A

Simple Method Bacteria Calculation: L=103*R*C*A

Pollutant Loading: Flagstaff MS4 - Summer Season - 6/5/15, 6/28/15, 8/7/15

Pollutant	Unit Conversion Factor	Runnoff or R value (inches)	Pollutant Concentration	Area (acres)	Pollutant (lbs)
Chemical Oxygen Demand (COD) (mg/L)	0.226	5.97645	209	20.00	5,645.83
Surfactants (mg/L)	0.226	5.97645	0.68	20.00	18.37
Cyanide (mg/L)	0.226	5.97645	<0.010	20.00	0.27*
Sulfates (mg/L)	0.226	5.97645	16.3	20.00	440.32
Nitrate (mg/L)	0.226	5.97645	0.38	20.00	10.27
Nitrite (mg/L)	0.226	5.97645	<0.10	20.00	2.70*
Total Ammonia (mg/L)	0.226	5.97645	<1.00	20.00	27.01*
Total Kjeldahl Nitrogen (TKN) (mg/L)	0.226	5.97645	4.99	20.00	134.80
Total Phosphorous (mg/L)	0.226	5.97645	1.43	20.00	38.63
Phosphate, Ortho (mg/L)	0.226	5.97645	0.2	20.00	5.40
Sodium (mg/L)	0.226	5.97645	23	20.00	621.31
Calcium (mg/L)	0.226	5.97645	39	20.00	1,053.53
Chloride (mg/L)	0.226	5.97645	<10.0	20.00	270.14*
Coliform, fecal (MPN/100 ml)	103	5.97645	TNTC	20.00	TNTC
E.Coli (MPN/100 ml)	103	5.97645	119.8	20.00	1,474,916.14
Antimony (mg/L)	0.226	5.97645	<0.0050	20.00	0.14*
Arsenic (mg/L)	0.226	5.97645	<0.0100	20.00	0.27*
Barium (mg/L)	0.226	5.97645	0.35	20.00	9.45
Beryllium (mg/L)	0.226	5.97645	<0.002	20.00	0.05*
Cadmium (mg/L)	0.226	5.97645	<0.0010	20.00	0.03*
Chromium (mg/L)	0.226	5.97645	0.029	20.00	0.78
Copper (mg/L)	0.226	5.97645	0.11	20.00	2.97
Lead (mg/L)	0.226	5.97645	0.0301	20.00	0.81
Mercury (mg/L)	0.226	5.97645	<0.0002	20.00	0.01*
Nickel (mg/L)	0.226	5.97645	0.04	20.00	1.08
Selenium (mg/L)	0.226	5.97645	<0.0200	20.00	0.54*
Silver (mg/L)	0.226	5.97645	<0.0010	20.00	0.03*
Zinc (mg/L)	0.226	5.97645	0.55	20.00	14.86
Total Petroleum Hydrocarbons (mg/L)	0.226	5.97645	<5.00	20.00	135.07*
Oil & Grease (Hexane Extr) (mg/L)	0.226	5.97645	<5.00	20.00	135.07*
Chlorine (mg/L)	0.226	5.97645	0.16	20.00	4.32

Drainage Area (acres)	20
Summer Runoff	5.97645
Summer Rainfall	6.99
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

KEY

* - Maximum value for trace detections (values with < amounts)

** - Minimum value for trace detections (values with > amounts)

ND - Not Detected

CONF - Confluent bacteria growth, colony count of the presence or non-presence of Fecal Coliforms could not be determined

TNTC - Too Numerous To Count

NOTE

Simple Method Pollutant Calculation: L=0.226*R*C*A

Simple Method Bacteria Calculation: L=103*R*C*A

Pollutant Loading: Sedona MS4 - Summer Season - 7/31/14 and 8/26/14

Pollutant	Unit Conversion Factor	Runnoff or R value (inches)	Pollutant Concentration (mg/L)	Area (acres)	Pollutant (lbs)
Oil & Grease (grab)	0.226	0.23085	5	7.35	1.92
TPH (grab)	0.226	0.23085	8.1	7.35	3.11
E. Coli (grab)	103	0.23085	42	7.35	7,340.13
BOD	0.226	0.23085	23	7.35	8.82
COD	0.226	0.23085	220	7.35	84.36
TSS	0.226	0.23085	80	7.35	30.68
TDS	0.226	0.23085	171	7.35	65.57
Total Nitrogen	0.226	0.23085	1	7.35	0.38
TKN	0.226	0.23085	3.92	7.35	1.50
Total Phosphorous	0.226	0.23085	0.22	7.35	0.084
Antimony	0.226	0.23085	0.0021	7.35	0.001
Barium	0.226	0.23085	0.04	7.35	0.015
Cadmium	0.226	0.23085	0.0001	7.35	0.000
Copper	0.226	0.23085	0.03	7.35	0.012
Lead	0.226	0.23085	0.0015	0.23	0.000
Zinc	0.226	0.23085	0.15	7.35	0.058

Drainage Area (acres)	7.35
Summer Runoff	0.23085
Summer Rainfall	0.27
Percent of Rainfall Runoff	0.9
Percent of Site Impervious	0.95
Runoff Factor	0.905

Note: E. Coli pollutant loading result is in billion colonies

Simple Method Pollutant Calculation: L=0.226*R*C*A

Simple Method Bacteria Calculation: L=103*R*C*A