PHXWATERSMART

City of Phoenix

2016 ANNUAL REPORT





Prepared by

AECOM

September 28, 2016

City of Phoenix
WATER SERVICES DEPARTMENT
Quality Reliability Value

September 28, 2016

Mr. Christopher M. Henninger, Manager
Stormwater and General Permits Unit, Surface Water Section
Arizona Department of Environmental Quality
Mail Code: 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

Re: ANNUAL REPORT FOR AZPDES PERMIT NO. AZS000003, MUNICIPAL SEPARATE STORM SEWER SYSTEM

Dear Mr. Henninger:

We are pleased to submit the 2015-2016 Annual Report for the City's Municipal Separate Storm Sewer System (MS4) Permit No. AZS000003, issued on February 3, 2009. This report covers the reporting period beginning July 1, 2015 and ending on June 30, 2016. This document includes the information specified in Section 8.1.1 for All Annual Reports.

We appreciate this opportunity to provide you with information about our stormwater management program. Please direct any questions you may have regarding this report to Linda Palumbo at 602-534-2916.

Sincerely,

Kathryn Sorensen

BK Kathryn Sorensen
Water Services Director

Enclosure

cc: Alexis Strauss, Region IX, Environmental Protection Agency (with attachment)
Ray Dovalina (Street Transportation Department)
Alan Stephenson (Planning and Development Services Department)
John Trujillo (Public Works Department)
Joe Giudice (Office of Environmental Programs)

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ANNUAL REPORT FORM

For Phase I MS4s – Due September 30th each year

PART 1: GENERAL INFORMATION

A. Name of Permittee: City of Phoenix, Arizona

B. Permit Number: AZS000003

C. Reporting Period: July 1, 2015 – June 30, 2016

D. Name of Stormwater Mgt. Program Contact: Linda Palumbo

Title: Environmental Programs Coordinator

Mailing Address: 2474 South 22nd Avenue, Building #31

City: Phoenix Zip: 85009 Phone: (602) 534-2916

Fax Number: (602) 534-7151 Email Address: linda.palumbo@phoenix.gov

E. Name of Certifying Official: Kathryn Sorensen, PhD
(Sections 9.2 and 9.12 of the permit)

Title: Water Services Director

Mailing Address: 200 West Washington Street, 9th Floor

City: Phoenix Zip: 85003 Phone: (602) 262-6627

Fax Number: (602) 534-1090 Email Address: kathryn.sorensen@phoenix.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 Sections 9.2 and 9.12 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.

BK Kathryn Sorensen 9/8/16

Signature of Certifying Official Date

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PART 3: NARRATIVE SUMMARY OF STORMWATER MANAGEMENT PROGRAM ACTIVITIES

Attach a status summary addressing each of the following in the approximate order referenced below. Briefly describe implementation, progress, and challenges in each area during the reporting year. Also, explain any significant developments or changes to the number or type of activities, frequency or schedule of activities, or the priorities or procedures for specific management practices.

A. Summarize public awareness activities including outreach

- **Report outreach events, topics, number of people reached, number and type of materials distributed and the Target groups.**

Stormwater Outreach

The City of Phoenix conducted a variety of stormwater-related public awareness activities throughout the 2015/16 reporting year, including outreach focused on the proper management and disposal of used oil. The Water Services Department (WSD) continued to post information on social media, including Facebook and Twitter. In addition, WSD developed a public service announcement (PSA) which provides general stormwater pollution awareness https://www.youtube.com/watch?v=m8dQg6WN8yo in English or in Spanish https://www.youtube.com/watch?v=0qQXTxJ40pw.

The City is rebranding the stormwater program and has purchased new promotional items to support the PSA over the next several months. The new Mascot is named "Hopper."

The Best Management Practices (BMPs) brochure for restaurants was distributed to 273 restaurants during routine commercial-industry inspections. Local schools were supplied with a variety of materials such as flyers, brochures, pencils and pens, all with a stormwater message. Outreach events were staffed by Water Quality Inspectors who answered questions and provided information to citizens.

The City also participates in Stormwater Outreach for Regional Municipalities (AZSTORM) to provide coordinated stormwater outreach throughout the Phoenix metropolitan area.

A summary of the stormwater outreach activities for 2015/16 is included in Table 3-1.

Table 3-1
Stormwater Outreach Activities

Date(s)	Event / Activity	Audience	Message	Handouts
July 1 – August 23, 2015	AZSTORM Billboard Campaign	General Public (more than 30 million people)	General Stormwater Awareness	None
August 7, 2015	Mailer	Homeowner Associations (155 associations)	Proper maintenance of Post Construction BMPs	155 postcards
September 15, 2015	Water cycle flyers	4th Graders (5,000 people)	Water cycle and water pollution	5,000 flyers handed out to 4th grade classes
October 28, 2015	AZ Forward Teacher's night	Teachers (130 people)	How to involve stormwater message into curriculum, geared primarily towards 4th grade	100 pencils, 75 flyers, 60 dog poop bag holders, and 15 mugs, 138 hacky sacks, 50 coloring books, and 15 solution to pollution brochures
November 2015 – February 2016	AZSTORM Movie Theater Campaign	General Public (approximately five million people)	General stormwater issues	None
November 6, 2015	Electronic flyer to HOA	Home Owners (30,000 people)	“What happens after it rains” oil/pesticide management	None
November 16, 2016	St. John Bosco school field day	Grade School Children (124 people)	Point source and non-point source pollution	Provided by Water Conservation
November 25, 2015	Compliance Academy	Businesses with Industrial Pretreatment Interest (50 people)	General stormwater awareness and compliance	50 booklets, and 50 pens
December 2015 – May 2016	AZSTORM Bear Essential News	Children (375 elementary and middle schools)	General stormwater education	None
January 7, 2016	Presentation	City of Phoenix, WSD Water Distribution (20 people)	General stormwater issues	None
March 4, 2016	Presentation with project Water Education with Teachers	6th Graders (56 people)	General stormwater issues	67 each of pencils, Frisbees, blue bags and magnets
March 12, 2016	Real Gardens for Real People	Gardeners (105 people)	Rain gardens, passive watering, and stormwater pollution	5 dog poop bags, 50 brown tote bags, 20 purple mugs, and 40 dust pans
April 23, 2016	Keep Phoenix Beautiful Earth Day Celebration	General Public (90 people)	Pollution prevention, drinking water quality, proper disposal of waste materials	25 stormwater cups and 25 IPP stress balls
April 24, 2016	Silent Sunday/Earth Day	General Public (45 people)	Pollution prevention and water conservation	Tumblers, dog waste bags, stress balls, pens, and totes

Date(s)	Event / Activity	Audience	Message	Handouts
April 28, 2016	Earth Day at Gateway Community College	College Students (50 people)	General stormwater issues	3 brochures and 5 bags
May 13, 2016	Presentation/career day	5th Graders (62 people)	Field sampling and general stormwater issues	60 pencils and bookmarks, 2 All the way to the Ocean books, 2 mugs, 2 tote bags
May 19, 2016	Presentation	5th Graders (17 people)	Stormwater issues, watershed model, water testing demo	None
June 14, 2016	GREAT program	7th and 8th Graders (34 people)	Stormwater pollution, job function, and pollution prevention	5 tumblers, 36 frisbees, 32 blue bags, 37 word magnets, and 36 dog bag dispensers
June 2016	Stormwater Pollution Video in Movie Theater[1]	General Public 510,000 impressions	General stormwater awareness	None
June 30, 2016	Contractors Networking Event	Development Community (126 people)	Permitting expectations, and construction BMPs	120 construction brochures
Ongoing	Facebook	Water Services Facebook 599 Followers	General Stormwater Management	None
Ongoing	Twitter	Water Services Twitter 1,773 Followers	General Stormwater Management	None
Ongoing	Website (phoenix.gov/stormwater)	General Public 2,439 views	General Stormwater Management	None
Ongoing	Public Service Announcement https://www.youtube.com/watch?v=m8dQg6WN8yo	General Public 453 YouTube Views	General Stormwater Management	None
Ongoing	Monsoon Minute https://www.youtube.com/watch?v=xbsmhy_YFP0	General Public 193 YouTube Views	Monsoon Preparedness and Pollutant Reduction	None

[1] Phoenix theatre list (5 theatres / 97 screens)- AMC Ahwatukee 24, AMC Arizona Center 24, AMC Deer Valley 17, AMC Desert Ridge 18, AMC Esplanade 14

Contractor Forum – Development Community Outreach Event June 30, 2016.

B. Summarize public involvement activities including outreach

- **Identify activities, number of people involved, number and type of materials distributed if applicable.**

<u>**Household Hazardous Waste Collection**</u>
The Public Works Department continues to provide residential customers with one Household Hazardous Waste (HHW) collection event per month; except for the peak summer months June, July and August. The events are held on a Friday and Saturday and are open to the public from 7am-Noon on both days. The events are held at various locations throughout the city, typically at a City of Phoenix park.

The Public Works Department (PWD) provided Phoenix residential customers with nine (9) Household Hazardous Waste (HHW) collection events in 2015/16. Over 6,500 Phoenix residential customers participated in the HHW events. The following items were collected, and recycled or remixed and distributed:

- Close to 30,000 gallons of oil-based paint and related materials
- 40,000 gallons of flammable liquids
- Over 3,600 gallons of used oil
- Six tons of lead acid and rechargeable batteries
- Over 1,800 gallons of latex paint for reuse.

Other items collected and properly disposed included:

- Antifreeze
- Pesticides
- Herbicides
- Other hazardous and toxic materials.

Non-hazardous materials brought to HHW events were sorted out and disposed of as Municipal Solid Waste (MSW), such as:

- Shampoo
- Lotions
- Alkaline batteries
- Quart-sized latex paint.

Ø **Describe MS4 system for public reporting of spills, dumping, discharges, and related stormwater issues.**

Ø The City continues to offer a Stormwater Hotline (602-256-3190) in English and Spanish, as well as an email address (ask.water@phoenix.gov) for anyone who wishes to report a complaint concerning illicit discharges or releases to the storm drain system. The contact information is distributed with outreach materials and is available on the stormwater website (www.phoenix.gov/stormwater). The City received 204 complaints during the year from several sources including the telephone, hotline and email.

C. Summarize Illicit Discharge, Detection and Elimination (IDDE) program activities. Include:

Ø **Illicit discharge prevention activities.**

The City discourages discharges to the storm drain system through the placement of Pollution Awareness Markers (PAMs) on existing catch basins. This year, more than 200 PAMs were added to existing catch basins using a two part epoxy, and more than 19,000 PAMs have been installed since the program started. WSD tried a new and more cost effective adhesive this fiscal year. Unfortunately, the less expensive adhesive was also less effective. This resulted in a disruption to process, which resulted in few PAMs being installed.

The City standard for managing hazardous waste and hazardous materials at municipal facilities is the Hazardous Materials Management Program (HMMP) Manual. The manual is available to City employees online through the City's intranet. HMMP procedures apply to all City departments unless stated otherwise and were developed to ensure the City operations are in compliance with federal, state, and local environmental and safety regulations. The HMMP Manual directs personnel to locate storage areas as far away as possible from washes, drains, and drywells and requires that they be protected from weather. Requirements are provided for secondary containment, security, air quality permitting, safety and spill response equipment, proper signs, and labeling. Container storage requirements such as aisle spacing, limitations on drum stacking, segregation of incompatible materials, and types and condition of containers are also provided.

The HMMP Manual contains a comprehensive stormwater management procedure, which, also serves as the facility stormwater management plan required by Phoenix City Code Chapter 32C. The procedure applies to all city facilities with the potential to impact stormwater and addresses permit applicability [including the Multi-Sector General Permit (MSGP) and De Minimis General Permit (DMGP)], training and inspection requirements, and BMPs for solid waste/litter control, parking lots and building washing, scrap metal and equipment, bulk material piles, vehicle and equipment washing and fueling, and maintenance of stormwater management devices.

The HMMP Manual is maintained by the Office of Environmental Programs (OEP). Each HMMP procedure is reviewed at least once every two years and revised as necessary. Revisions may be made more frequently if regulatory requirements change.

During reporting year 2015/16, four of the ten HMMP procedures were reviewed and updated, based on input from twelve operating departments and staff with stormwater expertise, including Environmental Quality Specialists and Environmental Program Coordinators.

It should be noted that in past annual reports, the City stated we had eleven HMMP procedures. During our review this year it was determined that there are only ten HMMP procedures and one internal OEP hotline call list protocol. The OEP hotline call list is reviewed and updated as needed but because it is internal to OEP only, it is not appropriate to send to other City departments for review. In future annual reports, the City will continue to review and update the ten HMMP procedures.

Ø **Training dates and topics:**

Stormwater training covering IDDE is accomplished through training offered by various departments, including WSD, PWD, Parks and Recreation, and OEP. Municipal employee stormwater training is coordinated by the OEP P2 Program.

The Phoenix MS4 permit requires IDDE training for two major groups of employees: (1) field staff without direct stormwater program responsibilities; and (2) employees with direct stormwater program responsibilities (Stormwater Field Staff). In addition, the training is divided into three (3) frequencies:

- Annual (for select field staff with “no direct stormwater responsibility” only)
- New Employee Training (for Stormwater Field Staff – offered twice a year)
- Refresher Training (for Stormwater Field Staff – offered every two years).

Other specific training requirements include municipal, industrial, and construction site inspections, hazardous materials handling, spill management, street maintenance and repair and water/sewer maintenance and is limited to employees working in functions with the potential to impact stormwater. Affected employees are identified in the stormwater training plan in the City’s Stormwater Management Plan (SWMP). The training is offered by various departments and is divided into two frequencies:

- New Employee Training (conducted twice per year)
- Refresher Training (conducted once every two years).

Ø **Annual Training**

Stormwater Awareness Training. Awareness training covering IDDE is provided to select field staff with no direct stormwater responsibilities. Topics taken from the City MS4 stormwater permit requirements include identification of harmful/prohibited practices (illegal dumping or spills) into the City's stormwater system and proper management procedures (reporting to the Stormwater Management Section). Fifteen sessions were held and 480 people were trained.

Date	Number Attended
July 8, 2015	27
December 8, 2015	11
January 5, 2016	13
January 8, 2016	15
January 19, 2016	12
February 2, 2016	14
February 16, 2016	2
March 11, 2016	13
March 29, 2016	16
April 15, 2016	12
April 25, 2016	10
May 10, 2016	12
May 2, 2016	296
May 13, 2016	11
May 24, 2016	16

Ø **New Employee Training and Biennial Refreshers**

IDDE for Stormwater Inspection Staff. Topics covered include MS4 permit requirements, Phoenix City Code, detecting and identifying illicit discharges, De Minimis and other sources of non-stormwater discharges, outfall inspections, sampling, and field screening. Two sessions were held and 47 people attended.

Date	Number Attended
April 13, 2016	24
April 20, 2016	23

Street Repair and Road Improvement for Street Maintenance Staff. Training is provided to all field staff in the Street Maintenance Division of the Street Transportation Department (STR). Training covers IDDE awareness, pollution prevention, and BMPs to minimize discharges to storm drains. Specific topics include BMPs for hazardous material use and storage, street sweeping, painting and striping, sediment pile management, paving, vehicle maintenance and washing, handling spills, solid waste, and concrete washout areas. Two sessions were held and 43 people were trained.

Date	Number Attended
February 22, 2016	21
April 4, 2016	22

Spill Prevention and Management Practices – non-Fire Department. Training covers site-specific spill prevention and response procedures/responsibilities and spill management practices to prevent or minimize discharges to the storm sewer system and drywells. Ten sessions were held and 177 people were trained.

Date	Number Attended
December 8, 2015	14
January 5, 2016	12
January 19, 2016	13
February 2, 2016	6
February 16, 2016	8
March 25, 2016	48
March 29, 2016	10
April 1, 2016	40
April 26, 2016	11
May 10, 2016	15

Spill Prevention and Management Practices – Fire Department. Training is delivered through an online video and training module, which was created specifically for the Phoenix Fire Department. The training covers stormwater awareness, specific spill prevention and response procedures/responsibilities for use during emergency responses, including protection of storm drains and drywells, and BMPs for Fire Department facilities. This biennial Fire Department training was not conducted this report period.

Hazardous Material Handling. Training covers responsibilities for spill prevention and reporting, compliance with regulatory and City hazardous materials management procedures (proper handling, storage, transportation, and disposal) to prevent contamination of stormwater runoff. Refresher training was provided and sessions for new employees are included in these totals. Twelve sessions were held and 376 people were trained.

Date	Number Attended
October 14, 2015	63
October 15, 2015	28
October 15, 2015	21
October 20, 2015	30
October 21, 2015	63
October 21, 2015	33
October 22, 2015	42
October 28, 2015	65
November 4, 2015	10
November 5, 2015	1
December 9, 2015	9
May 17, 2016	11

Water/Sewer Maintenance. Training is provided to field staff in Water Distribution and Wastewater Collection and includes protocols to minimize discharges including those found in the WSD Stormwater Pollution Prevention Plan, Emergency Response Plan and Field Incident Response Plan. Thirteen sessions were held and 157 people were trained.

Date	Number Attended
December 8, 2015	11
January 5, 2016	13
January 8, 2016	15
January 19, 2016	12
February 2, 2016	14
February 16, 2016	2
March 11, 2016	13
March 29, 2016	16
April 15, 2016	12
April 25, 2016	10
May 10, 2016	12

Date	Number Attended
May 13, 2016	11
May 24, 2016	16

<u>Municipal Stormwater Inspections</u>. Training topics include federal and local regulatory requirements, applicable permits and codes, stormwater BMPs, municipal facility inspection procedures, illicit discharges and De Minimis discharges. There were no new OEP employees this reporting period, and this biennial inspector training was not conducted this report period.

Industrial Stormwater Inspections. Training is provided to all inspectors in the WSD Environmental Services Division Stormwater Section. Topics include applicable permits and codes, stormwater pollution prevention policies, structural and non-structural BMPs, and inspection and enforcement procedures. Two sessions were held and 45 people were trained.

Date	Number Attended
April 12, 2016	23
April 19, 2016	22

Construction Sites Plan Review and Inspection Training. The Planning and Development Department (PDD) provided on-the-job training (OJT) for stormwater plan review and inspections and on June 1, 2016, 28 staff attended a training that covered stormwater runoff and infiltration, specifically, the use of drywells to meet low-impact development and green infrastructure requirements. In addition, two construction course sessions were held and 13 people were trained.

Date	Number Attended
February 22, 2016	2
April 4, 2016	11
June 1, 2016	28

- **IDDE screening program and investigations – including an overview of industrial facility inspections, identified sources, and any significant corrective or enforcement actions.**

The IDDE program continues to track illicit flows discovered in the storm drain system to identify their sources. Dry-weather flows are investigated by opening manholes and following the flow upstream. Flow changes (typically volume) are observed by the IDDE crew when the manholes are opened. Once the suspected illicit tap is determined to be nearby, the video system is then inserted in the storm drain pipe to track the flow directly to its source. By using the video system the City can then determine where the illicit connection or tap is located and then conduct the appropriate inspection. Occasionally, dye testing or a similar procedure is used to verify the source of the connection.

IDDE investigations are also initiated as a result of complaints, reported spills, or emergency response activities, such as fire-fighting.

During the report period, the following non-stormwater discharges were investigated:

- Flow at SR061 was found to be coming from Honeywell, located on Air Lane. The flow was due to the repair and maintenance of the fire suppression system. This is an allowable non-stormwater discharge.
- Flows at outfalls SR003, SR006, SR014, SR015, SR029, SR031, SR032, and SR035 were found to be from Salt River Project (SRP) irrigation junction boxes. Irrigation water is an allowable non-stormwater discharge.
- Flow at SR018 was found to be a back flow preventer device that had been destroyed by an individual driving over the curb hitting the backflow device. The device was repaired and the flow stopped.
- Flow at EF010 was found to be from air conditioner condensate coming from Bell Towne Shopping Center at 7th Street and Greenway Parkway. Air conditioner condensate is an allowable non-stormwater discharge.
- Flow at SR002 was found to be coming from a warehouse located at 3602 West Washington Street. The discharge was coming from the fire suppression system. This is an allowable non-stormwater discharge.
- Flow at EF061 was found to be irrigation and air condition condensate from 401 West Bell Road. This is an allowable non-stormwater discharge.
- Flow at EF008 was found to be from a leaking water distribution main at 2510 East Aire Libre. Water Distribution was notified to repair the leak.
- Flow at AC004 originated from the City’s Shaw Butte Storage Tank as a result of maintenance. A field Cease and Desist Order was issued and the discharge was suspended.
- Flow at AC002 was due to irrigation water in the residential, commercial and industrial complexes in the neighborhood. Irrigation water is an allowable non-stormwater discharge.
- Flow at AC005 and AC007 was irrigation water in the Metro Center Parkway Complex area. Irrigation water is an allowable non-stormwater discharge.
- Flows at SR004, SR061, and SR068 observed by the outfall inspection staff were not observed by IDDE staff. The outfalls and the surrounding area were completely dry.
- Flow at SR010 was found to be coming from three sources; office building air condition condensate, cooling tower that flows directly to the City of Phoenix storm drain from a property located on 101 North First Ave, and a broken sprinkler line coming from a property located on 603 North 5th. These are allowable non-stormwater discharges.

- A diesel fuel spill near 27th Avenue and Virginia was investigated. Testing concluded that the spill did not reach the outfall SR014 or the storm drain main, but was contained to the gutters along the street. OEP and Dispatch 19 were contacted for cleanup of this illicit discharge.
- A spill occurred at Honeywell, located at 111 South 34th Street that reached outfall SR061. The spill was the result of maintenance technician leaving a valve open. Approximately 1,500 gallons of oily wastewater was released; 50 gallons was estimated to have reached the storm drain. Honeywell cleaned up the spill at the airport and outfall. Because this facility is a co-permittee with the airport on the Multi-Sector General Permit (MSGP), the Aviation Department issued the notice of violation, and followed up on the remediation.
- Employees at AAMCO Transmission on Cave Creek Road discharged the contents of an oil/grease interceptor into the storm catch basin. This discharge reached outfall TS001. A field NOV was issued, the responsible party was required to clean the storm drain and outfall, and a Show Cause meeting was scheduled for July 2016. See Section E for additional information.
- Arizona Department of Transportation Durango Yard located at 22nd Avenue and Hilton self-reported a non-stormwater discharge occurring from a wash rack that was identified as being connected to the sanitary sewer. However, dye-testing resulted in flow detection in the storm sewer. ADOT closed the wash rack until facility improvements and permitting could be arranged.
- A fire at Solvent Recy-Clean located at 1850 West Broadway Road resulted in a mixture of fire-fighting water and approximately 20,000 gallons of a waste oil (5%) and water (95%) mixture and up to 20,000 gallons of mixed waste solvents were discharged to the City of Phoenix MS4 and subsequently the Salt River.
- A Sanitary Sewer Overflow (SSO) caused by Upper Crust Bakery, located at 3655 West Washington Street, reached SR002. The responsible party was required to clean the storm drain and outfall. The City is pursuing enforcement of this facility under the Industrial Pretreatment Program (IPP). See Section E for additional information.
- An SSO to Arizona Canal Diversion Channel originating from 9025 North 7th Avenue. The overflow was due to rags and grease and was cleaned up by the City of Phoenix. No responsible party could be identified.
- A former Turbine Alloy employee alleged that the company was pouring oil down the storm drains. The investigation found no evidence of illegal disposal into the storm drain.
- A charter school owner provided a video of a septage hauler dumping the contents of his truck into their storm drain. It was determined that the storm drain was a private system that did not discharge to the City of Phoenix MS4. However, the Stormwater Management Section worked with the Commercial Inspection Section to issue the owner of the company (Emergency Pumping) a Notice of Violation under Chapter 28 (Sanitary Sewer Ordinance). Enforcement is being pursued under IPP. See Section E for additional information.

- Investigation of dry weather flows along the Central Avenue corridor between Camelback Road and Interstate 10 was contracted to a third party due to complex access issues. The consultant performed 27 video inspection points and surveyed 63 manholes to assess the storm drain system and laterals for dry weather flows.

    - Five locations had dry weather flows that contributed to the Central Avenue storm drain: Three were irrigation related, one was runoff from local construction dust suppressant activities, and one was due to a leaking water valve.
    - Two areas had flows that were not draining to Central Avenue and were recommended by the consultant for follow-up actions.
    - Five catch basins along Central (at Vernon, Thomas, Catalina, Indian School, and Monterosa) were blocked by debris and were recommended by the consultant for follow-up actions.

Cross Connection Eliminated:

A cross connection between the City's MS4 and the sanitary sewer was identified in June 2015, and was discussed in last year's Annual Report. Stormwater in the intersection of 1st Street and Buchanan flowed into a drywell which was connected to a junction box (marked as an irrigation box). The junction box flowed to the sanitary sewer system. Sanitary wastewater did not flow into the storm drain. The City received a grant from Maricopa County Flood Control District to assist with the implementation of a permanent solution, which included connecting the intersection to the storm drain on Lincoln (one block to the south). In addition to the new storm drain, permeable concrete was used to reduce runoff and minimize flooding in the area. This project was completed in June 2016.

D. Municipal Facilities

Ø Status of identification and inventory of these facilities.

The Municipal Facility Inventory (MFI) is maintained in a facility assessment database that tracks inspection activities, compliance findings and pollution prevention recommendations. The inventory includes facilities owned and operated by City staff that store or use hazardous chemicals in containers greater than five (5) gallons, or which otherwise have the potential to pollute stormwater. Chemicals stored onsite at each facility are tracked through an online citywide Safety Data Sheet Management System. There were 298 municipal facilities on the inventory as of June 30, 2016. OEP's inspection facility assessment schedule targets 99 facilities each year.

Information maintained in the inventory includes: address, latitude and longitude, chemicals stored or used and their safety data sheets, operational status (operational or closed), Standard Industrial Classification (SIC) codes, date of last assessment, brief description of operations, facility contact, as well as other compliance-related information. The number of facilities may change based on new facilities becoming operational or existing facilities undergoing a change/cessation of operations. Such changes to the MFI are tracked through the facility assessment database.

<u>High-Risk Facilities Identification and Prioritization</u>:

The high-risk facility identification and prioritization was completed on June 30, 2011. The high risk identification process considered each of the following: (1) quantity of chemicals stored onsite (based on Tier II Reports), (2) potential for exposure of such chemicals to stormwater based on storage location, (3) likelihood of a spill or release to occur and discharge offsite based on structural BMPs and site drainage characteristics, (4) potential severity of impact on surface waters for a worst-case scenario release, and (5) MSGP coverage. Storage of and potential for release of other pollutants at the site were also considered as an additional risk factor.

Numeric ranking criteria are used to evaluate all city facilities that had submitted Tier II Reports. The criteria indicate which facilities are "higher risk" and also the overall risk of facilities relative to one another. Whenever these sites are physically assessed, the risk factors are reviewed and adjusted, if necessary. As of June 30, 2016 there were 43 facilities on the high-risk municipal facility inventory.

Of the 43 facilities categorized as high-risk, five facilities (service centers) were determined to be highest risk and were required to develop and implement facility-specific stormwater pollution prevention plans (SWPPP) and to conduct routine quarterly inspections by site staff and annual comprehensive stormwater inspections by OEP. For the 38 others currently classified as high-risk facilities—mainly unstaffed, remote locations associated with sanitary sewer system lift stations and odor control stations, or fire stations with double-walled (aboveground storage tank) ASTs containing diesel fuel—an increase in inspection frequency was not deemed necessary, but a comprehensive stormwater facility assessment is required at least once every three years.

Ø **Overview of inspection findings (i.e., number inspected, number with follow-up actions needed, significant findings).**

The OEP conducts Environmental Facility Assessments (EFAs) of City owned and operated facilities to acquire baseline information, ensure compliance with select environmental compliance requirements, including spill preparedness and response procedures, hazardous materials storage, and identification of opportunities to reduce hazardous material use and hazardous waste generation. The EFA inspection checklist includes a section on stormwater BMPs, the facility's SWMP, and a targeted review of high-risk facilities; this checklist is used to meet the Facility Assessment Measurable Goal at Appendix A Section III.B.(1) and the Municipal Facility Inspection Measurable Goal at Appendix A Section IV.C.(2).

OEP's target schedule is to conduct EFA's at 99 (of 298) facilities each year. The highest-risk facility service centers (5), which have facility specific SWPPPs, are inspected by site staff quarterly and receive an annual comprehensive stormwater inspection by OEP at least annually. Thirty-eight other high risk facilities receive a comprehensive facility stormwater inspection once every two to three years.

In 2015/16, EFAs were completed at 111 of the facilities on the MFI. Sixty facilities had zero corrective action findings as a result of the assessment. Fifty-one facilities had a total of 160 findings; recommended corrective action items are summarized in the next section.

In 2015/16, eighteen of the forty-three high-risk facilities were assessed, including all five of the highest-risk service centers with SWPPPs. The five high risk service centers are also assessed quarterly by site staff. Seven facilities had findings, five of which had some corrective actions related to stormwater which required improved stormwater BMPs. These are summarized in the following section.

- **Activities needed and performed in response to inspections (EFAs)**

The OEP records and tracks all activities needed as a result of an EFA until resolution. As applicable, facility status updates identifying any uncorrected findings are regularly provided to Department Directors. The text below summarizes the primary stormwater-related corrective action activities performed during 2015/16.

2015/16 Corrective Actions Implemented (EFAs)

- Spill response BMPs
  - Ensured spill response kits are adequately stocked and accessible
  - Installed or updated emergency contact poster in areas where hazardous materials are used or stored
  - Implemented clean up of two small oil stains from equipment drips and releases.
- Structural BMPs (to minimize exposure to stormwater and prevent spills)
  - Ensured facilities only store containers of hazardous materials under weather-protective cover or inside
  - Provided new secondary containment for hazardous material containers and used oil, etc.; repaired/cleaned existing secondary containment structures
  - Provided sediment control (e.g., straw wattles, fiber rolls) for material or soil stockpiles.
- Non-structural BMPs (practices and procedures)
  - Ensured container closure and labeling standards are followed for chemical containers and universal wastes
  - Improved housekeeping and general site, parking lot, and outdoor equipment storage practices
  - Ensured storage amounts are kept to a minimum.

2015/16 High-Risk Facilities – Improved Stormwater Controls and Practices Implemented

- Improved maintenance of retention basins; maintain free of trash and debris and do not use for concrete wash-out
- Ensured proper storage practices for scrap metal as required by HMMP
- Ensured compliance with HMMP storage practices for hazardous materials—store indoors, or under other weather protections, in closed containers, with appropriate secondary containment

- Ensured secondary containment structures are maintained clean and dry
- Implemented facility spill plans and/or posted spill contact info and spill response procedures
- Implemented clean up of small oil release from equipment drips
- Ensured all containers are labeled and with proper secondary containment
- Inspected spill kits and identified new spill kits needed.

<u>2015/16 Other Stormwater-Related Improvement Projects</u>

In addition to improvements made in response to inspection findings, the following stormwater capital improvement projects also had activity in 2015/16:

- STR installed a new storm drain and four catch basins to mitigate flooding concerns at the 1st Street and Buchanan intersection under a joint project with the Flood Control District of Maricopa County. The project also eliminated a cross connection with the sanitary sewer. Due to restrictive underground utility conditions, the size of the storm drain pipe was limited; therefore, pervious concrete was also installed to help increase water absorption. The project was completed June 2016.
- In Fiscal Year 2015, work began on drainage improvements at a former landfill site within the Rio Salado Habitat Restoration area, just west of 7th Avenue on the north bank. New rip rap channels and curbs along the service road were installed to minimize future erosion. The project was completed in early Fiscal Year 2016.
- Improvements to the Skunk Creek Landfill included the installation of runoff diversion berms consisting of a six-inch riprap channel to collect runoff from the cap and direct it to a newly constructed six-inch riprap energy dissipation pad. Runoff from the pad runs down the southwestern slope of cells 3/4 via an installed riprap gabion down drain that directs runoff into the existing southwest detention basin. Settlement controls include new fiber rolls and revegetation. Erosion repairs and asphalt millings placement were also part of the work.
- Improvements to the 27th Avenue Landfill included a six-inch riprap swale running adjacent to the south access ramp to the cap to collect runoff from the cap. A riprap down drain collects runoff from the swale and discharges it to an existing collection swale. Earthen berms were constructed along the edges of the existing gabion down drains to keep runoff within the downdrain. Settlement controls include new fiber rolls, riprap ribbons and revegetation. Erosion repairs and asphalt millings placement were also part of the work. Additional work included new roof drainage downspouts at the south end of the building, repaired erosion damage at the south end landscaped areas near the building, and improvements to keep stormwater out of the tunnel (north and south ends) including regrading retention areas and adding storm drain pipes and catch basins.

Ø **Identification and tracking of municipal owned and operated facilities subject to permitting under the MSGP.**

Table 3-2 contains a listing of the eleven (11) City-owned and operated facilities subject to permitting under the MSGP, based on their industry sector and/or SIC code.

Table 3-2
City Owned/Operated Facilities Subject to MSGP

Department	Facility	Address	POC	Authorization #	Comments
Public Works	Skunk Creek Landfill	3165 W Happy Valley Rd Phoenix, AZ 85027	Environmental Quality Specialist Joy Bell 602-256-5605	AZMSG-61708	
	27th Avenue Solid Waste Management Facility	3060 S 27th Ave Phoenix, AZ 85009		AZMSG-62581	
	SR 85	28361 W Patterson Rd Buckeye, AZ 85326		AZMSG-14391	
	North Gateway Transfer Station	30205 N Black Canyon Hwy, Phoenix, AZ 85085		AZMSG-61710	
Aviation	Sky Harbor International Airport	3400 E Sky Harbor Blvd, Ste 3300 Phoenix, AZ 85034	Environmental Quality Specialist Lisa Farinas 602-273-2787	AZMSG-66063	
	Deer Valley Airport	702 W Deer Valley Rd Phoenix, AZ 85027		AZMSG-66017	
	Phoenix/Goodyear Airport	1658 S Litchfield Rd Goodyear, AZ 85338		AZMSG-61934	
Water Services	91st Avenue Wastewater Treatment Plant	5616 S 91st Ave Tolleson, AZ 85353	Environmental Quality Specialist Doug Taylor 602-534-5081	AZMSG-61871	
	23rd Avenue Waste-water Treatment Plant	2470 S 22nd Ave Phoenix, AZ 85009		AZMSG-61896	
	Cave Creek Water Reclamation Plant	22841 N Cave Creek Rd Phoenix, AZ 85024		AZMSG-61713	
City Clerk	Customer Service Center (Print Shop)	2640 S 22nd Ave Phoenix, AZ	Environmental Quality Specialist Hilary Hartline 602-534-1778	AZRNED-670	No Exposure Certification September 2015

Note: The City previously submitted Sector L Closure Certifications for 15 city properties located on closed landfill sites (three of which were previously owned/operated by the City), which are not covered under the MSGP.

Ø **Status of all inventories, maps, and map studies required by the permit to be developed including completion dates.**

The stormwater GIS database conversion project has been completed. The data are being shared as a web service that is hosted on the Enterprise ArcGIS Server and shared for all city staff to access.

The City considers the storm drains to be protected critical infrastructure. As such, the City has not provided a copy of the GIS maps as an attachment. However, the maps are available for review by ADEQ upon request.

In May 2016, a consultant completed mapping of new drainage basin polygons for 42 specified MS4 outfalls, which will be incorporated into the Geographic Information System (GIS). This will enhance the city's ability to link specific discharge locations to specific outfalls. The completion of these 42 drainage basin polygons complements the process begun in Fiscal Year 2015 to map a total of 152 drainage basin polygons.

Historical MS4 mapping in the Ahwatukee area of Phoenix (located south of South Mountain Park and west of Interstate 10) is limited because this area was originally a Maricopa County island that had been annexed by the City of Phoenix. In June 2016, a pilot program to map MS4 components for which infrastructure mapping does not already exist was completed by a consultant for an approximately 5-square mile area bounded by Ray Road to Pecos Road and

32nd Street and I-10. STR plans to continue this effort to map the Ahwatukee area using existing City staff and resources.

Ø **For the Outfall inspection program, describe the status of:**

- o <u>Staff training</u>

  Outfall inspection training is described in Section H.

- o <u>Outfall inventory</u>

  The outfall inventory is described in Section H.

- o <u>Inspection tracking system</u>

  The outfall inspection tracking system is described in Section H.

- o <u>Overview of Inspection and screening procedures, and any significant findings</u>

  Inspection and screening procedures and findings are discussed in Section H.

E. Industrial Facilities

Ø **Status of identification and inventory of these facilities.**

The City currently manages an inventory of more than 8,000 facilities, which includes approximately 3,000 industrial facilities as well as commercial businesses, such as restaurants and auto service stations. Inspectors also focus on facilities that submit federal Toxic Release Inventory reports, facilities that generate Resource Conservation and Recovery Act (RCRA) hazardous waste, treatment storage and disposal facilities (TSDFs), and non-municipal solid waste facilities throughout the City.

Because lead and copper have been identified in wet-weather samples in quantities exceeding surface surface water quality standards (SWQS), facilities that use or store lead or copper have been identified for priority inspections.

In addition to the industrial inspections, the City has incorporated a stormwater assessment into many of the inspections conducted by the Commercial Section. Stormwater assessments are conducted at commercial businesses including restaurants, car washes, and service stations. When significant stormwater issues are noted, the Commercial Inspector forwards the information to the Stormwater Section for follow-up. Stormwater inspections are also conducted by IPP inspectors when they do their annual inspection for permit compliance.

Ø **An overview of inspection findings and note significant findings.**

In reporting year 2015/16, the City conducted 636 industrial and commecial stormwater inspections, 791 commercial stormwater assessments, and 109 IPP inspections. A total of 101 enforcement letters were issued for stormwater-related violations.

The most common violation identified continues to be a failure to develop a SWMP or SWPPP, as required by City code. For those facilities that have the potential to release pollutants to the MS4, the City ordinance requires that each facility develop and implement a SWMP containing facility-specific BMPs. Most stormwater issues noted during commercial (e.g., restaurant) inspections involved housekeeping related issues that were easily corrected (e.g., spills around tallow bins and open dumpsters).

- **Corrective and enforcement actions needed and taken in response to inspections.**

Formal enforcement actions included Compliance Inspection Notices (61), NOVs (40), and Show Cause meeting notices (0). Most enforcement actions were resolved quickly, with over 99 percent of all industrial inspections closed within one year of the initial inspection.

As stated above, the Stormwater Management Section did not issue any 'Show Cause' meeting notices. A 'Show Cause' meeting is typically the last step in the enforcement process, when previous efforts to bring the facility into compliance are unsuccesful. The facility is asked to enter into a settlement agreement and penalties may be assessed. Though Stormwater did not hold any Show Cause meetings this fiscal year, the section did work with the Commercial Section and the Industrial Pretreatment Section on enforcement actions that were pursured under Chapter 28. The following facilities had enforcement issues related to both the saniary sewer and storm drain systems:

Upper Crust Bakery – On September 1, 2016, the Upper Crust Bakery facility had a private sewer line rupture resulting in an SSO that reached SR002. An NOV was issued to cease and desist from further discharge immediately, and the facility was required to clean the storm drain and outfall. Though all stormwater issues were addressed, the City is still working with the facility to resolve the sanitary sewer violations. A show cause meeting was scheduled for August 2016.

Emergency Pumping – On April 17, 2016, the Emergency Plumbing and Pumping Company discharged untreated septic waste into a private storm drain feature at 9000 West McDowell Road. Since the discharge did not impact the City's MS4, enforcement was pursued under the sanitary sewer ordinance (Phoenix City Code Chapter 28). An NOV was issued to cease and desist from this type of activity, and a Show Cause meeting was held to determine punitive action; the company was assessed a monetary penalty of $25,000 and had 15 days to clean the private storm drain. The company did not comply with the agreement reached during the show cause meeting; therefore, a Civil Citation was issued. The outcome is pending.

AAMCO Transmissions – On May 27, 2016, AAMCO at 12036 North Cave Creek Road discharged the contents of a sand/oil interceptor into a City of Phoenix storm drain that discharges into Tenth Street Wash. An NOV was issued to cease and desist from this type of activity, clean the storm drain and outfall area, and to write a new SWMP. A show cause meeting was scheduled for July 2016.

F. Construction Program Activities

The City of Phoenix Stormwater Policies and Standards Manual requires retention areas for buildings to account for drainage collected from the roof tops, parking lots, and other drainage areas. When the PDD reviews grading plans, staff ensure that the site retention volume is adequate to prevent runoff for the required storm event. If inspectors find that the plans are not being followed, they may stop work on the project. If the problem continues, court-ordered injunctions may be served or civil penalties assessed.

Chapter 32A, the City's Grading and Drainage Ordinance, establishes minimum requirements for regulating grading and drainage and establishes implementation and enforcement procedures. Grading and Drainage Permits are issued to applicants who fulfill the application requirements, including the submittal of a SWMP, when applicable. Activities regulated by the Grading and Drainage Ordinance are subject to inspection and enforcement action. Enforcement steps begin with a verbal warning, and may lead to a written warning, halting project inspections on the building, and/or a civil citation. The PDD Civil and Site Inspection team includes 22 members tasked with enforcing the ordinance.

Staff from PDD hold pre-construction meetings with private developers to discuss many issues, including on-site retention of stormwater, controlling erosion, and the installation of other BMPs. Communications with developers occur during periodic observations by inspection staff and during formal inspections.

An overview of the PDD process for stormwater related submittals is provided below:

- The customer submits grading/drainage and stormwater plans for review
- PDD provides red lines on plans
- The customer addresses the red lines
- Plans are approved for construction by PDD
- The customer applies for required permits
- Permits are created by PDD, including Civil Grading & Drainage and Civil Stormwater
- PDD office staff obtain a copy of the Arizona Pollutant Discharge Elimination System (AZPDES) Construction General Permit authorization number before the customer can purchase permits
- The customer schedules a Pre-Construction Meeting prior to beginning work
- BMPs are implemented by the customer prior to the start of construction
- Inspector verifies that track out and BMPs are properly maintained during each inspection
- The customer submits an Notice of Termination (NOT) when the project is completed
- Warranty inspection is performed by PDD, one-year after completion.

Ø **Status of inventory/plan review of these facilities.**

The PDD database contains a comprehensive inventory of developments for which permits have been issued, plans have been reviewed, and inspections have been conducted. The permits are categorized in the database according to the type of work requested to be performed. In reporting year 2015/16, 634 Construction/Grading Plans were reviewed.

Ø **An overview of Inspection findings and significant findings.**

Inspection findings are documented in the PDD database. During reporting year 2015/16, a total of 390 construction sites were inspected for stormwater. There were 79 permits with noted deficiencies where corrective action was requested at least one time, along with four that required multiple requests to achieve compliance. The counts specific to the three types of deficiencies listed below are:

- 15 – Stormwater controls missing, not per plan, or started work without notification
- 30 – Track out control not working
- 38 – Failure to maintain stormwater controls

Some linear and utility municipal construction projects are not subject to PDD's stormwater permitting process and are inspected by either OEP or WSD staff to ensure BMPs and compliance with the local stormwater ordinance. There were 19 documented deficiencies at seven of the nine municipal projects inspected, including administrative violations and missing or insufficient sediment or erosion controls, such as around perimeter of material stockpiles not actively being worked.

Ø **Corrective and enforcement actions needed and taken in response to inspections.**

Most documented deficiencies were corrected by the next day. Four written notices were issued. No other escalated enforcement was required to bring projects into compliance (i.e., suspension of work), and most violations were corrected upon first request. For municipal projects, inspection reports showing the specific deficiencies are sent to project managers who work with the contractor to correct the problem and send follow-up documentation that deficiencies have been corrected. For the seven municipal projects with findings in 2015/16, all deficiencies were corrected promptly and additional enforcement steps were not necessary.

PDD requires that the developer provide a “letter of explanation” when they cannot obtain a NOT at the end of the project. These are forwarded to ADEQ twice a year. In reporting year 2015/16, PDD had one project that could not obtain a NOT.

Staff Training: The PDD Municipal Stormwater Inspection Training for Construction Inspectors trains plan review and inspection staff on administrative procedures (Notice of Intent and SWPPP), compliance, and appropriate BMPs to reduce pollution from construction activities.

Details on training dates and number of attendees are included in Section C.

G. Post Construction Controls

Ø **Summary of any new post-construction controls for municipal projects.**

Glenrosa Service Center – During a November 2015 annual stormwater inspection at the Glenrosa Service Center, sediment accumulation was noted in a small retention basin at the southwest corner of the site causing concern that the retention capacity had been significantly reduced. Based on the grading and drainage plans, a drywell had previously been installed in the basin, which was later converted into a bubbler with an overflow pipe that connected to a drywell in an adjacent northern retention basin. The bubbler grate had not been visible during inspections for the past several years. STR staff uncovered the grate and discovered it was completely filled with sediment. The bubbler, the piping to the drywell and the drywell in the adjacent retention basin were all cleaned out. In addition, the slopes of the retention basin were stabilized with concrete to prevent further erosion into the bubbler.

22nd Avenue Service Center – The 22nd Avenue Service Center is classified as a high-risk facility that discharges stormwater directly to the MS4. Funding from Fiscal Year 2016 was provided by OEP and PWD to locate and design a stormwater pretreatment device to prevent oil and grease from entering the MS4 at three existing storm drain inlets. The current effort will result in a drainage design report for the site. After the design phase is complete, it is anticipated that this project will transition to a capital improvement project, possibly in Fiscal Year 2017 or 2018, depending on funding availability.

1st Street and Buchanan – As discussed in the section of this report “2015/16 Other Stormwater-Related Improvement Projects”, work was completed in the area of 1st Street and Buchanan to mitigate flooding concerns. A green infrastructure component, pervious concrete, was installed to help increase water absorption. The project was completed in June 2016.

1st Street and Buchanan – Back-in parking with eight (8) pervious-concrete parking stalls.

- **An overview of the City's post-construction inspection program.**

  PDD inspectors conduct a one-year warranty inspection on each construction project within their jurisdiction. This inspection provides an opportunity to identify corrective action to be implemented by the developer or responsible sub-contractor for a variety of items, including stormwater and grading and drainage controls.

  For municipal projects not subject to PDD's stormwater permit program, OEP or WSD staff conducts post-construction stormwater inspections within one year of the project completion.

  During reporting year 2015/16, post-construction stormwater inspections were conducted by PDD at 121 private construction projects and by OEP or WSD at three municipal construction projects.

- **Corrective and enforcement actions needed and taken in response to post-construction inspections.**

  The PDD database contains directives for items identified for follow-up during the warranty inspection.

- **Summary of any new or revised post-construction requirements related to permits the City issues.**

  No new or revised post-construction requirements were identified by PDD personnel. In addition, the municipal post-construction inspections had zero findings.

H. Outfall inspection program; describe the status of

Ø **Staff training.**

Stormwater staff members are trained on sampling procedures and techniques when they are assigned to the Outfall Inspection rotation, typically within the first year of employment. As part of this, they are required to familiarize themselves with the applicable Code of Federal Regulations at 40 CFR 122 and 40 CFR 136 and the Standard Operating Procedures (SOPs) concerning sampling and Quality Assurance/Quality Control (QA/QC). Refresher training is provided informally throughout the year and formally at least once every two years.

Details on training dates and number of attendees are included in Section C.

Ø **Outfall inventory.**

The City maintains a database to document stormwater outfalls. At the time of this report, the inventory includes approximately 874 total outfalls with 510 of these designated as “Major” outfalls according to Environmental Protection Agency (EPA) guidelines. Thirty-one outfalls are designated as “priority,” either due to observed flow within the past five years, or because they received an illicit discharge in the past five years. Outfall TS001 was designated a priority outfall in June 2016, because of an illicit discharge. The City no longer has outfalls that discharge to an impaired water, because the Salt River, from the 23rd Avenue Wastewater Treatment Plant to the Gila River has been delisted. However, these outfalls remain on our ‘priority’ list for now. They will be removed once the new database has been implemented to better track the change in status. The outfall inventory is included as an attachment to this report.

Ø **Inspection tracking system.**

Each outfall inspection is conducted by a trained team of inspectors who use a form specifically designed to capture the data as they are observed. Once the inspection is completed and the inspectors return to the office, all data are entered into a database created exclusively for the stormwater program. Entered data include the documentation and tracking of all (both major and minor) outfall inspections. All items required in 40 CFR 122 are found on the form including both visual and field screening activities.

Ø **Inspection and screening procedures and significant findings.**

The inspection crew visits each “priority” outfall annually and the remaining major outfalls at least once during the five-year permit cycle. The inspection begins with an overall visual observation of the outfall structure and surrounding area. Visual items are noted such as residue, staining, dead animals, and differences in plant life near the outfall. If a flow (greater than 0.03 gallons per minute) is observed, a sample is collected for the field screening activity. Field screening includes pH, temperature, total chlorine, sulfide, ammonia, phenol, detergent, lead, and copper. All observations are recorded on a standard inspection checklist.

In reporting year 2015/16, staff inspected major outfalls along the Arizona Canal Diversion Channel, East Fork of Cave Creek Wash, Agua Fria, and the Salt River. All priority outfalls were inspected, regardless of location.

Twenty-four outfalls had two days of consecutive dry-weather flow, which triggered the field screening process at those locations. Twenty four IDDE investigations were initiated based upon the results of those field screening activities and flow amounts.

I. Description of any new or revised ordinances, rules or policies related to stormwater management or control, if applicable.

- Ø **Complete Streets Design Manual** – Per City Ordinance adopted by City Council, during 2014/15, a Complete Streets Advisory Board, consisting of community stakeholders appointed by each Council District and the Mayor's office worked to accomplish several goals, including development of a draft Complete Streets Design Manual. The draft Design Manual includes a chapter providing guidance on use of green infrastructure and low-impact development principles in the right of way for stormwater management. The guidance was primarily adopted from, with permission, Watershed Management Group's *Green Infrastructure for Southwestern Neighborhoods (2012).* Other design principles in the manual include improvement of pedestrian and bicycle safety and access and incorporation of street amenities like street furniture and shade accommodation. The draft manual was expected to be presented to City Council for adoption by November, 2015. However, based on developer input and ongoing Complete Streets Advisory Board meetings, the Complete Streets policy and design guidelines are still under revision with the goal of having them finalized in Fiscal Year 2017. Green infrastructure and low impact development continues to be a component of the design guidelines for City projects within the right-of-way.

- Ø **General Plan –** In August 2015, City of Phoenix voters approved a new General Plan. The Phoenix General Plan is the long-range guide for the City, and addresses issues such as energy, housing, neighborhoods, public facilities, natural resources, transportation and land use. The new General Plan includes a detailed section on Stormwater including: Land Use and Design Principles; Policy Documents and Maps, and Tools: Policies and Actions. This section encourages the use of green infrastructure or other post-construction methods for "capturing and using stormwater and urban runoff for beneficial purposes." The City of Phoenix Planning and Development Department leads inter-departmental discussions every year to update the listed "policies and actions" that may be needed due to a completed action or new policy. A copy of the Stormwater section of the City of Phoenix General Plan is included as an attachment.

J. Fiscal Expenditures; provide a brief report on expenditures related to implementation of the City's stormwater program for the previous fiscal year.

The City collects a stormwater fee to defray the costs of operating the stormwater management program.

Stormwater program charges from STR, WSD, and OEP are paid out of the Stormwater Fund. The fee does not cover the costs for most maintenance of the drainage system or infrastructure improvements, nor does it cover ancillary stormwater activities, such as street sweeping or the HHW program. Stormwater program costs for PDD are funded by construction permit fees. Late this reporting year, May 2016, WSD began funding a new position. This position's primary customer is the Stormwater Section.

<u>Water Services Department</u>
WSD coordinates the City's Stormwater Program. In addition to overall program administration, WSD conducts stormwater outreach, complaint investigations, outfall inspections and IDDE investigations, industrial inspections, wet-weather monitoring, and reporting. Expenditures totaled $1.7M in reporting year 2015/16.

Street Transportation Department

STR conducts storm drain maintenance and inspections, wash maintenance, and is responsible for the stormwater GIS. The stormwater budget for STR was $2,147,874 in reporting year 2015/16. The budget included more than $1,514,815 for wash maintenance and approximately $633,059 for the stormwater GIS.

Office of Environmental Programs

OEP conducts environmental assessments of municipal facilities and operations and oversees the stormwater training plan. OEP also advises city departments on regulatory compliance issues. OEP also conducts stormwater inspections for those municipal construction and post-construction projects which did not go through the PDD permit process. The stormwater operating expenditures for OEP was $139,424 in reporting year 2015/16. An additional $231,716 was spent on capital improvement projects.

Planning and Development Department

PDD conducts grading and drainage plan reviews and inspections. PDD costs are covered by construction permit fees, and their budget may vary significantly depending on the number of permitted construction projects. The grading and draining budget for PDD in reporting year 2015/16 was over $1.29M with stormwater expenditures at $367,376.

Table 3-3
Stormwater Management Program Fiscal Expenditures

City of Phoenix Department	Reporting Year 2015/16 Actual	Reporting Year 2016/2017 Projected
Water Services Department		
Stormwater Program Support	$1,702,105	$2,046,081
Street Transportation Department		
Wash Maintenance	$1,427,839	$1,923,151
Geographic Information System	$521,343	$674,328
Planning and Development Department		
Grading and Drainage – Plan Review	$990,438	$1,000,000
Grading & Drainage – Inspections	$297,960	$327,000
Office of Environmental Programs		
Stormwater Program Support	$139,424	$149,653
Capital Improvement Projects	$231,716	$250,000

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PART 4: SUMMARY OF STORMWATER MANAGEMENT PROGRAM ACTIVITIES (NUMERIC)

Provide a summary of stormwater management practices and activities performed each year as indicated in the Table below.

	REPORTING YEAR (July 1-June 30)						
STORMWATER MANAGEMENT PRACTICE OR ACTIVITY	**2009/2010**	**2010/2011**	**2011/2012**	**2012/2013**	**2013/2014**	**2014/2015**	**2015/2016**
Illicit Discharge Detection & Elimination Program							
1. Municipal Employee Training							
Number of training sessions (on non-stormwater discharges and the IDDE program)	**55**	**41**	**37**	**34**	**20**	**9**	**17**
Number of employees attending training	**852**	**610**	**754**	**726**	**515**	**302**	**527**
2. Spill Prevention							
Number of municipal facilities identified with hazardous materials	**353**	**337**	**326**	**307**	**303**	**301**	**298**
Number of spills at municipal facilities with hazardous materials, that occurred in outside areas	**0**	**0**	**0**	**2**	**2**	**1**	**1**
Number of Facility Assessments completed* *(*identify any issues found requiring follow-up in narrative and summarize new practices to minimize exposure*)	**115**	**123**	**98**	**120**	**107**	**112**	**111**
Date of last review of HMMP* (*Identify committee participant with stormwater expertise in narrative)	**06/2010**	**06/2011**	**06/2012**	**06/2013**	**06/2014**	**05/2015**	**05/2016**
3. Outfall Inspections							
Total Number inspected* *(*attach or forward electronic copy of inventory or map of major out falls and priority outfalls*)	**127**	**201**	**185**	**202**	**170**	**214**	**307**
Number of 'Priority Outfalls' identified to date* *(*summarize findings and follow-up actions in narrative)*	**40**	**39**	**38**	**38**	**31**	**27**	**31**
Number of 'Priority outfalls' inspected* *(*summarize findings and follow-up actions in narrative*)	**40**	**39**	**38**	**38**	**31**	**27**	**30**
Number of dry weather flows detected	**13**	**11**	**14**	**18**	**10**	**15**	**24**
Number of dry weather flows investigated	**12**	**11**	**11**	**18**	**10**	**15**	**24**
Number of major outfalls sampled	**13**	**11**	**14**	**18**	**10**	**15**	**24**
Number of illicit discharges identified	**0**	**5**	**7**	**4**	**1**	**6**	**7**
Number of illicit discharges eliminated	**0**	**3**	**3**[c]	**3**[c]	**1**	**2**	**7**
Amount of storm drain inspected (length)	**0.3 miles**	**0.5 miles**	**0.17 miles**	**0.61 miles**	**.076**[e]	**3.8 miles**	**4.04 miles**
Number of storm drain cross connection investigations	**31**	**0**	**0**	**0**	**0**	**1**	**1**
Number of illicit connections detected	**0**	**0**	**3**	**0**	**1**	**1**	**1**

	REPORTING YEAR (July 1-June 30)						
STORMWATER MANAGEMENT PRACTICE OR ACTIVITY	**2009/2010**	**2010/2011**	**2011/2012**	**2012/2013**	**2013/2014**	**2014/2015**	**2015/2016**
Number of illicit connections eliminated	**0**	**0**	**1**	**2**	**1**	**0**	**1**
Number of corrective or enforcement actions initiated within 60 days of identification	**0**	**N/A**	**2**	**1**	**1**	**1**	**2**
Percent of cases resolved within 1 calendar year of original Level One action*	**N/A**	**N/A**	**N/A**[d]	**100**	**90%**	**100%**	**100%**
Number of illicit discharge reports received from public	**282**	**294**	**224**	**236**	**213**	**195**	**186**
Percent of illicit discharge reports responded to	**100%**	**93%**	**100%**	**99%**	**100%**	**100%**	**98%**
Percent of responses initiated within 15 days of receipt	**99%**	**100%**	**100%**	**100%**	**100%**	**98%**	**100%**
Municipal Facilities							
1. Employee Training							
Number of training events* *(*dates and topics to be included in narrative)*	**97**	**59**	**86**	**77**	**48**	**484**	**37**
Number of staff trained	**1709**	**1833**	**1509**	**2416**	**1208**	**1354**	**753**
2. Inventory/Map/Database of MS4 Owned & Operated Facilities							
Total number of facilities on inventory	**353**	**337**	**326**	**307**	**303**	**301**	**298**
Date identification of “high risk” facilities completed		**06/30/2011**	**06/30/2011**	**6/30/2011**	**6/30/2011**	**6/30/2011**	**6/30/2011**
Date prioritization of municipal facilities completed		**06/30/2011**	**06/30/2011**	**6/30/2011**	**6/30/2011**	**6/30/2011**	**6/30/2011**
3. Inspections							
Miles of MS4 drainage system prioritized for inspection	**0**[b]	**0**[b]	**0**[b]	**0**[b]	**0**[b]	**0**[b]	**0**[b]
Miles visually inspected	**0.3**	**0.5**	**0.17**	**0.61** (city) **12.66** (contractor)	**9.55**	**14.08**	**10.06**
Number of ‘high risk’ municipal facilities inspected	**0**	**0**	**23**	**38**	**12**	**24**	**18**
Number of ‘high risk’ municipal facilities found needing improved stormwater controls	**0**	**0**	**4**	**11**	**6**	**8**	**5**
4. System Maintenance							
Linear miles of drainage system cleaned each year* (*City to maintain records documenting specific street cleaning events)	**166,675**	**152,396**	**150,087**	**116,413**	**176,970**	**146,315**	**191,318**
Record amount of waste collected from street and lot sweeping (reported in tons)	**14,065**	**13,553**	**12,970**	**14,198**	**12,386**	**16,120**	**18,509**
Total number of catch basins	**16,000**	**16,000**	**16,000**	**18,641**	**18,943**	**19,648**	**20,644**
Number of catch basins cleaned	**14,352**	**8,213**	**7,894**	**4,613**	**5,674**	**10,552**	**6,682**
Industrial Sites Not Owned by the MS4							
Number of training events for MS4 staff	**6**	**1**	**3**	**2**	**2**	**1**	**2**
Number of municipal staff trained	**43**	**22**	**41**	**12**	**46**	**13**	**45**

STORMWATER MANAGEMENT PRACTICE OR ACTIVITY	REPORTING YEAR (July 1-June 30)						
	2009/2010	**2010/2011**	**2011/2012**	**2012/2013**	**2013/2014**	**2014/2015**	**2015/2016**
Number of industrial facilities on Part V.B. Inventory inspected	**221**	**393**	**638**	**686**	**540**	**780**	**636**
Number of corrective or enforcement actions initiated on industrial facilities	**75**	**210**	**232**	**285**	**281**	**171**	**101**
Percent of cases resolved within 1 calendar year of original Level One action	**87%**	**86%**	**95%**	**>95%**	**95%**	**99%**	**99%**
Construction Program Activities							
Number of training events for MS4 staff* (*include topics in narrative summary)	**2**	**3**	**2**	**1**	**2**	**7**	**3**
Number of municipal staff trained	**35**	**59**	**36**	**4**	**20**	**28**	**41**
Number of construction/grading plans submitted for review	**98**	**95**	**90**	**153**	**164**	**335**	**634**
Number of construction/grading plans reviewed	**98**	**95**	**90**	**153**	**164**	**335**	**634**
Number of construction sites inspected	**403**	**322** **26** **(municipal)**	**320** **22** **(municipal)**	**334** **14** **(municipal)**	**344** **19** **(municipal)**	**353** **10** **(municipal)**	**390** **9** **(municipal)**
Number of corrective or enforcement actions initiated on construction facilities* (*identify the type of actions in narrative summary)	**11**	**19** **7** **(municipal)**	**44** **8** **(municipal)**	**36** **17** **(municipal)**	**34** **9** **(municipal)**	**118** **12** **(municipal)**	**83** **19** **(municipal)**
Post Construction Program Activities							
Number of post-construction inspections completed	**111**	**126** **23** **(municipal)**	**96** **28** **(municipal)**	**82** **12** **(municipal)**	**91** **14** **(municipal)**	**130** **6** **(municipal)**	**121** **3** **(municipal)**
Number of corrective or enforcement actions initiated for post-construction activities * (*identify the type of actions in narrative summary)	**0**	**0** **1** **(municipal)**	**0** **0** **(municipal)**	**0** **4** **(municipal)**	**0** **2** **(municipal)**	**0** **0** **(municipal)**	**0** **0** **(municipal)**

(a) Revised.
(b) The City does not measure linear miles of drainage system prioritized for inspection. Rather, these areas are listed by location. The lists are included in the SWMP, and updated annually.
(c) Some of the illicit discharges investigated were found to be allowable under City Code and thus not eliminated.
(d) Not applicable for 2011-2012. The cases have not been open for a full year from the initial corrective action date.
(e) 400 feet of televised line was inspected under contract by Pro Pipe. The City did not have the ability to televise storm drain lines due to inoperative camera equipment.

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PART 5: EVALUATION OF THE STORMWATER MANAGEMENT PROGRAM

In accordance with Section 5.4 of the permit, provide an evaluation of the progress and success of the stormwater management program 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.

Program Management

The Stormwater Working Group (Working Group), which includes representatives from WSD, STR, OEP, PDD, PWD, and Law, continues to meet on a monthly basis. The Working Group discusses ongoing issues, such as IDDE investigations, municipal stormwater projects, the GIS database, and stormwater training. An Executive Committee composed of Management from the five key departments meets quarterly to discuss the stormwater budget and any ongoing issues that require management decisions.

Monthly Working Group and quarterly Executive Committee meetings are an efficient and effective way to communicate program requirements. It is anticipated that this meeting structure will greatly benefit the City of Phoenix during the Phase I MS4 General Permit stakeholder process.

Public Education and Outreach

WSD has also been working to improve public education and outreach. The City of Phoenix continues to utilize the stormwater webpage, reach out to public schools, and participate in AZSTORM. The Stormwater Management Section has expanded the number of public outreach events attended and works cooperatively with IPP to distribute stormwater materials during their outreach events.

Historically, the City has commissioned a study to monitor resident knowledge of storm drains and storm drain pollution via a telephonic survey. This year, the survey was transitioned to an online format, doubling the response rate of the prior year. Each question was supplemented with multiple choice answers. Participants could select more than one choice and utilize an open-ended text field to provide an “Other” response for each question. A total of 806 surveys were received.

The survey was created using SurveyMonkey, a web-based survey solution. The survey was available from February 17 – April 30, 2016. The web link to the survey was posted on the WSD website, Facebook page, Twitter page, and Nextdoor. In addition, staff utilized iPads to gather survey input from event participants.

Demographics of the survey respondents were as follows:

- 60% female; 39% male; 1% other
- 53% were 55+ years old; 34% were 35 to 55 years old; 12% were 20 to 35 years old; and 1% was under 25 years old
- The north central part of the City provided the most participation; the top ten ZIP codes to participate were 85018, 85016, 85020, 85013, 85015, 85028, 85021, 85254, 85044 and 85022.

The questions and responses were as follows:

- *Where does water that flows into storm drains end up?*
  Responses in this category varied, with the greatest percentage (36%) selecting the correct response of *Washes/Salt River/Agua Fria River*.

- *Do you think we have a problem in the Valley with pollution entering storm drains?*
  A majority of respondents in this category (86%) think that there is a problem in the Valley with pollution entering storm drains.

- *How do you currently dispose of things such as household and garden chemicals or pesticides?*
  A majority of respondents indicated they do not improperly dispose of these items, but rather 47% responded that they *use it up* and 48% take advantage of a *household hazardous waste collection day*, for a total of 95%. Only 2% *pour in sink/down drain*.

- *How do you dispose of automotive fluids (e.g., oil, transmission fluid)?*
  A majority of respondents indicated they do not improperly dispose of automotive fluids, but rather 52% responded that *a mechanic services my vehicle* and 30% take to *auto parts store/recycle*, for a total of 82%. Only 0.25% dispose *in a storm drain*.

- *How do you dispose of yard waste?*
  A majority of respondents indicated they do not improperly dispose of yard waste, but rather 61% responded that the *put in garbage* and 48% wait for *bulk pick-up collection day* (multiple responses were permitted). Only 0.25% dispose of yard waste *in a storm drain/street*.

- *How do you dispose of pet waste?*
  A majority of respondents indicated they do not improperly dispose of yard waste, but rather 72% responded that they *put in garbage* and 23% indicated that *I don't have pet waste*.

- *Do your younger children understand what should or should not go in a storm drain?*
  A total of 193 respondents implied that they have young children; of those, 101 responded that their young children understand what should or should not go in a storm drain; 45 respondents said their children did not know; and 47 respondents indicated that as parents they were unaware if their children understood.

- *Have your young children mentioned, or brought home any materials from school related to this topic?*
  A total of 173 respondents implied that they have young children in response to this question; of those, only 26 responded that their young children mentioned, or brought home any materials, from school related to this topic; 147 respondents said their children did not mention or bring home materials from school related to storm drain awareness.

- *If you wanted to learn how to dispose of things like household chemicals, automotive fluids, lawn and garden chemicals, and pet wastes, where would you go?*

Just over 50% of respondents indicated that they would visit the *Internet* to learn more about how to properly dispose household items and waste. Additionally, 26% indicated they would go to their *City government* to learn more.

- *If you saw someone dumping trash or chemicals, automotive fluids, lawn and garden chemicals, and pet wastes, where would you go for information?*
  The most selected response for this question was that respondents are *not sure* (37%) where to go for information if they see someone improperly disposing items.

- *The City wants the community to learn more about stormwater and tips to prevent pollution. What is a good way to provide information to you?*
  Respondents indicated that water bill inserts, City website, and social media are the best ways to receive information about stormwater.

- *Is there anything else you want to tell us about storm drains and their use?*
  Almost 70 open-ended responses were submitted. Responses varied heavily, with some participants stating that they were unaware of the subject matter as whole while others suggested outreach ideas.

The results of the survey provide direction to the stormwater program, including focus areas of future outreach efforts, topics, and communication modes. Improvements include more accurately describing the MS4 and pollutant concerns, where to find additional information, and childhood awareness. Whereas, participants generally understood accepted practices for disposal, use and reuse of chemicals, yard and pet waste, and oil; therefore, the City of Phoenix may not need to immediately expand outreach regarding these pollutants.

Pollutant Load

Annual and seasonal pollutant load estimates have been calculated for pollutants identified in Section 7.4 of the City's AZPDES Permit. Total pollutant load estimates for all watershed basins within the Phoenix MS4 are presented in Part 11 of this report.

As included in the 2013 MS4 Permit renewal application, City GIS staff acquired County land-use spatial data and combined them with sub-watershed boundaries developed by the Flood Control District of Maricopa County (FCDMC 2013). These sub-watershed boundaries are very similar to the Watershed Boundary Dataset 10-digit Hydrologic Unit Code (HUC), with exceptions made for local flood control and other man-made diversions (for example, White Tanks A Basin). Clipping these data to the City permit boundaries produced a watershed-based land-use map that was used to define 12 new areas, now sub-watersheds, used in the pollutant load estimate. Data from reporting years 2012/13, 2013/14, and 2014/15 are presented for comparison to the reporting year 2015/16 pollutant load analysis.

Pollutant load anaylsis does not offer much insight to BMP effectiveness as there appears to be a direct correlation between pollutant loading and quantity of flow, not necessarily program implementation measures.

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PART 6: STORMWATER MANAGEMENT PROGRAM MODIFICATIONS

In accordance with Section 5.5 of the permit, provide a description of modifications, if applicable, to the stormwater management program 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.**

   No BMPs were added during this reporting year.

2. **Addition of Temporary BMPs: Specify the occasions when these controls were initiated and terminated, and the perceived success of these temporary BMPs.**

   No temporary BMPs were added this reporting year.

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.**

   No existing BMPs were increased during this reporting year.

4. **Replacement of Existing BMPs: Briefly summarize any replacements made with prior approval of ADEQ per section 5.5(4) of the permit.**

   No existing BMPs were replaced this reporting year.

Programmatic Changes

The Working Group, with representatives from five departments, continues to meet on a monthly basis. The Executive Committee meets quarterly to review program goals and resources.

WSD had several stormwater program improvements, including:

- Hiring a dedicated Environmental Quality Specialist that focuses on the needs of the Stormwater Program.
- Working with a consultant to continue the development of the new stormwater database.
- Installing new wet-weather sampling equipment, including auto samplers, solar panels, and wireless devices.
- Ordering two SmartCover flow meters for use throughout the City. The meters will be used to identify dry weather flow rate/frequency approaching outfall locations into the Salt River and to track illicit discharges into the storm sewer system. Installation of the meters will occur in Fiscal Year 2017.

No other significant programmatic changes were made this fiscal year.

Note: Modifications to reduce number of stormwater management practices or activities, frequencies, time frames, level of implementation, or any other program standard specified in Appendix A of the permit requires permit modification (refer to Section 5.6 of the permit).

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PART 7: MONITORING LOCATIONS

For the year one Annual Report**,** provide a brief description of each stormwater monitoring location (outfall), including the following information. For subsequent Annual Reports, advise if any of the information has changed or is updated.

No changes to the stormwater monitoring locations were made in reporting year 2015/16. However, new sampling equipment was installed at two locations: SR045 and SC046.

The monitoring sites are described on the following pages. The information for each site corresponds to the requirements in Part 7 of Appendix B of the Permit. Latitude and longitude coordinates have been revised for some outfalls. Land-use data and catchment area information are approximate values based on a review of the available data and best engineering judgment. Maps of the drainage areas are included as an attachment to this report.

Note: Modifications to monitoring locations shall not be implemented without permit modification.

Name and Description of Receiving Water

Arizona Canal Diversion Channel (ACDC)

Outfall Identification Number

AC033

Address/Physical Location of the Site

Dunlap and 7th Avenue just south of Hatcher

Latitude/Longitude

33° 34' 8.016 "

-112° 4' 58.348"

Discharge Structure

60-inch box outlet

Size (acres) of Drainage Area

1084 acres

Land Uses

Industrial	0.5%
Commercial	9.9%
Open Land	17.9%
Institutional	4.2%
Residential	49.8%
Heavy Residential	2.1%
Pavement	13.1%
Miscellaneous	2.5%

Type of Monitoring Equipment

Campbell Scientific Instruments CR10 datalogger and SM192 storage module; Sierra Misco Environmental model 2500 tipping bucket; Druck PDCR 940 pressure transducer; Isco Environmental model 3700 pumping sampler; and Motorola MC310 cellular phone.

Name and Description of Receiving Water

Indian Bend Wash

Outfall Identification Number

IB008

Address/Physical Location of the Site

12499 North 40th Street

Latitude/Longitude

33° 35' 58.218 "

-111° 59' 44.292"

Discharge Structure

66-inch round inlet pipe (original) discharging to two 30-inch outlet pipes

48-inch round inlet pipe (new in 2005) discharging to one 48-inch outlet pipe

Size (acres) of Drainage Area

804.5 acres

Land Uses

Industrial	0.6%
Commercial	5.3%
Open Land	1.8%
Institutional	6.0%
Residential	63.0%
Heavy Residential	3.3%
Utilities	0.7%
Pavement	13.1%
Miscellaneous	6.2%

Type of Monitoring Equipment

Sigma tipping bucket; Sigma integral area velocity flow meter; Sigma model 900 MAX pumping sampler; and hard-wired telephone.

Name and Description of Receiving Water

Salt River

Outfall Identification Number

SR003

Address/Physical Location of the Site

3501 West Elwood Street

Latitude/Longitude

33° 24' 43.025"

-112° 8' 5.004"

Discharge Structure

75-inch round pipe

Size (acres) of Drainage Area

1886 acres

Land Uses

Industrial	7.5%
Commercial	16.1%
Transportation	1.0%
Open Land	9.8%
Institutional	18.1%
Residential	26.1%
Heavy Residential	2.6%
Utilities	0.5%
Pavement	9.1%
Miscellaneous	9.3%

Type of Monitoring Equipment

Campbell Scientific Instruments CR10 datalogger and SM192 storage module; Sierra Misco Environmental model 2500 tipping bucket; Druck PDCR 940 pressure transducer; Isco Environmental model 3700 pumping sampler; and Motorola MC310 cellular phone.

Name and Description of Receiving Water

Salt River

Outfall Identification Number

SR030

Address/Physical Location of the Site

27th Avenue at the Salt River (south bank)

Latitude/Longitude

33° 24' 31.447"

-112° 06' 59.142"

Discharge Structure

108-inch round pipe

Size (acres) of Drainage Area

1620 acres

Land Uses

Industrial	9.58%
Commercial	22.33%
Open Land	21.72%
Institutional	2.03%
Residential	30.28%
Heavy Residential	0.24%
Pavement	6.33%
Miscellaneous	7.47%

Type of Monitoring Equipment

Campbell Scientific Instruments CR10 datalogger and SM192 storage module; Sierra Misco Environmental model 2500 tipping bucket; Druck PDCR 940 pressure transducer; Conoflow and pressure-regulator system; Isco Environmental model 3700 pumping sampler; and Motorola MC310 cellular phone.

Name and Description of Receiving Water

Salt River

Outfall Identification Number

SR045

Address/Physical Location of the Site

2401 South 40th Street

Latitude/Longitude

33° 25' 34.082"

-111° 59' 44. 274"

Discharge Structure

54-inch round pipe

Size (acres) of Drainage Area

879.7 acres

Land Uses

Industrial	42.6%
Commercial	30.5%
Transportation	3.0%
Open Land	8.4%
Institutional	10.5%
Residential	0.2%
Heavy Residential	0.0%
Utilities	0.9%
Pavement	7.2%
Miscellaneous	7.2%

Type of Monitoring Equipment

Automated composite sampler (Isco Environmental model 6712), an Isco rain gauge, and an Isco flow meter for depth and flow measurement.

Name and Description of Receiving Water

Salt River

Outfall Identification Number

SR049

Address/Physical Location of the Site

5400 South 67th Avenue

Latitude/Longitude

33° 24' 0.510"

-112° 12' 15.095"

Discharge Structure

96-inch round pipe

Size (acres) of Drainage Area

4761.9 acres

Land Uses

Industrial	24.3%
Commercial	11.1%
Transportation	0.6%
Open Land	20.8%
Institutional	3.2%
Residential	20.9%
Heavy Residential	1.0%
Utilities	0.6%
Pavement	6.4%
Miscellaneous	11.2%

Type of Monitoring Equipment

Campbell Scientific Instruments CR10 datalogger and SM192 storage module; Sierra Misco Environmental model 2500 tipping bucket; Druck PDCR 1830 pressure transducer; Isco Environmental model 3700 pumping sampler; and Motorola MC310 cellular phone.

Name and Description of Receiving Water

Skunk Creek Wash (Tributary to New River)

Outfall Identification Number

SC046

Address/Physical Location of the Site

35206 North 27th Avenue

Latitude/Longitude

33° 48' 11.171"

-112° 7' 7.380"

Discharge Structure

Three 36-inch round pipes

Size (acres) of Drainage Area

46 acres

Land Uses

Industrial	0.0%
Commercial	0.0%
Transportation	0.0%
Open Land	2.8%
Residential	86.9%
Heavy Residential	0.0%
Pavement	10.4%

Type of Monitoring Equipment

Automated composite sampler (Isco Environmental model 6712), an Isco rain gauge, and an Isco flow meter for depth and flow measurement.

PART 8: STORM EVENT RECORDS

For each outfall identified in Part 7.0, Table 1.0 of the permit, summarize all measurable storm events (greater than 0.1 inch rainfall) occurring in the drainage area of each outfall within the winter and summer wet seasons, respectively, until samples have been collected for the outfall. Include 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. (Note: If unable to collect stormwater samples due to adverse climatic conditions, provide, in lieu of sampling data, a description of the conditions that prevented sampling. Adverse climatic conditions which may prevent the collection of samples include weather conditions that create dangerous conditions for personnel, such as local flooding, high winds, electrical storms, etc.).

In accordance with 40 CFR Part 122.21(g) (7), the City AZPDES Permit Section 7.3.1 defines a representative storm as rainfall in the amount of 0.2 inches or more. The section further directs that "Stormwater samples shall be collected from discharges resulting from a storm event producing 0.2 inches or more of rainfall and at least 72 hours after the previously measured storm event (greater than 0.1 inch rainfall)." The definition of a representative storm event was modified in the 2009 permit so that more stormwater monitoring data might be collected during the new 5-year permit term.

The U.S. Geological Survey (USGS) conducts outfall monitoring under an intergovernmental agreement (IGA) with the City of Phoenix. There were representative storm events at all seven outfalls during the reporting year's summer season, including one event in late June 2015 that was included in the reporting year 2014/15 report, and from six of the seven outfalls for the winter wet season. Rainfall totals and sample collection information by outfall are provided in Table 8-1 in this section.

Storm events during which stormwater samples were collected are discussed by season below:

Summer Wet Season Sampling Summary

June 29, 2015: Grab and composite samples were collected from IB008 (see 2015 Annual Report).

July 31, 2015: Grab and composite samples were collected from SR003, SR030, SR045, and SR049.

October 6, 2015: Grab and composite samples were collected from SC046 and AC033.

Winter Wet Season Sampling Summary

January 4, 2016: Grab and composite samples were collected from IB008, AC033, SR003, and SR049.

January 31, 2016: Grab and composite samples were collected from SR030.

April 8, 2016: Grab and composite samples were collected from SC046.

No sample was collected from SR045 during the winter wet season.

All reported data were validated by the USGS to ensure that the data quality objectives of the AZPDES program have been met. The data validation was reviewed by AECOM to determine whether the data and associated quality assurance and quality control (QAQC) information appear to be complete.

However, based on the QAQC presented, the analytical results appear to be generally usable for their intended purpose.

The following procedures were used in validating the data:

- Analytical methods used in the monitoring program were reviewed to assess the appropriateness of sample collection, transport methods, and holding times.
- Original laboratory reports and the corresponding chain of custody forms were reviewed to determine if quality assurance/quality control requirements were met. Evaluation criteria including holding times, duplicate results, field blank results, method blank results, matrix spike results, equipment calibration information, and sample collection and transport information (to the extent practical.)

Table 8-1
Storm Event Data for Reporting Year 2015/16

	Date	Outfall IB008	Rainfall inches	Outfall SR049	Rainfall inches	Outfall SR045	Rainfall inches	Outfall SR003	Rainfall inches	Outfall SR030	Rainfall inches	Outfall AC033	Rainfall inches	Outfall SC046	Rainfall inches
Summer 2015 (July 1 – October 31)	7/03/15	SPC[1]	-	-	-	-	-	NR	0.10	NR	0.10	-	-	NR	0.18
	7/17/15	SPC	-	-	-	NR	0.14	-	-	-	-	-	-	-	-
	7/18/15	SPC	-	-	-	72-hr	0.42	-	-	-	-	-	-	-	-
	7/31/15	SPC	-	SC	0.22	SC	0.69	SC	0.69	SC	0.73	-	-	-	-
	8/07/15	SPC	-	SPC	-	SPC	-	SPC	-	SPC	-	-	-	NR	0.16
	8/11/15	SPC	-	SPC	-	SPC	-	SPC	-	SPC	-	NR	0.17	-	-
	8/27/15	SPC	-	SPC	-	SPC	-	SPC	-	SPC	-	NR	0.13	-	-
	10/06/15	SPC	-	SPC	-	SPC	-	SPC	-	SPC	-	SC	0.42	SC	0.87

[1] - The summer season sample for IB008 was collected during a storm event on 6/29/15 and was reported in the 2015 Annual Report.

NR – Not Representative; **72-hr** – Site on 72-hour Hold;
SC – Sample Collected; **SPC** – Sample Previously Collected; **RD** – Rain Gauge Damaged

Table 8-1 continued
Storm Event Data for Reporting Year 2015/16

	Date	Outfall IB008	Rainfall inches	Outfall SR049	Rainfall inches	Outfall SR045	Rainfall inches	Outfall SR003	Rainfall inches	Outfall SR030	Rainfall inches	Outfall AC033	Rainfall inches	Outfall SC046	Rainfall inches
Winter 2015/16 (November 1 – May 31)	11/4/15	NR	0.17	-	-	-	-	-	-	-	-	NR	0.14	NR	0.12
	11/15/15	NR	0.18	-	-	-	-	-	-	-	-	NR	0.10	NR	0.18
	11/15/15	72-hr	0.15	NR	0.13	NR	0.12	-	-	-	-	72-hr	0.34	72-hr	0.16
	12/11/15	NR	0.11	-	-	-	-	-	-	-	-	-	-	-	-
	12/14/15	72-hr	0.32	NR	0.18	-	-	NR	0.18	NR	0.18	NR	0.18	NR	0.12
	1/04/16	SC	0.75	SC	0.44	NR	0.16	0.44	SC	RD	-	SC	0.49	NR	0.16
	1/05/16	SPC	-	SPC	-	-	-	SPC	-	RD	-	SPC	-	72-hr	0.56
	1/06/16	SPC	-	SPC	-	72-hr	0.16	SPC	-	RD	-	SPC	-	72-hr	0.48
	1/07/16	SPC	-	SPC	-	72-hr	0.39	SPC	-	RD	-	SPC	-	72-hr	0.86
	1/31/16	SPC	-	SPC	-	NR	0.18	SPC	-	SC	0.46	SPC	-	NR	0.16
	4/08/16	SPC	-	SPC	-	NR	0.18	SPC	-	SPC	-	SPC	-	SC	0.37
	4/10/15	SPC	-	SPC	-	72-hr	0.21	SPC	-	SPC	-	SPC	-	SPC	-

NR – Not Representative; **72-hr** – Site on 72-hour Hold;
SC – Sample Collected; **SPC** – Sample Previously Collected; **RD** – Rain Gauge Damaged

PART 9: SUMMARY OF 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.

OUTFALL ID: IB008 **RECEIVING WATER: Indian Bend Wash** **DESIGNATED USES: PBC and A&We**	Summer 2011		Winter 2011/12		Summer 2012		Winter 2012/13		Summer 2013		Winter 2013/14		Summer 2014		Winter 2014/15		Summer 2015		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**7/04/11**	**SWQS**	**11/5/11**	**SWQS**	**8/21/12**	**SWQS**	**12/14/12**	**SWQS**	**7/19/13**	**SWQS**	**11/22/13**	**SWQS**	**8/2/14**	**SWQS**	**12/4/14**	**SWQS**	**6/29/15**	**SWQS**	**1/04/16**
MONITORING PARAMETERS [1, 2]																				
Conventional Parameters																				
Flow [3] (cfs)	NS	91.8	NS	6.733	NS	8.73	NS	4.62	NS	1.223	NS	12.34	NS	9.4	NS	0.212	NS	5.341	NS	2.296
pH	6.5-9	7.42	6.5-9	8.65	6.5-9	7.72	6.5-9	7.75	6.5-9	7.18	6.5-9	8.38	6.5-9	7.46	6.5-9	7.49	6.5-9	7.3	6.5-9	7.51
Temperature (ºC)	Varies	27.0	Varies	11.2	Varies	29.0	Varies	16.5	Varies	31.0	Varies	15.5	Varies	30.5	Varies	17.0	Varies	29.0	Varies	14.1
Hardness (mg/L)	400	43.2	400	37.3	400	47	400	33.8	400	224	400	60.8	400	39.9	400	16.6	400	91.2	400	25.1
Total Dissolved Solids (TDS) (mg/L) [2]	NS	144	NS	154	NS	136	NS	110	NS	674	NS	182	NS	92	NS	56	NS	274	NS	60
Total Suspended Solids (TSS) (mg/L) [2]	NS	510	NS	182	NS	280	NS	180	NS	279	NS	192	NS	212	NS	71.0	NS	252	NS	76.0
Biochemical Oxygen Demand (BOD) (mg/L) [2]	NS	31	NS	40	NS	29	NS	24	NS	123	NS	41	NS	17	NS	7	NS	67	NS	10
Chemical Oxygen Demand (COD) (mg/L) [2]	NS	270	NS	240	NS	220	NS	140	NS	600	NS	250	NS	110	NS	<50	NS	300	NS	90

IB008	Summer 2011		Winter 2011/12		Summer 2012		Winter 2012/13		Summer 2013		Winter 2013/14		Summer 2014		Winter 2014/15		Summer 2015		Winter 2015/16	
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Inorganics																				
Cyanide, total (µg/L) [2]	84	<5.0	84	<5.0	84	<5.0	84	<5	84	<50	84	<5	84	<5	84	<5	84	<5	84	<5.0
Nutrients (mg/L) [2]																				
Nitrate + Nitrite as N	NS	1.1	NS	1.0	NS	1.1	NS	0.9	NS	6.9	NS	1.3	NS	1.4	NS	0.4	NS	2.1	NS	0.5
Ammonia as N	NS	1.3	NS	0.78	NS	1.2	NS	1.2	NS	3.7	NS	1.7	NS	1.7	NS	0.61	NS	2.7	NS	0.45
Total Kjeldahl Nitrogen (TKN)	NS	6.9	NS	4.0	NS	6.6	NS	3.9	NS	15	NS	4.5	NS	3.1	NS	1.4	NS	7.7	NS	1.4
Total Phosphorus as P	NS	1.7	NS	1.3	NS	1.4	NS	0.70	NS	0.83	NS	0.64	NS	0.44	NS	0.35	NS	0.82	NS	0.44
Ortho-Phosphorus as P	NS	0.3	NS	0.3	NS	0.2	NS	0.2	NS	0.9	NS	0.3	NS	0.1	NS	0.1	NS	0.3	NS	0.1

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Microbiological																				
Escherichia coli (*E. coli*) (CFU/100 mg or MPN/100 mL) [2]	575	**>2,419.6**	575	**1,299.7**	575	**1,119.9**	575	**2,419.6**	575	**>2,419.6**	575	**>2,419.6**	575	**>2,419.6**	575	**>2,419.6**	575	**2419.6**	575	**2,650.0**
Total Metals (µg/L) [2]																				
Antimony	747 T	2.2 T 0.8 D	747 T	2.4 T 0.6 D	747 T	2 T 1.3 D	747 T	1.5 T 0.7 D	747 T	3.7 T 1.9 D	747 T	1.7 T 0.8 D	747 T	1.5 T 1.1 D	747 T	1.2 T 0.4 D	747 T	2 T <5 D	747 T	1.4 T <5.0 D
Arsenic	280 T 440 D	6.2 T 1.3 D	280 T 440 D	5.5 T 0.8 D	280 T 440 D	3.9 T 1.5 D	280 T 440 D	2.7 T 0.9 D	280 T 440 D	5.9 T 2.8 D	280 T 440 D	2.0 T 1.0 D	280 T 440 D	2.5 T 1.2 D	280 T 440 D	1.6 T 0.5 D	280 T 440 D	3.3 T <5 D	280 T 440 D	2.0 T <5.0 D
Barium	98,000 T	249 T 26 D	98,000 T	216 T 16 D	98,000 T	132 T 22 D	98,000 T	84 T 14 D	98,000 T	225 T 90 D	98,000 T	86 T 26 D	98,000 T	55 T 22 D	98,000 T	40 T 8 D	98,000 T	106 T 50 D	98,000 T	58 T 12 D
Beryllium	1,867 T	0.82T <0.15 D	1,867 T	0.65 T <0.06 D	1,867 T	0.39 T <0.15 D	1,867 T	0.28 T <0.15 D	1,867 T	0.46 T <0.15 D	1,867 T	<0.15 T <0.06 D	1,867 T	0.15 T <0.06 D	1,867 T	0.12 T <0.06 D	1,867 T	0.22 T <5 D	1,867 T	0.10 T <5.0 D
Cadmium	700 T 10.08 D	0.7 T <0.25 D	700 T 8.71 D	0.6 T <0.1 D	700 T 10.94 D	0.5 T <0.25 D	700 T 7.93 D	1.0 T 0.3 D	700 T 49.92 D	0.6 T <0.25 D	700 T 14.05 D	0.3 T <0.10 D	700 T 9.33 D	<0.30 T <0.12 D	700 T 3.67 D	<0.12 T <0.12 D	700 T 20.85 D	0.2 T <5 D	700 T 5.93 D	0.2 T <5.0
Chromium	NS	18.5 T <4.5	NS	20.8 T <1.8 D	NS	11.6 T <2.0 D	NS	7.2 T <2.00 D	NS	20.1 T 3.3 D	NS	5.9 T 1.0 D	NS	5 T 1 D	NS	3.7 T 0.4 D	NS	6.8 T <5 D	NS	5.1 T <5.0 D
Copper	1,300 T 10.55 D	120 T **13.4 D**	1,300 T 9.17 D	118 T **9.8 D**	1,300 T 11.42 D	84.9 T **12.1 D**	1,300 T 8.37	40.3 T **11.8 D**	1,300 T 49.73 D	147 T **75.5 D**	1,300 T 14.55 D	51.2 T **20.8 D**	1,300 T 9.79 D	25.2 T **13.7 D**	1,300 T 4.28 D	16.0 T **5.8** D	1,300 T 21.32 D	62.5 T **40.6 D**	1,300 T 6.32 D	40.0 T **14.8 D**
Lead	15 T 54.06 D	**40.3 T** 1.4 D	15 T 45.76 D	**35.9 T** 0.4 D	15 T 59.38 D	**42.5 T** 0.8 D	15 T 41.11D	12.9 T 0.5 D	15 T 323.97 D	**27.8 T** 2.4 D	15 T 78.97 D	11.0 T 0.5 D	15 T 49.48 D	7.3 T 0.7 D	15 T 18.45 D	7.6 T 0.3 D	15 T 123.27 D	10.4 T < 5 D	15 T 29.43 D	10.7 T <5.0 D
Mercury	280 T 5 D	0.13 T <0.092D	280 T 5 D	<0.092 T&D	280 T 5 D	0.05 T <0.040 D	280 T 5 D	<0.040 T <0.040 D	280 T 5 D	0.06 T 0.037 D	280 T 5 D	<0.020 T <0.020D	280 T 5 D	<0.092 T <0.2 D	280 T 5 D	<0.092 T <0.092 D	280 T 5 D	<0.2 T <0.2 D	280 T 5 D	<0.062 T <0.2 D
Nickel	28,000 T 2044 D	22.2 T 3.5 D	28,000 T 1,801 D	25.2 T 2.2 D	28,000 T 2,195 D	16.2 T 4.5 D	28,000 T 1,661 D	7.9 T 2.3 D	28,000 T 8,227 D	34.0 T 18.0 D	28,000 T 2,729.4 D	10.0 T 4.6 D	28,000 T 1,911 D	5.7 T 2.7 D	28,000 T 910.2 D	3.5 T 0.7 D	28,000 T 3,846 D	11.7 T 6.3 D	28,000 T 1,291 D	5.1 T <5.0 D
Selenium	33 T	<0.85 T&D	33 T	1.3 T 0.5 D	33 T	0.63 T 0.7 D	33 T	0.65 T 0.6 D	33 T	1.5 T 1.3 D	33 T	<0.60 T 0.3 D	33 T	0.64 T 0.4 D	33 T	0.25 T 0.1 D	33 T	0.99 T <5 D	33 T	<0.40 T <5.0 D
Silver	4,667 T 0.76 D	0.2 T <0.2 D	4,667 T 0.62 D	0.4 T <0.2 D	4,667 T 0.88 D	0.3 T <0.15 D	4,667 T 0.496 D	<0.15 T <0.15 D	4,667 T 12.88 D	0.4 T <0.15 D	4,667 T 1.364 D	<0.15 T <0.15 D	4,667 T 0.667D	<0.20 T <0.20 D	4,667 T 0.146 D	<0.08 T <0.08 D	4,667 T 2.75 D	<0.25 T *<5 D*	4,667 T 0.30 D	<0.25 T *<5.0 D*
Thallium	75 T	<0.2 T&D	75 T	<0.2 T <0.08 D	75 T	<0.20 T&D	75 T	<0.20 T <0.20 D	75 T	<0.20 T <0.20 D	75 T	<0.20 T <0.08 D	75 T	0.12 T <0.04 D	75 T	0.07 T <0.04 D	75 T	0.4 T <5 D	75 T	<0.15 T <5.0 D
Zinc	280,000 T 546 D	387 T 22 D	280,000 T 481 D	377 T 12.1 D	280,000 T 587 D	336 T 25.6 D	280,000 T 443.8 D	148 T 16.2 D	280,000 T 2,202 D	362 T 109 D	280,000 T 729.8 D	211 T 61.6 D	280,000 T 510.9 D	77 T 19.2 D	280,000 T 242.8 D	63.3 T 8.4 D	280,000 T 1,029 D	209 T 70 D	280,000 T 345 D	141 T 12.0 D
Organic Toxic Pollutants																				
Total Petroleum Hydrocarbons (TPH) (mg/L) [2]	NS	<10	NS	<10	NS	<10	NS	<10	NS	<11	NS	<11	NS	<10	NS	<12	NS	<11	NS	<5.7
Total Oil and Grease (mg/L) [2]	NS	<10	NS	<5	NS	<10	NS	5.3	NS	<5.6	NS	<5.7	NS	<5.0	NS	<6.0	NS	<5.6	NS	<5.7
VOCs, Semi-VOCs, & Pesticides (µg/L) [2]																				
Acrolein	467	<0.37	467	<0.37	467	<0.293	467	<0.20	467	<2.0	467	<0.20	467	<2.00	467	<0.40	467	<3.90	467	<0.78
Acrylonitrile	37,333	<0.17	37,333	<0.17	37,333	<0.226	37,333	<0.16	37,333	<1.6	37,333	<0.16	37,333	<0.70	37,333	<0.14	37,333	<2.65	37,333	<0.53
Benzene	3,733	<0.46	3,733	<0.20	3,733	<0.75	3,733	<0.75	3,733	<1.20	3,733	<0.24	3,733	<1.20	3,733	<0.13	3,733	<0.65	3,733	<0.46

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Bromoform	18,667	<0.83	18,667	<0.25	18,667	<2.15	18,667	<2.15	18,667	<2.35	18,667	<0.47	18,667	<2.35	18,667	<0.28	18,667	<1.40	18,667	<0.68
Carbon tetrachloride	1,307	<0.46	1,307	<0.31	1,307	<1.65	1,307	<1.65	1,307	<1.30	1,307	<0.26	1,307	<1.30	1,307	<0.23	1,307	<1.15	1,307	<0.31
Chlorobenzene	18,667	<0.74	18,667	<0.25	18,667	<1.40	18,667	<1.40	18,667	<0.80	18,667	<0.16	18,667	<0.80	18,667	<0.13	18,667	<0.65	18,667	<0.50
Chlorodibromomethane	18,667	<0.78	18,667	<0.21	18,667	<1.30	18,667	<1.30	18,667	<0.90	18,667	<0.18	18,667	<0.90	18,667	<0.24	18,667	<1.20	18,667	<0.61
Chloroethane (ethyl chloride)	NS	<0.45	NS	<0.14	NS	<1.35	NS	<1.35	NS	<1.10	NS	<0.22	NS	<1.10	NS	<0.19	NS	<0.95	NS	<0.40
2-chloroethylvinyl ether	NS	<0.174	NS	<0.174	NS	<0.22	NS	<0.184	NS	<2.2	NS	<0.22	NS	<0.95	NS	<0.19	NS	<2.65	NS	<0.53
Chloroform	9,333	0.46	9,333	<0.40	9,333	<1.05	9,333	<1.05	9,333	<1.15	9,333	<0.23	9,333	<1.15	9,333	<0.14	9,333	<0.70	9,333	<0.49
Dichlorobromomethane	18,667	<0.59	18,667	<0.23	18,667	<0.75	18,667	<0.75	18,667	<1.15	18,667	<0.23	18,667	<1.15	18,667	<0.15	18,667	<0.75	18,667	<0.49
1,1-dichloroethane	NS	<0.43	NS	<0.18	NS	<0.65	NS	<0.65	NS	<1.30	NS	<0.26	NS	<1.30	NS	<0.19	NS	<0.95	NS	<0.42
1,2-dichloroethane	186,667	<0.49	186,667	<0.20	186,667	<0.80	186,667	<0.80	186,667	<1.25	186,667	<0.25	186,667	<1.25	186,667	<0.11	186,667	<0.55	186,667	<0.51
1,1-dichloroethylene	46,667	<0.42	46,667	<0.23	46,667	<1.85	46,667	<1.85	46,667	<1.40	46,667	<0.28	46,667	<1.40	46,667	<0.27	46,667	<1.35	46,667	<0.34
1,2-dichloropropane	84,000	<0.50	84,000	<0.22	84,000	<0.75	84,000	<0.75	84,000	<1.25	84,000	<0.25	84,000	<1.25	84,000	<0.18	84,000	<0.90	84,000	<0.49
1,3-dichloropropylene	28,000	cis<0.57 trans<0.69	28,000	cis<0.19 trans<0/19	28,000	cis<0.50 trans<0.75	28,000	cis<0.50 trans<0.75	28,000	cis <1.20 trans <1.10	28,000	cis <0.24 trans <0.22	28,000	cis <1.20 trans <1.10	28,000	cis <0.13 trans <0.13	28,000	cis <0.65 trans <0.65	28,000	cis <0.51 trans <0.50
Ethylbenzene	93,333	<0.67	93,333	<0.27	93,333	<1.45	93,333	<1.45	93,333	<0.65	93,333	<0.13	93,333	<0.65	93,333	<0.15	93,333	<0.75	93,333	<0.46
Methyl bromide	1,307	<0.47	1,307	<0.14	1,307	<0.95	1,307	<0.95	1,307	<0.95	1,307	<0.19	1,307	<0.95	1,307	<0.18	1,307	<0.90	1,307	<0.46
Methyl chloride	NS	<0.43	NS	<0.20	NS	<1.85	NS	<1.85	NS	<1.40	NS	<0.28	NS	<01.40	NS	<0.23	NS	<1.15	NS	<0.46
Methylene chloride	56,000	<0.35	56,000	<0.45	56,000	<1.40	56,000	1.8	56,000	<1.00	56,000	<0.20	56,000	<1.00	56,000	<0.20	56,000	<1.00	56,000	<0.81
1,1,2,2-tetrachloroethane	93,333	<0.93	93,333	<0.11	93,333	<2.45	93,333	<2.45	93,333	<2.00	93,333	<0.40	93,333	<2.00	93,333	<0.35	93,333	<1.75	93,333	<0.80
Tetrachloroethylene	9,333	<0.48	9,333	<0.26	9,333	<1.15	9,333	<1.15	9,333	<1.05	9,333	<0.21	9,333	<1.05	9,333	<0.13	9,333	<0.65	9,333	<0.35
Toluene	373,333	<0.48	373,333	<0.23	373,333	<0.60	373,333	<0.60	373,333	<0.95	373,333	<0.19	373,333	<0.95	373,333	<0.11	373,333	<0.55	373,333	<0.43
1,2-trans-dichloroethylene	18,667	<0.40	18,667	<0.14	18,667	<0.85	18,667	<0.85	18,667	<1.25	18,667	<0.25	18,667	<1.25	18,667	<0.18	18,667	<0.90	18,667	<0.38
1,1,1-trichloroethane	$1.867 \times 10^{+6}$	<0.48	$1.867 \times 10^{+6}$	<0.28	$1.867 \times 10^{+6}$	<1.15	$1.867 \times 10^{+6}$	<1.15	$1.867 \times 10^{+6}$	<1.00	$1.867 \times 10^{+6}$	<0.20	$1.867 \times 10^{+6}$	<1.00	$1.867 \times 10^{+6}$	<0.14	$1.867 \times 10^{+6}$	<0.70	$1.867 \times 10^{+6}$	<0.34
1,1,2-trichloroethane	3,733	<0.79	3,733	<0.22	3,733	<1.20	3,733	<1.20	3,733	<0.75	3,733	<0.15	3,733	<0.75	3,733	<0.13	3,733	<0.65	3,733	<0.60
Trichloroethylene	280	<0.38	280	<0.35	280	<1.20	280	<1.20	280	<0.75	280	<0.15	280	<0.75	280	<0.22	280	<1.10	280	<0.48
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	NS	<0.25 <0.21	NS	<1.0 <1.0	NS	<5.0 <5.0	NS	<5.0 <5.0	NS	<5.0 <5.0	NS	<1.0 <1.0	NS	<5.0 <5.0	NS	<1.0 <1.0	NS	<5.0 <5.0	NS	<1.0 <1.0
Vinyl chloride	2,800	<0.47	2,800	<0.19	2,800	<2.50	2,800	<2.50	2,800	<1.00	2,800	<0.20	2,800	<1.00	2,800	<0.22	2,800	<1.10	2,800	<0.35
Xylenes, Total	186,667	<0.19	186,667	<0.51	186,667	<2.90	186,667	<2.90	186,667	<1.50	186,667	<0.30	186,667	<1.50	186,667	<0.13	186,667	<0.65	186,667	<0.52
Acid Compounds (µg/L) [2]																				
2-chlorophenol	4,667	<110.5	4,667	<44.2	4,667	<57.0	4,667	<22.8	4,667	<214.5	4,667	<90.1	4,667	<29.6	4,667	<1.48	4,667	<3.13	4,667	<3.10
2,4-dichlorophenol	2,800	<121.0	2,800	<48.4	2,800	<61.0	2,800	<24.4	2,800	<211.0	2,800	<88.6	2,800	<33.0	2,800	<1.65	2,800	<2.84	2,800	<2.81
2,4-dimethylphenol	18,667	<86.0	18,667	<34.4	18,667	<73.0	18,667	<29.2	18,667	<114.0	18,667	<47.9	18,667	<44.0	18,667	<2.20	18,667	<2.67	18,667	<2.64
4,6-dinitro-o-cresol	3,733	<109.0	3,733	<43.6	3,733	<69.0	3,733	<27.6	3,733	<149.0	3,733	<62.6	3,733	<24.4	3,733	<1.22	3,733	<1.50	3,733	<1.49
2,4-dinitrophenol	1,867	<50.0	1,867	<20.0	1,867	<69.5	1,867	<27.8	1,867	<129.5	1,867	<54.4	1,867	<22.6	1,867	<1.13	1,867	<2.23	1,867	<2.21
2-nitrophenol	NS	<115.5	NS	<46.2	NS	<139.0	NS	<55.6	NS	<205.5	NS	<86.3	NS	<31.4	NS	<1.57	NS	<2.87	NS	<2.84

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5 The sample was lost during extraction at the laboratory due to the glassware breaking.
6 There were no representative storm events (>0.20 inches) that occurred or no representative events without a measurable rain event in the previous 72 hours.

IB008	Summer 2011		Winter 2011/12		Summer 2012		Winter 2012/13		Summer 2013		Winter 2013/14		Summer 2014		Winter 2014/15		Summer 2015		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**7/04/11**	**SWQS**	**11/5/11**	**SWQS**	**8/21/12**	**SWQS**	**12/14/12**	**SWQS**	**7/19/13**	**SWQS**	**11/22/13**	**SWQS**	**8/2/14**	**SWQS**	**12/2/14**	**SWQS**	**6/29/15**	**SWQS**	**1/04/16**
4-nitrophenol	NS	<398.5	NS	<159.4	NS	<408.0	NS	<163.2	NS	<233.5	NS	<98.1	NS	<22.8	NS	<1.14	NS	<3.01	NS	<2.98
p-chloro-m-cresol	48,000	<98.0	48,000	<39.2	48,000	<93.0	48,000	<37.2	48,000	<220.5	48,000	<92.6	48,000	<33.0	48,000	<1.65	48,000	<1.89	48,000	<1.87
Pentachlorophenol	56.111	*<218.5*	193.236	<87.4	75.855	*<103.5*	78.211	<41.4	44.084	*<168.0*	147.244	<70.6	58.434	<27.8	60.177	<1.39	46.695	<1.48	61.40	<1.47
Phenol	180,000	<100.0	180,000	<40.0	180,000	<59.5	180,000	<23.8	180,000	<177.5	180,000	<74.6	180,000	<26.8	180,000	<1.34	180,000	<2.32	180,000	<2.30
2,4,6-trichlorophenol	130	*<259.0*	130	<103.6	130	*<140.0*	130	<56.0	130	*<239.5*	130	<100.6	130	<37.8	130	<1.89	130	<2.63	130	<2.60
Bases/Neutrals (µg/L) [2]																				
Acenaphthene	56,000	<65.5	56,000	<26.2	56,000	<85.0	56,000	<34.0	56,000	<67.0	56,000	<28.1	56,000	<20.6	56,000	<1.03	56,000	<0.35	56,000	<0.35
Acenaphthylene	NS	<77.0	NS	<30.8	NS	<63.5	NS	<25.4	NS	<86.5	NS	<36.3	NS	<20.0	NS	<1.00	NS	<1.24	NS	<1.23
Anthracene	280,000	<82.0	280,000	<32.8	280,000	<44.5	280,000	<17.8	280,000	<86.5	280,000	<36.3	280,000	<57.6	280,000	<2.88	280,000	<0.44	280,000	<0.44
Benzo(a)anthracene	0.2	*<132.5*	0.2	*<53.0*	0.2	*<78.5*	0.2	*<31.4*	0.2	*<86.5*	0.2	*<36.3*	0.2	*<21.6*	0.2	*<1.08*	0.2	*<0.38*	0.2	*<0.38*
Benzo(a)pyrene	0.2	*<223.5*	0.2	*<89.4*	0.2	*<96.5*	0.2	*<38.6*	0.2	*<93.5*	0.2	*<39.3*	0.2	*<75.4*	0.2	*<3.77*	0.2	*<1.42*	0.2	*<1.41*
Benzo(b)fluoranthene	NS	<196.0	NS	<78.4	NS	<169.5	NS	<67.8	NS	<121.5	NS	<51.0	NS	<29.2	NS	<1.46	NS	<1.07	NS	<1.06
Benzo(g,h,i)perylene	NS	<170.0	NS	<68.0	NS	<70.5	NS	<28.2	NS	<86.5	NS	<36.3	NS	<25.8	NS	<1.29	NS	<0.73	NS	<0.72
Benzo(k)fluoranthene	1.9	*<150.0*	1.9	*<60.0*	1.9	*<57.5*	1.9	*<23.0*	1.9	*<70.0*	1.9	*<29.4*	1.9	*<20.8*	1.9	<1.04	1.9	<0.35	1.9	<0.35
Chrysene	19	*<128.0*	19	*<51.2*	19	*<44.5*	19	<17.8	19	*<74.0*	19	*<31.1*	19	*<28.2*	19	<1.41	19	<0.46	19	<0.46
Dibenz(a,h)anthracene	1.9	*<203.0*	1.9	*<81.2*	1.9	*<202.5*	1.9	*<81.0*	1.9	*<99.0*	1.9	*<41.6*	1.9	*<24.8*	1.9	<1.24	1.9	<0.47	1.9	<0.47
1,2-dichlorobenzene	5,900	<63.5	5,900	<25.4	5,900	<108.5	5,900	<43.4	5,900	<13.5	5,900	<5.7	5,900	<35.2	5,900	<1.76	5,900	<1.05	5,900	<1.04
1,3-dichlorobenzene	NS	<59.5	NS	<23.8	NS	<121.0	NS	<48.4	NS	<56.5	NS	<23.7	NS	<34.8	NS	<1.74	NS	<0.47	NS	<0.47
1,4-dichlorobenzene	6,500	<71.0	6,500	<28.4	6,500	<106.5	6,500	<42.6	6,500	<52.5	6,500	<22.0	6,500	<31.2	6,500	<1.56	6,500	<1.29	6,500	<1.28
3,3-dichlorobenzidine	3	*<590.0*	3	<236.0	3	*<369.0*	3	*<147.6*	3	*<1363.5*	3	*<572.7*	3	*<121.2*	3	*<6.06*	3	*<11.72*	3	*<11.60*
Diethyl phthalate	746,667	<96.0	746,667	<38.4	746,667	<74.0	746,667	<29.6	746,667	<95.0	746,667	<39.9	746,667	<47.4	746,667	<2.37	746,667	<0.36	746,667	<0.36
Dimethyl phthalate	NS	<84.5	NS	<33.8	NS	<60.5	NS	<24.2	NS	<89.5	NS	<37.6	NS	<48.4	NS	<2.42	NS	<0.47	NS	<0.47
Di-n-butyl phthalate	1,100	<213.0	1,100	<85.2	1,100	<114.5	1,100	<45.8	1,100	<111.5	1,100	<46.8	1,100	<37.0	1,100	<1.85	1,100	<0.31	1,100	<0.31
2,4-dinitrotoluene	1,867	<134.5	1,867	<53.8	1,867	<65.5	1,867	<26.2	1,867	<102.5	1,867	<43.0	1,867	<42.4	1,867	<2.12	1,867	<0.26	1,867	<0.26
2,6-dinitrotoluene	3,733	<194.0	3,733	<77.6	3,733	<93.5	3,733	<37.4	3,733	<126.0	3,733	<52.9	3,733	<22.4	3,733	<1.12	3,733	<0.38	3,733	<0.38
Di-n-octyl phthalate	373,333	<393.0	373,333	<157.2	373,333	<206.5	373,333	<82.6	373,333	<144.0	373,333	<60.5	373,333	<22.0	373,333	<1.10	373,333	<1.29	373,333	<1.28
1,2-diphenylhydrazine (as azobenzene)	NS	<72.0	NS	<28.8	NS	<53.5	NS	<21.4	NS	<116.5	NS	<48.9	NS	<134.0	NS	<6.70	NS	<1.07	NS	<1.06
Fluoranthene	37,333	<122.5	37,333	<49.0	37,333	<33.5	37,333	<13.4	37,333	<89.5	37,333	<37.6	37,333	<27.0	37,333	<1.35	37,333	<0.27	37,333	<0.27
Fluorene	37,333	<65.5	37,333	<26.2	37,333	<84.0	37,333	<33.6	37,333	<77.0	37,333	<32.3	37,333	<96.2	37,333	<4.81	37,333	<0.29	37,333	<0.29
Hexachlorobenzene	747	<75.0	747	<30.0	747	<65.0	747	<26.0	747	<69.5	747	<29.2	747	<24.6	747	<1.23	747	<0.34	747	<0.34
Hexachlorobutadiene	187	<92.0	187	<36.8	187	<68.5	187	<27.4	187	<16.5	187	<6.9	187	<36.4	187	<1.82	187	<1.69	187	<1.67
Hexachlorocyclopentadiene	11,200	<187.0	11,200	<74.8	11,200	<66.0	11,200	<26.4	11,200	<113.5	11,200	<47.7	11,200	<24.6	11,200	<1.23	11,200	<1.55	11,200	<1.53
Hexachloroethane	850	<67.0	850	<26.8	850	<70.0	850	<28.0	850	<20.0	850	<8.4	850	<32.4	850	<1.62	850	<1.24	850	<1.23
Indeno(1,2,3-cd)pyrene	1.9	*<209.5*	1.9	*<83.8*	1.9	*<166.5*	1.9	*<66.6*	1.9	*<101.5*	1.9	*<42.6*	1.9	*<27.8*	1.9	<1.39	1.9	<0.63	1.9	<0.62
Isophorone	186,667	<86.5	186,667	<34.6	186,667	<95.0	186,667	<38.0	186,667	<70.5	186,667	<29.6	186,667	<42.8	186,667	<2.14	186,667	<0.37	186,667	<0.37
Naphthalene	18,667	<51.5	18,667	<20.6	18,667	<71.0	18,667	<28.4	18,667	<60.0	18,667	<25.2	18,667	<36.6	18,667	<1.83	18,667	<0.36	18,667	<0.36

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SAMPLING DATE(S):	**SWQS**	**7/04/11**	**SWQS**	**11/5/11**	**SWQS**	**8/21/12**	**SWQS**	**12/14/12**	**SWQS**	**7/19/13**	**SWQS**	**11/22/13**	**SWQS**	**8/2/14**	**SWQS**	**12/2/14**	**SWQS**	**6/29/15**	**SWQS**	**1/04/16**
Nitrobenzene	467	<119.0	467	<47.6	467	<65.5	467	<26.2	467	<61.5	467	<25.8	467	<42.0	467	<2.10	467	<1.27	467	<1.26
N-nitrosodimethylamine	0.03	*<51.5*	0.03	*<20.6*	0.03	*<82.0*	0.03	*<32.8*	0.03	*<60.0*	0.03	*<25.2*	0.03	*<20.0*	0.03	*<1.00*	0.03	*<1.14*	0.03	*<1.13*
N-nitrosodi-n-propylamine	88,667	<132.5	88,667	<53.0	88,667	<94.0	88,667	<37.6	88,667	<75.5	88,667	<31.7	88,667	<23.0	88,667	<1.15	88,667	<1.18	88,667	<1.17
N-nitrosodiphenylamine	290	<82.0	290	<32.8	290	<50.0	290	<20.0	290	<152.0	290	<63.8	290	<71.4	290	<3.57	290	<1.16	290	<1.15
Phenanthrene	NS	<64.0	NS	<25.6	NS	<38.0	NS	<15.2	NS	<81.5	NS	<34.2	NS	<27.8	NS	<1.39	NS	<0.31	NS	<0.31
Pyrene	28,000	<122.5	28,000	<49.0	28,000	<116.5	28,000	<46.6	28,000	<82.0	28,000	<34.4	28,000	<77.2	28,000	<3.86	28,000	<0.68	28,000	<0.67
1,2,4-trichlorobenzene	9,333	<71.0	9,333	<28.4	9,333	<133.0	9,333	<53.2	9,333	<16.0	9,333	<6.7	9,333	<33.8	9,333	<1.69	9,333	<1.05	9,333	<1.04
Pesticides (µg/L) [2]																				
Aldrin	4.5	0.207	4.5	<0.013	4.5	<0.058	4.5	<0.046	4.5	<0.047	4.5	0.043	4.5	<0.027	4.5	<0.027	4.5	<0.012	4.5	0.078
Alpha-BHC	1,600	<0.016	1,600	<0.016	1,600	<0.044	1,600	<0.038	1,600	<0.039	1,600	<0.017	1,600	<0.021	1,600	<0.021	1,600	<0.058	1,600	<0.058
Beta-BHC	560	<0.085	560	0.271	560	<0.048	560	<0.095	560	<0.098	560	<0.092	560	<0.072	560	<0.072	560	<0.063	560	<0.063
Gamma-BHC	11	<0.014	11	0.048	11	<0.055	11	<0.033	11	<0.034	11	<0.023	11	<0.034	11	<0.034	11	<0.058	11	<0.058
Delta-BHC	1,600	<0.016	1,600	<0.016	1,600	<0.035	1,600	<0.032	1,600	<0.033	1,600	<0.018	1,600	<0.021	1,600	<0.021	1,600	<0.066	1,600	<0.066
Chlordane	3.2	<0.35	3.2	<0.35	3.2	<0.29	3.2	<0.16	3.2	<0.16	3.2	<0.020	3.2	<0.14	3.2	<0.14	3.2	<0.36	3.2	<0.36
4,4'-DDT	1.1	<0.020	1.1	<0.020	1.1	<0.052	1.1	<0.029	1.1	<0.030	1.1	<0.016	1.1	<0.025	1.1	<0.025	1.1	<0.017	1.1	<0.017
4,4'-DDE	1.1	<0.011	1.1	<0.011	1.1	<0.036	1.1	<0.034	1.1	<0.035	1.1	<0.018	1.1	<0.010	1.1	<0.010	1.1	<0.013	1.1	<0.013
4,4'-DDD	1.1	<0.017	1.1	<0.017	1.1	<0.031	1.1	<0.023	1.1	<0.024	1.1	<0.014	1.1	<0.031	1.1	<0.031	1.1	<0.021	1.1	<0.021
Dieldrin	4	<0.024	4	<0.024	4	<0.045	4	0.033	4	<0.029	4	<0.022	4	<0.030	4	<0.030	4	<0.060	4	<0.060
Alpha-endosulfan	3 T	<0.010	3 T	<0.010	3 T	<0.048	3 T	<0.034	3 T	0.090	3 T	<0.018	3 T	0.054	3 T	0.061	3 T	<0.072	3 T	<0.072
Beta-endosulfan	3 T	<0.021	3 T	<0.021	3 T	<0.054	3 T	<0.034	3 T	<0.035	3 T	<0.013	3 T	<0.032	3 T	<0.032	3 T	<0.019	3 T	<0.019
Endosulfan sulfate	3	<0.015	3	<0.015	3	<0.030	3	<0,.025	3	<0.026	3	<0.014	3	<0.008	3	<0.008	3	<0.016	3	<0.016
Endrin	0.7	<0.019	0.7	<0.019	0.7	<0.036	0.7	<0.035	0.7	<0.036	0.7	<0.016	0.7	<0.017	0.7	<0.017	0.7	<0.023	0.7	<0.023
Endrin aldehyde	0.7	<0.015	0.7	<0.015	0.7	<0.014	0.7	<0.038	0.7	<0.039	0.7	<0.023	0.7	<0.032	0.7	<0.032	0.7	<0.026	0.7	<0.026
Heptachlor	0.9	<0.012	0.9	<0.012	0.9	<0.045	0.9	<0.035	0.9	<0.036	0.9	<0.018	0.9	<0.027	0.9	<0.027	0.9	<0.035	0.9	<0.035
Heptachlor epoxide	0.9	<0.010	0.9	<0.010	0.9	<0.045	0.9	<0.032	0.9	<0.033	0.9	<0.020	0.9	<0.008	0.9	<0.008	0.9	<0.062	0.9	<0.062
PCB-1242	[4]	<0.40	[4]	<0.40	[4]	<0.34	[4]	<0.41	[4]	<0.42	[4]	<0.55	[4]	<0.37	[4]	<0.37	[4]	<0.14	[4]	<0.14
PCB-1254	[4]	<0.22	[4]	<0.22	[4]	<0.34	[4]	<0.20	[4]	<0.21	[4]	<0.28	[4]	<0.23	[4]	<0.23	[4]	<0.20	[4]	<0.20
PCB-1221	[4]	<0.34	[4]	<0.34	[4]	<0.55	[4]	<0.68	[4]	<0.70	[4]	<0.85	[4]	<0.22	[4]	<0.22	[4]	<0.64	[4]	<0.64
PCB-1232	[4]	<0.41	[4]	<0.41	[4]	<0.77	[4]	<0.66	[4]	<0.68	[4]	<0.34	[4]	<0.55	[4]	<0.55	[4]	<0.37	[4]	<0.37
PCB-1248	[4]	<0.21	[4]	<0.21	[4]	<0.30	[4]	<0.78	[4]	<0.80	[4]	<0.27	[4]	<0.19	[4]	<0.19	[4]	<0.22	[4]	<0.22
PCB-1260	[4]	<0.19	[4]	<0.19	[4]	<0.34	[4]	<0.21	[4]	<0.22	[4]	<0.23	[4]	<0.32	[4]	<0.32	[4]	<0.59	[4]	<0.59
PCB-1016	[4]	<0.26	[4]	<0.26	[4]	<0.37	[4]	<0.36	[4]	<0.37	[4]	<0.33	[4]	<0.18	[4]	<0.18	[4]	<0.55	[4]	<0.55
Toxaphene	11	<0.33	11	<0.33	11	<0.79	11	<0.53	11	<0.55	11	<0.34	11	<0.22	11	<0.22	11	<0.60	11	<0.60

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OUTFALL ID: SC046

RECEIVING WATER: Skunk Creek Wash

DESIGNATED USES: A&We, PBC

	Summer 2011		Winter 2011/12		Summer 2012		Winter 2012/13		Summer 2013		Winter 2013/14		Summer 2014		Winter 2014/15		Summer 2015		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**None[6]**	**SWQS**	**11/5/11**	**SWQS**	**7/21/12**	**SWQS**	**1/26/13**	**SWQS**	**8/24/13**	**SWQS**	**11/22/13**	**SWQS**	**8/2/14**	**SWQS**	**12/4/14**	**SWQS**	**10/6/15**	**SWQS**	**4/8/16**
MONITORING PARAMETERS [1, 2]																				
Conventional Parameters																				
Flow [3] (cfs)			NS	0.889	NS	2.081	NS	0.69	NS	0.996	NS	0.16	NS	0.245	NS	0.088	NS	4.852	NS	3.363
pH			6.5-9	7.25	6.5-9	7.4	6.5-9	7.60	6.5-9	8.00	6.5-9	8.01	6.5-9	7.06	6.5-9	7.26	6.5-9	7.51	6.5-9	6.87
Temperature (ºC)			Varies	14.5	Varies	30.0	Varies	14.5	Varies	27.5	Varies	14.5	Varies	28.5	Varies	16.0	Varies	20.5	Varies	19.2
Hardness (mg/L)			400	18	400	<16.6	400	18.2	400	23.7	400	17.4	400	176	400	24.6	400	23.8	400	43.0
Total Dissolved Solids (TDS) (mg/L) [2]			NS	48	NS	180	NS	36	NS	88	NS	48	NS	534	NS	56	NS	118	NS	178
Total Suspended Solids (TSS) (mg/L) [2]			NS	147	NS	204	NS	38.0	NS	291	NS	57.2	NS	72	NS	14.7	NS	2,490	NS	133
Biochemical Oxygen Demand (BOD) (mg/L) [2]			NS	8	NS	56	NS	8	NS	21	NS	8	NS	167	NS	8	NS	15	NS	100
Chemical Oxygen Demand (COD) (mg/L) [2]			NS	60	NS	280	NS	<50	NS	150	NS	<50	NS	620	NS	<50	NS	310	NS	300

SC046	Summer 2011		Winter 2011/12		Summer 2012		Winter 2012/13		Summer 2013		Winter 2013/14		Summer 2014		Winter 2014/15		Summer 2015		Winter 2015/16	
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Inorganics																				
Cyanide, total (µg/L) [2]			84	<5.0	84	<5	84	<5	84	<5	84	<5	84	<5	84	<5	84	<5	84	<5
Nutrients (mg/L) [2]																				
Nitrate + Nitrite as N			NS	0.4	NS	1.0	NS	1.9	NS	1.2	NS	0.5	NS	<0.1	NS	0.6	NS	1.1	NS	0.7
Ammonia as N			NS	0.37	NS	1.5	NS	0.32	NS	1.3	NS	0.30	NS	3.7	NS	0.29	NS	0.50	NS	1.2
Total Kjeldahl Nitrogen (TKN)			NS	1.3	NS	5.1	NS	1.3	NS	3.1	NS	0.98	NS	17	NS	0.75	NS	5.6	NS	10
Total Phosphorus as P			NS	0.43	NS	0.58	NS	0.32	NS	0.90	NS	0.26	NS	1.5	NS	0.19	NS	5.3	NS	0.86
Ortho-Phosphorus as P			NS	0.1	NS	0.6	NS	<0.1	NS	0.2	NS	0.1	NS	0.5	NS	<0.1	NS	0.2	NS	0.7
Microbiological																				
Escherichia coli (*E. coli*) (CFU/100 mg or MPN) [2]			575	**>2,419.6**	575	**>2,419.6**	575	**>2,419.6**	575	61.6	575	**>2,419.6**	575	**>2,419.6**	575	**1,413.6**	575	**1,046.2**	575	**1,732.9**

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Total Metals (µg/L) [2]																				
Antimony			747 T	0.42 T <0.12 D	747 T	0.85 T 0.4 D	747 T	<0.25 T 0.2 D	747 T	0.71 T 0.3 D	747 T	0.27 T 0.2 D	747 T	1.1 T 1 D	747 T	0.24 T 0.2 D	747 T	0.38 T <5.0 D	747 T	0.70 T <5.0 D
Arsenic			280 T 440 D	1.8 T 0.4 D	280 T 440 D	4.0 T 1.5 D	280 T 440 D	0.95 T 0.6 D	280 T 440 D	3.2 T 0.8 D	280 T 440 D	<1.0 T 0.5 T	280 T 440 D	4.4 T 3.6 D	280 T 440 D	1.0 T 0.6 D	280 T 440 D	13.4 T <5.0 D	280 T 440 D	1.9 T <5.0 D
Barium			98,000 T	59 T 6 D	98,000 T	96 T 25 D	98,000 T	25 T 6 D	98,000 T	119 T 12 D	98,000 T	21 T 5 T	98,000 T	113 T 94 D	98,000 T	12 T 7 D	98,000 T	831 T 14 D	98,000 T	64 T 19 D
Beryllium			1,867 T	<0.15 T <0.06 D	1,867 T	0.33 T <0.15 D	1,867 T	<0.15 T <0.06 D	1,867 T	0.36 T <0.06 D	1,867 T	<0.15 T <0.06 D	1,867 T	<0.15 T <0.06 D	1,867 T	<0.06 T <0.06 D	1,867 T	3.5 T <5.0 D	1,867 T	0.15 T <5.0 D
Cadmium			700 T 4.29	<0.25 T <0.1 D	700 T 3.97 D	<0.25 T <0.25 D	700 T 4.34 D	<0.25 T <0.10 D	700 T 5.61 D	<0.25 T <0.10 D	700 T 4.15 D	<0.25 T <0.10 D	700 T 39.50 D	<0.30 T <0.12 D	700 T 5.82 D	0.2 T <0.12 D	700 T 5.63 D	1.2 T <5.0 D	700 T 10.03 D	<0.15 T <5.0 D
Chromium			NS	5.1 T <1.8 D	NS	8.9 T <2.00 D	NS	<2.00 T <0.80 D	NS	9.4 T <0.80 D	NS	<2.00 T <0.80 D	NS	3.2 T 1 D	NS	1.2 T <0.36 D	NS	36.4 T <5.0 D	NS	6.0 T <5.0 D
Copper			1,300 T 4.62 D	14.5 T 2.9 D	1,300 T 4.28 D	32.7 T **15.8 D**	1,300 T 4.67 D	9.3 T 2.9 D	1,300 T 5.99 D	35.7 T **7.1 D**	1,300 T 4.48 D	14.0 T **5.6 D**	1,300 T 39.62 D	33.3 T 24.1 D	1,300 T 6.20 D	6.6 T 5.2 D	1,300 T 6.01 D	88.5 T **8.9 D**	1,300 T 10.50 D	33.5 T **32.1 D**
Lead			15 T 20.21 D	5.2 T <0.2 D	15 T 18.45 D	7.7 T <0.45 D	15 T 20.47 D	2.3 T <0.18 D	15 T 27.59 D	9.4 T 0.2 D	15 T 19.45 D	1.8 T <0.18 D	15 T 250.76 D	4.1 T 1.7 D	15 T 27.77 D	0.7 T 0.1 D	15 T 27.72 D	**140 T** <5.0 D	15 T 53.78 D	14.1 T <5.0 D
Mercury			280 T 5 D	<0.092 T&D	280 T 5 D	0.05 T <0.040 D	280 T 5 D	<0.040 T&D	280 T 5 D	0.09 T 0.047 D	280 T 5 D	<0.020 T <0.020 D	280 T 5 D	<0.092 T <0.2 D	280 T 5 D	<0.092 T <0.092 D	280 T 5 D	0.12 T <0.2 D	280 T 5 D	<0.062 T <0.2 D
Nickel			28,000 T 975 D	5.2 T 0.6 D	28,000 T 910 D	12.2 T 4.3 D	28,000 T 984 D	1.9 T 0.6 D	28,000 T 1,229.8 D	11.3 T 1.4 D	28,000 T 947.4 D	2.0 T 0.7 D	28,000 T 6,708 D	7.5 T 6.1 D	28,000 T 1,269.4 D	1.2 T 0.7 D	28,000 T 1,234.2 D	42.9 T <5.0 D	28,000 T 2,036 D	6.4 T <5.0 D
Selenium			33 T	<0.85 T <1 D	33 T	<0.60 T <0.60 D	33 T	<0.60 T <0.24 D	33 T	<0.60 T 0.3 D	33 T	<0.60 T <0.24 D	33 T	1 T 0.7 D	33 T	0.19 T 0.1 D	33 T	2.2 T <5.0 D	33 T	0.45 T <5.0 D
Silver			4,667 T 0.17 D	*<0.2 T&D*	4,667 T 0.15 D	<0.15 T <0.15 D	4,667 T 0.17 D	<0.15 T <0.15 D	4,667 T 0.274 D	<0.15 T <0.15 D	4,667 T 0.158 D	<0.15 T <0.15 D	4,667 T 8.51 D	<0.20 T <0.20 D	4,667 T 0.292 D	0.2 T <0.08 D	4,667 T 0.28 D	0.4 T *<5.0 D*	4,667 T 0.75 D	<0.25 T *<5.0 D*
Thallium			75 T	<0.2 T <0.08 D	75 T	0.52 T <0.20 D	75 T	<0.20 T <0.08 D	75 T	<0.20 T <0.08 D	75 T	<0.20 T <0.08 D	75 T	<0.10 T <0.04 D	75 T	<0.04 T <0.04 D	75 T	0.46 T <5.0 D	75 T	0.19 T <5.0 D
Zinc			280,000 T 260 D	123 T 16.6 D	280,000 T 243 D	151 T 59.0 D	280,000 T 262 D	52.8 T 14.1 D	280,000 T 328.4 D	193 T 31.7 D	280,000 T 252.8 D	50.1 T 17.1 D	280,000 T 1,795 D	174 T 128 D	280,000 T 339.2 D	30.5 T 17.6 D	280,000 T 329.6 D	566 T 7.3 D	280,000 T 544 D	178 T 93.6 D
Organic Toxic Pollutants																				
Total Petroleum Hydrocarbons (TPH) (mg/L) [2]			NS	<10	NS	<10	NS	<10	NS	<11	NS	<11	NS	<10	NS	<10	NS	<5.4	NS	<5.9
Total Oil and Grease (mg/L) [2]			NS	<5	NS	<5	NS	<5.0	NS	<5.4	NS	<5.7	NS	<5.0	NS	<5.0	NS	<5.4	NS	<5.9
VOCs, Semi-VOCs, & Pesticides (µg/L) [2]																				
Acrolein			467	<0.37	467	<0.293	467	<0.293	467	<0.20	467	<0.20	467	<2.00	467	<0.40	467	<0.78	467	<0.41
Acrylonitrile			37,333	<0.17	37,333	<0.226	37,333	<0.226	37,333	<0.16	37,333	<0.16	37,333	<0.70	37,333	<0.14	37,333	<0.53	37,333	<0.42
Benzene			3,733	<0.20	3,733	<1.5	3,733	<0.15	3,733	<1.20	3,733	<0.24	3,733	<1.20	3,733	<0.13	3,733	<2.30	3,733	<2.30
Bromoform			18,667	<0.25	18,667	<4.3	18,667	<0.43	18,667	<2.35	18,667	<0.47	18,667	<2.35	18,667	<0.28	18,667	<3.40	18,667	<3.40
Carbon tetrachloride			1,307	<0.31	1,307	<3.3	1,307	<0.33	1,307	<1.30	1,307	<0.26	1,307	<1.30	1,307	<0.23	1,307	<1.55	1,307	<1.55
Chlorobenzene			18,667	<0.25	18,667	<2.8	18,667	<0.28	18,667	<0.80	18,667	<0.16	18,667	<0.80	18,667	<0.13	18,667	<2.50	18,667	<2.50

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Chlorodibromomethane			18,667	<0.21	18,667	<2.6	18,667	<0.26	18,667	<0.90	18,667	<0.18	18,667	<0.90	18,667	<0.24	18,667	<3.05	18,667	<3.05
Chloroethane (ethyl chloride)			NS	<0.14	NS	<2.7	NS	<0.27	NS	<1.10	NS	<0.22	NS	<1.10	NS	<0.19	NS	<2.00	NS	<2.00
2-chloroethylvinyl ether			NS	<0.174	NS	<0.22	NS	<0.22	NS	<0.22	NS	<0.22	NS	<0.95	NS	<0.19	NS	<0.53	NS	<0.43
Chloroform			9,333	<0.40	9,333	<2.1	9,333	<0.21	9,333	<1.15	9,333	<0.23	9,333	<1.15	9,333	<0.14	9,333	<2.45	9,333	<2.45
Dichlorobromomethane			18,667	<0.23	18,667	<1.5	18,667	<0.15	18,667	<1.15	18,667	<0.23	18,667	<1.15	18,667	<0.15	18,667	<2.45	18,667	<2.45
1,1-dichloroethane			NS	<0.18	NS	<1.3	NS	<0.13	NS	<1.30	NS	<0.26	NS	<1.30	NS	<0.19	NS	<2.10	NS	<2.10
1,2-dichloroethane			186,667	<0.20	186,667	<1.6	186,667	<0.16	186,667	<1.25	186,667	<0.25	186,667	<1.25	186,667	<0.11	186,667	<2.55	186,667	<2.55
1,1-dichloroethylene			46,667	<0.23	46,667	<3.7	46,667	<0.37	46,667	<1.40	46,667	<0.28	46,667	<1.40	46,667	<0.27	46,667	<1.70	46,667	<1.70
1,2-dichloropropane			84,000	<0.22	84,000	<1.5	84,000	<0.15	84,000	<1.25	84,000	<0.25	84,000	<1.25	84,000	<0.18	84,000	<2.45	84,000	<2.45
1,3-dichloropropylene			28,000	<0.19	28,000	<1.0	28,000	<0.10	28,000	<1.20	28,000	<0.24	28,000	<1.20	28,000	<0.13	28,000	cis <2.55 trans <2.50	28,000	cis <2.55 trans <2.50
Ethylbenzene			93,333	<0.27	93,333	<2.9	93,333	<0.29	93,333	<0.65	93,333	<0.13	93,333	<0.65	93,333	<0.15	93,333	<2.30	93,333	<2.30
Methyl bromide			1,307	<0.14	1,307	<1.9	1,307	<0.19	1,307	<0.95	1,307	<0.19	1,307	<0.95	1,307	<0.18	1,307	<2.30	1,307	<2.30
Methyl chloride			NS	<0.20	NS	<3.7	NS	<0.37	NS	<1.40	NS	<0.28	NS	<1.40	NS	<0.23	NS	<2.30	NS	<2.30
Methylene chloride			56,000	<0.45	56,000	<2.8	56,000	<0.28	56,000	<1.00	56,000	<0.20	56,000	<1.00	56,000	<0.20	56,000	<4.05	56,000	<4.05
1,1,2,2-tetrachloroethane			93,333	<0.11	93,333	<4.9	93,333	<0.49	93,333	<2.00	93,333	<0.40	93,333	<2.00	93,333	<0.35	93,333	<4.00	93,333	<4.00
Tetrachloroethylene			9,333	<0.26	9,333	<2.3	9,333	<0.23	9,333	<1.05	9,333	<0.21	9,333	<1.05	9,333	<0.13	9,333	<1.75	9,333	<1.75
Toluene			373,333	<0.23	373,333	<1.2	373,333	<0.12	373,333	<0.95	373,333	<0.19	373,333	<0.95	373,333	<0.11	373,333	<2.15	373,333	<2.15
1,2-trans-dichloroethylene			18,667	<0.14	18,667	<1.7	18,667	<0.17	18,667	<1.25	18,667	<0.25	18,667	<1.25	18,667	<0.18	18,667	<1.90	18,667	<1.90
1,1,1-trichloroethane			$1.867 \times 10^{+6}$	<0.28	$1.867 \times 10^{+6}$	<2.3	$1.867 \times 10^{+6}$	<0.23	$1.867 \times 10^{+6}$	<1.00	$1.867 \times 10^{+6}$	<0.20	$1.867 \times 10^{+6}$	<1.00	$1.867 \times 10^{+6}$	<0.14	$1.867 \times 10^{+6}$	<1.70	$1.867 \times 10^{+6}$	<1.70
1,1,2-trichloroethane			3,733	<0.22	3,733	<2.4	3,733	<0.24	3,733	<0.75	3,733	<0.15	3,733	<0.75	3,733	<0.13	3,733	<3.00	3,733	<3.00
Trichloroethylene			280	<0.35	280	<2.4	280	<0.24	280	<0.75	280	<0.15	280	<0.75	280	<0.22	280	<2.40	280	<2.40
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene			NS	<1.0	NS	<10 <10	NS	<1.0 <1.0	NS	<5.0 <5.0	NS	<1.0 <1.0	NS	<5.0 <5.0	NS	<1.0 <1.0	NS	<5.0 <5.0	NS	<5.0 <5.0
Vinyl chloride			2,800	<0.19	2,800	<5.0	2,800	<0.50	2,800	<1.00	2,800	<0.20	2,800	<1.00	2,800	<0.22	2,800	<1.75	2,800	<1.75
Xylenes, Total			186,667	<0.51	186,667	<5.8	186,667	<0.58	186,667	<1.50	186,667	<0.30	186,667	<1.50	186,667	<0.13	186,667	<2.60	186,667	<2.60
Acid Compounds (μg/L) [2]																				
2-chlorophenol			4,667	<22.1	4,667	<25.1	4,667	<1.14	4,667	<85.8	4,667	<42.9	4,667	<14.8	4,667	<1.48	4,667	<3.10	4,667	<3.26
2,4-dichlorophenol			2,800	<24.2	2,800	<26.8	2,800	<1.22	2,800	<84.4	2,800	<42.2	2,800	<16.5	2,800	<1.65	2,800	<2.81	2,800	<2.95
2,4-dimethylphenol			18,667	<17.2	18,667	<32.1	18,667	<1.46	18,667	<45.6	18,667	<22.8	18,667	<22.0	18,667	<2.20	18,667	<2.64	18,667	<2.77
4,6-dinitro-o-cresol			3,733	<21.8	3,733	<30.4	3,733	<1.38	3,733	<59.6	3,733	<29.8	3,733	<12.2	3,733	<1.22	3,733	<1.49	3,733	<1.56
2,4-dinitrophenol			1,867	<10.0	1,867	<30.6	1,867	<1.39	1,867	<51.8	1,867	<25.9	1,867	<11.3	1,867	<1.13	1,867	<2.21	1,867	<2.32
2-nitrophenol			NS	<23.1	NS	<61.2	NS	<2.78	NS	<82.2	NS	<41.1	NS	<15.7	NS	<1.57	NS	<2.84	NS	<2.98
4-nitrophenol			NS	<79.7	NS	<179.5	NS	<8.16	NS	<93.4	NS	<46.7	NS	<11.4	NS	<1.14	NS	<2.98	NS	<3.13
p-chloro-m-cresol			48,000	<19.6	48,000	<40.9	48,000	<1.86	48,000	<88.2	48,000	<44.1	48,000	<16.5	48,000	<1.65	48,000	<1.87	48,000	<1.96
Pentachlorophenol			47.319	<43.7	54.95	<45.5	67.18	<2.07	100.424	<67.2	101.486	<33.6	39.092	<13.9	47.794	<1.39	61.40	<1.47	32.29	<1.54
Phenol			180,000	<20.0	180,000	<26.2	180,000	<1.19	180,000	<71.0	180,000	<35.5	180,000	<13.4	180,000	<1.34	180,000	<2.30	180,000	<2.42

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2,4,6-trichlorophenol			130	<51.8	130	<61.6	130	<2.80	130	<95.8	130	<47.9	130	<18.9	130	<1.89	130	<2.60	130	<2.73
Bases/Neutrals (µg/L) [2]																				
Acenaphthene			56,000	<13.1	56,000	<37.4	56,000	<1.70	56,000	<26.8	56,000	<13.4	56,000	<10.3	56,000	<1.03	56,000	<0.35	56,000	<0.37
Acenaphthylene			NS	<15.4	NS	<27.9	NS	<1.27	NS	<34.6	NS	<17.3	NS	<10.0	NS	<1.00	NS	<1.23	NS	<1.29
Anthracene			280,000	<16.4	280,000	<19.6	280,000	<0.89	280,000	<34.6	280,000	<17.3	280,000	<28.8	280,000	<2.88	280,000	<0.44	280,000	<0.46
Benz(a)anthracene			0.2	*<26.5*	0.2	*<34.5*	0.2	*<1.57*	0.2	*<34.6*	0.2	*<17.3*	0.2	*<10.8*	0.2	*<1.08*	0.2	*<0.38*	0.2	*<0.40*
Benzo(a)pyrene			0.2	*<44.7*	0.2	*<42.5*	0.2	*<1.93*	0.2	*<37.4*	0.2	*<18.7*	0.2	*<37.7*	0.2	*<3.77*	0.2	*<1.41*	0.2	*<1.48*
Benzo(b)fluoranthene			NS	<39.2	NS	<74.6	NS	<3.39	NS	<48.6	NS	<24.3	NS	<14.6	NS	<1.46	NS	<1.06	NS	<1.11
Benzo(g,h,i)perylene			NS	<34.0	NS	<31.0	NS	<1.41	NS	<34.6	NS	<17.3	NS	<12.9	NS	<1.29	NS	<0.72	NS	<0.76
Benzo(k)fluoranthene			1.9	*<30.0*	1.9	*<25.3*	1.9	<1.15	1.9	*<28.0*	1.9	*<14.0*	1.9	*<10.4*	1.9	<1.04	1.9	<0.35	1.9	<0.37
Chrysene			19	*<25.6*	19	*<19.6*	19	<0.89	19	*<29.6*	19	<14.8	19	<14.1	19	<1.41	19	<0.46	19	<0.48
Dibenz(a,h)anthracene			1.9	*<40.6*	1.9	*<89.1*	1.9	*<4.05*	1.9	*<39.6*	1.9	*<19.8*	1.9	*<12.4*	1.9	<1.24	1.9	<0.47	1.9	<0.49
1,2-dichlorobenzene			5,900	<12.7	5,900	<47.7	5,900	<2.17	5,900	<5.4	5,900	<2.7	5,900	<17.6	5,900	<1.76	5,900	<1.04	5,900	<1.09
1,3-dichlorobenzene			NS	<11.9	NS	<53.2	NS	<2.42	NS	<22.6	NS	<11.3	NS	<17.4	NS	<1.74	NS	<0.47	NS	<0.49
1,4-dichlorobenzene			6,500	<14.2	6,500	<46.9	6,500	<2.13	6,500	<21.0	6,500	<10.5	6,500	<15.6	6,500	<1.56	6,500	<1.28	6,500	<1.34
3,3-dichlorobenzidine			3	*<118.0*	3	*<162.4*	3	*<7.38*	3	*<545.4*	3	*<272.7*	3	*<60.6*	3	*<6.06*	3	*<11.60*	3	*<12.18*
Diethyl phthalate			746,667	<19.2	746,667	<32.6	746,667	<1.48	746,667	<38.0	746,667	<19.0	746,667	<23.7	746,667	<2.37	746,667	<0.36	746,667	<0.38
Dimethyl phthalate			NS	<16.9	NS	<26.6	NS	<1.21	NS	<35.8	NS	<17.9	NS	<24.2	NS	<2.42	NS	<0.47	NS	<0.49
Di-n-butyl phthalate			1,100	<42.6	1,100	<50.4	1,100	<2.29	1,100	<44.6	1,100	<22.3	1,100	<18.5	1,100	<1.85	1,100	<0.31	1,100	<0.33
2,4-dinitrotoluene			1,867	<26.9	1,867	<28.8	1,867	<1.31	1,867	<41.0	1,867	<20.5	1,867	<21.2	1,867	<2.12	1,867	<0.26	1,867	<0.27
2,6-dinitrotoluene			3,733	<38.8	3,733	<41.1	3,733	<1.87	3,733	<50.4	3,733	<25.2	3,733	<11.2	3,733	<1.12	3,733	<0.38	3,733	<0.40
Di-n-octyl phthalate			373,333	<78.6	373,333	<90.9	373,333	<4.13	373,333	<57.6	373,333	<28.8	373,333	<11.0	373,333	<1.10	373,333	<1.28	373,333	<1.34
1,2-diphenylhydrazine (as azobenzene)			NS	<14.4	NS	<23.5	NS	<1.07	NS	<46.6	NS	<23.3	NS	<67.0	NS	<6.70	NS	<1.06	NS	<1.11
Fluoranthene			37,333	<24.5	37,333	<14.7	37,333	<0.67	37,333	<35.8	37,333	<17.9	37,333	<13.5	37,333	<1.35	37,333	<0.27	37,333	<0.28
Fluorene			37,333	<13.1	37,333	<37.0	37,333	<1.68	37,333	<30.8	37,333	<15.4	37,333	<48.1	37,333	<4.81	37,333	<0.29	37,333	<0.30
Hexachlorobenzene			747	<15.0	747	<28.6	747	<1.30	747	<27.8	747	<13.9	747	<12.3	747	<1.23	747	<0.34	747	<0.36
Hexachlorobutadiene			187	<18.4	187	<30.1	187	<1.37	187	<6.6	187	<3.3	187	<18.2	187	<1.82	187	<1.67	187	<1.75
Hexachlorocyclopentadiene			11,200	<37.4	11,200	<29.0	11,200	<1.32	11,200	<45.4	11,200	<22.7	11,200	<12.3	11,200	<1.23	11,200	<1.53	11,200	<1.61
Hexachloroethane			850	<13.4	850	<30.8	850	<1.40	850	<8.0	850	<4.0	850	<16.2	850	<1.62	850	<1.23	850	<1.29
Indeno(1,2,3-cd)pyrene			1.9	*<41.9*	1.9	*<73.3*	1.9	*<3.33*	1.9	*<40.6*	1.9	*<20.3*	1.9	*<13.9*	1.9	<1.39	1.9	<0.62	1.9	<0.65
Isophorone			186,667	<17.3	186,667	<41.8	186,667	<1.90	186,667	<28.2	186,667	<14.1	186,667	<21.4	186,667	<2.14	186,667	<0.37	186,667	<0.39
Naphthalene			18,667	<10.3	18,667	<31.2	18,667	<1.42	18,667	<24.0	18,667	<12.0	18,667	<18.3	18,667	<1.83	18,667	<0.36	18,667	<0.38
Nitrobenzene			467	<23.8	467	<28.8	467	<1.31	467	<24.6	467	<12.3	467	<21.0	467	<2.10	467	<1.26	467	<1.32
N-nitrosodimethylamine			0.03	*<10.3*	0.03	*<36.1*	0.03	*<1.64*	0.03	*<24.0*	0.03	*<12.0*	0.03	*<10.0*	0.03	*<1.00*	0.03	*<1.13*	0.03	*<1.19*
N-nitrosodi-n-propylamine			88,667	<26.5	88,667	<41.4	88,667	<1.88	88,667	<30.2	88,667	<15.1	88,667	<11.5	88,667	<1.15	88,667	<1.17	88,667	<1.23
N-nitrosodiphenylamine			290	<16.4	290	<22.0	290	<1.00	290	<60.8	290	<30.4	290	<35.7	290	<3.57	290	<1.15	290	<1.21
Phenanthrene			NS	<12.8	NS	<16.7	NS	<0.76	NS	<32.6	NS	<16.3	NS	<13.9	NS	<1.39	NS	<0.31	NS	<0.33

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Bold text indicates a sample result greater than the WQS.
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Footnotes
1 The Permittee shall report on any additional parameters that were monitored for seasonal stormwater sampling as required by Section 6.0 of this permit (Special Conditions).
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 6 hours).
4 Standard for total PCBs of 11 µg/L A&We and 19 µg/L PBC.
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SC046	Summer 2011		Winter 2011/12		Summer 2012		Winter 2012/13		Summer 2013		Winter 2013/14		Summer 2014		Winter 2014/15		Summer 2015		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**None[6]**	**SWQS**	**11/5/11**	**SWQS**	**7/21/12**	**SWQS**	**1/26/13**	**SWQS**	**8/24/13**	**SWQS**	**11/22/13**	**SWQS**	**8/2/14**	**SWQS**	**12/4/14**	**SWQS**	**10/6/15**	**SWQS**	**4/8/16**
Pyrene			28,000	<24.5	28,000	<51.3	28,000	<2.33	28,000	<32.8	28,000	<16.4	28,000	<38.6	28,000	<3.86	28,000	<0.67	28,000	<0.70
1,2,4-trichlorobenzene			9,333	<14.2	9,333	<58.5	9,333	<2.66	9,333	<6.4	9,333	<3.2	9,333	<16.9	9,333	<1.69	9,333	<1.04	9,333	<1.09
Pesticides (µg/L) [2]																				
Aldrin			4.5	<0.013	4.5	<0.058	4.5	<0.046	4.5	<0.046	4.5	<0.015	4.5	<0.027	4.5	<0.027	4.5	0.060	4.5	<0.012
Alpha-BHC			1,600	<0.016	1,600	<0.044	1,600	<0.038	1,600	<0.038	1,600	<0.016	1,600	<0.021	1,600	<0.021	1,600	<0.058	1,600	<0.058
Beta-BHC			560	<0.085	560	<0.048	560	<0.095	560	<0.095	560	<0.090	560	<0.072	560	<0.072	560	<0.063	560	<0.063
Gamma-BHC			11	<0.014	11	<0.055	11	<0.033	11	<0.033	11	<0.022	11	<0.034	11	<0.034	11	<0.058	11	<0.058
Delta-BHC			1,600	<0.016	1,600	<0.035	1,600	<0.032	1,600	<0.032	1,600	0.041	1,600	<0.021	1,600	<0.021	1,600	<0.066	1,600	<0.066
Chlordane			3.2	<0.35	3.2	<0.29	3.2	<0.16	3.2	<0.16	3.2	<0.19	3.2	<0.14	3.2	<0.14	3.2	<0.36	3.2	<0.36
4,4'-DDT			1.1	<0.020	1.1	<0.052	1.1	0.070	1.1	<0.029	1.1	<0.015	1.1	<0.025	1.1	<0.025	1.1	<0.017	1.1	<0.017
4,4'-DDE			1.1	<0.011	1.1	<0.036	1.1	<0.034	1.1	<0.034	1.1	<0.017	1.1	<0.010	1.1	<0.010	1.1	<0.013	1.1	<0.013
4,4'-DDD			1.1	<0.017	1.1	<0.031	1.1	<0.023	1.1	<0.023	1.1	<0.013	1.1	<0.031	1.1	<0.031	1.1	<0.021	1.1	<0.021
Dieldrin			4	<0.024	4	<0.045	4	<0.028	4	<0.028	4	<0.021	4	<0.030	4	<0.030	4	<0.060	4	<0.060
Alpha-endosulfan			3 T	<0.010	3 T	<0.048	3 T	<0.034	3 T	<0.034	3 T	<0.017	3 T	<0.018	3 T	0.019	3 T	<0.072	3 T	<0.072
Beta-endosulfan			3 T	<0.021	3 T	<0.054	3 T	<0.034	3 T	<0.034	3 T	<0.012	3 T	<0.032	3 T	<0.032	3 T	<0.019	3 T	<0.019
Endosulfan sulfate			3	<0.015	3	<0.030	3	<0.025	3	<0.025	3	<0.013	3	<0.008	3	<0.008	3	<0.016	3	<0.016
Endrin			0.7	<0.019	0.7	<0.036	0.7	<0.035	0.7	<0.035	0.7	<0.015	0.7	<0.017	0.7	<0.017	0.7	<0.023	0.7	<0.023
Endrin aldehyde			0.7	<0.015	0.7	<0.014	0.7	<0.038	0.7	<0.038	0.7	<0.022	0.7	<0.032	0.7	<0.032	0.7	<0.026	0.7	<0.026
Heptachlor			0.9	<0.012	0.9	<0.045	0.9	<0.035	0.9	<0.035	0.9	<0.017	0.9	<0.027	0.9	<0.027	0.9	<0.035	0.9	<0.035
Heptachlor epoxide			0.9	<0.010	0.9	<0.045	0.9	<0.032	0.9	<0.032	0.9	<0.019	0.9	<0.008	0.9	<0.008	0.9	<0.062	0.9	<0.062
PCB-1242			[4]	<0.40	[4]	<0.34	[4]	<0.41	[4]	<0.41	[4]	<0.53	[4]	<0.37	[4]	<0.37	[4]	<0.14	[4]	<0.14
PCB-1254			[4]	<0.22	[4]	<0.34	[4]	<0.20	[4]	<0.20	[4]	<0.28	[4]	<0.23	[4]	<0.23	[4]	<0.20	[4]	<0.20
PCB-1221			[4]	<0.34	[4]	<0.55	[4]	<0.68	[4]	<0.68	[4]	<0.83	[4]	<0.22	[4]	<0.22	[4]	<0.64	[4]	<0.64
PCB-1232			[4]	<0.41	[4]	<0.77	[4]	<0.66	[4]	<0.66	[4]	<0.33	[4]	<0.55	[4]	<0.55	[4]	<0.37	[4]	<0.37
PCB-1248			[4]	<0.21	[4]	<0.30	[4]	<0.78	[4]	<0.78	[4]	<0.27	[4]	<0.19	[4]	<0.19	[4]	<0.22	[4]	<0.22
PCB-1260			[4]	<0.19	[4]	<0.34	[4]	<0.21	[4]	<0.21	[4]	<0.22	[4]	<0.32	[4]	<0.32	[4]	<0.59	[4]	<0.59
PCB-1016			[4]	<0.26	[4]	<0.37	[4]	<0.36	[4]	<0.36	[4]	<0.32	[4]	<0.18	[4]	<0.18	[4]	<0.55	[4]	<0.55
Toxaphene			11	<0.33	11	<0.79	11	<0.53	11	<0.53	11	<0.33	11	<0.22	11	<0.22	11	<0.60	11	<0.60

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OUTFALL ID: AC033 RECEIVING WATER: Arizona Canal Diversion Canal DESIGNATED USES: AgI, AgL	MONITORING SEASONS Summer: June 1 – October 31 Winter: November 1 – May 31																					
	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		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/31/11**	**SWQS**	**11/5/11**	**SWQS**	**8/21/12**	**SWQS**	**12/14/12**	**SWQS**	**07/20/13**	**SWQS**	**11/22/13**	**SWQS**	**8/12/14**	**SWQS**	**12/4/14**	**SWQS**	**10/6/15**	**SWQS**	**1/4/16**
MONITORING PARAMETERS [1, 2]																						
Conventional Parameters																						
Flow [3] (cfs)	NS	0.993	NS	9.07	NS	1.629	NS	2.95	NS	0.76	NS	4.788	NS	2.00	NS	2.7	NS	0.364	NS	3.01	NS	1.466
pH	4.5-9.0	8.02	4.5-9.0	7.95	4.5-9.0	8.46	4.5-9.0	7.54	4.5-9.0	7.83	4.5-9.0	8.36	4.5-9.0	8.11	4.5-9.0	8.52	4.5-9.0	7.45	4.5-9.0	7.39	4.5-9.0	7.73
Temperature (ºC)	Varies	13.5	Varies	27.5	Varies	13.0	Varies	28.5	Varies	14.0	Varies	28.5	Varies	16.5	Varies	24.8	Varies	17.0	Varies	24.0	Varies	14.0
Hardness (mg/L)	400	30.1	400	22.5	400	34.9	400	23.4	400	25.7	400	56.6	400	25.7	400	33.9	400	19.4	400	34.0	400	16.9
Total Dissolved Solids (TDS) (mg/L) [2]	NS	45.0	NS	88	NS	110	NS	60	NS	92	NS	182	NS	72	NS	104	NS	42	NS	88	NS	46
Total Suspended Solids (TSS) (mg/L) [2]	NS	84.0	NS	1,040	NS	546	NS	76.0	NS	296	NS	573	NS	242	NS	352	NS	210	NS	182	NS	108
Biochemical Oxygen Demand (BOD) (mg/L) [2]	NS	9.50	NS	18	NS	22	NS	12	NS	19	NS	54	NS	18	NS	20	NS	12	NS	13	NS	10
Chemical Oxygen Demand (COD) (mg/L) [2]	NS	106	NS	300	NS	190	NS	100	NS	210	NS	370	NS	140	NS	180	NS	140	NS	140	NS	120

AC033	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		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/31/11**	**SWQS**	**11/5/11**	**SWQS**	**8/21/12**	**SWQS**	**12/14/12**	**SWQS**	**07/20/13**	**SWQS**	**11/22/13**	**SWQS**	**8/12/14**	**SWQS**	**12/4/14**	**SWQS**	**10/6/15**	**SWQS**	**1/4/16**
Inorganics																						
Cyanide, total (µg/L) [2]	200 T	<5.0	200 T	<5.0	200 T	<5.0	200 T	<5	200 T	<5	200 T	<50	200 T	<5	200 T	<5	200 T	<5	200 T	<5	200 T	<5
Nutrients (mg/L) [2]																						
Nitrate + Nitrite as N	NS	0.583	NS	0.9	NS	0.6	NS	0.5	NS	0.6	NS	1.7	NS	0.6	NS	1.2	NS	0.5	NS	0.8	NS	0.5
Ammonia as N	NS	0.459	NS	0.86	NS	0.84	NS	0.83	NS	1.2	NS	1.9	NS	0.86	NS	1.4	NS	0.85	NS	0.58	NS	0.52
Total Kjeldahl Nitrogen (TKN)	NS	1.41	NS	2.8	NS	3.1	NS	1.9	NS	3.6	NS	7.2	NS	2.2	NS	3.2	NS	2.0	NS	2.2	NS	1.3
Total Phosphorus as P	NS	0.310	NS	2.2	NS	2.6	NS	0.38	NS	0.74	NS	0.48	NS	0.80	NS	1.0	NS	0.38	NS	0.67	NS	0.48
Ortho-Phosphorus as P	NS	0.158	NS	0.2	NS	0.2	NS	0.2	NS	0.2	NS	0.5	NS	0.2	NS	0.2	NS	0.1	NS	0.1	NS	0.1
Microbiological																						
Escherichia coli (*E. coli*) (CFU/100 mg or MPN/100 mL) [2]	NS	38,730	NS	2,419.6	NS	>2,419.6	NS	1,553.1	NS	>2,419.6	NS	2419.6	NS	>2,419.6	NS	727.0	NS	>2,419.6	NS	9,590	NS	1,610.0
Total Metals (µg/L) [2]																						
Antimony	NS	<25 T&D	NS	1.1 T 0.4 D	NS	1.3 T 0.5 D	NS	0.84 T 0.5 D	NS	1.8 T 0.6 D	NS	1.9 T 0.9 D	NS	1.1 T 0.5 D	NS	1.6 T 1.0 D	NS	2.3 T 0.6 D	NS	2.1 T <5.0 D	NS	1.6 T <5.0 D
Arsenic	200 T	<10 T&D	200 T	8.6 T 1.3 D	200 T	4.3 T 1.2 D	200 T	2.1 T 0.9 D	200 T	4.0 T 0.8 D	200 T	7.4 T 1.4 D	200 T	2.5 T 0.7 D	200 T	4.1 T 1.4 D	200 T	2.6 T 0.6 D	200 T	3.7 T <5.0 D	200 T	2.1 T <5.0 D
Barium	NS	42 T <10 D	NS	318 T 13 D	NS	145 T 16 D	NS	43 T 12 D	NS	125 T 12 D	NS	283 T 39 D	NS	91 T 11 D	NS	126 T 20 D	NS	104 T 11 D	NS	92 T 18 D	NS	61 T 10 D
Beryllium	NS	<2 T&D	NS	<0.15 T <0.06 D	NS	0.39 T <0.06 D	NS	<0.15 T <0.15 D	NS	0.38 T <0.15 D	NS	0.73 T <0.15 D	NS	0.22 T <0.06 D	NS	0.29 T <0.15 D	NS	0.22 T <0.06	NS	0.15 T <5.0 D	NS	<0.10 T <5.0 D

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Cadmium	50 T	<3 T&D	50 T	1.0 T <0.10 D	50 T	0.40 T <0.10 D	50 T	<0.25 T <0.25 D	50 T	0.4 T <0.25 D	50 T	0.7 T <0.25 D	50 T	0.4 T <0.10 D	50 T	0.4 T <0.30 D	50 T	0.3 T <0.12 D	50 T	0.2 T 5.7 D	50 T	0.2 T <5.0 D
Chromium	NS CrIII CrVI 1,000 T	<10 T <10 D	NS CrIII CrVI 1,000 T	37.3 T <1.8 D	NS CrIII CrVI 1,000 T	12.7 T <1.80 D	NS CrIII CrVI 1,000 T	4.3 T <2.00 D	NS CrIII CrVI 1,000 T	12.6 T <2.00 D	NS CrIII CrVI 1,000 T	27.5 T <2.00 D	NS CrIII CrVI 1,000 T	8.1 T <0.80 D	NS CrIII CrVI 1,000 T	14.0 T 0.9 D	NS CrIII CrVI 1,000 T	9.0 T 0.8 D	NS CrIII CrVI 1,000 T	8.7 T <5.0 D	NS CrIII CrVI 1,000 T	5.3 T <5.0 D
Copper	500 T	22 T <10 D	500 T	99.7 T 9.0 D	500 T	47.3 T 9.5 D	500 T	20.0 T 8.0 D	500 T	51.9 T 8.4 D	500 T	97.0 T 26.9 D	500 T	32.7 T 10.1 D	500 T	49.6 T 13.6 D	500 T	40.2 T 8.0 D	500 T	39.7 T 11.9 D	500 T	28.7 T 10.2 D
Lead	100 T	17 T <10 D	100 T	**119 T** 1.2 D	100 T	29.7 T 0.4 D	100 T	10.2 T 0.5 D	100 T	33.2 T 0.6 D	100 T	71.1 T 3.1 D	100 T	15.3 T 0.4 D	100 T	37.5 T 1.1 D	100 T	25.2 T 0.7 D	100 T	19.7 T <5.0 D	100 T	13.3 T <5.0 D
Mercury	10 T	<0.20 T&D	10 T	0.16 T <0.092 D	10 T	<0.092 T&D	10 T	<0.040 T <0.040 D	10 T	<0.040 T <0.040 D	10 T	0.03 T 0.024 D	10 T	<0.020 T <0.020 D	10 T	<0.092 T <0.2 D	10 T	<0.092 T <0.092 D	10 T	<0.062 T <0.2 D	10 T	<0.062 T <0.2 D
Nickel	NS	<10 T&D	NS	34.5 T 1.7 D	NS	15.6 T 2.1 D	NS	5.6 T 2.3 D	NS	14.0 T 2.3 D	NS	29.2 T 6.4 D	NS	9.2 T 1.9 D	NS	13.4 T 2.3 D	NS	9.2 T 1.2 D	NS	9.0 T <5.0 D	NS	4.8 T <5.0 D
Selenium	20 T	<2.00 T&D	20 T	<0.85 T 0.5 D	20 T	0.87 T <0.34 D	20 T	<0.60 T <0.60 D	20 T	0.6 T <0.60 D	20 T	<0.60 T <0.60 D	20 T	<0.60 T <0.24 D	20 T	0.3 T <0.25 D	20 T	0.29 T 0.1 D	20 T	0.67 T <5.0 D	20 T	<0.40 T <5.0 D
Silver	NS	<5 T&D	NS	0.3 T <0.2 D	NS	0.2 T <0.20 D	NS	<0.15 T <0.15 D	NS	0.2 T <0.15 D	NS	0.3 T <0.15 D	NS	<0.15 T <0.15 D	NS	<0.20 T <0.20 D	NS	0.1 T <0.08 D	NS	<0.25 T <5.0 D	NS	<0.25 T <5.0 D
Thallium	NS	<0.5 T&D	NS	0.28 T <0.08 D	NS	<0.20 T <0.08 D	NS	<0.20 T <0.20 D	NS	<0.20 T <0.20 D	NS	0.34 T <0.20 D	NS	<0.20 T <0.08 D	NS	<0.10 T <0.10 D	NS	0.08 T <0.04 D	NS	<0.15 T <5.0 D	NS	<0.15 T <5.0 D
Zinc	10,000 T	145 T <50 D	10,000 T	382 T 9.6 D	10,000 T	244 T 10.7 D	10,000 T	105 T 27.9 D	10,000 T	272 T 26.0 D	10,000 T	424 T 80.6 D	10,000 T	170 T 32.1 D	10,000 T	197 T 19.8 D	10,000 T	195 T 15.0 D	10,000 T	180 T 26.6 D	10,000 T	173 T 18.0 D
Organic Toxic Pollutants																						
Total Petroleum Hydrocarbons (TPH) (mg/L) [2]	NS	<5.00	NS	<10	NS	<10	NS	<10	NS	<10	NS	<11	NS	<11	NS	<10.0	NS	<10	NS	<5.6	NS	<5.7
Total Oil and Grease (mg/L) [2]	NS	<5.00	NS	<5	NS	<5	NS	<10	NS	<5.0	NS	<5.5	NS	6.0	NS	<5.0	NS	<5.0	NS	<5.6	NS	<5.7
VOCs, Semi-VOCs, & Pesticides (µg/L) [2]																						
Acrolein	NS	<50.0	NS	<0.37	NS	<0.37	NS	<0.293	NS	<0.293	NS	1.1	NS	<0.20	NS	4.1	NS	<0.40	NS	<0.78	NS	<0.78
Acrylonitrile	NS	<5.00	NS	<0.17	NS	<0.17	NS	<0.226	NS	<0.226	NS	<0.16	NS	<0.16	NS	<0.70	NS	<0.14	NS	<0.53	NS	<0.53
Benzene	NS	<0.500	NS	<0.20	NS	<0.20	NS	<0.75	NS	<0.75	NS	<1.20	NS	<1.20	NS	<0.65	NS	<0.13	NS	<2.30	NS	<0.46
Bromoform	NS	<1.00	NS	<0.25	NS	<0.25	NS	<2.15	NS	<2.15	NS	<2.35	NS	<2.35	NS	<1.40	NS	<0.28	NS	<3.40	NS	<0.68
Carbon tetrachloride	NS	<0.500	NS	<0.31	NS	<0.31	NS	<1.65	NS	<1.65	NS	<1.30	NS	<1.30	NS	<1.15	NS	<0.23	NS	<1.55	NS	<0.31
Chlorobenzene	NS	<0.500	NS	<0.25	NS	<0.25	NS	<1.40	NS	<1.40	NS	<0.80	NS	<0.80	NS	<0.65	NS	<0.13	NS	<2.50	NS	<0.50
Chlorodibromomethane	NS	<0.500	NS	<0.21	NS	<0.21	NS	<1.30	NS	<1.30	NS	<0.90	NS	<0.90	NS	<1.20	NS	<0.24	NS	<3.05	NS	<0.61
Chloroethane (ethyl chloride)	NS	<5.00	NS	<0.14	NS	<0.14	NS	<1.35	NS	<1.35	NS	<1.10	NS	<1.10	NS	<0.95	NS	<0.19	NS	<2.00	NS	<0.40
2-chloroethylvinyl ether	NS	<2.00	NS	<0.174	NS	<0.174	NS	<0.22	NS	<0.22	NS	<0.22	NS	<0.22	NS	<0.95	NS	<0.19	NS	<0.53	NS	<0.53
Chloroform	NS	<0.500	NS	<0.40	NS	<0.40	NS	<1.05	NS	<1.05	NS	<1.15	NS	<1.15	NS	<0.70	NS	<0.14	NS	<2.45	NS	<0.49
Dichlorobromomethane	NS	<0.500	NS	<0.23	NS	<0.23	NS	<0.75	NS	<0.75	NS	<1.15	NS	<1.15	NS	<0.75	NS	<0.15	NS	<2.45	NS	<0.49
1,1-dichloroethane	NS	<1.00	NS	<0.18	NS	<0.18	NS	<0.65	NS	<0.65	NS	<1.30	NS	<1.30	NS	<0.95	NS	<0.19	NS	<2.10	NS	<0.42
1,2-dichloroethane	NS	<1.00	NS	<0.20	NS	<0.20	NS	<0.80	NS	<0.80	NS	<1.25	NS	<1.25	NS	<0.55	NS	<0.11	NS	<2.55	NS	<0.51

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1,1-dichloroethylene	NS	<1.00	NS	<0.23	NS	<0.23	NS	<1.85	NS	<1.85	NS	<1.40	NS	<1.40	NS	<1.35	NS	<0.27	NS	<1.70	NS	<0.34
1,2-dichloropropane	NS	<0.500	NS	<0.22	NS	<0.22	NS	<0.75	NS	<0.75	NS	<1.25	NS	<1.25	NS	<0.90	NS	<0.18	NS	<2.45	NS	<0.49
1,3-dichloropropylene	NS	<1.00	NS	<0.19	NS	<0.19	NS	<0.50	NS	<0.75	NS	<1.10	NS	<1.10	NS	<0.65	NS	<0.13	NS	cis <2.55 trans <2.50	NS	cis <0.51 trans <0.50
Ethylbenzene	NS	<2.00	NS	<0.27	NS	<0.27	NS	<1.45	NS	<1.45	NS	<0.65	NS	<0.65	NS	<0.75	NS	<0.15	NS	<2.30	NS	<0.46
Methyl bromide	NS	<5.00	NS	<0.14	NS	<0.14	NS	<0.95	NS	<0.95	NS	<0.95	NS	<0.95	NS	<0.90	NS	<0.18	NS	<2.30	NS	<0.46
Methyl chloride	NS	<5.00	NS	<0.20	NS	<0.20	NS	<1.85	NS	<1.85	NS	<1.40	NS	<1.40	NS	<1.15	NS	<0.23	NS	<2.30	NS	<0.46
Methylene chloride	NS	<3.00	NS	<0.45	NS	<0.45	NS	<1.40	NS	1.5	NS	<1.00	NS	<1.00	NS	<1.00	NS	<0.20	NS	<4.05	NS	<0.81
1,1,2,2-tetrachloroethane	NS	<0.500	NS	<0.11	NS	<0.11	NS	<2.45	NS	<2.45	NS	<2.00	NS	<2.00	NS	<1.75	NS	<0.35	NS	<4.00	NS	<0.80
Tetrachloroethylene	NS	<0.500	NS	<0.26	NS	<0.26	NS	<1.15	NS	<1.15	NS	<1.05	NS	<1.05	NS	<0.65	NS	<0.13	NS	<1.75	NS	<0.35
Toluene	NS	<3.00	NS	<0.23	NS	<0.23	NS	<0.60	NS	<0.60	NS	<0.95	NS	<0.95	NS	<0.55	NS	<0.11	NS	<2.15	NS	<0.43
1,2-trans-dichloroethylene	NS	<0.500	NS	<0.14	NS	<0.14	NS	<0.85	NS	<0.85	NS	<1.25	NS	<1.25	NS	<0.90	NS	<0.18	NS	<1.90	NS	<0.38
1,1,1-trichloroethane	1,000	<0.500	1,000	<0.28	1,000	<0.28	1,000	<1.15	1,000	<1.15	1,000	<1.00	1,000	<1.00	1,000	<0.70	1,000	<0.14	1,000	<1.70	1,000	<0.34
1,1,2-trichloroethane	NS	<0.500	NS	<0.22	NS	<0.22	NS	<1.20	NS	<1.20	NS	<0.75	NS	<0.75	NS	<0.65	NS	<0.13	NS	<3.00	NS	<0.60
Trichloroethylene	NS	<0.500	NS	<0.35	NS	<0.35	NS	<1.20	NS	<1.20	NS	<0.75	NS	<0.75	NS	<1.10	NS	<0.22	NS	<2.40	NS	<0.48
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	NS	<2.00 <1.50	NS	<2.0 <2.0	NS	<1.0 <1.0	NS	<5.0 <5.0	NS	<5.0 <5.0	NS	<5.0 <5.0	NS	<5.0 <5.0	NS	<10.0 <5.0	NS	<1.0 <1.0	NS	<5.0 <5.0	NS	<1.0 <1.0
Vinyl chloride	NS	<0.500	NS	<0.19	NS	<0.19	NS	<2.50	NS	<2.50	NS	<1.00	NS	<1.00	NS	<1.10	NS	<0.22	NS	<1.75	NS	<0.35
Xylenes, Total	NS	<1.00	NS	<0.51	NS	<0.51	NS	<2.90	NS	<2.90	NS	<1.50	NS	<1.50	NS	<1.25	NS	<0.13	NS	<2.60	NS	<0.52
Acid Compounds (µg/L) [2]																						
2-chlorophenol	NS	<2.46	NS	<110.5	NS	<110.5	NS	<23.9	NS	<57.0	NS	<223.1	NS	<90.9	NS	<1.48	NS	<1.48	NS	<3.10	NS	<3.10
2,4-dichlorophenol	NS	<1.38	NS	<121.0	NS	<121.0	NS	<25.6	NS	<61.0	NS	<219.4	NS	<89.5	NS	<1.65	NS	<1.65	NS	<2.81	NS	<2.81
2,4-dimethylphenol	NS	<2.93	NS	<86.0	NS	<86.0	NS	<30.7	NS	<73.0	NS	<118.6	NS	<48.3	NS	<2.20	NS	<2.20	NS	<2.64	NS	<2.64
4,6-dinitro-o-cresol	NS	<2.71	NS	<109.0	NS	<109.0	NS	<29.0	NS	<69.0	NS	<155.0	NS	<63.2	NS	<1.22	NS	<1.22	NS	<1.49	NS	<1.49
2,4-dinitrophenol	NS	<2.04	NS	<50.0	NS	<50.0	NS	<29.2	NS	<69.5	NS	<134.7	NS	<54.9	NS	<1.13	NS	<1.13	NS	<2.21	NS	<2.21
2-nitrophenol	NS	<1.46	NS	<115.5	NS	<115.5	NS	<58.4	NS	<139.0	NS	<213.7	NS	<87.1	NS	<1.57	NS	<1.57	NS	<2.84	NS	<2.84
4-nitrophenol	NS	<0.423	NS	<398.5	NS	<398.5	NS	<171.4	NS	<408.0	NS	<242.8	NS	<99.0	NS	5.2	NS	2.1	NS	<2.98	NS	<2.98
p-chloro-m-cresol	NS	<1.25	NS	<98.0	NS	<98.0	NS	<39.1	NS	<93.0	NS	<229.3	NS	<93.5	NS	<1.65	NS	<1.65	NS	<1.87	NS	<1.87
Pentachlorophenol	NS	<2.98	NS	<218.5	NS	<218.5	NS	<43.5	NS	<103.5	NS	<174.7	NS	<71.2	NS	<1.39	NS	<1.39	NS	<1.47	NS	<1.47
Phenol	NS	<0.695	NS	<100.0	NS	<100.0	NS	<25.0	NS	<59.5	NS	<184.6	NS	<75.3	NS	1.4	NS	<1.34	NS	<2.30	NS	<2.30
2,4,6-trichlorophenol	NS	<1.50	NS	<259.0	NS	<259.0	NS	<58.8	NS	<140.0	NS	<249.1	NS	<101.5	NS	<1.89	NS	<1.89	NS	<2.60	NS	<2.60
Bases/Neutrals (µg/L) [2]																						
Acenaphthene	NS	<0.704	NS	<65.5	NS	<65.5	NS	<35.7	NS	<85.0	NS	<69.7	NS	<28.4	NS	<1.03	NS	<1.03	NS	<0.35	NS	<0.35
Acenaphthylene	NS	<2.77	NS	<77.0	NS	<77.0	NS	<26.7	NS	<63.5	NS	<90.0	NS	<36.7	NS	<1.00	NS	<1.00	NS	<1.23	NS	<1.23
Anthracene	NS	<0.700	NS	<82.0	NS	<82.0	NS	<18.7	NS	<44.5	NS	<90.0	NS	<36.7	NS	<2.88	NS	<2.88	NS	<0.44	NS	<0.44
Benz(a)anthracene	NS	<0.772	NS	<132.5	NS	<132.5	NS	<33.0	NS	<78.5	NS	<90.0	NS	<36.7	NS	<1.08	NS	<1.08	NS	<0.38	NS	<0.38
Benzo(a)pyrene	NS	<0.743	NS	<223.5	NS	<223.5	NS	<40.5	NS	<96.5	NS	<97.2	NS	<39.6	NS	<3.77	NS	<3.77	NS	<1.41	NS	<1.41
Benzo(b)fluoranthene	NS	<0.747	NS	<196.0	NS	<196.0	NS	<71.2	NS	<169.5	NS	<126.4	NS	<51.5	NS	<1.46	NS	<1.46	NS	<1.06	NS	<1.06

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Benzo(g,h,i)perylene	NS	<0.770	NS	<170.0	NS	<170.0	NS	<29.6	NS	<70.5	NS	<90.0	NS	<36.7	NS	<1.29	NS	<1.29	NS	<0.72	NS	<0.72
Benzo(k)fluoranthene	NS	<0.779	NS	<150.0	NS	<150.0	NS	<24.2	NS	<57.5	NS	<72.8	NS	<29.7	NS	<1.04	NS	<1.04	NS	<0.35	NS	<0.35
Chrysene	NS	<0.800	NS	<128.0	NS	<128.0	NS	<18.7	NS	<44.5	NS	<77.0	NS	<31.4	NS	<1.41	NS	<1.41	NS	<0.46	NS	<0.46
Dibenzo(a,h)anthracene	NS	<0.743	NS	<203.0	NS	<203.0	NS	<85.0	NS	<202.5	NS	<103.0	NS	<42.0	NS	<1.24	NS	<1.24	NS	<0.47	NS	<0.47
1,2-dichlorobenzene	NS	<2.70	NS	<63.5	NS	<63.5	NS	<45.6	NS	<108.5	NS	<14.0	NS	<5.7	NS	<1.76	NS	<1.76	NS	<1.04	NS	<1.04
1,3-dichlorobenzene	NS	<2.39	NS	<59.5	NS	<59.5	NS	<50.8	NS	<121.0	NS	<58.8	NS	<24.0	NS	<1.74	NS	<1.74	NS	<0.47	NS	<0.47
1,4-dichlorobenzene	NS	<2.73	NS	<71.0	NS	<71.0	NS	<44.7	NS	<106.5	NS	<54.6	NS	<22.3	NS	<1.56	NS	<1.56	NS	<1.28	NS	<1.28
3,3-dichlorobenzidine	NS	<3.17	NS	<590.0	NS	<590.0	NS	<155.0	NS	<369.0	NS	<1418.0	NS	<578.1	NS	<6.06	NS	<6.06	NS	<11.60	NS	<11.60
Diethyl phthalate	NS	<0.777	NS	<96.0	NS	<96.0	NS	<31.1	NS	<74.0	NS	<98.8	NS	<40.3	NS	<2.37	NS	<2.37	NS	0.4	NS	0.4
Dimethyl phthalate	NS	<0.788	NS	<84.5	NS	<84.5	NS	<25.4	NS	<60.5	NS	<93.1	NS	<37.9	NS	<2.42	NS	<2.42	NS	<0.47	NS	<0.47
Di-n-butyl phthalate	NS	<1.03	NS	<213.0	NS	<213.0	NS	<48.1	NS	<114.5	NS	<116.0	NS	<47.3	NS	<1.85	NS	<1.85	NS	<0.31	NS	<0.31
2,4-dinitrotoluene	NS	<3.00	NS	<134.5	NS	<134.5	NS	<27.5	NS	<65.5	NS	<106.6	NS	<43.5	NS	<2.12	NS	<2.12	NS	<0.26	NS	<0.26
2,6-dinitrotoluene	NS	<0.753	NS	<194.0	NS	<194.0	NS	<39.3	NS	<93.5	NS	<131.0	NS	<53.4	NS	<1.12	NS	<1.12	NS	<0.38	NS	<0.38
Di-n-octyl phthalate	NS	<1.35	NS	<393.0	NS	<393.0	NS	<86.7	NS	<206.5	NS	<149.8	NS	<61.1	NS	<1.10	NS	<1.10	NS	<1.28	NS	<1.28
1,2-diphenylhydrazine (as azobenzene)	NS	<0.714	NS	<72.0	NS	<72.0	NS	<22.5	NS	<53.5	NS	<121.2	NS	<49.4	NS	<6.70	NS	<6.70	NS	<1.06	NS	<1.06
Fluoranthene	NS	<0.841	NS	<122.5	NS	<122.5	NS	<14.1	NS	<33.5	NS	<93.1	NS	<37.9	NS	<1.35	NS	<1.35	NS	<0.27	NS	<0.27
Fluorene	NS	<0.711	NS	<65.5	NS	<65.5	NS	<35.3	NS	<84.0	NS	<80.1	NS	<32.6	NS	<4.81	NS	<4.81	NS	<0.29	NS	<0.29
Hexachlorobenzene	NS	<0.575	NS	<75.0	NS	<75.0	NS	<27.3	NS	<65.0	NS	<72.3	NS	<29.5	NS	<1.23	NS	<1.23	NS	<0.34	NS	<0.34
Hexachlorobutadiene	NS	<2.94	NS	<92.0	NS	<92.0	NS	<28.8	NS	<68.5	NS	<17.2	NS	<7.0	NS	<1.82	NS	<1.82	NS	<1.67	NS	<1.67
Hexachlorocyclopentadiene	NS	<3.10	NS	<187.0	NS	<187.0	NS	<27.7	NS	<66.0	NS	<118.0	NS	<48.1	NS	<1.23	NS	<1.23	NS	<1.53	NS	<1.53
Hexachloroethane	NS	<3.00	NS	<67.0	NS	<67.0	NS	<29.4	NS	<70.0	NS	<20.8	NS	<8.5	NS	<1.62	NS	<1.62	NS	<1.23	NS	<1.23
Indeno(1,2,3-cd)pyrene	NS	<0.768	NS	<209.5	NS	<209.5	NS	<69.9	NS	<166.5	NS	<105.6	NS	<43.0	NS	<1.39	NS	<1.39	NS	<0.62	NS	<0.62
Isophorone	NS	<0.706	NS	<86.5	NS	<86.5	NS	<39.9	NS	<95.0	NS	<73.3	NS	<29.9	NS	<2.14	NS	<2.14	NS	<0.37	NS	<0.37
Naphthalene	NS	<2.48	NS	<51.5	NS	<51.5	NS	<29.8	NS	<71.0	NS	<62.4	NS	<25.4	NS	<1.83	NS	<1.83	NS	<0.36	NS	<0.36
Nitrobenzene	NS	<0.718	NS	<119.0	NS	<119.0	NS	<27.5	NS	<65.5	NS	<64.0	NS	<26.1	NS	<2.10	NS	<2.10	NS	<1.26	NS	<1.26
N-nitrosodimethylamine	NS	<2.18	NS	<51.5	NS	<51.5	NS	<34.4	NS	<82.0	NS	<62.4	NS	<25.4	NS	<1.00	NS	<1.00	NS	<1.13	NS	<1.13
N-nitrosodi-n-propylamine	NS	<0.725	NS	<132.5	NS	<132.5	NS	<39.5	NS	<94.0	NS	<78.5	NS	<32.0	NS	<1.15	NS	<1.15	NS	<1.17	NS	<1.17
N-nitrosodiphenylamine	NS	<3.24	NS	<82.0	NS	<82.0	NS	<21.0	NS	<50.0	NS	<158.1	NS	<64.4	NS	<3.57	NS	<3.57	NS	<1.15	NS	<1.15
Phenanthrene	NS	<0.711	NS	<64.0	NS	<64.0	NS	<16.0	NS	<38.0	NS	<84.8	NS	<34.6	NS	<1.39	NS	<1.39	NS	<0.31	NS	<0.31
Pyrene	NS	<0.835	NS	<122.5	NS	<122.5	NS	<48.9	NS	<116.5	NS	<85.3	NS	<34.8	NS	<3.86	NS	<3.86	NS	<0.67	NS	<0.67
1,2,4-trichlorobenzene	NS	<2.64	NS	<71.0	NS	<71.0	NS	<55.9	NS	<133.0	NS	<16.6	NS	<6.8	NS	<1.69	NS	<1.69	NS	<1.04	NS	<1.04
Pesticides (μg/L) [2]																						
Aldrin	0.003	*<0.120*	0.003	*<0.013*	0.003	*<0.013*	0.003	*<0.058*	0.003	**0.082**	0.003	*<0.048*	0.003	**0.028**	0.003	*<0.027*	0.003	*<0.027*	0.003	*<0.012*	0.003	*<0.012*
Alpha-BHC	NS	<0.100	NS	<0.016	NS	<0.016	NS	<0.044	NS	<0.038	NS	<0.040	NS	<0.017	NS	<0.021	NS	<0.021	NS	<0.058	NS	<0.058
Beta-BHC	NS	<0.100	NS	<0.085	NS	0.264	NS	<0.048	NS	<0.095	NS	<0.099	NS	<0.094	NS	<0.072	NS	<0.072	NS	0.078	NS	<0.063
Gamma-BHC	NS	<0.100	NS	<0.014	NS	0.062	NS	<0.055	NS	<0.033	NS	0.074	NS	<0.024	NS	<0.034	NS	<0.034	NS	<0.058	NS	<0.058
Delta-BHC	NS	<0.100	NS	<0.016	NS	0.016	NS	<0.035	NS	<0.032	NS	<0.033	NS	<0.018	NS	<0.021	NS	<0.021	NS	<0.066	NS	<0.066

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AC033	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		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/31/11**	**SWQS**	**11/5/11**	**SWQS**	**8/21/12**	**SWQS**	**12/14/12**	**SWQS**	**07/20/13**	**SWQS**	**11/22/13**	**SWQS**	**8/12/14**	**SWQS**	**12/4/14**	**SWQS**	**10/6/15**	**SWQS**	**1/4/16**
Chlordane	NS	<1.40	NS	<0.35	NS	<0.35	NS	<0.29	NS	<0.16	NS	<0.17	NS	<0.20	NS	<0.14	NS	<0.14	NS	<0.36	NS	<0.36
4,4'-DDT	0.001	*<0.120*	0.001	*<0.020*	0.001	*<0.020*	0.001	*<0.052*	0.001	*<0.029*	0.001	*<0.030*	0.001	*<0.016*	0.001	*<0.025*	0.001	*<0.025*	0.001	*<0.017*	0.001	*<0.017*
4,4'-DDE	0.001	*<0.100*	0.001	*<0.011*	0.001	*<0.011*	0.001	*<0.036*	0.001	*<0.034*	0.001	*<0.035*	0.001	*<0.018*	0.001	*<0.010*	0.001	*<0.010*	0.001	*<0.013*	0.001	*<0.013*
4,4'-DDD	0.001	*<0.100*	0.001	*<0.017*	0.001	*<0.017*	0.001	*<0.031*	0.001	*<0.023*	0.001	*<0.024*	0.001	*<0.014*	0.001	*<0.031*	0.001	*<0.031*	0.001	*<0.021*	0.001	*<0.021*
Dieldrin	0.003	*<0.100*	0.003	**0.045**	0.003	*<0.024*	0.003	*<0.045*	0.003	*<0.028*	0.003	*<0.029*	0.003	*<0.022*	0.003	*<0.030*	0.003	*<0.030*	0.003	*<0.060*	0.003	*<0.060*
Alpha-endosulfan	NS	<0.100	NS	<0.010	NS	<0.010	NS	<0.048	NS	<0.034	NS	<0.035	NS	0.084	NS	0.072	NS	<0.018	NS	<0.072	NS	<0.072
Beta-endosulfan	NS	<0.100	NS	<0.021	NS	<0.021	NS	<0.054	NS	<0.034	NS	<0.035	NS	<0.013	NS	<0.032	NS	<0.032	NS	<0.019	NS	<0.019
Endosulfan sulfate	NS	<0.100	NS	<0.015	NS	<0.015	NS	<0.030	NS	<0.025	NS	<0.026	NS	<0.014	NS	<0.008	NS	<0.008	NS	<0.016	NS	<0.016
Endrin	0.004	*<0.120*	0.004	*<0.019*	0.004	*<0.019*	0.004	*<0.036*	0.004	*<0.035*	0.004	*<0.036*	0.004	*<0.016*	0.004	*<0.017*	0.004	*<0.017*	0.004	*<0.023*	0.004	*<0.023*
Endrin aldehyde	NS	<0.100	NS	<0.015	NS	<0.015	NS	<0.014	NS	<0.038	NS	<0.040	NS	<0.024	NS	<0.032	NS	<0.032	NS	<0.026	NS	<0.026
Heptachlor	NS	<0.120	NS	<0.012	NS	<0.012	NS	<0.045	NS	<0.035	NS	0.092	NS	<0.018	NS	<0.027	NS	<0.027	NS	<0.035	NS	<0.035
Heptachlor epoxide	NS	<0.100	NS	<0.010	NS	<0.010	NS	<0.045	NS	<0.032	NS	<0.033	NS	<0.020	NS	<0.008	NS	<0.008	NS	<0.062	NS	<0.062
PCB-1242	0.001	*<0.600*	0.001	*<0.40*	0.001	*<0.40*	0.001	*<0.34*	0.001	*<0.41*	0.001	*<0.43*	0.001	<0.56	0.001	*<0.37*	0.001	*<0.37*	0.001	*<0.14*	0.001	*<0.14*
PCB-1254	0.001	*<1.00*	0.001	*<0.22*	0.001	*<0.22*	0.001	*<0.34*	0.001	*<0.20*	0.001	*<0.21*	0.001	<0.29	0.001	*<0.23*	0.001	*<0.23*	0.001	*<0.20*	0.001	*<0.20*
PCB-1221	0.001	*<1.80*	0.001	*<0.34*	0.001	*<0.34*	0.001	*<0.55*	0.001	*<0.68*	0.001	*<0.71*	0.001	<0.87	0.001	*<0.22*	0.001	*<0.22*	0.001	*<0.64*	0.001	*<0.64*
PCB-1232	0.001	*<0.140*	0.001	*<0.41*	0.001	*<0.41*	0.001	*<0.77*	0.001	*<0.66*	0.001	*<0.69*	0.001	<0.34	0.001	*<0.55*	0.001	*<0.55*	0.001	*<0.37*	0.001	*<0.37*
PCB-1248	0.001	*<0.400*	0.001	*<0.21*	0.001	*<0.21*	0.001	*<0.30*	0.001	*<0.78*	0.001	*<0.81*	0.001	<0.28	0.001	*<0.19*	0.001	*<0.19*	0.001	*<0.22*	0.001	*<0.22*
PCB-1260	0.001	*<0.800*	0.001	*<0.19*	0.001	*<0.19*	0.001	*<0.34*	0.001	*<0.21*	0.001	*<0.22*	0.001	<0.24	0.001	*<0.32*	0.001	*<0.32*	0.001	*<0.59*	0.001	*<0.59*
PCB-1016	0.001	*<0.800*	0.001	*<0.26*	0.001	*<0.26*	0.001	*<0.37*	0.001	*<0.36*	0.001	*<0.37*	0.001	<0.33	0.001	*<0.18*	0.001	*<0.18*	0.001	*<0.55*	0.001	*<0.55*
Toxaphene	0.005	*<1.40*	0.005	*<0.33*	0.005	*<0.33*	0.005	*<0.79*	0.005	*<0.53*	0.005	*<0.55*	0.005	<0.34	0.005	*<0.22*	0.005	*<0.22*	0.005	*<0.60*	0.005	*<0.60*

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OUTFALL ID: SR003 **RECEIVING WATER: Salt River** **DESIGNATED USES: A&Wedw, PBC, FC, AgI, AgL**	**MONITORING SEASONS** Summer: June 1 – October 31 Winter: November 1 – May 31																					
	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		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/11/11**	**SWQS**	**11/5/11**	**SWQS**	**7/12/12**	**SWQS**	**12/14/12**	**SWQS**	**7/21/13**	**SWQS**	**11/23/13**	**SWQS**	**8/12/14**	**SWQS**	**12/4/14**	**SWQS**	**7/31/15**	**SWQS**	**1/4/16**
MONITORING PARAMETERS [1, 2]																						
Conventional Parameters																						
Flow [3] (cfs)	NS	0.465	NS	1.136	NS	0.505	NS	1.806	NS	0.55	NS	2.93	NS	2.23	NS	1.162	NS	1.116	NS	5.167	NS	2.656
pH	6.5-9	8.19	6.5-9	7.58	6.5-9	8.17	6.5-9	7.55	6.5-9	8.48	6.5-9	7.78	6.5-9	8.54	6.5-9	7.67	6.5-9	8.47	6.5-9	7.63	6.5-9	7.94
Temperature (ºC)	Varies	16.5	Varies	30.0	Varies	10.5	Varies	29.8	Varies	20.0	Varies	27.5	Varies	20.0	Varies	29.5	Varies	19.5	Varies	30.8	Varies	15.5
Hardness (mg/L)	400	70.9	400	105	400	48.4	400	51.5	400	47.8	400	39.1	400	74.0	400	38.9	400	32.5	400	46.0	400	41.4
Total Dissolved Solids (TDS) (mg/L) [2]	NS	144	NS	344	NS	154	NS	178	NS	210	NS	130	NS	186	NS	130	NS	112	NS	172	NS	124
Total Suspended Solids (TSS) (mg/L) [2]	NS	90.0	NS	115	NS	27.5	NS	568	NS	142	NS	178	NS	84.0	NS	314	NS	1,600	NS	684	NS	196
Biochemical Oxygen Demand (BOD) (mg/L) [2]	NS	10.2	NS	<24	NS	15	NS	45	NS	34	NS	27	NS	10	NS	18	NS	36	NS	30	NS	21
Chemical Oxygen Demand (COD) (mg/L) [2]	NS	84.0	NS	120	NS	77	NS	360	NS	190	NS	160	NS	74	NS	200	NS	400	NS	330	NS	200

SR003	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		Winter 2015/16	
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Inorganics																						
Cyanide, total (µg/L) [2]	41 T	5.00	41 T	<5.0	41 T	<5.0	41 T	<5	41 T	<5	41 T	*<50*	41 T	<5	41 T	<5	41 T	<5	41 T	<5	41 T	<5
Nutrients (mg/L) [2]																						
Nitrate + Nitrite as N	NS	0.784	NS	1.7	NS	0.8	NS	1.5	NS	1.2	NS	1.6	NS	0.9	NS	0.9	NS	0.7	NS	0.7	NS	0.6
Ammonia as N	5.843	0.559	17.58	0.27	6.089	1.0	18.45	1.7	3.34	2.1	12.56	1.2	2.98	0.47	10.18	0.98	2.28	1.1	16.2	1.6	9.42	0.78
Total Kjeldahl Nitrogen (TKN)	NS	1.80	NS	3.6	NS	2.4	NS	5.4	NS	5.0	NS	4.0	NS	1.2	NS	2.8	NS	4.2	NS	4.3	NS	2.5
Total Phosphorus as P	NS	0.357	NS	0.53	NS	0.51	NS	0.62	NS	0.65	NS	0.79	NS	0.40	NS	1.1	NS	0.37	NS	1.8	NS	0.98
Ortho-Phosphorus as P	NS	0.275	NS	0.3	NS	0.2	NS	0.2	NS	0.3	NS	0.4	NS	0.1	NS	0.1	NS	0.2	NS	<0.1	NS	0.1
Microbiological																						
Escherichia coli (*E. coli*) (CFU/100 mg or MPN/100 mL) [2]	575	**23,590**	575	**>2,419.6**	575	**>2,419.6**	575	**>2,419.6**	575	**>2,419.6**	575	**>2,419.6**	575	**2,419.6**	575	**>2419.6**	575	**>2,419.6**	575	**10,710**	575	**8,130.0**

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Total Metals (µg/L) [2]																						
Antimony	640 T 1,000 D	<25 T&D	640 T 1,000 D	1.6 T 1.5 D	640 T 1,000 D	0.91 T 0.7 D	640 T 1,000 D	2.5 T <0.25 D	640 T 1,000 D	2.2 T 1.3 D	640 T 1,000 D	1.6 T 0.8 D	640 T 1,000 D	1.2 T 0.6 D	640 T 1,000 D	1.8 T 1.0 D	640 T 1,000 D	1.4 T 1.0 D	640 T 1,000 D	2.9 T <5.0 D	640 T 1,000 D	2.6 T <5.0 D
Arsenic	80 T 340 D	<10 T&D	80 T 340 D	4.0 T 3.1 D	80 T 340 D	2.7 T 1.3 D	80 T 340 D	7.9 T 0.4 D	80 T 340 D	4.0 T 1.4 D	80 T 340 D	4.6 T 1.4 D	80 T 340 D	3.6 T 2.8 D	80 T 340 D	3.8 T 1.4 D	80 T 340 D	12.2 T 1.2 D	80 T 340 D	8.8 T <5.0 D	80 T 340 D	4.8 T <5.0 D
Barium	98,000 T	53 T 20 D	98,000 T	63 T 47 D	98,000 T	46 T 20 D	98,000 T	266 T 6 D	98,000 T	113 T 20 D	98,000 T	119 T 22 D	98,000 T	67 T 26 D	98,000 T	136 T 21 D	98,000 T	538 T 14 D	98,000 T	293 T 25 D	98,000 T	161 T 18 D
Beryllium	84 T	<2 T&D	84 T	<0.15 T&D	84 T	<0.15 T <0.06 D	84 T	0.77 T <0.15 D	84 T	0.34 T <0.15 D	84 T	0.48 T <0.15 D	84 T	<0.15 <0.06 D	84 T	0.3 T <0.15 D	84 T	1.7 T <0.06 D	84 T	0.95 T <5.0 D	84 T	0.32 T <5.0 D
Cadmium	50 T 5.63 D	<3 T <3 D	50 T 8.25	<0.25 T&D	50 T 3.88 D	<0.25 T <0.10 D	50 T 4.13 D	1.4 T <0.25 D	50 T 3.97 D	0.5 T <0.25 D	50 T 3.158 D	0.6 T <0.25 D	50 T 5.87 D	<0.3 T <0.10 D	50 T 3.14 D	0.8 T <0.30 D	50 T 2.64 D	2.7 T <0.12 D	50 T 3.70 D	1.2 T *<5.0 D*	50 T 3.33 D	1.2 T *<5.0 D*
Chromium	1,000 T	<10 T&D	1,000 T	4.7 T <4.50 D	1,000 T	4.8 T <1.80 D	1,000 T	27.8 T <2.00 D	1,000 T	12.1 T <2.00 D	1,000 T	14.5 T <2.00 D	1,000 T	5.2 T 1.1 D	1,000 T	11.6 T 1.1 D	1,000 T	45.6 T 0.8 D	1,000 T	31.4 T <5.0 D	1,000 T	14.4 T <5.0 D
Copper	500 T 9.71 D	21 T *<10 D*	500 T 14.07 D	28.8 T **20.9 D**	500 T 6.78 D	19.9 T **12.0 D**	500 T 7.20 D	126 T 2.5 D	500 T 6.93 D	60.1 T **18.5 D**	500 T 5.54 D	49.1 T **16.8 D**	500 T 10.12 D	25.1 T 6.8 D	500 T 5.52 D	78.3 T **9.6 D**	500 T 4.66 D	219 T **10.6 D**	500 T 6.47 D	147 T **16.6 D**	500 T 5.85 D	95.2 T **17.3 D**
Lead	15 T 44.22 D	14 T <10 D	15 T 68.10 D	5.9 T 0.9 D	15 T 29.07 D	9.5 T 0.5 D	15 T 31.15 D	**74.2 T** <0.45 D	15 T 29.81 D	**26.1 T** 0.8 D	15 T 22.93 D	**34.4 T** 1.5 D	15 T 46.46 D	14.4 T 0.6 D	15 T 22.79 D	**49.6 T** 1.4 D	15 T 18.64 D	**110 T** 0.6 D	15 T 27.47 D	**64.4 T** 1.0 D	15 T 24.43 D	**44.1 T** <5.0 D
Mercury	10 T 2.4 D	<0.2000 T&D	10 T 2.4 D	<0.092 T&D	10 T 2.4 D	<0.092 T&D	10 T 2.4 D	0.09 T <0.040 D	10 T 2.4 D	<0.040 T <0.040 D	10 T 2.4 D	0.02 T 0.023 D	10 T 2.4 D	<0.020 T <0.020 D	10 T 2.4 D	<0.092 T <0.2 D	10 T 2.4 D	<0.092 T <0.092 D	10 T 2.4 D	0.08 T <0.2 D	10 T 2.4 D	0.08 T <0.2 D
Nickel	511 T 349 D	<10 T&D	511 T 488 D	7.4 T 5.8 D	511 T 254 D	6.1 T 2.4 D	511 T 267 D	36.1 T 0.8 D	511 T 258 D	15.6 T 3.6 D	511 T 211.5 D	18.8 T 3.3 D	511 T 363 D	6.1 T 1.3 D	511 T 210.6 D	16.4 T 2.5 D	511 T 181 D	60.6 D 2.2 D	511 T 243 D	36.8 T 3.4 D	511 T 222 D	18.9 T <5.0 D
Selenium	20 T	<2.00 T&D	20 T	<0.85 T&D	20 T	<0.85 T <0.34 D	20 T	0.98 T <0.60 D	20 T	0.86 T <0.60 D	20 T	<0.60 T <0.60 D	20 T	<0.60 T 0.7 D	20 T	<0.25 T <0.25 D	20 T	0.79 T 0.3 D	20 T	<0.40 T <5.0 D	20 T	<0.40 T <5.0 D
Silver	4,667 T 1.77 D	<5 T *<5 D*	4,667 T 3.50	<0.2 T&D	4,667 T 0.92 D	<0.20 T&D	4,667 T 1.03 D	0.5 T <0.15 D	4,667 T 0.96 D	0.2 T <0.15 D	4,667 T 0.643 D	0.2 T <0.15 D	4,667 T 1.92 D	<0.15 T <0.15 D	4,667 T 0.637 D	<0.20 T <0.20 D	4,667 T 0.465 D	0.5 T <0.08 D	4,667 T 0.85 D	0.4 T *<5.0 D*	4,667 T 0.70 D	<0.25 T *<5.0 D*
Thallium	1 T 700 D	<0.50 T <0.5 D	1 T 700 D	<0.20 T&D	1 T 700 D	<0.20 T <0.08 D	1 T 700 D	0.33 T <0.20 D	1 T 700 D	<0.20 T <0.20 D	1 T 700 D	<0.20 T <0.20 D	1 T 700 D	<0.2 T <0.08 D	1 T 700 D	0.13 T <0.10 D	1 T 700 D	0.61 T <0.04 D	1 T 700 D	0.22 T <5.0 D	1 T 700 D	<0.15 T <5.0 D
Zinc	5,106 T 87.5	141 T <50 D	5,106 T 122.1 D	78.6 T 37.4 D	5,106 T 63.3 D	87.0 T 19.9 D	5,106 T 66.8 D	644 T 8.3 D	5,106 T 64.6 D	277 T 38.2 D	5,106 T 52.9 D	213 T 27.4 D	5,106 T 90.8 D	120 T 18.6 D	5,106 T 52.7 D	391 T 30.4 D	5,106 T 45.2 D	919 T 12.9 D	5,106 T 60.7 D	688 T 29.5 D	5,106 T 55.5 D	395 T 27.4 D
Organic Toxic Pollutants																						
Total Petroleum Hydrocarbons (TPH) (mg/L) [2]	NS	<5.00	NS	<10	NS	<10	NS	<5	NS	<10	NS	<11	NS	<11	NS	<13	NS	<10	NS	<12	NS	<5.4
Total Oil and Grease (mg/L) [2]	NS	<5.00	NS	<10	NS	<5	NS	<5	NS	14	NS	<5.5	NS	<5.6	NS	<6.3	NS	5.4	NS	<5.8	NS	<5.4
VOCs, Semi-VOCs, & Pesticides (µg/L) [2]																						
Acrolein	1.9	<50.0	1.9	<1.86	1.9	<0.37	1.9	*<2.93*	1.9	<1.465	1.9	<0.20	1.9	<0.20	1.9	<2.00	1.9	<0.40	1.9	<0.78	1.9	<0.78
Acrylonitrile	0.2	<5.00	0.2	*<0.84*	0.2	<0.17	0.2	*<2.26*	0.2	*<1.130*	0.2	<0.16	0.2	<0.16	0.2	<0.70	0.2	<0.14	0.2	*<0.53*	0.2	*<0.53*
Benzene	114	<0.500	114	<2.30	114	<0.20	114	<4.0	114	<0.75	114	<1.20	114	<0.24	114	<0.65	114	<0.13	114	<0.46	114	<0.46
Bromoform	133	<1.00	133	<4.15	133	<0.25	133	<5.0	133	<2.15	133	<2.35	133	<0.47	133	<1.40	133	<0.28	133	<0.68	133	<0.68
Carbon tetrachloride	2	<0.500	2	*<2.30*	2	<0.31	2	*<6.2*	2	<1.65	2	<1.30	2	<0.26	2	<1.15	2	<0.23	2	<0.31	2	<0.31

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T&D = Total and Dissolved
Bold text indicates a sample result greater than the WQS.
Italicized text indicated a laboratory detection limit higher that the WQS.

Footnotes
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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 6 hours).
4 Standard for total PCBs of 11 µg/L A&We and 19 µg/L PBC.
5 The sample was lost during extraction at the laboratory due to the glassware breaking.
6 There were no representative storm events (>0.20 inches) that occurred or no representative events without a measurable rain event in the previous 72 hours.

SR003	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		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/11/11**	**SWQS**	**11/5/11**	**SWQS**	**7/12/12**	**SWQS**	**12/14/12**	**SWQS**	**7/21/13**	**SWQS**	**11/23/13**	**SWQS**	**8/12/14**	**SWQS**	**12/4/14**	**SWQS**	**7/31/15**	**SWQS**	**1/4/16**
Chlorobenzene	1,553	<0.500	1,553	<3.70	1,553	<0.25	1,553	<5.0	1,553	<1.40	1,553	<0.80	1,553	<0.16	1,553	<0.65	1,553	<0.13	1,553	<0.50	1,553	<0.50
Chlorodibromomethane	13	<0.500	13	<3.90	13	<0.21	13	<4.2	13	<1.30	13	<0.90	13	<0.18	13	<1.20	13	<0.24	13	<0.61	13	<0.61
Chloroethane (ethyl chloride)	NS	<5.00	NS	<2.25	NS	<0.14	NS	<2.8	NS	<1.35	NS	<1.10	NS	<0.22	NS	<0.95	NS	<0.19	NS	<0.40	NS	<0.40
2-chloroethylvinyl ether	180,000	<2.00	180,000	<0.174	180,000	<0.174	180,000	<2.2	180,000	<0.22	180,000	<0.22	180,000	<0.22	180,000	<0.95	180,000	<0.19	180,000	<0.53	180,000	<0.53
Chloroform	2,133	<0.500	2,133	<2.30	2,133	<0.40	2,133	<8.0	2,133	<1.05	2,133	<1.15	2,133	<0.23	2,133	0.72	2,133	<0.14	2,133	<0.49	2,133	<0.49
Dichlorobromomethane	17	<0.500	17	<2.95	17	<0.23	17	<4.6	17	<0.75	17	<1.15	17	<0.23	17	<0.75	17	<0.15	17	<0.49	17	<0.49
1,1-dichloroethane	NS	<1.00	NS	<2.15	NS	<0.18	NS	<3.6	NS	<0.65	NS	<1.30	NS	<0.26	NS	<0.95	NS	<0.19	NS	<0.42	NS	<0.42
1,2-dichloroethane	37	<1.00	37	<2.45	37	<0.20	37	<4.0	37	<0.80	37	<1.25	37	<0.25	37	<0.55	37	<0.11	37	<0.51	37	<0.51
1,1-dichloroethylene	7,143	<1.00	7,143	<2.10	7,143	<0.23	7,143	<4.6	7,143	<1.85	7,143	<1.40	7,143	<0.28	7,143	<1.35	7,143	<0.27	7,143	<0.34	7,143	<0.34
1,2-dichloropropane	17,518	<0.500	17,518	<2.50	17,518	<0.22	17,518	<4.4	17,518	<0.75	17,518	<1.25	17,518	<0.25	17,518	<0.90	17,518	<0.18	17,518	<0.49	17,518	<0.49
1,3-dichloropropylene	42	<1.00	42	cis<2.85 trans<3.45	42	<0.19	42	cis<3.8 trans<3.8	42	cis<0.50 trans<0.75	42	cis<1.20 trans<1.10	42	cis<0.24 trans<0.22	42	<0.65	42	<0.13	42	cis <0.51 trans <0.50	42	cis <0.51 trans <0.50
Ethylbenzene	2,133	<2.00	2,133	<3.35	2,133	<0.27	2,133	<5.4	2,133	<1.45	2,133	<0.65	2,133	<0.13	2,133	<0.75	2,133	<0.15	2,133	<0.46	2,133	<0.46
Methyl bromide	299	<5.00	299	<2.35	299	<0.14	299	<2.8	299	<0.95	299	<0.95	299	<0.19	299	<0.90	299	<0.18	299	<0.46	299	<0.46
Methyl chloride	270,000	<5.00	270,000	<2.15	270,000	<0.20	270,000	<4.0	270,000	<1.85	270,000	<1.40	270,000	<0.28	270,000	<1.15	270,000	<0.23	270,000	<0.46	270,000	<0.46
Methylene chloride	593	<3.00	593	2.0	593	<0.45	593	14	593	1.8	593	<1.00	593	<0.20	593	<1.00	593	<0.20	593	<0.81	593	<0.81
1,1,2,2-tetrachloroethane	4	<0.500	4	*<4.65*	4	<0.11	4	<2.2	4	<2.45	4	<2.00	4	<0.40	4	<1.75	4	<0.35	4	<0.80	4	<0.80
Tetrachloroethylene	261	<0.500	261	<2.40	261	<0.26	261	<5.2	261	<1.15	261	<1.05	261	<0.21	261	<0.65	261	<0.13	261	<0.35	261	<0.35
Toluene	8,700	<3.00	8,700	<2.40	8,700	<0.23	8,700	<4.6	8,700	<0.60	8,700	<0.95	8,700	<0.19	8,700	<0.55	8,700	<0.11	8,700	<0.43	8,700	<0.43
1,2-trans-dichloroethylene	10,127	<0.500	10,127	<2.00	10,127	<0.14	10,127	<2.8	10,127	<0.85	10,127	<1.25	10,127	<0.25	10,127	<0.90	10,127	<0.18	10,127	<0.38	10,127	<0.38
1,1,1-trichloroethane	1,000	<0.500	1,000	<2.40	1,000	<0.28	1,000	<5.6	1,000	<1.15	1,000	<1.00	1,000	<0.20	1,000	<0.70	1,000	<0.14	1,000	<0.34	1,000	<0.34
1,1,2-trichloroethane	16	<0.500	16	<3.95	16	<0.22	16	<4.4	16	<1.20	16	<0.75	16	<0.15	16	<0.65	16	<0.13	16	<0.60	16	<0.60
Trichloroethylene	29	<0.500	29	<1.90	29	<0.35	29	<7.0	29	<1.20	29	<0.75	29	<0.15	29	<1.10	29	<0.22	29	<0.48	29	<0.48
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	NS	<2.00 <1.50	NS	<20 <20	NS	<1.0	NS	<20 <20	NS	<5.0 <5.0	NS	<5.0 <5.0	NS	<1.0 <1.0	NS	<10.00 <5.00	NS	<1.0 <1.0	NS	<1.0 <1.0	NS	<1.0 <1.0
Vinyl chloride	5	<0.500	5	<2.35	5	<0.19	5	<3.8	5	<2.50	5	<1.00	5	<0.20	5	<1.10	5	<0.22	5	<0.35	5	<0.35
Xylenes, Total	186,667	<1.00	186,667	<0.95	186,667	<0.51	186,667	<10.2	186,667	<2.90	186,667	<1.50	186,667	<0.30	186,667	<1.25	186,667	<0.13	186,667	<0.52	186,667	<0.52
Acid Compounds (µg/L) [2]																						
2-chlorophenol	30	<2.46	30	<2.21	30	<11.05	30	*<57.0*	30	<22.8	30	*<89.2*	30	*<43.3*	30	<1.48	30	<1.48	30	<3.10	30	<3.10
2,4-dichlorophenol	59	<1.38	59	<2.42	59	<12.10	59	*<61.0*	59	<24.4	59	*<87.8*	59	<42.6	59	<1.65	59	<1.65	59	<2.81	59	<2.81
2,4-dimethylphenol	171	<2.93	171	<1.72	171	<8.60	171	<73.0	171	<29.2	171	<47.4	171	<23.0	171	<2.20	171	<2.20	171	<2.64	171	<2.64
4,6-dinitro-o-cresol	310	<2.71	310	<2.18	310	<10.90	310	<69.0	310	<27.6	310	<62.0	310	<30.1	310	<1.22	310	<1.22	310	<1.49	310	<1.49
2,4-dinitrophenol	110	<2.04	110	<1.00	110	<5.00	110	<69.5	110	<27.8	110	<53.9	110	<26.2	110	<1.13	110	<1.13	110	<2.21	110	<2.21
2-nitrophenol	NS	<1.46	NS	<2.31	NS	<11.55	NS	<139.0	NS	<55.6	NS	<85.5	NS	<41.5	NS	<1.57	NS	<1.57	NS	<2.84	NS	<2.84
4-nitrophenol	4,100	<0.423	4,100	<7.97	4,100	<39.85	4,100	<408.0	4,100	<163.2	4,100	<97.1	4,100	<47.2	4,100	3.0	4,100	3.7	4,100	<2.98	4,100	3.6
p-chloro-m-cresol	15	<1.25	15	<1.96	15	<9.80	15	*<93.0*	15	*<37.2*	15	*<91.7*	15	*<44.5*	15	<1.65	15	<1.65	15	<1.87	15	<1.87
Pentachlorophenol	30.006	<2.98	16.26	<4.37	29.427	<21.85	15.79	*<103.5*	40.17	*<41.4*	19.879	*<69.9*	42.688	<33.9	17.803	<1.39	39.781	<1.39	17.10	6.7	23.36	<1.47

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Phenol	37	<0.695	37	<2.00	37	<10.00	37	*<59.5*	37	<23.8	37	*<73.8*	37	<35.9	37	1.6	37	<1.34	37	<2.30	37	<2.30
2,4,6-trichlorophenol	2	<1.50	2	*<5.18*	2	*<25.90*	2	*<140.0*	2	*<56.0*	2	*<99.6*	2	*<48.4*	2	<1.89	2	<1.89	2	*<2.60*	2	*<2.60*
Bases/Neutrals (µg/L) [2]																						
Acenaphthene	198	<0.704	198	<1.31	198	<6.55	198	<85.0	198	<34.0	198	<27.9	198	<13.5	198	<1.03	198	<1.03	198	<0.35	198	<0.35
Acenaphthylene	NS	<2.77	NS	<1.54	NS	<7.70	NS	<63.5	NS	<25.4	NS	<36.0	NS	<17.5	NS	<1.00	NS	<1.00	NS	<1.23	NS	<1.23
Anthracene	74	<0.700	74	<1.64	74	<8.20	74	<44.5	74	<17.8	74	<36.0	74	<17.5	74	<2.88	74	<2.88	74	<0.44	74	<0.44
Benz(a)anthracene	0.02	*<0.772*	0.02	*<2.65*	0.02	*<13.25*	0.02	*<78.5*	0.02	*<31.4*	0.02	*<36.0*	0.02	*<17.5*	0.02	*<1.08*	0.02	*<1.08*	0.02	*<0.38*	0.02	*<0.38*
Benzo(a)pyrene	0.02	*<0.743*	0.02	*<4.47*	0.02	*<22.35*	0.02	*<96.5*	0.02	*<38.6*	0.02	*<38.9*	0.02	*<18.9*	0.02	*<3.77*	0.02	*<3.77*	0.02	*<1.41*	0.02	*<1.41*
Benzo(b)fluoranthene	0.02	*<0.747*	0.02	*<3.92*	0.02	*<19.60*	0.02	*<169.5*	0.02	*<67.8*	0.02	*<50.5*	0.02	*<24.5*	0.02	*<1.46*	0.02	*<1.46*	0.02	*<1.06*	0.02	*<1.06*
Benzo(g,h,i)perylene	NS	<0.770	NS	<3.40	NS	<17.00	NS	<70.5	NS	<28.2	NS	<36.0	NS	<17.5	NS	<1.29	NS	<1.29	NS	<0.72	NS	<0.72
Benzo(k)fluoranthene	0.02	*<0.779*	0.02	*<3.00*	0.02	*<15.00*	0.02	*<57.5*	0.02	*<23.0*	0.02	*<29.1*	0.02	*<14.1*	0.02	*<1.04*	0.02	*<1.04*	0.02	*<0.35*	0.02	*<0.35*
Chrysene	0.02	*<0.800*	0.02	*<2.56*	0.02	*<12.80*	0.02	*<44.5*	0.02	*<17.8*	0.02	*<30.8*	0.02	*<14.9*	0.02	*<1.41*	0.02	*<1.41*	0.02	*<0.46*	0.02	*<0.46*
Dibenz(a,h)anthracene	0.02	*<0.743*	0.02	*<4.06*	0.02	*<20.30*	0.02	*<202.5*	0.02	*<81.0*	0.02	*<41.2*	0.02	*<20.0*	0.02	*<1.24*	0.02	*<1.24*	0.02	*<0.47*	0.02	*<0.47*
1,2-dichlorobenzene	205	<2.70	205	<1.27	205	<6.35	205	<108.5	205	<43.4	205	<5.6	205	<2.7	205	<1.76	205	<1.76	205	<1.04	205	<1.04
1,3-dichlorobenzene	2,500	<2.39	2,500	<1.19	2,500	<5.95	2,500	<121.0	2,500	<48.4	2,500	<23.5	2,500	<11.4	2,500	<1.74	2,500	<1.74	2,500	<0.47	2,500	<0.47
1,4-dichlorobenzene	2,000	<2.73	2,000	<1.42	2,000	<7.10	2,000	<106.5	2,000	<42.6	2,000	<21.8	2,000	<10.6	2,000	<1.56	2,000	<1.56	2,000	<1.28	2,000	<1.28
3,3-dichlorobenzidine	0.03	*<3.17*	0.03	*<11.80*	0.03	*<59.00*	0.03	*<369.0*	0.03	*<147.6*	0.03	*<567.2*	0.03	*<275.4*	0.03	*<6.06*	0.03	*<6.06*	0.03	*<11.60*	0.03	*<11.60*
Diethyl phthalate	8,767	<0.777	8,767	<1.92	8,767	<9.60	8,767	<74.0	8,767	<29.6	8,767	<39.5	8,767	<19.2	8,767	<2.37	8,767	<2.37	8,767	0.4	8,767	<0.36
Dimethyl phthalate	17,000	<0.788	17,000	<1.69	17,000	<8.45	17,000	<60.5	17,000	<24.2	17,000	<37.2	17,000	<18.1	17,000	<2.42	17,000	<2.42	17,000	<0.47	17,000	<0.47
Di-n-butyl phthalate	470	<1.03	470	<4.26	470	<21.30	470	<114.5	470	<45.8	470	<46.4	470	<22.5	470	<1.85	470	<1.85	470	<0.31	470	<0.31
2,4-dinitrotoluene	421	<3.00	421	<2.69	421	<13.45	421	<65.5	421	<26.2	421	<42.6	421	<20.7	421	<2.12	421	<2.12	421	<0.26	421	<0.26
2,6-dinitrotoluene	3,733	<0.753	3,733	<3.88	3,733	<19.40	3,733	<93.5	3,733	<37.4	3,733	<52.4	3,733	<25.5	3,733	<1.12	3,733	<1.12	3,733	<0.38	3,733	<0.38
Di-n-octyl phthalate	373,333	<1.35	373,333	<7.86	373,333	<39.30	373,333	<206.5	373,333	<82.6	373,333	<59.9	373,333	<29.1	373,333	<1.10	373,333	<1.10	373,333	<1.28	373,333	<1.28
1,2-diphenylhydrazine (as azobenzene)	NS	<0.714	NS	<1.44	NS	<7.20	NS	<53.5	NS	<21.4	NS	<48.5	NS	<23.5	NS	<6.70	NS	<6.70	NS	<1.06	NS	<1.06
Fluoranthene	28	<0.841	28	<2.45	28	<12.25	28	*<33.5*	28	<13.4	28	*<37.2*	28	<18.1	28	<1.35	28	<1.35	28	0.3	28	<0.27
Fluorene	1,067	<0.711	1,067	<1.31	1,067	<6.55	1,067	<84.0	1,067	<33.6	1,067	<32.0	1,067	<15.6	1,067	<4.81	1,067	<4.81	1,067	<0.29	1,067	<0.29
Hexachlorobenzene	0.0003	*<0.575*	0.0003	*<1.50*	0.0003	*<7.50*	0.0003	*<65.0*	0.0003	*<26.0*	0.0003	*<28.9*	0.0003	*<14.0*	0.0003	*<1.23*	0.0003	*<1.23*	0.0003	*<0.34*	0.0003	*<0.34*
Hexachlorobutadiene	18	<2.94	18	<1.84	18	<9.20	18	*<68.5*	18	*<27.4*	18	<6.9	18	<3.3	18	<1.82	18	<1.82	18	<1.67	18	<1.67
Hexachlorocyclopentadiene	3.5	<3.10	3.5	*<3.74*	3.5	*<18.70*	3.5	*<66.0*	3.5	*<26.4*	3.5	*<47.2*	3.5	*<22.9*	3.5	<1.23	3.5	<1.23	3.5	<1.53	3.5	<1.53
Hexachloroethane	3.3	<3.00	3.3	<1.34	3.3	*<6.70*	3.3	*<70.0*	3.3	*<28.0*	3.3	*<8.3*	3.3	*<4.0*	3.3	<1.62	3.3	<1.62	3.3	<1.23	3.3	<1.23
Indeno(1,2,3-cd)pyrene	0.2	*<0.768*	0.2	*<4.19*	0.2	*<20.95*	0.2	*<166.5*	0.2	*<66.6*	0.2	*<42.2*	0.2	*<20.5*	0.2	*<1.39*	0.2	*<1.39*	0.2	*<0.62*	0.2	*<0.62*
Isophorone	961	<0.706	961	<1.73	961	<8.65	961	<95.0	961	<38.0	961	<29.3	961	<14.2	961	<2.14	961	<2.14	961	<0.37	961	<0.37
Naphthalene	1,524	<2.48	1,524	<1.03	1,524	<5.15	1,524	<71.0	1,524	<28.4	1,524	<25.0	1,524	<12.1	1,524	<1.83	1,524	<1.83	1,524	<0.36	1,524	0.6
Nitrobenzene	138	<0.718	138	<2.38	138	<11.90	138	<65.5	138	<26.2	138	<25.6	138	<12.4	138	<2.10	138	<2.10	138	<1.26	138	<1.26
N-nitrosodimethylamine	0.03	*<2.18*	0.03	*<1.03*	0.03	*<5.15*	0.03	*<82.0*	0.03	*<32.8*	0.03	*<25.0*	0.03	*<12.1*	0.03	*<1.00*	0.03	*<1.00*	0.03	*<1.13*	0.03	*<1.13*
N-nitrosodi-n-propylamine	0.5	*<0.725*	0.5	*<2.65*	0.5	*<13.25*	0.5	*<94.0*	0.5	*<37.6*	0.5	*<31.4*	0.5	*<15.3*	0.5	*<1.15*	0.5	*<1.15*	0.5	*<1.17*	0.5	*<1.17*
N-nitrosodiphenylamine	6	*<3.24*	6	<1.64	6	*<8.20*	6	*<50.0*	6	*<20.0*	6	*<63.2*	6	*<30.7*	6	<3.57	6	<3.57	6	<1.15	6	<1.15

NOTES:

NS = no standard applicable to the designated use
T = Total
D = Dissolved
D[a] = Result is assumed based upon a 1:1 ratio to total metals
T&D = Total and Dissolved
Bold text indicates a sample result greater than the WQS.
Italicized text indicated a laboratory detection limit higher that the WQS.

Footnotes

1 The Permittee shall report on any additional parameters that were monitored for seasonal stormwater sampling as required by Section 6.0 of this permit (Special Conditions).
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 6 hours).
4 Standard for total PCBs of 11 µg/L A&We and 19 µg/L PBC.
5 The sample was lost during extraction at the laboratory due to the glassware breaking.
6 There were no representative storm events (>0.20 inches) that occurred or no representative events without a measurable rain event in the previous 72 hours.

SR003	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		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/11/11**	**SWQS**	**11/5/11**	**SWQS**	**7/12/12**	**SWQS**	**12/14/12**	**SWQS**	**7/21/13**	**SWQS**	**11/23/13**	**SWQS**	**8/12/14**	**SWQS**	**12/4/14**	**SWQS**	**7/31/15**	**SWQS**	**1/4/16**
Phenanthrene	30	<0.711	30	<1.28	30	<6.40	30	*<38.0*	30	<15.2	30	*<33.9*	30	<16.5	30	<1.39	30	<1.39	30	<0.31	30	<0.31
Pyrene	800	<0.835	800	<2.45	800	<12.25	800	<116.5	800	<46.6	800	<34.1	800	<16.6	800	<3.86	800	<3.86	800	<0.67	800	<0.67
1,2,4-trichlorobenzene	70	<2.64	70	<1.42	70	<7.10	70	*<133.0*	70	<53.2	70	<6.7	70	<3.2	70	<1.69	70	<1.69	70	<1.04	70	<1.04
Pesticides (μg/L) [2]														NOT RUN[5]								
Aldrin	0.00005	*<0.060*	0.00005	*<0.013*	0.00005	*<0.013*	0.00005	*<0.058*	0.00005	*<0.046*	0.00005	*<0.046*	0.00005		0.00005	*<0.027*	0.00005	*<0.027*	0.00005	*<0.012*	0.00005	*<0.012*
Alpha-BHC	0.005	*<0.050*	0.005	*<0.016*	0.005	*<0.016*	0.005	*<0.044*	0.005	*<0.038*	0.005	*<0.038*	0.005		0.005	*<0.021*	0.005	*<0.021*	0.005	*<0.058*	0.005	*<0.058*
Beta-BHC	0.02	*<0.050*	0.02	*<0.085*	0.02	**0.183**	0.02	*<0.048*	0.02	*<0.095*	0.02	*<0.095*	0.02		0.02	*<0.072*	0.02	*<0.072*	0.02	*<0.063*	0.02	*<0.063*
Gamma-BHC	1	<0.050	1	<0.014	1	<0.014	1	<0.055	1	<0.033	1	<0.033	1		1	<0.034	1	*<0.034*	1	<0.058	1	<0.058
Delta-BHC	1,600	<0.050	1,600	<0.016	1,600	<0.016	1,600	<0.035	1,600	<0.032	1,600	<0.032	1,600		1,600	<0.021	1,600	<0.021	1,600	<0.066	1,600	<0.066
Chlordane	0.0008	*<0.700*	0.0008	*<0.35*	0.0008	*<0.35*	0.0008	*<0.29*	0.0008	*<0.16*	0.0008	*<0.16*	0.0008		0.0008	*<0.14*	0.0008	*<0.14*	0.0008	*<0.36*	0.0008	*<0.36*
4,4’-DDT	0.0002	*<0.060*	0.0002	*<0.020*	0.0002	*<0.020*	0.0002	*<0.052*	0.0002	*<0.029*	0.0002	*<0.029*	0.0002		0.0002	*<0.025*	0.0002	*<0.025*	0.0002	*<0.017*	0.0002	*<0.017*
4,4’-DDE	0.0002	*<0.050*	0.0002	*<0.011*	0.0002	*<0.011*	0.0002	*<0.036*	0.0002	*<0.034*	0.0002	*<0.034*	0.0002		0.0002	*<0.010*	0.0002	*<0.010*	0.0002	*<0.013*	0.0002	*<0.013*
4,4’-DDD	0.0002	*<0.050*	0.0002	*<0.017*	0.0002	*<0.017*	0.0002	*<0.031*	0.0002	*<0.023*	0.0002	*<0.023*	0.0002		0.0002	*<0.031*	0.0002	*<0.031*	0.0002	*<0.021*	0.0002	*<0.021*
Dieldrin	0.00005	*<0.050*	0.00005	*<0.024*	0.00005	*<0.024*	0.00005	*<0.045*	0.00005	*<0.028*	0.00005	*<0.028*	0.00005		0.00005	*<0.030*	0.00005	*<0.030*	0.00005	*<0.060*	0.00005	*<0.060*
Alpha-endosulfan	0.2	<0.050	0.2	<0.010	0.2	<0.010	0.2	<0.048	0.2	<0.034	0.2	<0.034	0.2		0.2	<0.018	0.2	<0.018	0.2	<0.072	0.2	<0.072
Beta-endosulfan	0.2	<0.050	0.2	<0.021	0.2	<0.021	0.2	<0.054	0.2	<0.034	0.2	<0.034	0.2		0.2	<0.032	0.2	<0.032	0.2	<0.019	0.2	<0.019
Endosulfan sulfate	0.2	<0.050	0.2	<0.015	0.2	<0.015	0.2	<0.030	0.2	<0.025	0.2	<0.025	0.2		0.2	<0.008	0.2	0.078	0.2	<0.016	0.2	0.051
Endrin	0.004	*<0.060*	0.004	*<0.019*	0.004	*<0.019*	0.004	*<0.036*	0.004	*<0.035*	0.004	*<0.035*	0.004		0.004	*<0.017*	0.004	*<0.017*	0.004	*<0.023*	0.004	*<0.023*
Endrin aldehyde	0.09	*<0.050*	0.09	<0.015	0.09	<0.015	0.09	<0.014	0.09	<0.038	0.09	<0.038	0.09		0.09	<0.032	0.09	<0.032	0.09	<0.026	0.09	<0.026
Heptachlor	0.00008	*<0.060*	0.00008	*<0.012*	0.00008	*<0.012*	0.00008	*<0.045*	0.00008	**0.099**	0.00008	*<0.035*	0.00008		0.00008	*<0.027*	0.00008	**0.063**	0.00008	*<0.035*	0.00008	**0.059**
Heptachlor epoxide	0.00004	*<0.050*	0.00004	*<0.010*	0.00004	*<0.010*	0.00004	*<0.045*	0.00004	*<0.032*	0.00004	*<0.032*	0.00004		0.00004	*<0.008*	0.00004	*<0.008*	0.00004	*<0.062*	0.00004	*<0.062*
PCB-1242	[4]	<0.300	[4]	<0.40	[4]	<0.40	[4]	<0.34	[4]	<0.41	[4]	<0.41	[4]		[4]	<0.37	[4]	<0.37	[4]	<0.14	[4]	<0.14
PCB-1254	[4]	<0.500	[4]	<0.22	[4]	<0.22	[4]	<0.34	[4]	<0.20	[4]	<0.20	[4]		[4]	<0.23	[4]	<0.23	[4]	<0.20	[4]	<0.20
PCB-1221	[4]	<0.900	[4]	<0.34	[4]	<0.34	[4]	<0.55	[4]	<0.68	[4]	<0.68	[4]		[4]	<0.22	[4]	<0.22	[4]	<0.64	[4]	<0.64
PCB-1232	[4]	<0.070	[4]	<.041	[4]	<0.41	[4]	<0.77	[4]	<0.66	[4]	<0.66	[4]		[4]	<0.55	[4]	<0.55	[4]	<0.37	[4]	<0.37
PCB-1248	[4]	<0.200	[4]	<0.21	[4]	<0.21	[4]	<0.30	[4]	<0.78	[4]	<0.78	[4]		[4]	<0.19	[4]	<0.19	[4]	<0.22	[4]	<0.22
PCB-1260	[4]	<0.400	[4]	<0.19	[4]	<0.19	[4]	<0.34	[4]	<0.21	[4]	<0.21	[4]		[4]	<0.32	[4]	<0.32	[4]	<0.59	[4]	<0.59
PCB-1016	[4]	<0.400	[4]	<0.26	[4]	<0.26	[4]	<0.37	[4]	<0.36	[4]	<0.36	[4]		[4]	<0.18	[4]	<0.18	[4]	<0.55	[4]	<0.55
Toxaphene	0.0003	*<0.700*	0.0003	*<0.33*	0.0003	*<0.33*	0.0003	*<0.79*	0.0003	*<0.53*	0.0003	*<0.53*	0.0003		0.0003	*<0.22*	0.0003	*<0.22*	0.0003	*<0.60*	0.0003	*<0.60*

NOTES:

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D = Dissolved
D^a = Result is assumed based upon a 1:1 ratio to total metals
T&D = Total and Dissolved
Bold text indicates a sample result greater than the WQS.
Italicized text indicated a laboratory detection limit higher that the WQS.

Footnotes

1 The Permittee shall report on any additional parameters that were monitored for seasonal stormwater sampling as required by Section 6.0 of this permit (Special Conditions).
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3 Report the average flow rate for the sampling period (no more than 6 hours).
4 Standard for total PCBs of 11 μg/L A&We and 19 μg/L PBC.
5 The sample was lost during extraction at the laboratory due to the glassware breaking.
6 There were no representative storm events (>0.20 inches) that occurred or no representative events without a measurable rain event in the previous 72 hours.

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OUTFALL ID: SR030 **RECEIVING WATER: Salt River** **DESIGNATED USES: A&Wedw, PBC, FC, AgI, and AgL**	**MONITORING SEASONS** Summer: June 1 – October 31 Winter: November 1 – May 31																					
	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		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/11/11**	**SWQS**	**12/12/11**	**SWQS**	**7/12/12**	**SWQS**	**12/14/12**	**SWQS**	**7/21/13**	**SWQS**	**11/22/13**	**SWQS**	**8/12/14**	**SWQS**	**12/4/14**	**SWQS**	**7/31/15**	**SWQS**	**1/31/16**
MONITORING PARAMETERS [1, 2]																						
Conventional Parameters																						
Flow [3] (cfs)	NS	0.547	NS	1.233	NS	3.956	NS	14.79	NS	1.62	NS	40.52	NS	7.51	NS	69.2	NS	3.094	NS	30.58	NS	6.438
pH	6.5-9	8.20	6.5-9	7.62	6.5-9	7.60	6.5-9	7.90	6.5-9	8.33	6.5-9	8.14	6.5-9	8.49	6.5-9	8.17	6.5-9	8.15	6.5-9	7.9	6.5-9	8.09
Temperature (ºC)	Varies	16.5	Varies	29.5	Varies	15.5	Varies	27.2	Varies	17.0	Varies	26.5	Varies	18.5	Varies	26.2	Varies	19.0	Varies	30.5	Varies	13.5
Hardness (mg/L)	400	220	400	133	400	32.1	400	42.1	400	49.5	400	33.1	400	64.3	400	85.5	400	31.0	400	64.5	400	33.1
Total Dissolved Solids (TDS) (mg/L) [2]	NS	177	NS	470	NS	112	NS	132	NS	206	NS	120	NS	204	NS	332	NS	96	NS	240	NS	114
Total Suspended Solids (TSS) (mg/L) [2]	NS	564	NS	780	NS	464	NS	618	NS	440	NS	392	NS	355	NS	251	NS	296	NS	124	NS	712
Biochemical Oxygen Demand (BOD) (mg/L) [2]	NS	20.0	NS	<120	NS	25	NS	18	NS	35	NS	17	NS	53	NS	9	NS	14	NS	38	NS	20
Chemical Oxygen Demand (COD) (mg/L) [2]	NS	235	NS	550	NS	220	NS	230	NS	310	NS	140	NS	340	NS	94	NS	160	NS	220	NS	250

SR030	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		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/11/11**	**SWQS**	**12/12/11**	**SWQS**	**7/12/12**	**SWQS**	**12/14/12**	**SWQS**	**7/21/13**	**SWQS**	**11/22/13**	**SWQS**	**8/12/14**	**SWQS**	**12/4/14**	**SWQS**	**7/31/15**	**SWQS**	**1/31/16**
Inorganics																						
Cyanide, total (µg/L) [2]	41 T	<5.00	41 T	<5.0	41 T	<5.0	41 T	<5	41 T	<5	41 T	*<50*	41 T	<5	41 T	<5	41 T	<5	41 T	<5	41 T	<5
Nutrients (mg/L) [2]																						
Nitrate + Nitrite as N	NS	0.786	NS	1.1	NS	0.8	NS	1.2	NS	1.4	NS	1.2	NS	2.1	NS	1.0	NS	0.8	NS	1.3	NS	1.5
Ammonia as N	5.72	0.692	16.48	1.3	17.0	0.74	10.1	1.3	4.46	1.6	6.46	1.2	3.27	2.3	4.07	0.56	4.24	0.76	10.1	1.8	7.09	0.87
Total Kjeldahl Nitrogen (TKN)	NS	5.04	NS	8.2	NS	2.9	NS	4.0	NS	5.3	NS	4.2	NS	6.3	NS	1.7	NS	2.3	NS	4.2	NS	3.8
Total Phosphorus as P	NS	<0.500	NS	1.6	NS	1.4	NS	0.92	NS	0.79	NS	0.46	NS	1.4	NS	0.83	NS	0.39	NS	0.77	NS	1.8
Ortho-Phosphorus as P	NS	0.234	NS	0.2	NS	0.2	NS	0.3	NS	0.3	NS	0.4	NS	0.3	NS	0.1	NS	0.2	NS	<0.1	NS	0.2
Microbiological																						
Escherichia coli (*E. coli*) (CFU/100 mg or MPN/100 mL) [2]	575	**14,140**	575	**1,986.3**	575	**>2,419.6**	575	**>2,419.6**	575	**>2,419.6**	575	**>2419.6**	575	**2419.6**	575	**>2,419.6**	575	**>2,419.6**	575	**1,553.1**	575	**4,320.0**
Total Metals (µg/L) [2]																						
Antimony	640 T 1,000 D	<25 T&D	640 T 1,000 D	2.5 T 2.0 D	640 T 1,000 D	2.2 T 0.9 D	640 T 1,000 D	1.4 T 0.9 D	640 T 1,000 D	2.5 T 1.0 D	640 T 1,000 D	1.2 T 0.4 D	640 T 1,000 D	2.4 T 1.2 D	640 T 1,000 D	<25 T&D	640 T 1,000 D	<25 T&D	640 T 1,000 D	3.9 T <5.0 D	640 T 1,000 D	1.9 T <5.0 D
Arsenic	80 T 340 D	<10 T&D	80 T 340 D	10.1 T 3.0 D	80 T 340 D	5.3 T 1.2 D	80 T 340 D	6.8 T 1.8 D	80 T 340 D	5.3 T 1.7 D	80 T 340 D	8.0 T 1.2 D	80 T 340 D	4.9 T 1.5 D	80 T 340 D	35 T <10 D	80 T 340 D	<10 T&D	80 T 340 D	4.2 T <5.0 D	80 T 340 D	7.8 T <5.0 D

NOTES:
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- D = Dissolved
- D[a] = Result is assumed based upon a 1:1 ratio to total metals
- T&D = Total and Dissolved
- **Bold** text indicates a sample result greater than the WQS.
- *Italicized* text indicated a laboratory detection limit higher that the WQS.

Footnotes
1. The Permittee shall report on any additional parameters that were monitored for seasonal stormwater sampling as required by Section 6.0 of this permit (Special Conditions).
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 6 hours).
4. Standard for total PCBs of 11 µg/L A&We and 19 µg/L PBC.
5. The sample was lost during extraction at the laboratory due to the glassware breaking.
6. There were no representative storm events (>0.20 inches) that occurred or no representative events without a measurable rain event in the previous 72 hours.

SR030	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		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/11/11**	**SWQS**	**12/12/11**	**SWQS**	**7/12/12**	**SWQS**	**12/14/12**	**SWQS**	**7/21/13**	**SWQS**	**11/22/13**	**SWQS**	**8/12/14**	**SWQS**	**12/4/14**	**SWQS**	**7/31/15**	**SWQS**	**1/31/16**
Barium	98,000 T	256 T 21 D	98,000 T	291 T 60 D	98,000 T	164 T 12 D	98,000 T	194 T 18 D	98,000 T	175 T 20 D	98,000 T	236 T 14 D	98,000 T	160 T 28 D	98,000 T	670 T 13 D	98,000 T	206 T 38 D	98,000 T	110 T 33 D	98,000 T	256 T 16 D
Beryllium	84 T	<2 T&D	84 T	1.0 T <0.15 D	84 T	0.6 T <0.06 D	84 T 3.39 D	0.7 T <0.15 D	84 T 3.17 D	0.57 T <0.15 D	84 T	0.94 T <0.15 D	84 T	0.45 T <0.06 D	84 T	2.2 T <2.0 D	84 T	<2 T&D	84 T	0.29 T <5.0 D	84 T	0.95 T <5.0 D
Cadmium[5]	50 T 16.93 D	<3 T&D	50 T 10.38 D	1.0 T <0.25 D	50 T 2.61 D	0.8 T <0.10 D	50 T	0.7 T <0.25 D	50 T 3.97 D	0.8 T <0.25 D	50 T 2.68 D	0.8 T <0.25 D	50 T 5.12 D	0.5 T <0.10 D	50 T 30.23 D	4.6 T <3.0 D	50 T 13.10 D	<3 T&D	50 T 5.14 D	0.5 T <5.0 D	50 T 2.68 D	0.7 T *<5.0 D*
Chromium	1,000 T	28 T <10 D	1,000 T	27.1 T <4.50 D	1,000 T	16 T <1.80 D	1,000 T	18.8 T <2.00 D	1,000 T	14.3 T 2.8 D	1,000 T	23.9 T <2.00 D	1,000 T	13.7 T 1.5 D	1,000 T	57 T <10 D	1,000 T	17.8 T <10 D	1,000 T	11.6 T <5.0 D	1,000 T	24.8 T <5.0 D
Copper[5]	500 T 28.25 D	110 T 14 D	500 T 17.58 D	117 T **24.9 D**	500 T 4.60 D	70.9 T **15.6 D**	500 T 5.94 D	66.1 T **13.1 D**	500 T 6.93 D	75.0 T **20.2 D**	500 T 4.74 D	65.8 T **10.6 D**	500 T 8.87 D	75.2 T **30.9 D**	500 T 49.62 D	210 T 10 D	500 T 22.03 D	75 T 14 D	500 T 8.89 D	58.6 T **33.5 D**	500 T 4.74 D	79.2 T **14.0 D**
Lead[5]	15 T 150.61 D	**62 T** <10 D	15 T 87.97 D	**65.8 T** 1.3 D	15 T 18.38 D	**41.1 T** 0.7 D	15 T 24.89 D	**49.0 T** 0.5 D	15 T 29.81 D	**41.4 T** 0.7 D	15 T 19.03 D	**60.8 T** 1.1 D	15 T 39.80 D	**27.6 T** 0.9 D	15 T 280.85 D	**110 T** <10 D	15 T 113.78 D	**71 T** <10 D	15 T 39.94 D	**38.6 T** 2.4 D	15 T 19.02 D	**45.0 T** <5.0 D
Mercury	10 T 2.4 D	<0.2000T <0.2000 D	10 T 2.4 D	0.17 T <0.092 D	10 T 2.4 D	<0.092 T&D	10 T 2.4 D	0.09 T <0.040 D	10 T 2.4 D	<0.040 T <0.040 D	10 T 2.4 D	0.04 T <0.020 D	10 T 2.4 D	<0.020 T <0.020 D	10 T 2.4 D	<0.2 T&D	10 T 2.4 D	<0.20 T <0.20 D	10 T 2.4 D	0.08 T <0.2 D	10 T 2.4 D	<0.062 T <0.2 D
Nickel	511 T 912 D	36 T <10 D	511 T 596	41.5 T 15.2 D	511 T 179.4 D	20.3 T 2.1 D	511 T 225.4 D	25.1 T 2.3 D	511 T 258 D	19.6 T 3.5 D	511 T 183.5 D	30.6 T 2.1 D	511 T 322.2 D	18.9 T 4.6 D	511 T 1,513 D	110 T <10 D	511 T 730 D	23 T <10 D	511 T 323 D	12.1 T 4.6 D	511 T 184 D	31.4 T <5.0 D
Selenium	20 T	<2.00 T&D	20 T	0.89 T 0.9 D	20 T	<0.85 T <0.34 D	20 T	0.85 T <0.60 D	20 T	0.65 T <0.60 D	20 T	<0.60 T <0.60 D	20 T	0.66 T 0.4 D	20 T	<2.0 T&D	20 T	<2.00 T <2.00 D	20 T	0.41 T <5.0 D	20 T	0.62 T <5.0 D
Silver[5]	4,667 T 12.48 D	<5 T&D	4,667 T 5.25 D	0.4 T <0.2 D	4,667 T 0.45 D	0.3 T <0.2 D	4,667 T 0.723 D	0.3 T <0.15 D	4,667 T 0.96 D	0.2 T <0.15 D	4,667 T 0.482 D	0.2 T <0.15 D	4,667 T 1.502 D	0.2 T <0.15 D	4,667 T 34.91 D	<5 T&D	4,667 T 7.93 D	<5 T&D	4,667 T 1.51 D	<0.25 T *<5.0 D*	4,667 T 0.48 D	0.3 T *<5.0 D*
Thallium	1 T 700 D	<0.50 T <0.5 D	1 T 700 D	0.23 T <0.20 D	1 T 700 D	0.21 T <0.08 D	1 T 700 D	0.20 T <0.20 D	1 T 700 D	<0.20 T <0.20 D	1 T 700 D	0.20 T <0.20 D	1 T 700 D	<0.20 T <0.08 D	1 T 700 D	0.9 T <0.5 D	1 T 700 D	<0.5 T&D	1 T 700 D	0.26 T <5.0 D	1 T 700 D	0.37 T <5.0 D
Zinc[5]	5,106 T 228.6 D	554 T <50 D	5,106 T 149.2 D	500 T 68.6 D	5,106 T 44.72 D	351 T 14.2 D	5,106 T 56.31 D	385 T 10.8 D	5,106 T 64.55 D	374 T 19.2 D	5,106 T 45.92 D	452 T 13.7 D	5,106 T 80.6 D	302 T 31.4 D	5,106 T 379.3 D	770 T <50 D	5,106 T 182.8 D	397 T <50 D	5,106 T 80.8 D	195 T 38.0 D	5,106 T 45.9 D	390 T 11.0 D
Organic Toxic Pollutants																						
Total Petroleum Hydrocarbons (TPH) (mg/L) [2]	NS	<5.00	NS	<10	NS	<10	NS	<5	NS	<10	NS	<11	NS	<11	NS	<10	NS	<10	NS	<12	NS	<5.8
Total Oil and Grease (mg/L) [2]	NS	<5.00	NS	<10	NS	5	NS	<5	NS	8.4	NS	<5.7	NS	6.4	NS	<5.0	NS	<5.0	NS	11	NS	<5.8
VOCs, Semi-VOCs, & Pesticides (µg/L) [2]																						
Acrolein	1.9	<50.0	1.9	<1.86	1.9	<0.37	1.9	*<2.93*	1.9	<1.465	1.9	<0.20	1.9	<0.20	1.9	*<2.00*	1.9	<0.40	1.9	<0.78	1.9	<0.41
Acrylonitrile	0.2	<5.00	0.2	*<0.84*	0.2	<0.17	0.2	*<2.26*	0.2	*<1.130*	0.2	<0.16	0.2	<0.16	0.2	*<0.70*	0.2	<0.14	0.2	*<0.53*	0.2	*<0.42*
Benzene	114	<0.500	114	<2.30	114	<0.20	114	<4.0	114	<0.75	114	<1.20	114	<0.24	114	<0.65	114	<0.13	114	<0.46	114	<0.46
Bromoform	133	<1.00	133	<4.15	133	<0.25	133	<5.0	133	<2.15	133	<2.35	133	<0.47	133	<1.40	133	<0.28	133	<0.68	133	<0.68
Carbon tetrachloride	2	<0.500	2	*<2.30*	2	<0.31	2	*<6.2*	2	<1.65	2	<1.30	2	<0.26	2	<1.15	2	<0.23	2	<0.31	2	<0.31
Chlorobenzene	1,553	<0.500	1,553	<3.70	1,553	<0.25	1,553	<5.0	1,553	<1.40	1,553	<0.80	1,553	<0.16	1,553	<0.65	1,553	<0.13	1,553	<0.50	1,553	<0.50
Chlorodibromomethane	13	<0.500	13	<3.90	13	<0.21	13	<4.2	13	<1.30	13	<0.90	13	<0.18	13	2.6	13	<0.24	13	<0.61	13	<0.61
Chloroethane (ethyl chloride)	NS	<5.00	NS	<2.25	NS	<0.14	NS	<2.8	NS	<1.35	NS	<1.10	NS	<0.22	NS	<0.95	NS	<0.19	NS	<0.40	NS	<0.40
2-chloroethylvinyl ether	180,000	<2.00	180,000	<0.174	180,000	<0.174	180,000	<2.2	180,000	<0.22	180,000	<0.22	180,000	<0.22	180,000	<0.95	180,000	<0.19	180,000	<0.53	180,000	<0.43
Chloroform	2,133	<0.500	2,133	<2.30	2,133	<0.40	2,133	<8.0	2,133	<1.05	2,133	<1.15	2,133	<0.23	2,133	0.92	2,133	<0.14	2,133	<0.49	2,133	<0.49
Dichlorobromomethane	17	<0.500	17	<2.95	17	<0.23	17	<4.6	17	<0.75	17	<1.15	17	<0.23	17	2.2	17	<0.15	17	<0.49	17	<0.49

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SR030	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		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/11/11**	**SWQS**	**12/12/11**	**SWQS**	**7/12/12**	**SWQS**	**12/14/12**	**SWQS**	**7/21/13**	**SWQS**	**11/22/13**	**SWQS**	**8/12/14**	**SWQS**	**12/4/14**	**SWQS**	**7/31/15**	**SWQS**	**1/31/16**
1,1-dichloroethane	NS	<1.00	NS	<2.15	NS	<0.18	NS	<3.6	NS	<0.65	NS	<1.30	NS	<0.26	NS	<0.95	NS	<0.19	NS	<0.42	NS	<0.42
1,2-dichloroethane	37	<1.00	37	<2.45	37	<0.20	37	<4.0	37	<0.80	37	<1.25	37	<0.25	37	<0.55	37	<0.11	37	<0.51	37	<0.51
1,1-dichloroethylene	7,143	<1.00	7,143	<2.10	7,143	<0.23	7,143	<4.6	7,143	<1.85	7,143	<1.40	7,143	<0.28	7,143	<1.35	7,143	<0.27	7,143	<0.34	7,143	<0.34
1,2-dichloropropane	17,518	<0.500	17,518	<2.50	17,518	<0.22	17,518	<4.4	17,518	<0.75	17,518	<1.25	17,518	<0.25	17,518	<0.90	17,518	<0.18	17,518	<0.49	17,518	<0.49
1,3-dichloropropylene	42	<1.00	42	cis<2.85 trans<3.45	42	<0.19	42	cis<3.8 trans<3.8	42	cis<0.50 trans<0.75	42	cis<1.20 trans<1.10	42	cis<0.24 trans<0.22	42	<0.65	42	<0.13	42	cis <0.51 trans <0.50	42	cis <0.51 trans <0.50
Ethylbenzene	2,133	<2.00	2,133	<3.35	2,133	<0.27	2,133	<5.4	2,133	<1.45	2,133	<0.65	2,133	<0.13	2,133	<0.75	2,133	<0.15	2,133	<0.46	2,133	<0.46
Methyl bromide	299	<5.00	299	<2.35	299	<0.14	299	<2.8	299	<0.95	299	<0.95	299	<0.19	299	<0.90	299	<0.18	299	<0.46	299	<0.46
Methyl chloride	270,000	<5.00	270,000	<2.15	270,000	<0.20	270,000	<4.0	270,000	<1.85	270,000	<1.40	270,000	<0.28	270,000	<1.15	270,000	<0.23	270,000	<0.46	270,000	<0.46
Methylene chloride	593	<3.00	593	2.0	593	<0.45	593	10	593	1.8	593	<1.00	593	<0.20	593	<1.00	593	<0.20	593	<0.81	593	<0.81
1,1,2,2-tetrachloroethane	4	<0.500	4	*<4.65*	4	<0.11	4	<2.2	4	<2.45	4	<2.00	4	<0.40	4	<1.75	4	<0.35	4	<0.80	4	<0.80
Tetrachloroethylene	261	<0.500	261	<2.40	261	<0.26	261	<5.2	261	<1.15	261	<1.05	261	<0.21	261	<0.65	261	<0.13	261	<0.35	261	<0.35
Toluene	8,700	<3.00	8,700	<2.40	8,700	<0.23	8,700	<4.6	8,700	<0.60	8,700	<0.95	8,700	<0.19	8,700	<0.55	8,700	<0.11	8,700	<0.43	8,700	<0.43
1,2-trans-dichloroethylene	10,127	<0.500	10,127	<2.00	10,127	<0.14	10,127	<2.8	10,127	<0.85	10,127	<1.25	10,127	<0.25	10,127	<0.90	10,127	<0.18	10,127	<0.38	10,127	<0.38
1,1,1-trichloroethane	1,000	<0.500	1,000	<2.40	1,000	<0.28	1,000	<5.6	1,000	<1.15	1,000	<1.00	1,000	<0.20	1,000	<0.70	1,000	<0.14	1,000	<0.34	1,000	<0.34
1,1,2-trichloroethane	16	<0.500	16	<3.95	16	<0.22	16	<4.4	16	<1.20	16	<0.75	16	<0.15	16	<0.65	16	<0.13	16	<0.60	16	<0.60
Trichloroethylene	29	<0.500	29	<1.90	29	<0.35	29	<7.0	29	<1.20	29	<0.75	29	<0.15	29	<1.10	29	<0.22	29	<0.48	29	<0.48
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	NS	<2.00 <1.50	NS	<20 <20	NS	<1.0	NS	<20 <20	NS	<5.0 <5.0	NS	<5.0 <5.0	NS	<1.0 <1.0	NS	<10.0 <5.0	NS	<1.0 <1.0	NS	<1.0 <1.0	NS	<1.0 <1.0
Vinyl chloride	5	<0.500	5	<2.35	5	<0.19	5	<3.8	5	<2.50	5	<1.00	5	<0.20	5	<1.10	5	<0.22	5	<0.35	5	<0.35
Xylenes, Total	186,667	<1.00	186,667	<0.95	186,667	<0.51	186,667	<10.2	186,667	<2.90	186,667	<1.50	186,667	<0.30	186,667	<1.25	186,667	<0.13	186,667	<0.52	186,667	<0.52
Acid Compounds (µg/L) [2]																						
2-chlorophenol	30	<4.92	30	<22.1	30	*<44.2*	30	<24.2	30	<22.8	30	*<214.5*	30	*<45.5*	30	<1.48	30	<1.48	30	<3.10	30	<3.10
2,4-dichlorophenol	59	<2.76	59	<24.2	59	<48.4	59	<25.9	59	<24.4	59	*<211.0*	59	<44.7	59	<1.65	59	<1.65	59	<2.81	59	<2.81
2,4-dimethylphenol	171	<5.86	171	<17.2	171	<34.4	171	<31.0	171	<29.2	171	<114.0	171	<24.2	171	<2.20	171	<2.20	171	<2.64	171	<2.64
4,6-dinitro-o-cresol	310	<5.42	310	<21.8	310	<43.6	310	<29.3	310	<27.6	310	<149.0	310	<31.6	310	<1.22	310	<1.22	310	<1.49	310	<1.49
2,4-dinitrophenol	110	<4.07	110	<10.0	110	<20.0	110	<29.5	110	<27.8	110	*<129.5*	110	<27.5	110	<1.13	110	<1.13	110	<2.21	110	<2.21
2-nitrophenol	NS	<2.92	NS	<23.1	NS	<46.2	NS	<58.9	NS	<55.6	NS	<205.5	NS	<43.6	NS	<1.57	NS	<1.57	NS	<2.84	NS	<2.84
4-nitrophenol	4,100	<0.846	4,100	<79.7	4,100	<159.4	4,100	<173.0	4,100	<163.2	4,100	<233.5	4,100	<49.5	4,100	<1.14	4,100	2.6	4,100	<2.98	4,100	<2.98
p-chloro-m-cresol	15	<2.50	15	*<19.6*	15	*<39.2*	15	*<39.4*	15	*<37.2*	15	*<220.5*	15	*<46.7*	15	<1.65	15	<1.65	15	<1.87	15	<1.87
Pentachlorophenol	30.296	<5.97	16.927	*<43.7*	16.577	*<87.4*	22.410	*<43.9*	34.561	*<41.4*	28.558	<168.0	40.564	<35.6	29.427	<1.39	28.848	<1.39	22.410	7.4	27.137	<1.47
Phenol	37	<1.39	37	<20.0	37	*<40.0*	37	<25.2	37	<23.8	37	*<177.5*	37	*<37.6*	37	<1.34	37	<1.34	37	<2.30	37	<2.30
2,4,6-trichlorophenol	2	<3.01	2	*<51.8*	2	*<103.6*	2	*<59.4*	2	*<56.0*	2	*<239.5*	2	*<50.8*	2	<1.89	2	<1.89	2	*<2.60*	2	*<2.60*

NOTES:
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D = Dissolved
D[a] = Result is assumed based upon a 1:1 ratio to total metals
T&D = Total and Dissolved
Bold text indicates a sample result greater than the WQS.
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3 Report the average flow rate for the sampling period (no more than 6 hours).
4 Standard for total PCBs of 11 µg/L A&We and 19 µg/L PBC.
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SR030	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		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/11/11**	**SWQS**	**12/12/11**	**SWQS**	**7/12/12**	**SWQS**	**12/14/12**	**SWQS**	**7/21/13**	**SWQS**	**11/22/13**	**SWQS**	**8/12/14**	**SWQS**	**12/4/14**	**SWQS**	**7/31/15**	**SWQS**	**1/31/16**
Bases/Neutrals (µg/L) [2]																						
Acenaphthene	198	<1.41	198	<13.1	198	<26.2	198	<36.0	198	<34.0	198	<67.0	198	<14.2	198	<1.03	198	<1.03	198	<0.35	198	<0.35
Acenaphthylene	NS	<5.54	NS	<15.4	NS	<30.8	NS	<26.9	NS	<25.4	NS	<86.5	NS	<18.3	NS	<1.00	NS	<1.00	NS	<1.23	NS	<1.23
Anthracene	74	<1.40	74	<16.4	74	<32.8	74	<18.9	74	<17.8	74	*<86.5*	74	<18.3	74	<2.88	74	<2.88	74	<0.44	74	<0.44
Benz(a)anthracene	0.02	*<1.54*	0.02	*<26.5*	0.02	*<53.0*	0.02	*<33.3*	0.02	*<31.4*	0.02	*<86.5*	0.02	*<18.3*	0.02	*<1.08*	0.02	*<1.08*	0.02	*<0.38*	0.02	*<0.38*
Benzo(a)pyrene	0.02	*<1.49*	0.02	*<44.7*	0.02	*<89.4*	0.02	*<40.9*	0.02	*<38.6*	0.02	*<93.5*	0.02	*<19.8*	0.02	*<3.77*	0.02	*<3.77*	0.02	*<1.41*	0.02	*<1.41*
Benzo(b)fluoranthene	0.02	*<1.49*	0.02	*<39.2*	0.02	*<78.4*	0.02	*<71.9*	0.02	*<67.8*	0.02	*<121.5*	0.02	*<25.8*	0.02	*<1.46*	0.02	*<1.46*	0.02	*<1.06*	0.02	*<1.06*
Benzo(g,h,i)perylene	NS	<1.54	NS	<34.0	NS	<68.0	NS	<29.9	NS	<28.2	NS	<86.5	NS	<18.3	NS	<1.29	NS	<1.29	NS	<0.72	NS	<0.72
Benzo(k)fluoranthene	0.02	*<1.56*	0.02	*<30.0*	0.02	*<60.0*	0.02	*<24.4*	0.02	*<23.0*	0.02	*<70.0*	0.02	*<14.8*	0.02	*<1.04*	0.02	*<1.04*	0.02	*<0.35*	0.02	*<0.35*
Chrysene	0.02	*<1.60*	0.02	*<25.6*	0.02	*<51.2*	0.02	*<18.9*	0.02	*<17.8*	0.02	*<74.0*	0.02	*<15.7*	0.02	*<1.41*	0.02	*<1.41*	0.02	*<0.46*	0.02	*<0.46*
Dibenz(a,h)anthracene	0.02	*<1.49*	0.02	*<40.6*	0.02	*<81.2*	0.02	*<85.9*	0.02	*<81.0*	0.02	*<99.0*	0.02	*<21.0*	0.02	*<1.24*	0.02	*<1.24*	0.02	*<0.47*	0.02	*<0.47*
1,2-dichlorobenzene	205	<5.39	205	<12.7	205	<25.4	205	<46.0	205	<43.4	205	<13.5	205	<2.9	205	<1.76	205	<1.76	205	<1.04	205	<1.04
1,3-dichlorobenzene	2,500	<4.79	2,500	<11.9	2,500	<23.8	2,500	<51.3	2,500	<48.4	2,500	<56.5	2,500	<12.0	2,500	<1.74	2,500	<1.74	2,500	<0.47	2,500	<0.47
1,4-dichlorobenzene	2,000	<5.47	2,000	<14.2	2,000	<28.4	2,000	<45.2	2,000	<42.6	2,000	<52.5	2,000	<11.1	2,000	<1.56	2,000	<1.56	2,000	<1.28	2,000	<1.28
3,3-dichlorobenzidine	0.03	*<6.34*	0.03	*<118.0*	0.03	*<236.0*	0.03	*<156.5*	0.03	*<147.6*	0.03	*<1363.5*	0.03	*<289.1*	0.03	*<6.06*	0.03	*<6.06*	0.03	*<11.60*	0.03	*<11.60*
Diethyl phthalate	8,767	<1.55	8,767	<19.2	8,767	<38.4	8,767	<31.4	8,767	<29.6	8,767	<95.0	8,767	<20.1	8,767	<2.37	8,767	<2.37	8,767	0.6	8,767	0.5
Dimethyl phthalate	17,000	<1.58	17,000	<16.9	17,000	<33.8	17,000	<25.7	17,000	<24.2	17,000	<89.5	17,000	<19.0	17,000	<2.42	17,000	<2.42	17,000	<0.47	17,000	<0.47
Di-n-butyl phthalate	470	<2.05	470	<42.6	470	<85.2	470	<48.5	470	<45.8	470	<111.5	470	<23.6	470	<1.85	470	<1.85	470	<0.31	470	<0.31
2,4-dinitrotoluene	421	<6.00	421	<26.9	421	<53.8	421	<27.8	421	<26.2	421	<102.5	421	<21.7	421	<2.12	421	<2.12	421	<0.26	421	<0.26
2,6-dinitrotoluene	3,733	<1.51	3,733	<38.8	3,733	<77.6	3,733	<39.6	3,733	<37.4	3,733	<126.0	3,733	<26.7	3,733	<1.12	3,733	<1.12	3,733	<0.38	3,733	<0.38
Di-n-octyl phthalate	373,333	<2.69	373,333	<78.6	373,333	<157.2	373,333	<87.6	373,333	<82.6	373,333	<144.0	373,333	<30.5	373,333	<1.10	373,333	<1.10	373,333	<1.28	373,333	<1.28
1,2-diphenylhydrazine (as azobenzene)	NS	<1.43	NS	<14.4	NS	<28.8	NS	<22.7	NS	<21.4	NS	<116.5	NS	<24.7	NS	<6.70	NS	<6.70	NS	<1.06	NS	<1.06
Fluoranthene	28	<1.68	28	<24.5	28	*<49.0*	28	<14.2	28	<13.4	28	*<89.5*	28	<19.0	28	<1.35	28	<1.35	28	<0.27	28	<0.27
Fluorene	1,067	<1.42	1,067	<13.1	1,067	<26.2	1,067	<35.6	1,067	<33.6	1,067	<77.0	1,067	<16.3	1,067	<4.81	1,067	<4.81	1,067	<0.29	1,067	<0.29
Hexachlorobenzene	0.0003	*<1.15*	0.0003	*<15.0*	0.0003	*<30.0*	0.0003	*<27.6*	0.0003	*<26.0*	0.0003	*<69.5*	0.0003	*<14.7*	0.0003	*<1.23*	0.0003	*<1.23*	0.0003	*<0.34*	0.0003	*<0.34*
Hexachlorobutadiene	18	<5.89	18	*<18.4*	18	*<36.8*	18	*<29.0*	18	*<27.4*	18	<16.5	18	<3.5	18	<1.82	18	<1.82	18	<1.67	18	<1.67
Hexachlorocyclopentadiene	3.5	*<6.20*	3.5	*<37.4*	3.5	*<74.8*	3.5	*<28.0*	3.5	*<26.4*	3.5	*<113.5*	3.5	*<24.1*	3.5	<1.23	3.5	<1.23	3.5	<1.53	3.5	<1.53
Hexachloroethane	3.3	*<6.01*	3.3	*<13.4*	3.3	*<26.8*	3.3	*<29.7*	3.3	*<28.0*	3.3	*<20.0*	3.3	*<4.2*	3.3	<1.62	3.3	<1.62	3.3	<1.23	3.3	<1.23
Indeno(1,2,3-cd)pyrene	0.2	*<1.54*	0.2	*<41.9*	0.2	*<83.8*	0.2	*<70.6*	0.2	*<66.6*	0.2	*<101.5*	0.2	*<21.5*	0.2	*<1.39*	0.2	*<1.39*	0.2	*<0.62*	0.2	*<0.62*
Isophorone	961	<1.41	961	<17.3	961	<34.6	961	<40.3	961	<38.0	961	<70.5	961	<14.9	961	<2.14	961	<2.14	961	<0.37	961	<0.37
Naphthalene	1,524	<4.96	1,524	<10.3	1,524	<20.6	1,524	<30.1	1,524	<28.4	1,524	<60.0	1,524	<12.7	1,524	<1.83	1,524	<1.83	1,524	<0.36	1,524	<0.36
Nitrobenzene	138	<1.44	138	<23.8	138	<47.6	138	<27.8	138	<26.2	138	<61.5	138	<13.0	138	<2.10	138	<2.10	138	<1.26	138	<1.26
N-nitrosodimethylamine	0.03	*<4.35*	0.03	*<10.3*	0.03	*<20.6*	0.03	*<34.8*	0.03	*<32.8*	0.03	*<60.0*	0.03	*<12.7*	0.03	*<1.00*	0.03	*<1.00*	0.03	*<1.13*	0.03	*<1.13*
N-nitrosodi-n-propylamine	0.5	*<1.45*	0.5	*<26.5*	0.5	*<53.0*	0.5	*<39.9*	0.5	*<37.6*	0.5	*<75.5*	0.5	*<16.0*	0.5	*<1.15*	0.5	*<1.15*	0.5	*<1.17*	0.5	*<1.17*
N-nitrosodiphenylamine	6	<6.48	6	*<16.4*	6	*<32.8*	6	*<21.2*	6	*<20.0*	6	*<152.0*	6	<32.2	6	<3.57	6	<3.57	6	<1.15	6	<1.15
Phenanthrene	30	<1.42	30	<12.8	30	<25.6	30	<16.1	30	<15.2	30	*<81.5*	30	<17.3	30	<1.39	30	<1.39	30	<0.31	30	<0.31
Pyrene	800	<1.67	800	<24.5	800	<49.0	800	<49.4	800	<46.6	800	<82.0	800	<17.4	800	<3.86	800	<3.86	800	<0.67	800	<0.67

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SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/11/11**	**SWQS**	**12/12/11**	**SWQS**	**7/12/12**	**SWQS**	**12/14/12**	**SWQS**	**7/21/13**	**SWQS**	**11/22/13**	**SWQS**	**8/12/14**	**SWQS**	**12/4/14**	**SWQS**	**7/31/15**	**SWQS**	**1/31/16**
1,2,4-trichlorobenzene	70	<5.29	70	<14.2	70	<28.4	70	<56.4	70	<53.2	70	<16.0	70	<3.4	70	<1.69	70	<1.69	70	<1.04	70	<1.04
Pesticides (μg/L) [2]																						
Aldrin	0.00005	*<0.060*	0.00005	*<0.013*	0.00005	*<0.013*	0.00005	*<0.058*	0.00005	*<0.046*	0.00005	*<0.046*	0.00005	*<0.016*	0.00005	*<0.027*	0.00005	*<0.027*	0.00005	*<0.012*	0.00005	*<0.012*
Alpha-BHC	0.005	*<0.050*	0.005	*<0.016*	0.005	*<0.016*	0.005	*<0.044*	0.005	*<0.038*	0.005	*<0.038*	0.005	*<0.017*	0.005	*<0.021*	0.005	*<0.021*	0.005	*<0.058*	0.005	*<0.058*
Beta-BHC	0.02	*<0.050*	0.02	*<0.085*	0.02	*<0.085*	0.02	*<0.048*	0.02	*<0.095*	0.02	*<0.095*	0.02	*<0.092*	0.02	*<0.072*	0.02	*<0.072*	0.02	*<0.063*	0.02	*<0.063*
Gamma-BHC	1	<0.050	1	<0.014	1	<0.014	1	<0.055	1	<0.033	1	<0.033	1	<0.023	1	<0.034	1	<0.034	1	<0.058	1	<0.058
Delta-BHC	1,600	<0.050	1,600	<0.016	1,600	<0.016	1,600	<0.035	1,600	<0.032	1,600	<0.032	1,600	<0.018	1,600	<0.021	1,600	<0.021	1,600	<0.066	1,600	<0.066
Chlordane	0.0008	*<0.700*	0.0008	*<0.35*	0.0008	*<0.35*	0.0008	*<0.29*	0.0008	*<0.16*	0.0008	*<0.16*	0.0008	*<0.020*	0.0008	*<0.14*	0.0008	*<0.14*	0.0008	*<0.36*	0.0008	*<0.36*
4,4'-DDT	0.0002	*<0.060*	0.0002	*<0.020*	0.0002	*<0.020*	0.0002	*<0.052*	0.0002	*<0.029*	0.0002	*<0.029*	0.0002	*<0.016*	0.0002	*<0.025*	0.0002	*<0.025*	0.0002	*<0.017*	0.0002	*<0.017*
4,4'-DDE	0.0002	*<0.050*	0.0002	*<0.011*	0.0002	*<0.011*	0.0002	**0.068**	0.0002	**0.041**	0.0002	**0.037**	0.0002	*<0.018*	0.0002	*<0.010*	0.0002	**0.027**	0.0002	*<0.013*	0.0002	*<0.013*
4,4'-DDD	0.0002	*<0.050*	0.0002	*<0.017*	0.0002	*<0.017*	0.0002	*<0.031*	0.0002	*<0.023*	0.0002	*<0.023*	0.0002	*<0.014*	0.0002	*<0.031*	0.0002	*<0.031*	0.0002	*<0.021*	0.0002	*<0.021*
Dieldrin	0.00005	*<0.050*	0.00005	*<0.024*	0.00005	*<0.024*	0.00005	*<0.045*	0.00005	*<0.028*	0.00005	*<0.028*	0.00005	*<0.022*	0.00005	*<0.030*	0.00005	*<0.030*	0.00005	*<0.060*	0.00005	*<0.060*
Alpha-endosulfan	0.2	*<0.050*	0.2	<0.010	0.2	<0.010	0.2	<0.048	0.2	<0.034	0.2	<0.034	0.2	<0.018	0.2	<0.018	0.2	<0.018	0.2	<0.072	0.2	<0.072
Beta-endosulfan	0.2	*<0.050*	0.2	<0.021	0.2	<0.021	0.2	<0.054	0.2	<0.034	0.2	<0.034	0.2	<0.013	0.2	<0.032	0.2	<0.032	0.2	<0.019	0.2	<0.019
Endosulfan sulfate	0.2	*<0.050*	0.2	<0.015	0.2	<0.015	0.2	<0.030	0.2	<0.025	0.2	<0.025	0.2	<0.014	0.2	<0.008	0.2	0.028	0.2	<0.016	0.2	<0.016
Endrin	0.004	*<0.060*	0.004	*<0.019*	0.004	*<0.019*	0.004	*<0.036*	0.004	*<0.035*	0.004	*<0.035*	0.004	*<0.016*	0.004	*<0.017*	0.004	*<0.017*	0.004	*<0.023*	0.004	*<0.023*
Endrin aldehyde	0.09	*<0.050*	0.09	<0.015	0.09	*<0.015*	0.09	<0.014	0.09	<0.038	0.09	<0.038	0.09	<0.023	0.09	<0.032	0.09	<0.032	0.09	<0.026	0.09	<0.026
Heptachlor	0.00008	*<0.060*	0.00008	*<0.012*	0.00008	*<0.012*	0.00008	*<0.045*	0.00008	*<0.035*	0.00008	*<0.035*	0.00008	*<0.018*	0.00008	*<0.027*	0.00008	*<0.027*	0.00008	*<0.035*	0.00008	*<0.035*
Heptachlor epoxide	0.00004	*<0.050*	0.00004	*<0.010*	0.00004	*<0.010*	0.00004	*<0.045*	0.00004	*<0.032*	0.00004	*<0.032*	0.00004	*<0.020*	0.00004	*<0.008*	0.00004	*<0.008*	0.00004	*<0.062*	0.00004	*<0.062*
PCB-1242	[4]	<0.300	[4]	<0.40	[4]	<0.40	[4]	<0.34	[4]	<0.41	[4]	<0.41	[4]	<0.55	[4]	<0.37	[4]	<0.37	[4]	<0.14	[4]	<0.14
PCB-1254	[4]	<0.500	[4]	<0.22	[4]	<0.22	[4]	<0.34	[4]	<0.20	[4]	<0.20	[4]	<0.28	[4]	<0.23	[4]	<0.23	[4]	<0.20	[4]	<0.20
PCB-1221	[4]	<0.900	[4]	<0.34	[4]	<0.34	[4]	<0.55	[4]	<0.68	[4]	<0.68	[4]	<0.85	[4]	<0.22	[4]	<0.22	[4]	<0.64	[4]	<0.64
PCB-1232	[4]	<0.070	[4]	<0.41	[4]	<0.41	[4]	<0.77	[4]	<0.66	[4]	<0.66	[4]	<0.34	[4]	<0.55	[4]	<0.55	[4]	<0.37	[4]	<0.37
PCB-1248	[4]	<0.200	[4]	<0.21	[4]	<0.21	[4]	<0.30	[4]	<0.78	[4]	<0.78	[4]	<0.27	[4]	<0.19	[4]	<0.19	[4]	<0.22	[4]	<0.22
PCB-1260	[4]	<0.400	[4]	<0.19	[4]	<0.19	[4]	<0.34	[4]	<0.21	[4]	<0.21	[4]	<0.23	[4]	<0.32	[4]	<0.32	[4]	<0.59	[4]	<0.59
PCB-1016	[4]	<0.400	[4]	<0.26	[4]	<0.26	[4]	<0.37	[4]	<0.36	[4]	<0.36	[4]	<0.33	[4]	<0.18	[4]	<0.18	[4]	<0.55	[4]	<0.55
Toxaphene	0.0003	*<0.700*	0.0003	*<0.33*	0.0003	*<0.33*	0.0003	*<0.79*	0.0003	*<0.53*	0.0003	*<0.53*	0.0003	*<0.34*	0.0003	*<0.22*	0.0003	*<0.22*	0.0003	*<0.60*	0.0003	*<0.60*

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OUTFALL ID: SR045

RECEIVING WATER: Salt River

DESIGNATED USES: A&We, PBC

MONITORING SEASONS
Summer: June 1 – October 31
Winter: November 1 – May 31

	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		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/11/11**	**SWQS**	**11/5/11**	**SWQS**	**7/12/12**	**SWQS**	**12/14/12**	**SWQS**	**7/21/13**	**SWQS**	**11/22/13**	**SWQS**	**8/12/14**	**SWQS**	**12/4/14**	**SWQS**	**7/31/15**	**SWQS**	**None[6]**
MONITORING PARAMETERS [1, 2]																						
Conventional Parameters																						
Flow [3] (cfs)	NS	0.206	NS	2.739	NS	1.048	NS	0.967	NS	0.67	NS	8.88	NS	1.01	NS	0.725	NS	1.371	NS	1.898	NS	
pH	6.5-9	7.81	6.5-9	7.55	6.5-9	7.92	6.5-9	7.35	6.5-9	7.45	6.5-9	8.24	6.5-9	8.30	6.5-9	7.94	6.5-9	7.73	6.5-9	7.62	6.5-9	
Temperature (ºC)	Varies	18.0	Varies	29.5	Varies	16.5	Varies	31.6	Varies	20.5	Varies	28.0	Varies	19.5	Varies	30.1	Varies	19.0	Varies	30.5	Varies	
Hardness (mg/L)	400	60.8	400	68.7	400	43.0	400	105	400	72.1	400	40.1	400	31.2	400	96.1	400	42.2	400	42.4	400	
Total Dissolved Solids (TDS) (mg/L) [2]	NS	117	NS	230	NS	178	NS	394	NS	266	NS	98	NS	82	NS	340	NS	124	NS	126	NS	
Total Suspended Solids (TSS) (mg/L) [2]	NS	81.6	NS	776	NS	474	NS	360	NS	332	NS	60.0	NS	420	NS	192	NS	1070	NS	126	NS	
Biochemical Oxygen Demand (BOD) (mg/L) [2]	NS	34.1	NS	<67	NS	33	NS	86	NS	127	NS	13	NS	56	NS	45	NS	175	NS	25	NS	
Chemical Oxygen Demand (COD) (mg/L) [2]	NS	114	NS	390	NS	270	NS	480	NS	540	NS	100	NS	540	NS	280	NS	950	NS	160	NS	

SR045	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		Winter 2015/16	
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Inorganics																						
Cyanide, total (µg/L) [2]	84	5.69[6]	84	<5.0	84	<5.0	84	<5	84	5	84	<50	84	<5	84	<5	84	<5	84	<5	84	
Nutrients (mg/L) [2]																						
Nitrate + Nitrite as N	NS	0.723	NS	1.3	NS	1.1	NS	3.0	NS	1.7	NS	0.8	NS	0.6	NS	1.7	NS	0.5	NS	1.2	NS	
Ammonia as N	NS	0.572	NS	1.1	NS	0.83	NS	2.5	NS	1.5	NS	0.64	NS	0.42	NS	1.4	NS	0.51	NS	1.4	NS	
Total Kjeldahl Nitrogen (TKN)	NS	2.12	NS	5.8	NS	3.2	NS	8.4	NS	7.6	NS	3.3	NS	6.9	NS	4.5	NS	14	NS	2.9	NS	
Total Phosphorus as P	NS	0.531	NS	1.9	NS	1.1	NS	0.74	NS	0.70	NS	0.41	NS	1.5	NS	0.91	NS	0.58	NS	0.55	NS	
Ortho-Phosphorus as P	NS	0.467	NS	0.3	NS	0.2	NS	0.5	NS	0.3	NS	<0.1	NS	0.2	NS	0.2	NS	0.1	NS	<0.1	NS	
Microbiological																						
Escherichia coli (*E. coli*) (CFU/100 mg or MPN/100 mL) [2]	575	**7,540**	575	**1,553.1**	575	**>2,419.6**	575	378.4	575	**1,986.3**	575	**2419.6**	575	**>2419.6**	575	**>2,419.6**	575	**>2,419.6**	575	**34,480**	575	

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Total Metals (µg/L) [2]																						
Antimony	747 T	<25 T&D	747 T	3.5 T 2.1 D	747 T	2.3 T 1.0 D	747 T	3.4 T 3.0 D	747 T	3.2 T 1.3 D	747 T	1.8 T 0.9 D	747 T	2.6 T 0.6 D	747 T	3.5 T 3.1 D	747 T	4.8 T 1.0 D	747 T	3.2 T <5.0 D	747 T	
Arsenic	280 T 440 D	<10 T&D	280 T 440 D	7.2 T 2.3 D	280 T 440 D	3.6 T 1.1 D	280 T 440 D	8.5 T 3.5 D	280 T 440 D	5.5 T 1.7 D	280 T 440 D	2.6 T 1.0 D	280 T 440 D	8.1 T 1.1 D	280 T 440 D	5.0 T 3.2 D	280 T 440 D	10.5 T 1.2 D	280 T 440 D	3.5 T <5.0 D	280 T 440 D	
Barium	98,000 T	54 T 15 D	98,000 T	264 T 29 D	98,000 T	150 T 14 D	98,000 T	205 T 44 D	98,000 T	173 T 20 D	98,000 T	86 T 22 D	98,000 T	344 T 8 D	98,000 T	98 T 39 D	98,000 T	599 T 11 D	98,000 T	120 T 19 D	98,000 T	
Beryllium	1,867 T	<2 T&D	1,867 T	1.0 T <0.15 D	1,867 T	0.2 T <0.06 D	1,867 T	0.61 T <0.15 D	1,867 T	0.32 T <0.15 D	1,867 T	0.22 T <0.15 D	1,867 T	0.53 T <0.06 D	1,867 T	<0.15 T <0.15 D	1,867 T	0.75 T <0.06 D	1,867 T	0.21 T <5.0 D	1,867 T	
Cadmium	700 T 14.00	<3 T&D	700 T 15.83 D	1.3 T <0.25 D	700 T 10.03 D	0.7 T <0.10 D	700 T 23.91 D	0.7 T <0.25 D	700 T 16.59 D	1.0 T <0.25 D	700 T 9.37 D	0.4 T <0.25 D	700 T 7.34 D	2.1 T <0.10 D	700 T 21.94 D	<0.30 T <0.30 D	700 T 9.85 D	2.2 T <0.12 D	700 T 9.89 D	0.4 T <5.0 D	700 T	
Chromium	NS	12 T <10 D	NS	23.6 T <4.50 D	NS	15.7 T <1.80 D	NS	18.6 T 3.2 D	NS	12.6 T 2.5 D	NS	7.3 T <2.00 D	NS	23.8 T 0.8 D	NS	7.7 T 2.5 D	NS	34.6 T 1.9 D	NS	10.4 T <5.0 D	NS	
Copper	1,300 T 14.55	52 T **22 D**	1,300 T 16.33 D	173 T **34.4 D**	1,300 T 10.50 D	89.2 T **21.9 D**	1,300 T 24.36 D	133 T **59.7 D**	1,300 T 17.09 D	124 T **40.8 D**	1,300 T 9.83 D	72.0 T **23.8 D**	1,300 T 7.77 D	206 T **12.2 D**	1,300 T 22.40 D	60.6 T **32.7 D**	1,300 T 10.32 D	263 T **16.7 D**	1,300 T 10.36 D	66.6 T **21.6 D**	1,300 T	
Lead	15 T 78.98	12 T <10 D	15 T 90.36 D	**52.0 T** 2.8 D	15 T 53.78 D	**37.4 T** 0.9 D	15 T 143.73 D	**31.5 T** 2.0 D	15 T 95.29 D	**31.4 T** 0.8 D	15 T 49.76 D	**21.4 T** 1.2 D	15 T 37.58 D	**75.3 T** 0.6 D	15 T 130.52 D	14.3 T 1.4 D	15 T 52.67 D	**97.9 T** 0.6 D	15 T 52.95 D	**19.4 T** <0.8 D	15 T	
Mercury	280 T 5 D	<0.20 T&D	280 T 5 D	0.17 T <0.092 D	280 T 5 D	<0.092 T&D	280 T 5 D	0.09 T <0.040 D	280 T 5 D	0.06 T <0.040 D	280 T 5 D	0.02 T <0.020 D	280 T 5 D	0.20 T 0.026 D	280 T 5 D	<0.092 T <0.2 D	280 T 5 D	0.30 T <0.092 D	280 T 5 D	0.08 T <0.2 D	280 T 5 D	
Nickel	28,000 T 2,722	<10 T <10 D	28,000 T 3,027 D	31.2 T 7.0 D	28,000 T 2,036 D	13.6 T 3.5 D	28,000 T 4,334 D	30.0 T 11.0 D	28,000 T 3,153 D	16.7 T 5.4 D	28,000 T 1,919 D	10.3 T 3.5 D	28,000 T 1,552 D	32.3 T 1.7 D	28,000 T 4021 D	14.6 T 8.4 D	28,000 T 2004 D	37.9 T 2.1 D	28,000 T 2,012 D	11.2 T 2.7 D	28,000 T	
Selenium	33 T	<2.00 T&D	33 T	1.1 T <0.85 D	33 T	<0.85 T <0.34 D	33 T	1.5 T 1.2 D	33 T	1.1 T 0.7 D	33 T	<0.60 T <0.60 D	33 T	0.69 T <0.24 D	33 T	0.76 T 0.5 D	33 T	0.87 T 0.4 D	33 T	0.51 T <5.0 D	33 T	
Silver	4,667 T 1.36	<5 T *<5 D*	4,667 T 1.688 D	0.4 T <0.2 D	4,667 T 0.75 D	<0.2 T&D	4,667 T 3.50 D	0.2 T <0.15 D	4,667 T 1.834 D	0.3 T 0.3 D	4,667 T 0.672 D	0.2 T <0.15 D	4,667 T 0.434 D	0.5 T <0.15 D	4,667 T 3.005 D	<0.20 T <0.20 D	4,667 T 0.726 D	0.8 T <0.08 D	4,667 T 0.73 D	0.3 T *<5.0 D*	4,667 T	
Thallium	75 T	<0.50 T <0.5 D	75 T	0.22 T <0.20 D	75 T	<0.20 T <0.08 D	75 T	<0.20 T <0.20 D	75 T	<0.20 T <0.20 D	75 T	<0.20 T <0.20 D	75 T	<0.20 T <0.08 D	75 T	<0.10 T <0.10 D	75 T	0.25 T <0.04 D	75 T	<0.15 T <5.0 D	75 T	
Zinc	280,000 T 730 D	163 T <50 D	280,000 T 809 D	475 T 40.6 D	280,000 T 544 D	384 T 60.0 D	280,000 T 1,159 D	381 T 118 D	280,000 T 843 D	469 T 60.6 D	280,000 T 513 D	207 T 63.2 D	280,000 T 414 D	1020 T 23.0 D	280,000 T 1075 D	192 T 66.4 D	280,000 T 535.2 D	1,410 T 32.8 D	280,000 T 537 D	288 T 50.9 D	280,000 T	
Organic Toxic Pollutants																						
Total Petroleum Hydrocarbons (TPH) (mg/L) [2]	NS	<5.00	NS	<10	NS	<10	NS	<5	NS	<10	NS	<11	NS	15	NS	<10	NS	<10	NS	<11	NS	
Total Oil and Grease (mg/L) [2]	NS	<5.00	NS	<10	NS	<5	NS	<5	NS	29	NS	<5.7	NS	42	NS	<5.0	NS	6.0	NS	5.8	NS	
VOCs, Semi-VOCs, & Pesticides (µg/L) [2]																						
Acrolein	467	<50.0	467	<1.86	467	<0.37	467	<2.93	467	7.5	467	<0.20	467	<0.20	467	2.7	467	<0,40	467	<0.78	467	
Acrylonitrile	37,333	<5.00	37,333	<0.84	37,333	<0.17	37,333	<2.26	37,333	<1.130	37,333	<0.16	37,333	<0.16	37,333	<0.70	37,333	<0.14	37,333	<0.53	37,333	
Benzene	3,733	<0.500	3,733	<2.30	3,733	<0.20	3,733	<2.0	3,733	<0.75	3,733	<0.15	3,733	<1.20	3,733	<0.65	3,733	<0.13	3,733	<0.46	3,733	
Bromoform	18,667	<1.00	18,667	<4.15	18,667	<0.25	18,667	<2.5	18,667	<2.15	18,667	<0.43	18,667	<2.35	18,667	<1.40	18,667	<0.28	18,667	<0.68	18,667	
Carbon tetrachloride	1,307	<0.500	1,307	<2.30	1,307	<0.31	1,307	<3.1	1,307	<1.65	1,307	<0.33	1,307	<1.30	1,307	<1.15	1,307	<0.23	1,307	<0.31	1,307	
Chlorobenzene	18,667	<0.500	18,667	<3.70	18,667	<0.25	18,667	<2.5	18,667	<1.40	18,667	<0.28	18,667	<0.80	18,667	<0.65	18,667	<0.13	18,667	<0.50	18,667	

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Chlorodibromomethane	18,667	<0.500	18,667	<3.90	18,667	<0.21	18,667	<2.1	18,667	<1.30	18,667	<0.26	18,667	<0.90	18,667	<1.20	18,667	<0.24	18,667	<0.61	18,667	
Chloroethane (ethyl chloride)	NS	<5.00	NS	<2.25	NS	<0.14	NS	<1.4	NS	<1.35	NS	<0.27	NS	<1.10	NS	<0.95	NS	<0.19	NS	<0.40	NS	
2-chloroethylvinyl ether	NS	<2.00	NS	<0.174	NS	<0.174	NS	<2.2	NS	<0.22	NS	<0.22	NS	<0.22	NS	<0.95	NS	<0.19	NS	<0.53	NS	
Chloroform	9,333	<0.500	9,333	<2.30	9,333	<0.40	9,333	<4.0	9,333	<1.05	9,333	<0.21	9,333	<1.15	9,333	<0.70	9,333	<0.14	9,333	<0.49	9,333	
Dichlorobromomethane	18,667	<0.500	18,667	<2.95	18,667	<0.23	18,667	<2.3	18,667	<0.75	18,667	<0.15	18,667	<1.15	18,667	<0.75	18,667	<0.15	18,667	<0.49	18,667	
1,1-dichloroethane	NS	<1.00	NS	<2.15	NS	<0.18	NS	<1.8	NS	<0.65	NS	<0.13	NS	<1.30	NS	<0.95	NS	<0.19	NS	<0.42	NS	
1,2-dichloroethane	186,667	<1.00	186,667	<2.45	186,667	<0.20	186,667	<2.0	186,667	<0.80	186,667	<0.16	186,667	<1.25	186,667	<0.55	186,667	<0.11	186,667	<0.51	186,667	
1,1-dichloroethylene	46,667	<1.00	46,667	<2.10	46,667	<0.23	46,667	<2.3	46,667	<1.85	46,667	<0.37	46,667	<1.40	46,667	<1.35	46,667	<0.27	46,667	<0.34	46,667	
1,2-dichloropropane	84,000	<0.500	84,000	<2.50	84,000	<0.22	84,000	<2.2	84,000	<0.75	84,000	<0.15	84,000	<1.25	84,000	<0.90	84,000	<0.18	84,000	<0.49	84,000	
1,3-dichloropropylene	28,000	<1.00	28,000	cis<2.85 trans<3.45	28,000	<0.19	28,000	cis<1.9 trans<1.9	28,000	cis<0.50 trans<0.75	28,000	cis<0.10 trans<0.15	28,000	cis<1.20 trans<1.10	28,000	<0.65	28,000	<0.13	28,000	cis <0.51 trans <0.50	28,000	
Ethylbenzene	93,333	<2.00	93,333	<3.35	93,333	<0.27	93,333	<2.7	93,333	<1.45	93,333	<0.29	93,333	<0.65	93,333	<0.75	93,333	<0.15	93,333	<0.46	93,333	
Methyl bromide	1,307	<5.00	1,307	<2.35	1,307	<0.14	1,307	<1.4	1,307	<0.95	1,307	<0.19	1,307	<0.95	1,307	<0.90	1,307	<0.18	1,307	<0.46	1,307	
Methyl chloride	NS	<5.00	NS	<2.15	NS	<0.20	NS	<2.0	NS	<1.85	NS	<0.37	NS	<1.40	NS	<1.15	NS	<0.23	NS	<0.46	NS	
Methylene chloride	56,000	<3.00	56,000	1.9	56,000	<0.45	56,000	<4.5	56,000	1.6	56,000	<0.28	56,000	<1.00	56,000	<1.00	56,000	<0.20	56,000	<0.81	56,000	
1,1,2,2-tetrachloroethane	93,333	<0.500	93,333	<4.65	93,333	<0.11	93,333	<1.1	93,333	<2.45	93,333	<0.49	93,333	<2.00	93,333	<1.75	93,333	<0.35	93,333	<0.80	93,333	
Tetrachloroethylene	9,333	<0.500	9,333	<2.40	9,333	<0.26	9,333	<2.6	9,333	<1.15	9,333	<0.23	9,333	<1.05	9,333	<0.65	9,333	<0.13	9,333	<0.35	9,333	
Toluene	373,333	<3.00	373,333	<2.40	373,333	<0.23	373,333	<2.3	373,333	<0.60	373,333	<0.12	373,333	<0.95	373,333	<0.55	373,333	<0.11	373,333	<0.43	373,333	
1,2-trans-dichloroethylene	18,667	<0.500	18,667	<2.00	18,667	<0.14	18,667	<1.4	18,667	<0.85	18,667	<0.17	18,667	<1.25	18,667	<0.90	18,667	<0.18	18,667	<0.38	18,667	
1,1,1-trichloroethane	1,866,667	<0.500	1,866,667	<2.40	1,866,667	<0.28	1,866,667	<2.8	1,866,667	<1.15	1,866,667	<0.23	1,866,667	<1.00	1,866,667	<0.70	1,866,667	<0.14	1,866,667	<0.34	1,866,667	
1,1,2-trichloroethane	3,733	<0.500	3,733	<3.95	3,733	<0.22	3,733	<2.2	3,733	<1.20	3,733	<0.24	3,733	<0.75	3,733	<0.65	3,733	<0.13	3,733	<0.60	3,733	
Trichloroethylene	280	<0.500	280	<1.90	280	<0.35	280	<3.5	280	<1.20	280	<0.24	280	<0.75	280	<1.10	280	<0.22	280	<0.48	280	
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	NS	<2.00 <1.50	NS	<20 <20	NS	<1.0	NS	<10 <10	NS	<5.0 <5.0	NS	<1.0 <1.0	NS	<5.0 <5.0	NS	<10.00 <5.00	NS	<1.0 <1.0	NS	<1.0 <1.0	NS	
Vinyl chloride	2,800	<0.500	2,800	<2.35	2,800	<0.19	2,800	<1.9	2,800	<2.50	2,800	<0.50	2,800	<1.00	2,800	<1.10	2,800	<0.22	2,800	<0.35	2,800	
Xylenes, Total	186,667	<1.00	186,667	<0.95	186,667	<0.51	186,667	<5.1	186,667	<2.90	186,667	<0.58	186,667	<1.50	186,667	<1.25	186,667	<0.13	186,667	<0.52	186,667	
Acid Compounds (μg/L) [2]																						
2-chlorophenol	4,667	<4.92	4,667	<44.2	4,667	<46.4	4,667	<24.6	4,667	<57.0	4,667	<85.8	4,667	<214.5	4,667	<1.48	4,667	<1.48	4,667	<3.10	4,667	
2,4-dichlorophenol	2,800	<2.76	2,800	<48.4	2,800	<50.8	2,800	<26.4	2,800	<61.0	2,800	<84.4	2,800	<211.0	2,800	<1.65	2,800	<1.65	2,800	<2.81	2,800	
2,4-dimethylphenol	18,667	<5.86	18,667	<34.4	18,667	<36.1	18,667	<31.5	18,667	<73.0	18,667	<45.6	18,667	<114.0	18,667	<2.20	18,667	<2.20	18,667	<2.64	18,667	
4,6-dinitro-o-cresol	3,733	<5.42	3,733	<43.6	3,733	<45.8	3,733	<29.8	3,733	<69.0	3,733	<59.6	3,733	<149.0	3,733	<1.22	3,733	<1.22	3,733	<1.49	3,733	
2,4-dinitrophenol	1,867	<4.07	1,867	<20.0	1,867	<21.0	1,867	<30.0	1,867	<69.5	1,867	<51.8	1,867	<129.5	1,867	<1.13	1,867	<1.13	1,867	<2.21	1,867	
2-nitrophenol	NS	<2.92	NS	<46.2	NS	<48.5	NS	<60.0	NS	<139.0	NS	<82.2	NS	<205.5	NS	<1.57	NS	<1.57	NS	<2.84	NS	
4-nitrophenol	NS	<0.846	NS	<159.4	NS	<167.4	NS	<176.3	NS	<408.0	NS	<93.4	NS	<233.5	NS	<1.14	NS	3.1	NS	<2.98	NS	
p-chloro-m-cresol	48,000	<2.50	48,000	<39.2	48,000	<41.2	48,000	<40.2	48,000	<93.0	48,000	<88.2	48,000	<220.5	48,000	<1.65	48,000	<1.65	48,000	<1.87	48,000	
Pentachlorophenol	81.270	<5.97	63.97	*<87.4*	92.74	<91.8	52.32	<44.7	57.85	*<103.5*	127.97	<67.2	135.76	*<168.0*	94.663	<1.39	76.64	<1.39	68.60	6.6	NS	
Phenol	180,000	<1.39	180,000	<40.0	180,000	<42.0	180,000	<25.7	180,000	<59.5	180,000	<71.0	180,000	<177.5	180,000	2.8	180,000	1.9	180,000	<2.30	180,000	
2,4,6-trichlorophenol	130	<3.01	130	<103.6	130	<108.8	130	<60.5	130	*<140.0*	130	<95.8	130	*<239.5*	130	<1.89	130	<1.89	130	<2.60	130	

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SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/11/11**	**SWQS**	**11/5/11**	**SWQS**	**7/12/12**	**SWQS**	**12/14/12**	**SWQS**	**7/21/13**	**SWQS**	**11/22/13**	**SWQS**	**8/12/14**	**SWQS**	**12/4/14**	**SWQS**	**7/31/15**	**SWQS**	**None[6]**
Bases/Neutrals (µg/L) [2]																						
Acenaphthene	56,000	<1.41	56,000	<26.2	56,000	<27.5	56,000	<36.7	56,000	<85.0	56,000	<26.8	56,000	<67.0	56,000	<1.03	56,000	<1.03	56,000	<0.35	56,000	
Acenaphthylene	NS	<5.54	NS	<30.8	NS	<32.3	NS	<27.4	NS	<63.5	NS	<34.6	NS	<86.5	NS	<1.00	NS	<1.00	NS	<1.23	NS	
Anthracene	280,000	<1.40	280,000	<32.8	280,000	<34.4	280,000	<19.2	280,000	<44.5	280,000	<34.6	280,000	<86.5	280,000	<2.88	280,000	<2.88	280,000	<0.44	280,000	
Benz(a)anthracene	0.2	*<1.54*	0.2	*<53.0*	0.2	*<55.6*	0.2	*<33.9*	0.2	*<78.5*	0.2	*<34.6*	0.2	*<86.5*	0.2	*<1.08*	0.2	*<1.08*	0.2	*<0.38*	0.2	
Benzo(a)pyrene	0.2	*<1.49*	0.2	*<89.4*	0.2	*<93.9*	0.2	*<41.7*	0.2	*<96.5*	0.2	*<37.4*	0.2	*<93.5*	0.2	*<3.77*	0.2	*<3.77*	0.2	*<1.41*	0.2	
Benzo(b)fluoranthene	1.9	*<1.49*	1.9	*<78.4*	1.9	*<82.3*	1.9	*<73.2*	1.9	*<169.5*	1.9	*<48.6*	1.9	*<121.5*	1.9	<1.46	1.9	<1.46	1.9	<1.06	1.9	
Benzo(g,h,i)perylene	NS	<1.54	NS	<68.0	NS	<71.4	NS	<30.5	NS	<70.5	NS	<34.6	NS	<86.5	NS	<1.29	NS	<1.29	NS	<0.72	NS	
Benzo(k)fluoranthene	1.9	<1.56	1.9	*<60.0*	1.9	*<63.0*	1.9	*<24.8*	1.9	*<57.5*	1.9	*<28.0*	1.9	*<70.0*	1.9	<1.04	1.9	<1.04	1.9	<0.35	1.9	
Chrysene	19	<1.60	19	*<51.2*	19	*<53.8*	19	*<19.2*	19	*<44.5*	19	*<29.6*	19	*<74.0*	19	<1.41	19	<1.41	19	<0.46	19	
Dibenz(a,h)anthracene	1.9	<1.49	1.9	*<81.2*	1.9	*<85.3*	1.9	*<87.5*	1.9	*<202.5*	1.9	*<39.6*	1.9	*<99.0*	1.9	<1.24	1.9	<1.24	1.9	<0.47	1.9	
1,2-dichlorobenzene	5,900	<5.39	5,900	<25.4	5,900	<26.7	5,900	<46.9	5,900	<108.5	5,900	<5.4	5,900	<13.5	5,900	<1.76	5,900	<1.76	5,900	<1.04	5,900	
1,3-dichlorobenzene	NS	<4.79	NS	<23.8	NS	<25.0	NS	<52.3	NS	<121.0	NS	<22.6	NS	<56.5	NS	<1.74	NS	<1.74	NS	<0.47	NS	
1,4-dichlorobenzene	6,500	<5.47	6,500	<28.4	6,500	<29.8	6,500	<46.0	6,500	<106.5	6,500	<21.0	6,500	<52.5	6,500	<1.56	6,500	<1.56	6,500	<1.28	6,500	
3,3-dichlorobenzidine	3	*<6.34*	3	*<236.0*	3	*<247.8*	3	*<159.4*	3	*<369.0*	3	*<545.4*	3	*<1363.5*	3	*<6.06*	3	*<6.06*	3	*<11.60*	3	
Diethyl phthalate	746,667	<1.55	746,667	<38.4	746,667	<40.3	746,667	<32.0	746,667	<74.0	746,667	<38.0	746,667	<95.0	746,667	<2.37	746,667	<2.37	746,667	0.7	746,667	
Dimethyl phthalate	NS	<1.58	NS	<33.8	NS	<35.5	NS	<26.1	NS	<60.5	NS	<35.8	NS	<89.5	NS	<2.42	NS	<2.42	NS	<0.47	NS	
Di-n-butyl phthalate	1,100	<2.05	1,100	<85.2	1,100	<89.5	1,100	<49.5	1,100	<114.5	1,100	<44.6	1,100	<111.5	1,100	<1.85	1,100	<1.85	1,100	<0.31	1,100	
2,4-dinitrotoluene	1,867	<6.00	1,867	<53.8	1,867	<56.5	1,867	<28.3	1,867	<65.5	1,867	<41.0	1,867	<102.5	1,867	<2.12	1,867	<2.12	1,867	<0.26	1,867	
2,6-dinitrotoluene	3,733	<1.51	3,733	<77.6	3,733	<81.5	3,733	<40.4	3,733	<93.5	3,733	<50.4	3,733	<126.0	3,733	<1.12	3,733	<1.12	3,733	<0.38	3,733	
Di-n-octyl phthalate	373,333	<2.69	373,333	<157.2	373,333	<165.1	373,333	<89.2	373,333	<206.5	373,333	<57.6	373,333	<144.0	373,333	<1.10	373,333	<1.10	373,333	<1.28	373,333	
1,2-diphenylhydrazine (as azobenzene)	NS	<1.43	NS	<28.8	NS	<30.2	NS	<23.1	NS	<53.5	NS	<46.6	NS	<116.5	NS	<6.70	NS	<6.70	NS	<1.06	NS	
Fluoranthene	37,333	<1.68	37,333	<49.0	37,333	<51.4	37,333	<14.5	37,333	<33.5	37,333	<35.8	37,333	<89.5	37,333	<1.35	37,333	<1.35	37,333	<0.27	37,333	
Fluorene	37,333	<1.42	37,333	<26.2	37,333	<27.5	37,333	<36.3	37,333	<84.0	37,333	<30.8	37,333	<77.0	37,333	<4.81	37,333	<4.81	37,333	<0.29	37,333	
Hexachlorobenzene	747	<1.15	747	<30.0	747	<31.5	747	<28.1	747	<65.0	747	<27.8	747	<69.5	747	<1.23	747	<1.23	747	<0.34	747	
Hexachlorobutadiene	187	<5.89	187	<36.8	187	<38.6	187	<29.6	187	<68.5	187	<6.6	187	<16.5	187	<1.82	187	<1.82	187	<1.67	187	
Hexachlorocyclopentadiene	11,200	<6.20	11,200	<74.8	11,200	<78.5	11,200	<28.5	11,200	<66.0	11,200	<45.4	11,200	<113.5	11,200	<1.23	11,200	<1.23	11,200	<1.53	11,200	
Hexachloroethane	850	<6.01	850	<26.8	850	<28.1	850	<30.2	850	<70.0	850	<8.0	850	<20.0	850	<1.62	850	<1.62	850	<1.23	850	
Indeno(1,2,3-cd)pyrene	1.9	<1.54	1.9	*<83.8*	1.9	*<88.0*	1.9	*<71.9*	1.9	*<166.5*	1.9	*<40.6*	1.9	*<101.5*	1.9	<1.39	1.9	<1.39	1.9	<0.62	1.9	
Isophorone	186,667	<1.41	186,667	<34.6	186,667	<36.3	186,667	<41.0	186,667	<95.0	186,667	<28.2	186,667	<70.5	186,667	<2.14	186,667	<2.14	186,667	<0.37	186,667	
Naphthalene	18,667	<4.96	18,667	<20.6	18,667	<21.6	18,667	<30.7	18,667	<71.0	18,667	<24.0	18,667	<60.0	18,667	<1.83	18,667	<1.83	18,667	<0.36	18,667	
Nitrobenzene	467	<1.44	467	<47.6	467	<50.0	467	<28.3	467	<65.5	467	<24.6	467	<61.5	467	<2.10	467	<2.10	467	<1.26	467	
N-nitrosodimethylamine	0.03	*<4.35*	0.03	*<20.6*	0.03	*<21.6*	0.03	*<35.4*	0.03	*<82.0*	0.03	*<24.0*	0.03	*<60.0*	0.03	*<1.00*	0.03	*<1.00*	0.03	*<1.13*	0.03	
N-nitrosodi-n-propylamine	86,667	<1.45	86,667	<53.0	86,667	<55.6	86,667	<40.6	86,667	<94.0	86,667	<30.2	86,667	<75.5	86,667	<1.15	86,667	<1.15	86,667	<1.17	86,667	
N-nitrosodiphenylamine	290	<6.48	290	<32.8	290	<34.4	290	<21.6	290	<50.0	290	<60.8	290	<152.0	290	<3.57	290	<3.57	290	<1.15	290	

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Phenanthrene	NS	<1.42	NS	<25.6	NS	<26.9	NS	<16.4	NS	<38.0	NS	<32.6	NS	<81.5	NS	<1.39	NS	<1.39	NS	<0.31	NS	
Pyrene	28,000	<1.67	28,000	<49.0	28,000	<51.4	28,000	<50.3	28,000	<116.5	28,000	<32.8	28,000	<82.0	28,000	<3.86	28,000	<3.86	28,000	<0.67	28,000	
1,2,4-trichlorobenzene	9,333	<5.29	9,333	<28.4	9,333	<29.8	9,333	<57.5	9,333	<133.0	9,333	<6.4	9,333	<16.0	9,333	<1.69	9,333	<1.69	9,333	<1.04	9,333	
Pesticides (µg/L) [2]																						
Aldrin	4.5	<0.060	4.5	<0.013	4.5	<0.014	4.5	<0.058	4.5	<0.046	4.5	<0.048	4.5	<0.015	4.5	<0.027	4.5	<0.027	4.5	<0.012	4.5	
Alpha-BHC	1,600	<0.050	1,600	<0.016	1,600	<0.017	1,600	<0.044	1,600	<0.038	1,600	<0.040	1,600	<0.016	1,600	<0.021	1,600	<0.021	1,600	<0.058	1,600	
Beta-BHC	560	<0.050	560	<0.085	560	0.388	560	<0.048	560	<0.095	560	<0.100	560	<0.088	560	<0.072	560	<0.072	560	<0.063	560	
Gamma-BHC	11	<0.050	11	<0.014	11	0.175	11	<0.055	11	<0.033	11	0.052	11	<0.022	11	<0.034	11	<0.034	11	<0.058	11	
Delta-BHC	1,600	<0.050	1,600	<0.016	1,600	0.018	1,600	<0.035	1,600	<0.032	1,600	<0.034	1,600	<0.017	1,600	<0.021	1,600	<0.021	1,600	<0.066	1,600	
Chlordane	3.2	<0.700	3.2	<0.35	3.2	<0.38	3.2	<0.29	3.2	<0.16	3.2	<0.17	3.2	<0.19	3.2	<0.14	3.2	<0.14	3.2	<0.36	3.2	
4,4'-DDT	1.1	<0.060	1.1	<0.020	1.1	<0.022	1.1	<0.052	1.1	<0.029	1.1	<0.030	1.1	<0.015	1.1	<0.025	1.1	<0.025	1.1	<0.017	1.1	
4,4'-DDE	1.1	<0.050	1.1	<0.011	1.1	<0.012	1.1	<0.036	1.1	<0.034	1.1	<0.036	1.1	<0.017	1.1	<0.010	1.1	<0.010	1.1	<0.013	1.1	
4,4'-DDD	1.1	<0.050	1.1	<0.017	1.1	<0.019	1.1	<0.031	1.1	<0.023	1.1	<0.024	1.1	<0.013	1.1	<0.031	1.1	<0.031	1.1	<0.021	1.1	
Dieldrin	4	<0.050	4	<0.024	4	<0.026	4	<0.045	4	<0.028	4	<0.029	4	0.070	4	<0.030	4	<0.030	4	<0.060	4	
Alpha-endosulfan	3 T	<0.050	3 T	<0.010	3 T	<0.011	3 T	<0.048	3 T	<0.034	3 T	0.089	3 T	<0.017	3 T	<0.018	3 T	<0.018	3 T	<0.072	3 T	
Beta-endosulfan	3 T	<0.050	3 T	<0.021	3 T	<0.023	3 T	<0.054	3 T	<0.034	3 T	<0.036	3 T	<0.012	3 T	<0.032	3 T	<0.032	3 T	<0.019	3 T	
Endosulfan sulfate	3	<0.050	3	<0.015	3	<0.016	3	<0.030	3	<0.025	3	<0.026	3	<0.013	3	<0.008	3	<0.008	3	0.028	3	
Endrin	0.7	<0.060	0.7	<0.019	0.7	<0.021	0.7	<0.036	0.7	<0.035	0.7	<0.037	0.7	<0.015	0.7	<0.017	0.7	<0.017	0.7	<0.023	0.7	
Endrin aldehyde	0.7	<0.050	0.7	<0.015	0.7	<0.016	0.7	<0.014	0.7	<0.038	0.7	<0.040	0.7	<0.022	0.7	<0.032	0.7	<0.032	0.7	<0.026	0.7	
Heptachlor	0.9	<0.060	0.9	<0.012	0.9	<0.013	0.9	<0.045	0.9	<0.035	0.9	<0.037	0.9	<0.017	0.9	<0.027	0.9	0.045	0.9	<0.035	0.9	
Heptachlor epoxide	0.9	<0.050	0.9	<0.010	0.9	<0.011	0.9	<0.045	0.9	<0.032	0.9	<0.034	0.9	<0.019	0.9	<0.008	0.9	<0.008	0.9	<0.062	0.9	
PCB-1242	[4]	<0.300	[4]	<0.40	[4]	<0.44	[4]	<0.34	[4]	<0.41	[4]	<0.43	[4]	<0.52	[4]	<0.37	[4]	<0.37	[4]	<0.14	[4]	
PCB-1254	[4]	<0.500	[4]	<0.22	[4]	<0.24	[4]	<0.34	[4]	<0.20	[4]	<0.21	[4]	<0.27	[4]	<0.23	[4]	<0.23	[4]	<0.20	[4]	
PCB-1221	[4]	<0.900	[4]	<0.34	[4]	<0.37	[4]	<0.55	[4]	<0.68	[4]	<0.71	[4]	<0.81	[4]	<0.22	[4]	<0.22	[4]	<0.64	[4]	
PCB-1232	[4]	<0.070	[4]	<0.41	[4]	<0.45	[4]	<0.77	[4]	<0.66	[4]	<0.69	[4]	<0.32	[4]	<0.55	[4]	<0.55	[4]	<0.37	[4]	
PCB-1248	[4]	<0.200	[4]	<0.21	[4]	<0.23	[4]	<0.30	[4]	<0.78	[4]	<0.82	[4]	<0.26	[4]	<0.19	[4]	<0.19	[4]	<0.22	[4]	
PCB-1260	[4]	<0.400	[4]	<0.19	[4]	<0.21	[4]	<0.34	[4]	<0.21	[4]	<0.22	[4]	<0.22	[4]	<0.32	[4]	<0.32	[4]	<0.59	[4]	
PCB-1016	[4]	<0.400	[4]	<0.26	[4]	<0.28	[4]	<0.37	[4]	<0.36	[4]	<0.38	[4]	<0.31	[4]	<0.18	[4]	<0.18	[4]	<0.55	[4]	
Toxaphene	11	<0.700	11	<0.33	11	<0.36	11	<0.79	11	<0.53	11	<0.56	11	<0.32	11	<0.22	11	<0.22	11	<0.60	11	

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OUTFALL ID: SR049 **RECEIVING WATER: Salt River** **DESIGNATED USES: A&Wedw, PBC, FC, AgI, and AgL**	**MONITORING SEASONS** Summer: June 1 – October 31 Winter: November 1 – May 31																				
	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		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/11/11**	**SWQS**	**11/5/11**	**SWQS**	**8/17/12**	**SWQS**	**12/14/12**	**SWQS**	**7/21/13**	**SWQS**	**11/22/13**	**SWQS**	**8/1/14**	**SWQS**	**12/4/14**	**SWQS**	**7/31/15**	**SWQS**	**1/4/16**
MONITORING PARAMETERS [1, 2]																						
Conventional Parameters																						
Flow [3] (cfs)	NS	7.592	NS	3.783	NS	9.025	NS	5.83	NS	3.56	NS	18.84	NS	13.48	NS	10.791	NS	10.166	NS	24.5	NS	22.997
pH	6.5-9	8.17	6.5-9	6.92	6.5-9	8.04	6.5-9	7.48	6.5-9	7.45	6.5-9	8.03	6.5-9	8.54	6.5-9	7.64	6.5-9	8.01	6.5-9	7.5	6.5-9	7.73
Temperature (ºC)	Varies	16.0	Varies	30.0	Varies	10.8	Varies	28.0	Varies	20.0	Varies	28.6	Varies	17.0	Varies	28.5	Varies	18.0	Varies	30.8	Varies	16.5
Hardness (mg/L)	400	92.5	400	167	400	48.5	400	63.2	400	103	400	39.9	400	32.8	400	74.8	400	142	400	66.8	400	48.9
Total Dissolved Solids (TDS) (mg/L) [2]	NS	160	NS	602	NS	182	NS	228	NS	402	NS	134	NS	100	NS	290	NS	362	NS	270	NS	146
Total Suspended Solids (TSS) (mg/L) [2]	NS	205	NS	34.0	NS	354	NS	170	NS	226	NS	440	NS	420	NS	508	NS	200	NS	2,290	NS	420
Biochemical Oxygen Demand (BOD) (mg/L) [2]	NS	17.8	NS	63	NS	32	NS	32	NS	69	NS	35	NS	22	NS	66	NS	33	NS	61	NS	25
Chemical Oxygen Demand (COD) (mg/L) [2]	NS	124	NS	410	NS	220	NS	280	NS	430	NS	270	NS	200	NS	440	NS	210	NS	750	NS	280

SR049	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		Winter 2015/16	
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Inorganics																						
Cyanide, total (µg/L) [2]	41 T	<5.00	41 T	<5.0	41 T	<5.0	41 T	<5	41 T	<5	41 T	<50	41 T	<5	41 T	<5	41 T	<5	41 T	<5	41 T	<5
Nutrients (mg/L) [2]																						
Nitrate + Nitrite as N	NS	0.870	NS	2.7	NS	1.2	NS	1.6	NS	3.2	NS	1.2	NS	0.8	NS	2.8	NS	1.9	NS	1.3	NS	1.0
Ammonia as N	6.089	1.01	38.5	2.6	7.82	1.6	20.52	1.5	21.45	4.1	5.33	1.3	1.99	1.1	10.7	2.8	5.52	1.4	19.9	2.5	13.7	1.2
Total Kjeldahl Nitrogen (TKN)	NS	3.19	NS	11	NS	4.5	NS	5.1	NS	11	NS	5.3	NS	3.8	NS	8.0	NS	4.7	NS	5.2	NS	3.9
Total Phosphorus as P	NS	0.642	NS	0.99	NS	1.5	NS	0.92	NS	0.80	NS	0.46	NS	1.5	NS	2.1	NS	0.35	NS	3.5	NS	1.4
Ortho-Phosphorus as P	NS	0.253	NS	0.3	NS	0.3	NS	0.3	NS	0.4	NS	0.3	NS	0.2	NS	0.6	NS	0.1	NS	<0.1	NS	0.2
Microbiological																						
Escherichia coli (*E. coli*) (CFU/100 mg or MPN/100 mL) [2]	575	**14,670**	575	**>2,419.6**	575	**>2,419.6**	575	**2,419.6**	575	**1,553.1**	575	**>2,419.6**	575	**>2,419.6**	575	**>2,419.6**	575	**>2,419.6**	575	**8,570**	575	**5,040.0**

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Total Metals (µg/L) [2]																						
Antimony	640 T 1,000 D	<25 T&D	640 T 1,000 D	2.9 T 2.4 D	640 T 1,000 D	2.2 T 1.0 D	640 T 1,000 D	2.0 T 1.4 D	640 T 1,000 D	3.3 T 1.5 D	640 T 1,000 D	1.8 T 0.7 D	640 T 1,000 D	1.8 T 0.3 D	640 T 1,000 D	4.3 T 1.9 D	640 T 1,000 D	2.7 T 1.6 D	640 T 1,000 D	2.6 T <5.0 D	640 T 1,000 D	3.0 T <5.0 D
Arsenic	80 T 340 D	<10 T&D	80 T 340 D	5.2 T 3.4 D	80 T 340 D	5.7 T 1.5 D	80 T 340 D	5.2 T 2.3 D	80 T 340 D	5.8 T 2.2 D	80 T 340 D	6.5 T 1.4 D	80 T 340 D	4.2 T 0.6 D	80 T 340 D	7.7 T 2.3 D	80 T 340 D	4.4 T 2.0 D	80 T 340 D	16.6 T <5.0 D	80 T 340 D	6.0 T <5.0 D
Barium	98,000 T	123 T 32 D	98,000 T	147 T 90 D	98,000 T	193 T 26 D	98,000 T	146 T 33 D	98,000 T	230 T 48 D	98,000 T	241 T 25 D	98,000 T	157 T 8 D	98,000 T	251 T 44 D	98,000 T	160 T 56 D	98,000 T	572 T 43 D	98,000 T	244 T 27 D
Beryllium	84 T	<2 T&D	84 T	0.33 T <0.15 D	84 T	0.56 T <0.06 D	84 T	0.41 T <0.15 D	84 T	0.59 T <0.15 D	84 T	0.79 T <0.15 D	84 T	0.4 T <0.06 D	84 T	0.74 T <0.06 D	84 T	0.3 T <0.06 D	84 T	2.1 T <5.0 D	84 T	0.53 T <5.0 D
Cadmium	50 T 7.29 D	<3 T&D	50 T 12.95 D	0.6 T 0.3 D	50 T 3.89 D	0.7 T <0.10 D	50 T 5.08 D	0.7 T <0.25 D	50 T 8.10 D	1.1 T <0.25 D	50 T 3.22 D	1.0 T <0.25 T	50 T 2.66 D	0.9 T <0.10 D	50 T 5.93 D	0.9 T <0.12 D	50 T 11.07 D	0.4 T <0.12 D	50 T 5.31 D	2.4 T <5.0 D	50 T 3.92 D	1.1 T *<5.0 D*
Chromium	1,000 T	17 T <10 D	1,000 T	8.7 T <4.50 D	1,000 T	20.8 T <1.80 D	1,000 T	13.9 T <2.00 D	1,000 T	17.3 T <2.00 D	1,000 T	26.3 T <2.00 D	1,000 T	14.4 T <0.80 D	1,000 T	27.3 T 2.2 D	1,000 T	11.2 T 1.4 D	1,000 T	67.0 T <5.0 D	1,000 T	20.1 T <5.0 D
Copper	500 T 12.48 D	72 T **16 D**	500 T 21.79 D	87.4 T **38.2 D**	500 T 6.80 D	94.8 T **12.7 D**	500 T 8.80 D	91.1 T **16.8 D**	500 T 13.82 D	152 T **45.2 D**	500 T 5.66 D	149 T **11.8 D**	500 T 4.70 D	79.1 T **5.5 D**	500 T 10.22 D	127 T **18.4 D**	500 T 18.70	75.6 T **19.8 D**	500 T 9.19 D	268 T **17.2 D**	500 T 6.85 D	137 T **10.5 D**
Lead	15 T 59.32 D	**17 T** <10 D	15 T 112.34 D	10.8 T 1.4 D	15 T 29.14 D	**28.6 T** 0.6 D	15 T 39.46 D	**22.9 T** 0.9 D	15 T 66.69 D	**38.9 T** 0.8 D	15 T 23.45 D	**48.2 T** 2.3 D	15 T 18.83 D	**39.5 T** 0.3 D	15 T 47.01 D	**35.4 T** 2.0 D	15 T 94.40	**16.0 T** 0.5 D	15 T 41,51 D	**93.5 T** 2.1 D	15 T 29.40 D	**38.4 T** <5.0 D
Mercury	10 T 2.4 D	<0.20 T&D	10 T 2.4 D	0.10 T <0.092 D	10 T 2.4 D	<0.092 T&D	10 T 2.4 D	<0.040 T <0.040 D	10 T 2.4 D	<0.040 T <0.040 D	10 T 2.4 D	0.06 T <0.020 D	10 T 2.4 D	0.04 T <0.020 D	10 T 2.4 D	0.13 T <0.2 D	10 T 2.4 D	<0.092 T <0.092 D	10 T 2.4 D	0.11 T <0.2 D	10 T 2.4 D	0.08 T <0.2 D
Nickel	511 T 438 D	20 T <10 D	511 T 723 D	20.5 T 14.2 D	511 T 254 D	27.9 T 4.4 D	511 T 320 D	19.3 T 5.6 D	511 T 480 D	26.4 T 8.6 D	511 T 215.5 D	34.8 T 4.4 D	511 T 182.2 D	18.5 T 1.1 D	511 T 366.2 D	34.6 T 7.2 D	511 T 630	16.0 T 4.3 D	511 T 333 D	86.7 T 8.1 D	511 T 256 D	27.8 T <5.0 D
Selenium	20 T	<2.00 T&D	20 T	0.92 T 0.9 D	20 T	1.1 T <0.34 D	20 T	<0.60 T <0.60 D	20 T	1.3 T 0.8 D	20 T	<0.60 T <0.60 D	20 T	<0.60 T <0.24 D	20 T	1.1 T 0.7 D	20 T	0.78 T 0.6 D	20 T	1.2 T <5.0 D	20 T	0.59 T <5.0 D
Silver	4,667 T 2.81 D	<5 T *<5 D*	4,667 T 7.77 D	<0.2 T&D	4,667 T 0.93 D	<0.20 T&D	4,667 T 1.48 D	0.2 T <0.15 D	4,667 T 3.38 D	0.5 T <0.15 D	4,667 T 0.667 D	0.3 T <0.15 D	4,667 T 0.474 D	0.2 T <0.15 D	4,667 T 1.952 D	0.2 T <0.20 D	4,667 T 5.88	0.1 T <0.08 D	4,667 T 1.61 D	0.4 T *<5.0 D*	4,667 T 0.94 D	<0.25 T *<5.0 D*
Thallium	1 T 700 D	<0.50 T <0.5 D	1 T 700 D	<0.20 T&D	1 T 700 D	<0.20 T <0.08 D	1 T 700 D	<0.20 T <0.20 D	1 T 700 D	<0.20 T <0.20 D	1 T 700 D	<0.20 T <0.20 D	1 T 700 D	0.29 T <0.08 D	1 T 700 D	0.37 T <0.04 D	1 T 700 D	0.30 T <0.04 D	1 T 700 D	0.41 T <5.0 D	1 T 700 D	0.15 T <5.0 D
Zinc	5,106 T 109.7 D	298 T <50 D	5,106 T 181.0 D	262T 137 D	5,106 T 63.45 D	374 T 29.8 D	5,106 T 80.08 D	297 T 37.2 D	5,106 T 120.2 D	528 T 99.2 D	5,106 T 53.79 D	458 T 39.5 D	5,106 T 45.56 D	349 T 11.6 D	5,106 T 91.6 D	502 T 51.4 D	5,106 T 157.7	180 T 25.6 D	5,106 T 83.3 D	1,510 T 70.8 D	5,106 T 63.9 D	740 T 21.2 D
Organic Toxic Pollutants																						
Total Petroleum Hydrocarbons (TPH) (mg/L) [2]	NS	<5.00	NS	130	NS	<10	NS	<10	NS	<10	NS	<11	NS	<11	NS	<10	NS	<10	NS	<10	NS	<6
Total Oil and Grease (mg/L) [2]	NS	<5.00	NS	<10	NS	<5	NS	<10	NS	8.1	NS	<5.7	NS	<5.7	NS	7.0	NS	7.6	NS	<5.1	NS	<6
VOCs, Semi-VOCs, & Pesticides (µg/L) [2]																						
Acrolein	1.9	*<50.0*	1.9	*<3.73*	1.9	<0.37	1.9	<1.465	1.9	<1.465	1.9	<0.20	1.9	<0.20	1.9	*<2.00*	1.9	<0.40	1.9	<0.78	1.9	<0.78
Acrylonitrile	0.2	<5.00	0.2	*<1.67*	0.2	<0.17	0.2	*<1.130*	0.2	*<1.130*	0.2	<0.16	0.2	<0.16	0.2	*<0.70*	0.2	<0.14	0.2	*<0.53*	0.2	*<0.53*
Benzene	114	<0.500	114	<2.30	114	<0.20	114	<0.75	114	<0.75	114	<1.20	114	<0.24	114	<1.20	114	<0.13	114	<0.46	114	<0.46
Bromoform	133	<1.00	133	<4.15	133	<0.25	133	<2.15	133	<2.15	133	<2.35	133	<0.47	133	<2.35	133	<0.28	133	<0.68	133	<0.68
Carbon tetrachloride	2	<0.500	2	*<2.30*	2	<0.31	2	<1.65	2	<1.65	2	<1.30	2	<0.26	2	<1.30	2	<0.23	2	<0.31	2	<0.31
Chlorobenzene	1,553	<0.500	1,553	<3.70	1,553	<0.25	1,553	<1.40	1,553	<1.40	1,553	<0.80	1,553	<0.16	1,553	<0.80	1,553	<0.13	1,553	<0.50	1,553	<0.50

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Chlorodibromomethane	13	<0.500	13	<3.90	13	<0.21	13	<1.30	13	<1.30	13	<0.90	13	<0.18	13	<0.90	13	<0.24	13	<0.61	13	<0.61
Chloroethane (ethyl chloride)	NS	<5.00	NS	<2.25	NS	<0.14	NS	<1.35	NS	<1.35	NS	<1.10	NS	<0.22	NS	<1.10	NS	<0.19	NS	<0.40	NS	<0.40
2-chloroethylvinyl ether	180,000	<2.00	180,000	<0.174	180,000	<0.174	180,000	<1.10	180,000	<0.22	180,000	<0.22	180,000	<0.22	180,000	<0.95	180,000	<0.19	180,000	<0.53	180,000	<0.53
Chloroform	2,133	<0.500	2,133	<2.30	2,133	<0.40	2,133	<1.05	2,133	<1.05	2,133	<1.15	2,133	<0.23	2,133	<1.15	2,133	<0.14	2,133	<0.49	2,133	<0.49
Dichlorobromomethane	17	<0.500	17	<2.95	17	<0.23	17	<0.75	17	<0.75	17	<1.15	17	<0.23	17	<1.15	17	<0.15	17	<0.49	17	<0.49
1,1-dichloroethane	NS	<1.00	NS	<2.15	NS	<0.18	NS	<0.65	NS	<0.65	NS	<1.30	NS	<0.26	NS	<1.30	NS	<0.19	NS	<0.42	NS	<0.42
1,2-dichloroethane	37	<1.00	37	<2.45	37	<0.20	37	<0.80	37	<0.80	37	<1.25	37	<0.25	37	<1.25	37	<0.11	37	<0.51	37	<0.51
1,1-dichloroethylene	7,143	<1.00	7,143	<2.10	7,143	<0.23	7,143	<1.85	7,143	<1.85	7,143	<1.40	7,143	<0.28	7,143	<1.40	7,143	<0.27	7,143	<0.34	7,143	<0.34
1,2-dichloropropane	17,518	<0.500	17,518	<2.50	17,518	<0.22	17,518	<0.75	17,518	<0.75	17,518	<1.25	17,518	<0.25	17,518	<1.25	17,518	<0.18	17,518	<0.49	17,518	<0.49
1,3-dichloropropylene	42	<1.00	42	cis<2.85 trans<3.45	42	<0.19	42	cis<0.50 trans<0.75	42	cis<0.50 trans<0.75	42	cis<1.20 trans<1.10	42	cis<0.24 trans<0.22	42	cis <1.20 trans <1.10	42	<0.13	42	cis <0.51 trans <0.50	42	cis <0.51 trans <0.50
Ethylbenzene	2,133	<2.00	2,133	<3.35	2,133	<0.27	2,133	<1.45	2,133	<1.45	2,133	<0.65	2,133	<0.13	2,133	<0.65	2,133	<0.15	2,133	<0.46	2,133	<0.46
Methyl bromide	299	<5.00	299	<2.35	299	<0.14	299	<0.95	299	<0.95	299	<0.95	299	<0.19	299	<0.95	299	<0.18	299	<0.46	299	<0.46
Methyl chloride	270,000	<5.00	270,000	<2.15	270,000	<0.20	270,000	<1.85	270,000	<1.85	270,000	<1.40	270,000	<0.28	270,000	<1.40	270,000	<0.23	270,000	<0.46	270,000	<0.46
Methylene chloride	593	<3.00	593	2.0	593	<0.45	593	<1.40	593	1.6	593	<1.00	593	<0.20	593	<1.00	593	<0.20	593	<0.81	593	<0.81
1,1,2,2-tetrachloroethane	4	<0.500	4	*<4.65*	4	<0.11	4	<2.45	4	<2.45	4	<2.00	4	<0.40	4	<2.00	4	<0.35	4	<0.80	4	<0.80
Tetrachloroethylene	261	<0.500	261	<2.40	261	<0.26	261	<1.15	261	<1.15	261	<1.05	261	<0.21	261	<1.05	261	<0.13	261	<0.35	261	<0.35
Toluene	8,700	<3.00	8,700	<2.40	8,700	<0.23	8,700	<0.60	8,700	<0.60	8,700	<0.95	8,700	<0.19	8,700	<0.95	8,700	0.16	8,700	<0.43	8,700	<0.43
1,2-trans-dichloroethylene	10,127	<0.500	10,127	<2.00	10,127	<0.14	10,127	<0.85	10,127	<0.85	10,127	<1.25	10,127	<0.25	10,127	<1.25	10,127	<0.18	10,127	<0.38	10,127	<0.38
1,1,1-trichloroethane	1,000	<0.500	1,000	<2.40	1,000	<0.28	1,000	<1.15	1,000	<1.15	1,000	<1.00	1,000	<0.20	1,000	<1.00	1,000	<0.14	1,000	<0.34	1,000	<0.34
1,1,2-trichloroethane	16	<0.500	16	<3.95	16	<0.22	16	<1.20	16	<1.20	16	<0.75	16	<0.15	16	<0.75	16	<0.13	16	<0.60	16	<0.60
Trichloroethylene	29	<0.500	29	<1.90	29	<0.35	29	<1.20	29	<1.20	29	<0.75	29	<0.15	29	<0.75	29	<0.22	29	<0.48	29	<0.48
1,2,4-Trimethylbenzene 1,3,5- Trimethylbenzene	NS	<2.00 <1.50	NS	<2.0 <2.0	NS	<1.0 <1.0	NS	<5.0 <5.0	NS	<5.0 <5.0	NS	<5.0 <5.0	NS	<1.0 <1.0	NS	<5.0 <5.0	NS	<1.0 <1.0	NS	<1.0 <1.0	NS	<1.0 <1.0
Vinyl chloride	5	<0.500	5	<2.35	5	<0.19	5	<2.50	5	<2.50	5	<1.00	5	<0.20	5	<1.00	5	<0.22	5	<0.35	5	<0.35
Xylenes, Total	186,667	<1.00	186,667	<0.95	186,667	<0.51	186,667	<2.90	186,667	<2.90	186,667	<1.50	186,667	<0.30	186,667	<1.50	186,667	<0.13	186,667	<0.52	186,667	<0.52
Acid Compounds (µg/L) [2]																						
2-chlorophenol	30	<4.92	30	<22.1	30	*<44.2*	30	<22.8	30	*<57.0*	30	*<220.9*	30	*<220.9*	30	*<74.0*	30	<1.48	30	<3.10	30	<3.10
2,4-dichlorophenol	59	<2.76	59	<24.2	59	<48.4	59	<24.4	59	*<61.0*	59	*<217.3*	59	*<217.3*	59	*<82.5*	59	<1.65	59	<2.81	59	<2.81
2,4-dimethylphenol	171	<5.86	171	<17.2	171	<34.4	171	<29.2	171	<73.0	171	<117.4	171	<117.4	171	<110.0	171	<2.20	171	<2.64	171	<2.64
4,6-dinitro-o-cresol	310	<5.42	310	<21.8	310	<43.6	310	<27.6	310	<69.0	310	<153.5	310	<153.5	310	<61.0	310	<1.22	310	<1.49	310	<1.49
2,4-dinitrophenol	110	<4.07	110	<10.0	110	<20.0	110	<27.8	110	<69.5	110	*<133.4*	110	*<133.4*	110	<56.6	110	<1.13	110	<2.21	110	<2.21
2-nitrophenol	NS	<2.92	NS	<23.1	NS	<46.2	NS	<55.6	NS	<139.0	NS	<211.7	NS	<211.7	NS	<78.5	NS	<1.57	NS	<2.84	NS	<2.84
4-nitrophenol	4,100	<0.846	4,100	<79.7	4,100	<159.4	4,100	<163.2	4,100	<408.0	4,100	<240.5	4,100	<240.5	4,100	<57.0	4,100	<1.14	4,100	<2.98	4,100	3.6
p-chloro-m-cresol	15	<2.50	15	*<19.6*	15	*<39.2*	15	*<37.2*	15	*<93.0*	15	*<227.1*	15	*<227.1*	15	*<82.5*	15	<1.65	15	<1.87	15	<1.87

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D^a = Result is assumed based upon a 1:1 ratio to total metals
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3 Report the average flow rate for the sampling period (no more than 6 hours).
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SR049	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		Winter 2015/16	
SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/11/11**	**SWQS**	**11/5/11**	**SWQS**	**8/17/12**	**SWQS**	**12/14/12**	**SWQS**	**7/21/13**	**SWQS**	**11/22/13**	**SWQS**	**8/1/14**	**SWQS**	**12/4/14**	**SWQS**	**7/31/15**	**SWQS**	**1/4/16**
Pentachlorophenol	29.427	<5.97	8.376	*<43.7*	25.83	*<87.4*	14.71	*<41.4*	14.28	*<103.5*	25.56	*<173.0*	42.69	<173.0	17.278	*<69.5*	25.041	<1.39	14.992	7.5	18.91	<1.47
Phenol	37	<1.39	37	<20.0	37	*<40.0*	37	<23.8	37	*<59.5*	37	*<182.8*	37	<182.8	37	*<67.0*	37	2.1	37	<2.30	37	<2.30
2,4,6-trichlorophenol	2	*<3.01*	2	*<51.8*	2	*<103.6*	2	*<56.0*	2	*<140.0*	2	*<246.7*	2	<246.7	2	*<94.5*	2	<1.89	2	*<2.60*	2	*<2.60*
Bases/Neutrals (µg/L) [2]																						
Acenaphthene	198	<1.41	198	<13.1	198	<26.2	198	<34.0	198	<85.0	198	<69.0	198	<69.0	198	<51.5	198	<1.03	198	<0.35	198	<0.35
Acenaphthylene	NS	<5.54	NS	<15.4	NS	<30.8	NS	<25.4	NS	<63.5	NS	<89.1	NS	<89.1	NS	<50.0	NS	<1.00	NS	<1.23	NS	<1.23
Anthracene	74	<1.40	74	<16.4	74	<32.8	74	<17.8	74	<44.5	74	*<89.1*	74	*<89.1*	74	*<144.0*	74	<2.88	74	<0.44	74	<0.44
Benz(a)anthracene	0.02	*<1.54*	0.02	*<26.5*	0.02	*<53.0*	0.02	*<31.4*	0.02	*<78.5*	0.02	*<89.1*	0.02	*<89.1*	0.02	*<54.0*	0.02	*<1.08*	0.02	*<0.38*	0.02	*<0.38*
Benzo(a)pyrene	0.02	*<1.49*	0.02	*<44.7*	0.02	*<89.4*	0.02	*<38.6*	0.02	*<96.5*	0.02	*<96.3*	0.02	*<96.3*	0.02	*<188.5*	0.02	*<3.77*	0.02	*<1.41*	0.02	*<1.41*
Benzo(b)fluoranthene	0.02	*<1.49*	0.02	*<39.2*	0.02	*<78.4*	0.02	*<67.8*	0.02	*<169.5*	0.02	*<125.1*	0.02	<125.1	0.02	*<73.0*	0.02	*<1.46*	0.02	*<1.06*	0.02	*<1.06*
Benzo(g,h,i)perylene	NS	<1.54	NS	<34.0	NS	<68.0	NS	<28.2	NS	<70.5	NS	<89.1	NS	<89.1	NS	<64.5	NS	<1.29	NS	<0.72	NS	<0.72
Benzo(k)fluoranthene	0.02	*<1.56*	0.02	*<30.0*	0.02	*<60.0*	0.02	*<23.0*	0.02	*<57.5*	0.02	*<72.1*	0.02	*<72.1*	0.02	*<52.0*	0.02	*<1.04*	0.02	*<0.35*	0.02	*<0.35*
Chrysene	0.02	*<1.60*	0.02	*<25.6*	0.02	*<51.2*	0.02	*<17.8*	0.02	*<44.5*	0.02	*<76.2*	0.02	*<76.2*	0.02	*<70.5*	0.02	*<1.41*	0.02	*<0.46*	0.02	*<0.46*
Dibenzo(a,h)anthracene	0.02	*<1.49*	0.02	*<40.6*	0.02	*<81.2*	0.02	*<81.0*	0.02	*<202.5*	0.02	*<102.0*	0.02	*<102.0*	0.02	*<62.0*	0.02	*<1.24*	0.02	*<0.47*	0.02	*<0.47*
1,2-dichlorobenzene	205	<5.39	205	<12.7	205	<25.4	205	<43.4	205	<108.5	205	<13.9	205	<13.9	205	<88.0	205	<1.76	205	<1.04	205	<1.04
1,3-dichlorobenzene	2,500	<4.79	2,500	<11.9	2,500	<23.8	2,500	<48.4	2,500	<121.0	2,500	<58.2	2,500	<58.2	2,500	<87.0	2,500	<1.74	2,500	<0.47	2,500	<0.47
1,4-dichlorobenzene	2,000	<5.47	2,000	<14.2	2,000	<28.4	2,000	<42.6	2,000	<106.5	2,000	<54.1	2,000	<54.1	2,000	<78.0	2,000	<1.56	2,000	<1.28	2,000	<1.28
3,3-dichlorobenzidine	0.03	*<6.34*	0.03	*<118.0*	0.03	*<236.0*	0.03	*<147.6*	0.03	*<369.0*	0.03	*<1404.4*	0.03	*<1404.4*	0.03	*<303.0*	0.03	*<6.06*	0.03	*<11.60*	0.03	*<11.60*
Diethyl phthalate	8,767	<1.55	8,767	<19.2	8,767	<38.4	8,767	<29.6	8,767	<74.0	8,767	<97.8	8,767	<97.8	8,767	<118.5	8,767	<2.37	8,767	<0.36	8,767	<0.36
Dimethyl phthalate	17,000	<1.58	17,000	<16.9	17,000	<33.8	17,000	<24.2	17,000	<60.5	17,000	<92.2	17,000	<92.2	17,000	<121.0	17,000	<2.42	17,000	<0.47	17,000	<0.47
Di-n-butyl phthalate	470	<2.05	470	<42.6	470	<85.2	470	<45.8	470	<114.5	470	<114.8	470	<114.8	470	<92.5	470	<1.85	470	<0.31	470	<0.31
2,4-dinitrotoluene	421	<6.00	421	<26.9	421	<53.8	421	<26.2	421	<65.5	421	<105.6	421	<105.6	421	<106.0	421	<2.12	421	<0.26	421	<0.26
2,6-dinitrotoluene	3,733	<1.51	3,733	<38.8	3,733	<77.6	3,733	<37.4	3,733	<93.5	3,733	<129.8	3,733	<129.8	3,733	<56.0	3,733	<1.12	3,733	<0.38	3,733	<0.38
Di-n-octyl phthalate	373,333	<2.69	373,333	<78.6	373,333	<157.2	373,333	<82.6	373,333	<206.5	373,333	<148.3	373,333	<148.3	373,333	<55.0	373,333	<1.10	373,333	<1.28	373,333	<1.28
1,2-diphenylhydrazine (as azobenzene)	NS	<1.43	NS	<14.4	NS	<28.8	NS	<21.4	NS	<53.5	NS	<120.0	NS	<120.0	NS	<335.0	NS	<6.70	NS	<1.06	NS	<1.06
Fluoranthene	28	<1.68	28	<24.5	28	*<49.0*	28	<13.4	28	*<33.5*	28	*<92.2*	28	*<92.2*	28	*<67.5*	28	<1.35	28	<0.27	28	<0.27
Fluorene	1,067	<1.42	1,067	<13.1	1,067	<26.2	1,067	<33.6	1,067	<84.0	1,067	<79.3	1,067	<79.3	1,067	<240.5	1,067	<4.81	1,067	<0.29	1,067	<0.29
Hexachlorobenzene	0.0003	*<1.15*	0.0003	*<15.0*	0.0003	*<30.0*	0.0003	*<26.0*	0.0003	*<65.0*	0.0003	*<71.6*	0.0003	*<71.6*	0.0003	*<61.5*	0.0003	*<1.23*	0.0003	*<0.34*	0.0003	*<0.34*
Hexachlorobutadiene	18	<5.89	18	*<18.4*	18	*<36.8*	18	*<27.4*	18	*<68.5*	18	<17.0	18	<17.0	18	*<91.0*	18	<1.82	18	<1.67	18	<1.67
Hexachlorocyclopentadiene	3.5	*<6.20*	3.5	*<37.4*	3.5	*<74.8*	3.5	*<26.4*	3.5	*<66.0*	3.5	*<116.9*	3.5	*<116.9*	3.5	*<61.5*	3.5	<1.23	3.5	<1.53	3.5	<1.53
Hexachloroethane	3.3	*<6.01*	3.3	*<13.4*	3.3	*<26.8*	3.3	*<28.0*	3.3	*<70.0*	3.3	*<20.6*	3.3	*<20.6*	3.3	*<81.0*	3.3	<1.62	3.3	<1.23	3.3	<1.23
Indeno(1,2,3-cd)pyrene	0.2	*<1.54*	0.2	*<41.9*	0.2	*<83.8*	0.2	*<66.6*	0.2	*<166.5*	0.2	*<104.5*	0.2	*<104.5*	0.2	*<69.5*	0.2	*<1.39*	0.2	*<0.62*	0.2	*<0.62*
Isophorone	961	<1.41	961	<17.3	961	<34.6	961	<38.0	961	<95.0	961	*<72.6*	961	<72.6	961	<107.0	961	<2.14	961	<0.37	961	<0.37
Naphthalene	1,524	<4.96	1,524	<10.3	1,524	<20.6	1,524	<28.4	1,524	<71.0	1,524	<61.8	1,524	<61.8	1,524	<91.5	1,524	<1.83	1,524	<0.36	1,524	<0.36
Nitrobenzene	138	<1.44	138	<23.8	138	<47.6	138	<26.2	138	<65.5	138	<63.3	138	<63.3	138	<105.0	138	<2.10	138	<1.26	138	<1.26
N-nitrosodimethylamine	0.03	*<4.35*	0.03	*<10.3*	0.03	*<20.6*	0.03	*<32.8*	0.03	*<82.0*	0.03	*<61.8*	0.03	*<61.8*	0.03	*<50.0*	0.03	*<1.00*	0.03	*<1.13*	0.03	*<1.13*
N-nitrosodi-n-propylamine	0.5	*<1.45*	0.5	*<26.5*	0.5	*<53.0*	0.5	*<37.6*	0.5	*<94.0*	0.5	*<77.8*	0.5	*<77.8*	0.5	*<57.5*	0.5	*<1.15*	0.5	*<1.17*	0.5	*<1.17*

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SAMPLING DATE(S):	**SWQS**	**12/23/10**	**SWQS**	**7/11/11**	**SWQS**	**11/5/11**	**SWQS**	**8/17/12**	**SWQS**	**12/14/12**	**SWQS**	**7/21/13**	**SWQS**	**11/22/13**	**SWQS**	**8/1/14**	**SWQS**	**12/4/14**	**SWQS**	**7/31/15**	**SWQS**	**1/4/16**
N-nitrosodiphenylamine	6	*<6.48*	6	*<16.4*	6	*<32.8*	6	*<20.0*	6	*<50.0*	6	*<156.6*	6	*<156.6*	6	*<178.5*	6	<3.57	6	<1.15	6	<1.15
Phenanthrene	30	<1.42	30	<12.8	30	<25.6	30	<15.2	30	*<38.0*	30	<83.9	30	*<83.9*	30	*<69.5*	30	<1.39	30	<0.31	30	<0.31
Pyrene	800	<1.67	800	<24.5	800	<49.0	800	<46.6	800	<116.5	800	<84.5	800	<84.5	800	<193.0	800	<3.86	800	<0.67	800	<0.67
1,2,4-trichlorobenzene	70	<5.29	70	<14.2	70	<28.4	70	<53.2	70	*<133.0*	70	<16.5	70	<16.5	70	*<84.5*	70	<1.69	70	<1.04	70	<1.04
Pesticides (µg/L) [2]																						
Aldrin	0.00005	*<0.120*	0.00005	*<0.013*	0.00005	*<0.013*	0.00005	*<0.058*	0.00005	*<0.046*	0.00005	*<0.046*	0.00005	*<0.016*	0.00005	*<0.027*	0.00005	*<0.027*	0.00005	*<0.012*	0.00005	*<0.012*
Alpha-BHC	0.005	*<0.100*	0.005	*<0.016*	0.005	*<0.016*	0.005	*<0.044*	0.005	*<0.038*	0.005	*<0.038*	0.005	*<0.017*	0.005	*<0.021*	0.005	*<0.021*	0.005	*<0.058*	0.005	*<0.058*
Beta-BHC	0.02	*<0.100*	0.02	*<0.085*	0.02	**0.413**	0.02	*<0.048*	0.02	*<0.095*	0.02	*<0.095*	0.02	<0.093	0.02	*<0.072*	0.02	*<0.072*	0.02	*<0.063*	0.02	*<0.063*
Gamma-BHC	1	<0.100	1	<0.014	1	0.120	1	<0.055	1	<0.033	1	0.062	1	<0.023	1	<0.034	1	<0.034	1	<0.058	1	<0.058
Delta-BHC	1,600	<0.100	1,600	<0.016	1,600	0.025	1,600	<0.035	1,600	<0.032	1,600	<0.032	1,600	<0.018	1,600	<0.021	1,600	<0.021	1,600	<0.066	1,600	<0.066
Chlordane	0.0008	*<1.40*	0.0008	*<0.35*	0.0008	*<0.35*	0.0008	*<0.29*	0.0008	*<0.16*	0.0008	*<0.16*	0.0008	*<0.20*	0.0008	*<0.14*	0.0008	*<0.14*	0.0008	*<0.36*	0.0008	*<0.36*
4,4’-DDT	0.0002	*<0.120*	0.0002	*<0.020*	0.0002	*<0.020*	0.0002	*<0.052*	0.0002	*<0.029*	0.0002	*<0.029*	0.0002	*<0.016*	0.0002	*<0.025*	0.0002	*<0.025*	0.0002	*<0.017*	0.0002	*<0.017*
4,4’-DDE	0.0002	*<0.100*	0.0002	*<0.011*	0.0002	*<0.011*	0.0002	*<0.036*	0.0002	*<0.034*	0.0002	*<0.034*	0.0002	*<0.018*	0.0002	*<0.010*	0.0002	*<0.010*	0.0002	*0.033*	0.0002	*<0.013*
4,4’-DDD	0.0002	*<0.100*	0.0002	*<0.017*	0.0002	*<0.017*	0.0002	*<0.031*	0.0002	*<0.023*	0.0002	*<0.023*	0.0002	*<0.014*	0.0002	*<0.031*	0.0002	*<0.031*	0.0002	*<0.021*	0.0002	*<0.021*
Dieldrin	0.00005	*<0.100*	0.00005	*<0.024*	0.00005	**0.080**	0.00005	*<0.045*	0.00005	*<0.028*	0.00005	*<0.028*	0.00005	*<0.022*	0.00005	*<0.030*	0.00005	*<0.030*	0.00005	*<0.060*	0.00005	*<0.060*
Alpha-endosulfan	0.2	<0.100	0.2	0.053	0.2	<0.010	0.2	<0.048	0.2	<0.034	0.2	<0.034	0.2	<0.018	0.2	<0.018	0.2	<0.018	0.2	<0.072	0.2	<0.072
Beta-endosulfan	0.2	<0.100	0.2	<0.021	0.2	<0.021	0.2	<0.054	0.2	<0.034	0.2	<0.034	0.2	<0.013	0.2	<0.032	0.2	<0.032	0.2	<0.019	0.2	<0.019
Endosulfan sulfate	0.2	<0.100	0.2	<0.015	0.2	<0.015	0.2	<0.030	0.2	<0.025	0.2	<0.025	0.2	<0.014	0.2	<0.008	0.2	0.071	0.2	<0.016	0.2	0.080
Endrin	0.004	*<0.120*	0.004	*<0.019*	0.004	*<0.019*	0.004	*<0.036*	0.004	*<0.035*	0.004	*<0.035*	0.004	*<0.016*	0.004	*<0.017*	0.004	*<0.017*	0.004	*<0.023*	0.004	*<0.023*
Endrin aldehyde	0.09	*<0.100*	0.09	<0.015	0.09	<0.015	0.09	<0.014	0.09	<0.038	0.09	<0.038	0.09	*<0.023*	0.09	<0.032	0.09	*<0.032*	0.09	<0.026	0.09	<0.026
Heptachlor	0.00008	*<0.120*	0.00008	*<0.012*	0.00008	*<0.012*	0.00008	*<0.045*	0.00008	**0.087**	0.00008	*<0.035*	0.00008	*<0.018*	0.00008	*<0.027*	0.00008	***0.063***	0.00008	*<0.035*	0.00008	*<0.035*
Heptachlor epoxide	0.00004	*<0.100*	0.00004	*<0.010*	0.00004	*<0.010*	0.00004	*<0.045*	0.00004	*<0.032*	0.00004	*<0.032*	0.00004	*<0.020*	0.00004	*<0.008*	0.00004	*<0.008*	0.00004	*<0.062*	0.00004	*<0.062*
PCB-1242	[4]	<0.600	[4]	<0.40	[4]	<0.40	[4]	<0.34	[4]	<0.41	[4]	<0.41	[4]	<0.55	[4]	<0.37	[4]	<0.37	[4]	<0.14	[4]	<0.14
PCB-1254	[4]	<1.00	[4]	<0.22	[4]	<0.22	[4]	<0.34	[4]	<0.20	[4]	<0.20	[4]	<0.29	[4]	<0.23	[4]	<0.23	[4]	<0.20	[4]	<0.20
PCB-1221	[4]	<1.80	[4]	<0.34	[4]	<0.34	[4]	<0.55	[4]	<0.68	[4]	<0.68	[4]	<0.86	[4]	<0.22	[4]	<0.22	[4]	<0.64	[4]	<0.64
PCB-1232	[4]	<0.140	[4]	<0.41	[4]	<0.41	[4]	<0.77	[4]	<0.66	[4]	<0.66	[4]	<0.34	[4]	<0.55	[4]	<0.55	[4]	<0.37	[4]	<0.37
PCB-1248	[4]	<0.400	[4]	<0.21	[4]	<0.21	[4]	<0.30	[4]	<0.78	[4]	<0.78	[4]	<0.28	[4]	<0.19	[4]	<0.19	[4]	<0.22	[4]	<0.22
PCB-1260	[4]	<0.800	[4]	<0.19	[4]	<0.19	[4]	<0.34	[4]	<0.21	[4]	<0.21	[4]	<0.23	[4]	<0.32	[4]	<0.32	[4]	<0.59	[4]	<0.59
PCB-1016	[4]	<0.800	[4]	<0.26	[4]	<0.26	[4]	<0.37	[4]	<0.36	[4]	<0.36	[4]	<0.33	[4]	<0.18	[4]	<0.18	[4]	<0.55	[4]	<0.55
Toxaphene	0.0003	*<1.40*	0.0003	*<0.33*	0.0003	*<0.33*	0.0003	*<0.79*	0.0003	*<0.53*	0.0003	*<0.53*	0.0003	*<0.34*	0.0003	*<0.22*	0.0003	*<0.22*	0.0003	*<0.60*	0.0003	*<0.60*

NOTES:
NS = no standard applicable to the designated use
T = Total
D = Dissolved
D[a] = Result is assumed based upon a 1:1 ratio to total metals
T&D = Total and Dissolved
Bold text indicates a sample result greater than the WQS.
Italicized text indicated a laboratory detection limit higher that the WQS.

Footnotes
1 The Permittee shall report on any additional parameters that were monitored for seasonal stormwater sampling as required by Section 6.0 of this permit (Special Conditions).
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 6 hours).
4 Standard for total PCBs of 11 µg/L A&We and 19 µg/L PBC.
5 The sample was lost during extraction at the laboratory due to the glassware breaking.
6 There were no representative storm events (>0.20 inches) that occurred or no representative events without a measurable rain event in the previous 72 hours.

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PART 10: ASSESSMENT OF MONITORING DATA

A. Stormwater Quality: Provide an evaluation of the sampling results for each outfall monitoring location, including an assessment of any improvements or degradation of stormwater quality from each drainage area. In the year 4, Annual Report, 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.

Escherichia Coli (*E. coli*) has been detected at concentrations greater than the applicable SWQS at six monitored outfalls throughout the permit term. One outfall, AC033, does not have an applicable SWQS for *E. coli*. Total lead has been observed in elevated concentrations at all monitored outfalls, and dissolved copper has been observed in elevated concentrations at all but one monitored outfall. These metals are common transportation-related stormwater pollutants. A few of the monitored outfalls occasionally have elevated detections of pesticides including 4,4’ DDE, heptachlor, and Aldrin. The pesticides detected in stormwater runoff have been banned from use in the United States for several decades and are likely present due to historical application of these chemicals. A discussion of the historical exceedances by outfall is provided below. (Note: the data in the tables in Part 9 of this report begin in 2010/2011, so exceedances that occurred early in the permit term included below are no longer present in Part 9.)

AC033

The designated uses for the receiving water for this outfall, the ACDC, include agricultural irrigation (AgI) and agricultural livestock watering (AgL). The primary land uses are open land and residential. There have been very few SWQS exceedances at this outfall. Aldrin has been detected at concentrations greater than the applicable SWQS in winter samples collected in 2012 and 2013. Total lead (2010 and 2011) and dieldrin (2011) have also been reported above their applicable standards at this outfall.

IB008

Stormwater runoff from this outfall discharges to the Indian Bend Wash. Applicable designated uses are aquatic and wildlife ephemeral (A&We) and partial body contact (PBC). The dominant land use category in this area is residential. In addition to *E. coli* exceedances, elevated levels of dissolved copper and total lead (last exceedance was in 2013) have been detected. Endrin Aldehyde was detected once (2009).

SR003

The receiving water for SR003 is the Salt River. Designated uses include aquatic and wildlife effluent dependent water (A&Wedw), PBC, Fish Consumption (FC), AgI and AgL. Land use for this outfall is divided amongst residential, institutional, industrial, commercial, and open land. Elevated concentrations of dissolved copper, total lead, and pesticides, including heptachlor have been observed in this outfall, in addition to *E. coli*.

SR030

This outfall discharges to the Salt River. Designated uses for this segment of the Salt River are the same as those listed for SR003. Primary land use categories are open land and residential, with some areas of industrial/commercial use. Total lead, dissolved copper, and elevated *E. coli* and 4,4’-DDE concentrations have been observed in this area.

SR045

This outfall discharges stormwater to the Salt River. The designated uses for this segment of the Salt River are A&We and PBC. In addition to *E. coli* exceedances, elevated concentrations of total lead and dissolved copper have been reported for this outfall during the permit term. The properties in this area are primarily commercial and light industrial.

SR049

The receiving water for this outfall is the Salt River. The applicable designated uses are A&Wedw, PBC, FC, AgI and AgL. Elevated concentrations of dissolved copper, total lead, and pesticides, including heptachlor have been observed at this outfall, in addition to *E. coli*. Inspectors noted that this catchment area includes several agricultural properties, (used for grazing by horses, cows, goats, and sheep), along with newer residential areas and light industrial properties.

SC046

Skunk Creek Wash is the receiving water for this outfall, with designated uses of A&We and PBC. This area is primarily residential with some open land. SWQS exceedances for this outfall are limited to *E. coli*, dissolved copper, and total lead.

B. Water Quality Standards (SWQS): Compare the sampling results for each outfall monitoring location with the applicable SWQS for the receiving water.

The applicable SWQS for each monitoring station are dependent upon the designated uses for the specific receiving water. Table 10-1 includes the designated uses for each monitoring location:

Table 10-1
Designated Uses for Monitoring Locations

Outfall	Receiving Water	Designated Uses
AC033	ACDC	AgI, AgL
IB008	Indian Bend Wash	A&We, PBC
SR003	Salt River at 35th Avenue	A&Wedw, PBC, FC, AgI, and AgL
SR030	Salt River at 27th Avenue	A&Wedw, PBC, FC, AgI, and AgL
SR045	Salt River at 40th Street	A&We, PBC
SR049	Salt River at 67th Avenue	A&Wedw, PBC, FC, AgI, and AgL
SC046	Skunk Creek Wash	A&We, PBC

AgI = Agricultural Irrigation
AgL = Agricultural Livestock Watering
A&We = Aquatic and Wildlife, Ephemeral
A&Wedw =Aquatic and Wildlife, Effluent Dependent Water (acute)
PBC = Partial Body Contact
FC = Fish Consumption

The analytical results reported were compared to the lowest applicable standard, as documented in Part 9.

C. Exceeding a SWQS: Note any exceedance of a surface water quality standard (as measured at the outfall) during the reporting year, including, at a minimum, the following information:

1. Sampling dates: See Table 10-2
2. Monitoring location (outfall identification number): See Table 10-2
3. Receiving water and surface water quality standard exceeded: See Table 10-2
4. Outfall monitoring results (laboratory reports): See Table 10-2 and Part 13

Table 10-2
Analytical Results Exceeding SWQS for Reporting Year 2015/16

Outfall	Parameter	Sampling Date	Receiving Water	Designated Use	SWQS	Result
IB008	*E. Coli*	1/04/16	Indian Bend Wash	PBC	575 MPN/100 mL	2,650.0 MPN/100 mL
	Dissolved Copper	1/04/16	Indian Bend Wash	A&We	6.32 µg/L	14.8 µg/L
SC046	*E. Coli*	10/06/15	Skunk Creek Wash	PBC	575 MPN/100 mL	1,046.2 MPN/100 mL
	E. Coli	4/08/16	Skunk Creek Wash	PBC	575 MPN/100 mL	1,732.9 MPN/100 mL
	Dissolved Copper	10/06/15	Skunk Creek Wash	A&We	6.01 µg/L	8.9 µg/L
	Dissolved Copper	4/08/16	Skunk Creek Wash	A&We	10.50 µg/L	32.1 µg/L
	Total Lead	10/06/15	Skunk Creek Wash	PBC	15 µg/L	140 µg/L
SR003	*E. Coli*	7/31/15	Salt River	PBC	575 MPN/100 mL	10,710 MPN/100 mL
	E. Coli	1/04/16	Salt River	PBC	575 MPN/100 mL	8,130.0 MPN/100 mL
	Dissolved Copper	7/31/15	Salt River	A&Wedw	6.47 µg/L	16.6 µg/L
	Dissolved Copper	1/04/16	Salt River	A&Wedw	5.85 µg/L	17.3 µg/L
	Total Lead	7/31/15	Salt River	PBC	15 µg/L	64.4 µg/L
	Total Lead	1/04/16	Salt River	PBC	15 µg/L	44.1 µg/L
	Heptachlor	1/04/16	Salt River	FC	0.00008 µg/L	0.059 µg/L
SR030	*E. Coli*	7/31/15	Salt River	PBC	575 MPN/100 mL	1,553.1 MPN/100 mL
	E. Coli	1/31/16	Salt River	PBC	575 MPN/100 mL	4,320.0 MPN/100 mL
	Dissolved Copper	7/31/15	Salt River	A&Wedw	8.89 µg/L	33.5 µg/L
	Dissolved Copper	1/31/16	Salt River	A&Wedw	4.74 µg/L	14.0 µg/L
	Total Lead	7/31/15	Salt River	PBC	15 µg/L	38.6 µg/L
	Total Lead	1/31/16	Salt River	PBC	15 µg/L	45.0 µg/L
SR045	*E. Coli*	7/31/15	Salt River	PBC	575 MPN/100 mL	34,480 MPN/100 mL
	Dissolved Copper	7/31/15	Salt River	A&We	10.36 µg/L	21.6 µg/L
	Total Lead	7/31/15	Salt River	A&We	15 µg/L	19.4 µg/L

Outfall	Parameter	Sampling Date	Receiving Water	Designated Use	SWQS	Result
SR049	*E. Coli*	7/31/15	Salt River	PBC	575 MPN/100 mL	8,570 MPN/100 mL
	E. Coli	1/04/16	Salt River	PBC	575 MPN/100 mL	5,040.0 MPN/100 mL
	Dissolved Copper	7/31/15	Salt River	A&Wedw	9.19 µg/L	17.2 µg/L
	Dissolved Copper	1/04/16	Salt River	A&Wedw	6.85 µg/L	10.5 µg/L
	Total Lead	7/31/15	Salt River	A&Wedw	15 µg/L	93.5 µg/L
	Total Lead	1/04/16	Salt River	A&Wedw	15 µg/L	38.4 µg/L

FC = fish consumption
PBC = partial body contact
A&We = aquatic and wildlife ephemeral
A&Wedw = aquatic and wildlife effluent dependent water (acute)
MPN/100 mL = most probable number of bacteria per 100 milliliters
µg/L = micrograms per liter

5. A description of the circumstances that may have caused or contributed to the exceedance of an applicable surface water quality standard:

Six monitoring stations showed elevated *E. coli* levels. These exceedances seem to be independent of predominant land uses. One potential source of *E. coli* in stormwater is pet waste. However, other wildlife sources, including birds and bats, should also be considered.

Dissolved copper was elevated at six outfalls. Copper is a common component in pesticides, fungicides, and insecticides. This includes algaecides commonly used in pools, spas, and fountains. Copper is also used in automotive parts such as brake pads, brake linings, and moving engine parts. Consequently, sources of elevated copper could include automotive repair shops, roadway run-off, and pool backwashing.

Five of the seven monitoring stations showed elevated lead levels. Lead is used in automotive parts, including tires and batteries. Lead-based paint is sometimes used on buildings and road stripping, and lead was a common additive in gasoline until the 1970's and early 1980's. Therefore, sources of elevated lead could include automotive repair shops, lead tire weights, roadway run-off, and lead-containing sediment deposited in the past from automotive exhaust.

One monitoring station showed elevated heptachlor (this is the third winter sampling season in which the parameter has been detected). Heptachlor is an organochlorine compound (and a component of technical grade chlordane) that was widely used as an insecticide prior to 1974 when it was banned in most countries. Currently, the only permitted use of products containing heptachlor is for fire ant control in pad mounted transformers, cable television boxes, and telephone cable boxes located underground.

6. If a pollutant is noted at levels above the SWQS at a particular outfall, more than 1X ('reoccurs'), describe actions taken to determine the source(s) of the pollutant per Sections 4.3 and 4.4 of the permit. Also state any proposed follow-up actions or additional and/or revised management practices or pollution controls to prevent the discharge from causing or contributing to an exceedance of a surface water quality standard in the future:

The City follows an internal Standard Operating Procedure (COP #6004) "Stormwater Quality Evaluation and Action Plan," to identify the source of pollutants. The purpose of the procedure is to ensure compliance with Sections 4.2, 4.4, and 8.3 of the MS4 Permit. The procedure discusses how a SWQS exceedance is identified, assigns the responsibility for attempting to identify potential sources of the pollutant(s) of concern and evaluating existing BMPs that may require revision to address the issue(s), provides a schedule for implementation, and outlines the requirements for reporting the occurrence to ADEQ.

This fiscal year, the City identified recurring exceedances of *E. coli* at six monitoring stations. The city identified recurring exceedances for total lead at five of the seven monitoring stations. The city also identified six monitoring stations with recurring exceedances of dissolved copper this year. Heptachlor was identified at one location (see Table 10-2).

The first step in evaluating each exceedance was to research potential sources of these pollutants in stormwater. A summary of these findings is discussed in Part 10, Section 5. Water Quality Inspectors were provided with a summary of the potential sources, along with information on the catchment area for each outfall in question. The inspectors then drove through each catchment area, looking for any obvious causes of the exceedances. In most situations, the inspectors were unable to confirm a specific source of the elevated levels. A summary of their findings is included below:

SC046

Samples at this outfall contained pollutants in exceedance of the SWQS for *E. coli*, dissolved copper, and total lead.

E. coli
It was observed that many residents in the area use the wilderness corridor for recreation including walking pets. Although not directly observed, it can be surmised that not all residents pick up after their pets completely or at all while they are out on the trail or on their property, adding to the waste produced by wildlife.

Dissolved copper
During the investigation, vehicles were observed being driven in the area and many vehicles were parked in driveways. Additionally, many houses had landscaped yards, which also may contribute copper to runoff.

Total lead
This area is primarily residential with light automobile traffic, and lawn ornamentation made of various metallic substances were also observed.

IB008

Samples at this outfall contained pollutants in exceedance of the SWQS for *E. coli* and dissolved copper.

E. coli
A large portion of this area is residential, which includes privately and publicly owned parks where residents walk their pets. It can be assumed that some owners will not pick up after their animals adding to the excrement produced by wildlife.

Dissolved copper

During the investigation, vehicles were observed being driven, parked in driveways, oil stains were observed in the streets in front of many houses, and multiple auto repair shops were observed; however, no obvious signs of discharges to the MS4 were present.

AC033

No exceedances were noted in 2015/16.

SR003

Samples at this outfall contained pollutants in exceedance of the SWQS for *E. coli*, total lead, dissolved copper, and heptachlor.

E. coli

A possible source of e-coli may be goats that are kept on a palm tree orchard located on southwest corner of Buckeye and 35th Avenue (irrigated property).

Lead and Copper

Nothing was discovered during the investigation that could positively identify sources of the noted exceedances. The lead and copper exceedances may be the result of the heavy amount of automotive traffic within this area. There are several large industrial businesses near the monitoring site SR003. They are located along 35th Avenue and include a couple of wood pallet manufacturing facilities, a mulch facility, a metal recycling facility, and a cement pipe and brick manufacturer.

Heptachlor

A possible source of heptachlor could be the APS power generation station located at 43th Avenue and Buckeye (northwest corner). The facility will be inspected in 2016/2017.

SR030

Samples at this outfall contained pollutants in exceedance of the SWQS for *E. coli*, total lead, and dissolved copper.

E.coli

E. coli sources in the area could include pet waste in the residential zone, but the cleanliness of the residential area and the presence of a variety of wildlife around the outfall itself make it hard to determine a specific cause of that exceedance. In addition to the residential and natural sources, it is possible that the farms in the southern area may be using fresh manure fertilizer that could be running off of their properties. Fresh fertilizer is untreated and is a known vector for *E. coli*.

Lead and Copper

Businesses in the northern sector of the drainage area deal in large quantities of wrecked vehicles with exposed parts and batteries. Field observation of BMPs at the facilities showed room for improvement in the implementation of good storage practices, which could be a contributing factor in contamination of lead and copper. In addition, lead and copper leached into the soil from historic land use may have been disturbed by recent major roadwork in the area, which has necessitated some businesses to reconfigure their properties and storage to accommodate the expanded road.

SR045

Samples at this outfall contained pollutants in exceedance of the SWQS for total lead, dissolved copper, and *E. coli*.

E.coli
Based on the reconnaissance investigation, stagnant water was visible and overflowing dumpsters left debris along the curbs. Both could result in increased levels. The inspector contacted STR to sweep the area.

Lead and Copper
The area includes numerous industrial, commercial, construction, auto body, auto repair, paper and metal recycling facilities.

SR049

Samples at this outfall contained pollutants in exceedance of the SWQS for *E. coli*, total lead, and dissolved copper.

E. coli
This area receives flood irrigation that may cause animal waste to flow with the irrigation water to the street.

Lead and Copper
Two industrial properties were noted that will be assessed for potential contributions of these parameters.

7. A schedule for implementing the proposed follow-up, stormwater or non-stormwater management practices or pollution controls:

As described above, city inspectors conducted thorough visual reconnaissance of each catchment area, searching for potential sources of the elevated levels. No obvious cause of the elevated constituents was identified.

The potential sources for these pollutants are varied. *E. coli* can come from a variety of sources, including pet waste and bird droppings. Though the city cannot control wild birds, the PWD does enforce pet waste requirements. Phoenix City Code, Chapter 27, Section 27-12 requires all animal owners and custodians to immediately clean up and properly dispose of animal waste left on any public street, alley, gutter, sidewalk, right-of-way, or park. Staff hangs notices on doorknobs to educate the public regarding the need to clean up and properly dispose of pet wastes. The door hangers or similarly worded placards are posted at public facilities such as parks, libraries, and other locations. Pet waste bags are also provided at many city parks.

Lead and copper can come from a variety of residential, commercial, and industrial sources. Therefore, the City has decided to use these chemical constituents as one criterion to prioritize industrial facility inspections. Thirty-six facilities were identified through EPA Tier II reports as using or storing large quantities of copper and/or lead on site. In addition, approximately 1,600 facilities were identified through an SIC code search as potentially using these chemicals. These facilities, along with permit-required facilities, make up the ‘high priority’ industrial facility inventory. Inspections of these facilities are ongoing, and will continue throughout the permit term.

Heptachlor appears to be occasionally recurring in winter samples. The periods of detections are: December 2012, December 2014, and January 2016. This trend may or may not be significant; however, the City will continue to monitor for reoccurrence.

The City will continue to evaluate reduction strategies for these pollutants. However, metals such as lead and copper can come from automotive sources such as dust from brake pads, rubber tires, lead tire weights, and engine exhaust. Since these sources are ubiquitous, they may be best controlled at the state or national level.

PART 11: ESTIMATE OF ANNUAL POLLUTANT LOADINGS

Provide an estimate of the pollutant loadings each year from the municipal storm sewer system to waters of the U.S. for each constituent listed in Section 7.4 of the permit detected by stormwater monitoring within the permit term. 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.

Seasonal and annual pollutant load estimates were developed for all of the City's twelve stormwater basins for reporting year 2015/16 (Table 11-1). Winter, summer, and total annual loads were computed for all water quality parameters where sufficient validated data was available. As in past years, results from the City's monitoring data were used to correlate pollutant concentrations with land uses for twelve stormwater basins in Phoenix. Where data were insufficient to perform this evaluation, information from past annual reports was used. The "Simple Method" as described in USEPA's guidance documents was used in performing this analysis[2].

Table 11-1
Seasonal and Total Annual Pollutant Load

Constituent	Summer Pollutant Load (pounds)	Winter Pollutant Load (pounds)	Total Annual Pollutant Load (pounds)
BOD_5	1,068,241	770,796	1,839,037
COD	5,185,391	3,785,824	8,971,215
TDS	5,821,035	4,260,524	10,081,558
Nitrogen, NO2 + NO3, Total	99,427	72,552	171,979
Nitrogen, Organic, Total Kjeldahl	139,913	102,908	242,821
Phosphorous, Total	19,060	13,887	32,947
Arsenic, Total	27,696	16,273	43,969
Antimony, Total	87	63.7	151
Barium, Total	4,997	3,672	8,669
Beryllium, Total	23.0	16.8	39.9
Cadmium, Total	139	102	241
Chromium, Total	804	591	1,395
Copper, Total	1,891	1,369	3,260
Lead, Total	1,107	813	1,920
Mercury, Total	26.9	19.7	46.6
Nickel, Total	908	666	1,574

2 Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer System, November 1992.

Constituent	Summer Pollutant Load (pounds)	Winter Pollutant Load (pounds)	Total Annual Pollutant Load (pounds)
Selenium, Total	159	116	275
Silver, Total	0.00	0.00	0.00
Thallium, Total	Insufficient Data, Not Calculated[1]		
Zinc, Total	6,411	4,883	11,294
1 - A statistically representative event mean concentration for thallium could not be calculated as thallium occurs infrequently in stormwater samples regionally .			

The following methodology was used in developing pollutant loads:

In the Part 1 MS4 NPDES Permit Application, the City was divided into 13 stormwater sub-watersheds, based upon outfall locations that impacted specific water conveyance structures or tributaries of the Salt River. This division of the permit area was followed until the last AZPDES permit renewal application in 2013. Through annexation, the City had acquired by this time substantial new undeveloped land, primarily in the north. In order to integrate this new land into the load calculation and to provide a consistent basis for analysis, a watershed-based approach was developed for the 2012-13 reporting year annual report.

City GIS staff acquired County land-use spatial data and combined them with sub-watershed boundaries developed by the Maricopa County Flood Control District (MCFCD 2013). These sub-watershed boundaries are very similar to the Watershed Boundary Dataset 10-digit Hydrologic Unit Code (HUC), with exceptions made for local flood control and other man-made diversions (for example, White Tanks A Basin). Clipping these data to the City permit boundaries produced a watershed-based land-use map that was used to define 12 new areas, now sub-watersheds, used in the pollutant load estimate.

For the purposes of this model, four land-uses were defined from the data: Industrial, Commercial, Residential, and Open Space. The Part 1 application demonstrated that, on a city-wide scale, these four land-use type provide the strongest distinction in stormwater composition.

The Part 1 application also developed pollutant-specific, rainfall-event-normalized, stormwater loading factors for each of the four land-use categories. These factors, called *event-mean concentrations* or EMCs, represent the concentration of each pollutant of concern in the runoff from the four land-use types. The concentration is normalized to the amount of rainfall in the sampling event to accommodate the dynamic nature of runoff chemistry.

Rainfall runoff was generated from data collected by the fifty-seven Maricopa County Flood Control District (MCFCD) ALERT meteorological stations. Stations were located on GIS projections and rainfall records assigned to each of the twelve sub-watersheds. Monthly rainfall amounts were used for the summer and winter total amounts for the permit year.

Rainfall was translated to runoff as part of the load calculation, using (Schuler 1987),

$$R = P_j\ (P)(R_v)(A)$$

where, P = rainfall depth (inches)

P_j = fraction of events that produce runoff (0.9)

R_v = runoff coefficient

A = sub-watershed area (acres)

Sub-watershed areas were measured from GIS projections. Runoff coefficients that were utilized for each land use are as follows (developed specially for Phoenix under the 2001 Permit Renewal Application effort):

Industrial:	0.053
Commercial:	0.745
Residential:	0.236
Open Space:	0.04

The current AZPDES permit indicates that, if possible, annual monitoring data be used to generate concentration factors in the load model. As in past years, EMCs were taken from the COP Part 1 NPDES MS4 characterization data. These values were compared to USGS monitoring results (Table 11-2) from representative storms.

As in the previous year, several elemental pollutants of concern were not found in Phoenix stormwater at levels above method detection limits. **Based upon research conducted by the City that supported the permit renewal application, both thallium and silver occur infrequently in stormwater samples regionally and are poorly represented in the historical record for Phoenix stormwater at levels above the detection level. For this reason, a statistically representative event mean concentration of thallium could not be calculated for each of the four land-use categories and the silver EMC has a calculated value of zero. In recent reports, the method detection limits for thallium are lower; however, there are still very few reportable data for thallium and poor representation of individual land uses persists. Accordingly, no load for thallium was estimated.** This matter can be re-examined in the future as more data are collected using the method detection levels of the next permit.

EMCs were determined for each land-use type and pollutant of concern, as possible (Table 11-2). For each of the twelve stormwater sub-watersheds, EMCs were weighted by the percentage of land-use type, or

$$EMC_{k,\,j} = (EMC_{j,\,industrial} * \%\ area_{k,\,industrial}) + (EMC_{j,\,commercial} * \%\ area_{k,\,commercial}) + (EMC_{j,\,residential} * \%\ area_{k,\,residential}) + (EMC_{j,\,open\ space} * \%\ area_{k,\,open\ space})$$

where, $EMC_{k,\,j}$ = event mean concentration for the kth sub-watershed and the jth pollutant

Thus each sub-watershed has a unique EMC for each pollutant, dependent upon land use.

For each of the twelve stormwater sub-watersheds, total runoff was calculated for the summer and winter seasons. These volumes were multiplied by the EMCs and the seasonal load was calculated (Tables 11-3 through 11-14). Seasonal loads were added to give the annual load per pollutant per sub-watershed. Summation over the twelve stormwater sub-watersheds produced the estimated annual load to the Salt River for each pollutant over the permit year.

Table 11-2
Land-Use Based Event Mean Concentrations

Pollutants	2015-16 data (ave all sites)[1]	Event Mean Concentrations[2]			
		EMC_O	EMC_R	EMC_I	EMC_C
BOD_5 (mg/L)	30.7	31.0	12.0	55.3	0.00
COD High Level (mg/L)	263	130	42.3	68.8	148
Residue, Total at 105 Deg.C (TDS)	140	120	111	123	84.0
Nitrogen NO_2 + NO_3, Total, (mg/L as N)	0.93	3.12	1.24	1.14	0.70
Nitrogen Organic, Total Kjeldahl (mg/L as N)	3.94	0.11	5.19	7.24	1.67
Phosphorous, Total, (mg/L as P)	1.55	0.41	0.26	0.78	0.30
Arsenic, Total, (µg/L as As)	6.23	2.40	5.24	7.77	2.95
Antimony Total (µg/L as Sb)	2.19	0.64	1.96	4.81	2.12
Barium Total (µg/L as Ba)	239	20.0	170	311	35.6
Beryllium, Total Recoverable, (µg/L as Be)	0.84	1.10	0.00	0.00	0.00
Cadmium, Total Recoverable, (µg/L as Cd)	0.85	0.00	3.38	3.68	6.63
Chromium, Total Recoverable, (µg/L as Cr)	20.1	24.3	12.3	3.68	5.71
Copper, Total Recoverable, (µg/L as Cu)	90.2	29.0	23.3	204	15.0
Lead, Total Recoverable, (µg/L as Pb)	45.1	19.9	25.2	29.7	12.5
Mercury, Total Recoverable, (µg/L as Hg)	0.09	1.08	0.20	0.084	0.036
Nickel, Total Recoverable, (µg/L as Ni)	24.4	23.4	13.4	15.4	12.1
Selenium Total Recoverable, (µg/L as Se)	0.83	7.13	0.086	1.20	0.39
Silver, Total Recoverable, (µg/L as Ag)	0.36	0.00	0.00	0.00	0.00
Thallium Total Recoverable, (µg/L as Th)	0.29	Insufficient Data, Not Calculated[3]			
Zinc, Total Recoverable, (µg/L as Zn)	454	96.0	109	346	135

NOTES: 1. Censored non detects included in mean as per USACOE 2008, Manual 1110-1-4014, ENVIRONMENTAL STATISTICS
2. Event mean concentrations from 2001 MS4 application, as modified by monitoring data to date. See text. O = open space land use, R = residential land use, I = industrial land use, C = commercial land use
3. A statistically representative event mean concentration for thallium could not be calculated as thallium occurs infrequently in stormwater samples regionally.

Table 11-3: Lower Arizona Canal Diversion Channel Watershed Pollutant Loadings

Total area, acres: 94,321 Residential: 41.14% Industrial : 13.58% Undeveloped: 19.67% Commercial: 25.60%

Total Summer (July-Dec) Runoff, cubic feet: 310,751,682 Total Winter (Jan-Jun) Runoff, cubic feet: 212,981,864

Constituent	Land Use weighted concentration	Summer Pollutant Load (pounds)	Winter Pollutant Load (pounds)	Total Annual Pollutant Load (pounds)
BOD_5 (mg/L)	18.6	359,872	246,648	606,520
COD High Level (mg/L)	90.2	1,749,804	1,199,274	2,949,079
Residue, Total at 105 Deg.C (TDS)	107	2,084,196	1,428,458	3,512,654
Nitrogen NO_2 + NO_3, Total, (mg/L as N)	1.46	28,286	19,386	47,672
Nitrogen Organic, Total Kjeldahl (mg/L as N)	3.57	69,239	47,455	116,694
Phosphorous, Total, (mg/L as P)	0.37	7,185	4,924	12,110
Arsenic, Total, (μg/L as As)	4.44	86	59.0	145.1
Antimony Total (μg/l as Sb)	2.13	41.3	28.3	69.6
Barium Total (μg/l as Ba)	125	2,432	1,667	4,099
Beryllium, Total Recoverable, (μg/L as Be)	0.22	4.20	2.88	7.1
Cadmium, Total Recoverable, (μg/L as Cd)	3.59	70	47.7	117
Chromium, Total Recoverable, (μg/L as Cr)	11.8	229	157	386
Copper, Total Recoverable, (μg/L as Cu)	46.8	907	622	1,529
Lead, Total Recoverable, (μg/L as Pb)	21.5	417	286	703
Mercury, Total Recoverable, (μg/L as Hg)	0.31	6.1	4.18	10.3
Nickel, Total Recoverable, (μg/L as Ni)	15.3	297	204	500
Selenium Total Recoverable, (μg/L as Se)	1.70	33.0	22.6	56
Silver, Total Recoverable, (μg/L as Ag)	0.00	0.00	0.00	0.00
Thallium Total Recoverable, (μg/L as Th)	Insufficient Data, Not Calculated			
Zinc, Total Recoverable, (μg/L as Zn)	145	2,815	1,930	4,745

Table 11-4: Upper Arizona Canal Diversion Channel Watershed Pollutant Loadings

Total area, acres: 63,903 | Residential: 46.30% | Industrial : 3.90% | Undeveloped: 31.91% | Commercial: 17.88%

Total Summer (July-Dec) Runoff, cubic feet: 122,213,684 | Total Winter (Jan-Jun) Runoff, cubic feet: 128,814,297

Constituent	Land Use weighted concentration	Summer Pollutant Load (pounds)	Winter Pollutant Load (pounds)	Total Annual Pollutant Load (pounds)
BOD_5 (mg/L)	17.6	134,336	141,592	275,928
COD High Level (mg/L)	90.2	688,202	725,371	1,413,573
Residue, Total at 105 Deg.C (TDS)	109	835,407	880,526	1,715,933
Nitrogen NO_2 + NO_3, Total, (mg/L as N)	1.74	13,271	13,988	27,259
Nitrogen Organic, Total Kjeldahl (mg/L as N)	3.02	23,052	24,297	47,349
Phosphorous, Total, (mg/L as P)	0.34	2,558	2,696	5,255
Arsenic, Total, (µg/L as As)	4.02	31	32.3	63
Antimony Total (µg/l as Sb)	1.68	12.8	13.5	26.3
Barium Total (µg/l as Ba)	104	791	834	1,625
Beryllium, Total Recoverable, (µg/L as Be)	0.35	2.68	2.82	5.5
Cadmium, Total Recoverable, (µg/L as Cd)	2.89	22.1	23.3	45
Chromium, Total Recoverable, (µg/L as Cr)	14.6	111	117	229
Copper, Total Recoverable, (µg/L as Cu)	30.6	234	246	480
Lead, Total Recoverable, (µg/L as Pb)	21.4	163	172	336
Mercury, Total Recoverable, (µg/L as Hg)	0.45	3.4	3.58	7.0
Nickel, Total Recoverable, (µg/L as Ni)	16.4	125	132	258
Selenium Total Recoverable, (µg/L as Se)	2.43	18.6	19.6	38.1
Silver, Total Recoverable, (µg/L as Ag)	0.00	0.00	0.00	0.00
Thallium Total Recoverable, (µg/L as Th)	Insufficient Data, Not Calculated			
Zinc, Total Recoverable, (µg/L as Zn)	119	905	954	1,859

Table 11-5: South Mountain Watershed Basin Pollutant Loadings

Total area, acres: 61,998 | Residential: 27.30% | Industrial : 4.37% | Undeveloped: 52.98% | Commercial: 15.35%

Total Summer (July-Dec) Runoff, cubic feet: 156,656,627 | Total Winter (Jan-Jun) Runoff, cubic feet: 84,294,478

Constituent	Land Use weighted concentration	Summer Pollutant Load (pounds)	Winter Pollutant Load (pounds)	Total Annual Pollutant Load (pounds)
BOD_5 (mg/L)	22.1	216,325	116,401	332,727
COD High Level (mg/L)	106	1,037,963	558,512	1,596,474
Residue, Total at 105 Deg.C (TDS)	112	1,096,627	590,078	1,686,705
Nitrogen NO_2 + NO_3, Total, (mg/L as N)	2.15	21,015	11,308	32,323
Nitrogen Organic, Total Kjeldahl (mg/L as N)	2.05	20,050	10,789	30,839
Phosphorous, Total, (mg/L as P)	0.37	3,602	1,938	5,541
Arsenic, Total, (μg/L as As)	3.49	34.2	18.4	53
Antimony Total (μg/l as Sb)	1.41	13.8	7.43	21.2
Barium Total (μg/l as Ba)	76.2	745	401	1,146
Beryllium, Total Recoverable, (μg/L as Be)	0.58	5.7	3.07	8.8
Cadmium, Total Recoverable, (μg/L as Cd)	2.10	20.5	11.1	31.6
Chromium, Total Recoverable, (μg/L as Cr)	17.3	169	91	260
Copper, Total Recoverable, (μg/L as Cu)	32.9	322	173	495
Lead, Total Recoverable, (μg/L as Pb)	20.6	202	109	310
Mercury, Total Recoverable, (μg/L as Hg)	0.63	6.2	3.34	9.5
Nickel, Total Recoverable, (μg/L as Ni)	18.6	182	98	280
Selenium Total Recoverable, (μg/L as Se)	3.92	38.3	20.6	59
Silver, Total Recoverable, (μg/L as Ag)	0.00	0.00	0.00	0.00
Thallium Total Recoverable, (μg/L as Th)	Insufficient Data, Not Calculated			
Zinc, Total Recoverable, (μg/L as Zn)	116	1,138	612	1,751

Table 11-6: Upper Indian Bend Wash Watershed Pollutant Loadings

Total area, acres: 17,187 | Residential: 12.38% | Industrial : 2.10% | Undeveloped: 70.78% | Commercial: 14.73%

Total Summer (July-Dec) Runoff, cubic feet: 27,816,924 | Total Winter (Jan-Jun) Runoff, cubic feet: 26,887,067

Constituent	Land Use weighted concentration	Summer Pollutant Load (pounds)	Winter Pollutant Load (pounds)	Total Annual Pollutant Load (pounds)
BOD_5 (mg/L)	24.6	42,703	41,275	83,978
COD High Level (mg/L)	121	209,256	202,261	411,517
Residue, Total at 105 Deg.C (TDS)	114	197,336	190,739	388,075
Nitrogen NO_2 + NO_3, Total, (mg/L as N)	2.49	4,322	4,178	8,500
Nitrogen Organic, Total Kjeldahl (mg/L as N)	1.12	1,947	1,882	3,828
Phosphorous, Total, (mg/L as P)	0.38	665	643	1,308
Arsenic, Total, (µg/L as As)	2.94	5.1	5.1	10.2
Antimony Total (µg/l as Sb)	1.11	1.93	1.93	3.9
Barium Total (µg/l as Ba)	47.0	82	82	163
Beryllium, Total Recoverable, (µg/L as Be)	0.78	1.35	1.31	2.66
Cadmium, Total Recoverable, (µg/L as Cd)	1.47	2.56	2.47	5.0
Chromium, Total Recoverable, (µg/L as Cr)	19.6	34	33.0	67
Copper, Total Recoverable, (µg/L as Cu)	29.9	52	50.2	102
Lead, Total Recoverable, (µg/L as Pb)	19.7	34	33.0	67
Mercury, Total Recoverable, (µg/L as Hg)	0.80	1.38	1.33	2.72
Nickel, Total Recoverable, (µg/L as Ni)	20.3	35	34.1	69
Selenium Total Recoverable, (µg/L as Se)	5.14	8.9	8.6	17.6
Silver, Total Recoverable, (µg/L as Ag)	0.00	0.00	0.00	0.00
Thallium Total Recoverable, (µg/L as Th)	Insufficient Data, Not Calculated			
Zinc, Total Recoverable, (µg/L as Zn)	109	189	182	371

Table 11-7: Middle Indian Bend Wash Watershed Pollutant Loadings

Total area, acres: 19,142 Residential: 64.54% Industrial : 0.35% Undeveloped: 70.78% Commercial: 12.69%

Total Summer (July-Dec) Runoff, cubic feet: 68,878,280 Total Winter (Jan-Jun) Runoff, cubic feet: 47,181,622

Constituent	Land Use weighted concentration	Summer Pollutant Load (pounds)	Winter Pollutant Load (pounds)	Total Annual Pollutant Load (pounds)
BOD_5 (mg/L)	29.9	128,484	88,012	216,496
COD High Level (mg/L)	138	594,721	407,384	1,002,106
Residue, Total at 105 Deg.C (TDS)	168	720,948	493,850	1,214,798
Nitrogen NO_2 + NO_3, Total, (mg/L as N)	3.10	13,336	9,135	22,472
Nitrogen Organic, Total Kjeldahl (mg/L as N)	3.67	15,774	10,805	26,579
Phosphorous, Total, (mg/L as P)	0.50	2,145	1,469	3,614
Arsenic, Total, (mg/L as As)	5.48	23,562	16,140	39,702
Antimony Total (mg/l as Sb)	2.01	8.6	5.91	14.5
Barium Total (mg/l as Ba)	130	557	382	939
Beryllium, Total Recoverable, (mg/L as Be)	0.78	3.35	2.29	5.64
Cadmium, Total Recoverable, (mg/L as Cd)	3.03	13.0	8.9	22.0
Chromium, Total Recoverable, (mg/L as Cr)	25.9	111	76.2	187
Copper, Total Recoverable, (mg/L as Cu)	38.1	164	112	276
Lead, Total Recoverable, (mg/L as Pb)	32.0	138	94	232
Mercury, Total Recoverable, (mg/L as Hg)	0.90	3.85	2.64	6.5
Nickel, Total Recoverable, (mg/L as Ni)	26.8	115	79	194
Selenium Total Recoverable, (mg/L as Se)	5.16	22.2	15.2	37.4
Silver, Total Recoverable, (mg/L as Ag)	0.00	0.00	0.00	0.00
Thallium Total Recoverable, (mg/L as Th)	Insufficient Data, Not Calculated			
Zinc, Total Recoverable, (mg/L as Zn)	156	673	461	1134

Table 11-8: Cave Creek Watershed Pollutant Loadings

Total area, acres: 18,009 | Residential: 16.83% | Industrial : 0.28% | Undeveloped: 77.63% | Commercial: 5.26%

Total Summer (July-Dec) Runoff, cubic feet: 21,707,115 | Total Winter (Jan-Jun) Runoff, cubic feet: 19,163,818

Constituent	Land Use weighted concentration	Summer Pollutant Load (pounds)	Winter Pollutant Load (pounds)	Total Annual Pollutant Load (pounds)
BOD_5 (mg/L)	26.2	35,557	31,391	66,948
COD High Level (mg/L)	116	157,211	157,211	314,422
Residue, Total at 105 Deg.C (TDS)	117	158,005	158,005	316,010
Nitrogen NO_2 + NO_3, Total, (mg/L as N)	2.67	3,619	3,619	7,238
Nitrogen Organic, Total Kjeldahl (mg/L as N)	1.07	1,450	1,450	2,899
Phosphorous, Total, (mg/L as P)	0.38	515	515	1,030
Arsenic, Total, (mg/L as As)	2.92	3,959	3.96	3,963
Antimony Total (mg/l as Sb)	0.95	1.14	1.29	2.4
Barium Total (mg/l as Ba)	46.9	56.2	64	120
Beryllium, Total Recoverable, (mg/L as Be)	0.85	1.02	1.16	2.18
Cadmium, Total Recoverable, (mg/L as Cd)	0.93	1.11	1.26	2.37
Chromium, Total Recoverable, (mg/L as Cr)	21.2	25.4	28.8	54
Copper, Total Recoverable, (mg/L as Cu)	27.8	33.2	37.6	71
Lead, Total Recoverable, (mg/L as Pb)	20.4	24.4	27.7	52
Mercury, Total Recoverable, (mg/L as Hg)	0.87	1.04	1.18	2.23
Nickel, Total Recoverable, (mg/L as Ni)	21.1	25.2	28.6	54
Selenium Total Recoverable, (mg/L as Se)	5.58	6.7	7.6	14.2
Silver, Total Recoverable, (mg/L as Ag)	0.00	0.00	0.00	0.00
Thallium Total Recoverable, (mg/L as Th)	Insufficient Data, Not Calculated			
Zinc, Total Recoverable, (mg/L as Zn)	101	121	137	257

Table 11-9: Skunk Creek Watershed Pollutant Loadings

Total area, acres: 26,174 | Residential: 19.12% | Industrial : 1.15% | Undeveloped: 59.46% | Commercial: 20.26%

Total Summer (July-Dec) Runoff, cubic feet: 63,350,322 | Total Winter (Jan-Jun) Runoff, cubic feet: 53,263,292

Constituent	Land Use weighted concentration	Summer Pollutant Load (pounds)	Winter Pollutant Load (pounds)	Total Annual Pollutant Load (pounds)
BOD_5 (mg/L)	21.4	84,494	71,040	155,534
COD High Level (mg/L)	116	459,405	386,256	845,661
Residue, Total at 105 Deg.C (TDS)	111	439,042	369,135	808,178
Nitrogen NO_2 + NO_3, Total, (mg/L as N)	2.25	8,888	7,473	16,361
Nitrogen Organic, Total Kjeldahl (mg/L as N)	1.48	5,860	4,927	10,787
Phosphorous, Total, (mg/L as P)	0.36	1,437	1,208	2,645
Arsenic, Total, (µg/L as As)	3.12	12.3	10.4	22.7
Antimony Total (µg/l as Sb)	1.24	4.9	4.13	9.0
Barium Total (µg/l as Ba)	55.3	219	184	402
Beryllium, Total Recoverable, (µg/L as Be)	0.65	2.59	2.17	4.76
Cadmium, Total Recoverable, (µg/L as Cd)	2.03	8.0	6.8	14.8
Chromium, Total Recoverable, (µg/L as Cr)	18.0	71	59.9	131
Copper, Total Recoverable, (µg/L as Cu)	27.1	107	90	197
Lead, Total Recoverable, (µg/L as Pb)	19.5	77	64.9	142
Mercury, Total Recoverable, (µg/L as Hg)	0.69	2.72	2.29	5.00
Nickel, Total Recoverable, (µg/L as Ni)	19.1	76	63.5	139
Selenium Total Recoverable, (µg/L as Se)	4.35	17.2	14.5	31.7
Silver, Total Recoverable, (µg/L as Ag)	0.00	0.00	0.00	0.00
Thallium Total Recoverable, (µg/L as Th)	Insufficient Data, Not Calculated			
Zinc, Total Recoverable, (µg/L as Zn)	109	432	363	795

Table 11-10: Upper New River Watershed Pollutant Loadings

Total area, acres: 30,056 Residential: 14.35% Industrial : 0.64% Undeveloped: 80.59% Commercial: 4.42%

Total Summer (July-Dec) Runoff, cubic feet: 37,204,084

Total Winter (Jan-Jun) Runoff, cubic feet: 19,382,547

Constituent	Land Use weighted concentration	Summer Pollutant Load (pounds)	Winter Pollutant Load (pounds)	Total Annual Pollutant Load (pounds)
BOD_5 (mg/L)	27.1	62,849	32,743	95,591
COD High Level (mg/L)	118	273,623	142,552	416,174
Residue, Total at 105 Deg.C (TDS)	117	272,054	141,734	413,789
Nitrogen NO_2 + NO_3, Total, (mg/L as N)	2.73	6,342	3,304	9,646
Nitrogen Organic, Total Kjeldahl (mg/L as N)	0.96	2,222	1,157	3,379
Phosphorous, Total, (mg/L as P)	0.39	896	467	1,364
Arsenic, Total, (µg/L as As)	2.87	6.7	3.47	10.1
Antimony Total (µg/l as Sb)	0.92	2.15	1.12	3.26
Barium Total (µg/l as Ba)	44.1	103	53	156
Beryllium, Total Recoverable, (µg/L as Be)	0.89	2.06	1.07	3.13
Cadmium, Total Recoverable, (µg/L as Cd)	0.80	1.86	0.97	2.83
Chromium, Total Recoverable, (µg/L as Cr)	21.6	50	26.2	76
Copper, Total Recoverable, (µg/L as Cu)	28.7	67	34.7	101
Lead, Total Recoverable, (µg/L as Pb)	20.4	47	24.7	72
Mercury, Total Recoverable, (µg/L as Hg)	0.90	2.09	1.09	3.18
Nickel, Total Recoverable, (µg/L as Ni)	21.4	50	25.9	76
Selenium Total Recoverable, (µg/L as Se)	5.79	13.4	7.0	20.4
Silver, Total Recoverable, (µg/L as Ag)	0.00	0.00	0.00	0
Thallium Total Recoverable, (µg/L as Th)	Insufficient Data, Not Calculated			
Zinc, Total Recoverable, (µg/L as Zn)	101	122	235	357

Table 11-11: Lower New River Watershed Pollutant Loadings

Total area, acres: 1,395 | Residential: 37.20% | Industrial : 2.48% | Undeveloped: 53.59% | Commercial: 6.74%

Total Summer (July-Dec) Runoff, cubic feet: 2,109,065 | Total Winter (Jan-Jun) Runoff, cubic feet: 930,039

Constituent	Land Use weighted concentration	Summer Pollutant Load (pounds)	Winter Pollutant Load (pounds)	Total Annual Pollutant Load (pounds)
BOD_5 (mg/L)	22.4	2,955	1,303	4,259
COD High Level (mg/L)	97.1	12,779	5,635	18,414
Residue, Total at 105 Deg.C (TDS)	114	15,048	6,636	21,684
Nitrogen NO_2 + NO_3, Total, (mg/L as N)	2.21	291	128	419
Nitrogen Organic, Total Kjeldahl (mg/L as N)	2.28	301	133	433
Phosphorous, Total, (mg/L as P)	0.36	47	20.7	68
Arsenic, Total, (μg/L as As)	3.63	0.48	0.21	0.69
Antimony Total (μg/l as Sb)	1.34	0.18	0.08	0.25
Barium Total (μg/l as Ba)	84.2	11.1	4.9	16.0
Beryllium, Total Recoverable, (μg/L as Be)	0.59	0.08	0.03	0.11
Cadmium, Total Recoverable, (μg/L as Cd)	1.79	0.24	0.10	0.34
Chromium, Total Recoverable, (μg/L as Cr)	18.1	2.38	1.05	3.43
Copper, Total Recoverable, (μg/L as Cu)	30.2	4.0	1.76	5.7
Lead, Total Recoverable, (μg/L as Pb)	21.6	2.85	1.25	4.1
Mercury, Total Recoverable, (μg/L as Hg)	0.66	0.09	0.04	0.12
Nickel, Total Recoverable, (μg/L as Ni)	18.7	2.46	1.09	3.6
Selenium Total Recoverable, (μg/L as Se)	3.91	0.51	0.23	0.74
Silver, Total Recoverable, (μg/L as Ag)	0.00	0.00	0.00	0.00
Thallium Total Recoverable, (μg/L as Th)	Insufficient Data, Not Calculated			
Zinc, Total Recoverable, (μg/L as Zn)	110	14.4	6.4	20.8

Table 11-12: Upper Agua Fria River Watershed Pollutant Loadings

Total area, acres: 492 | Residential: 0.00% | Industrial : 0.00% | Undeveloped: 100.00% | Commercial: 0.00%

Total Summer (July-Dec) Runoff, cubic feet: 274,985 | Total Winter (Jan-Jun) Runoff, cubic feet: 150,663

Constituent	Land Use weighted concentration	Summer Pollutant Load (pounds)	Winter Pollutant Load (pounds)	Total Annual Pollutant Load (pounds)
BOD_5 (mg/L)	31.0	532	292	824
COD High Level (mg/L)	130	2,232	1,223	3,454
Residue, Total at 105 Deg.C (TDS)	120	2,060	1,129	3,189
Nitrogen NO_2 + NO_3, Total, (mg/L as N)	3.12	54	29.3	83
Nitrogen Organic, Total Kjeldahl (mg/L as N)	0.11	1.94	1.06	3.01
Phosphorous, Total, (mg/L as P)	0.41	7.0	3.86	10.9
Arsenic, Total, (μg/L as As)	2.40	0.041	0.023	0.06
Antimony Total (μg/l as Sb)	0.64	0.011	0.006	0.017
Barium Total (μg/l as Ba)	20.0	0.34	0.19	0.53
Beryllium, Total Recoverable, (μg/L as Be)	1.10	0.019	0.010	0.029
Cadmium, Total Recoverable, (μg/L as Cd)	0.00	0.00	0.00	0.00
Chromium, Total Recoverable, (μg/L as Cr)	24.3	0.42	0.23	0.65
Copper, Total Recoverable, (μg/L as Cu)	29.0	0.50	0.27	0.77
Lead, Total Recoverable, (μg/L as Pb)	19.9	0.34	0.19	0.53
Mercury, Total Recoverable, (μg/L as Hg)	1.08	0.019	0.010	0.029
Nickel, Total Recoverable, (μg/L as Ni)	23.4	0.40	0.22	0.62
Selenium Total Recoverable, (μg/L as Se)	7.13	0.12	0.07	0.19
Silver, Total Recoverable, (μg/L as Ag)	0.00	0.00	0.00	0.00
Thallium Total Recoverable, (μg/L as Th)	Insufficient Data, Not Calculated			
Zinc, Total Recoverable, (μg/L as Zn)	96.0	0.90	1.65	2.55

Table 11-13: Lower Agua Fria River Watershed Pollutant Loadings

Total area, acres: 24 | Residential: 0.00% | Industrial : 89.39% | Undeveloped: 10.61% | Commercial: 0.00%

Total Summer (July-Dec) Runoff, cubic feet: 10,557 | Total Winter (Jan-Jun) Runoff, cubic feet: 7,898

Constituent	Land Use weighted concentration	Summer Pollutant Load (pounds)	Winter Pollutant Load (pounds)	Total Annual Pollutant Load (pounds)
BOD_5 (mg/L)	52.7	35	26.0	61
COD High Level (mg/L)	75.3	50	37.1	87
Residue, Total at 105 Deg.C (TDS)	122	81	60	141
Nitrogen NO_2 + NO_3, Total, (mg/L as N)	1.35	0.89	0.67	1.56
Nitrogen Organic, Total Kjeldahl (mg/L as N)	6.48	4.3	3.20	7.5
Phosphorous, Total, (mg/L as P)	0.74	0.49	0.37	0.85
Arsenic, Total, (μg/L as As)	7.20	0.005	0.0036	0.008
Antimony Total (μg/l as Sb)	4.37	0.003	0.0022	0.005
Barium Total (μg/l as Ba)	280	0.18	0.14	0.32
Beryllium, Total Recoverable, (μg/L as Be)	0.12	7.7E-05	5.8E-05	1.3E-04
Cadmium, Total Recoverable, (μg/L as Cd)	3.29	0.0022	0.0016	0.004
Chromium, Total Recoverable, (μg/L as Cr)	5.87	0.004	0.0029	0.007
Copper, Total Recoverable, (μg/L as Cu)	185	0.12	0.09	0.21
Lead, Total Recoverable, (μg/L as Pb)	28.6	0.019	0.014	0.033
Mercury, Total Recoverable, (μg/L as Hg)	0.19	1.3E-04	9.4E-05	2.2E-04
Nickel, Total Recoverable, (μg/L as Ni)	16.3	0.011	0.008	0.019
Selenium Total Recoverable, (μg/L as Se)	1.83	0.0012	0.0009	0.0021
Silver, Total Recoverable, (μg/L as Ag)	0.00	0.00	0.00	0.00
Thallium Total Recoverable, (μg/L as Th)	Insufficient Data, Not Calculated			
Zinc, Total Recoverable, (μg/L as Zn)	319	0.16	0.21	0.37

Table 11-14: White Tanks A Watershed Pollutant Loadings

Total area, acres: 39 Residential: 0.00% Industrial : 90.30% Undeveloped: 4.26% Commercial: 5.44%

Total Summer (July-Dec) Runoff, cubic feet: 30,723 Total Winter (Jan-Jun) Runoff, cubic feet: 22,984

Constituent	Land Use weighted concentration	Summer Pollutant Load (pounds)	Winter Pollutant Load (pounds)	Total Annual Pollutant Load (pounds)
BOD_5 (mg/L)	51.3	98	74	172
COD High Level (mg/L)	75.7	145	109	254
Residue, Total at 105 Deg.C (TDS)	120	231	173	404
Nitrogen NO_2 + NO_3, Total, (mg/L as N)	1.20	2.30	1.72	4.0
Nitrogen Organic, Total Kjeldahl (mg/L as N)	6.63	12.7	9.5	22.2
Phosphorous, Total, (mg/L as P)	0.74	1.42	1.06	2.47
Arsenic, Total, (mg/L as As)	7.28	0.014	0.010	0.024
Antimony Total (mg/l as Sb)	4.49	0.009	0.006	0.015
Barium Total (mg/l as Ba)	284	0.54	0.41	0.95
Beryllium, Total Recoverable, (mg/L as Be)	0.05	9.0E-05	6.7E-05	1.6E-04
Cadmium, Total Recoverable, (mg/L as Cd)	3.69	0.007	0.005	0.012
Chromium, Total Recoverable, (mg/L as Cr)	4.67	0.009	0.007	0.016
Copper, Total Recoverable, (mg/L as Cu)	186	0.36	0.27	0.62
Lead, Total Recoverable, (mg/L as Pb)	28.3	0.05	0.041	0.09
Mercury, Total Recoverable, (mg/L as Hg)	0.12	2.4E-04	1.8E-04	4.2E-04
Nickel, Total Recoverable, (mg/L as Ni)	15.6	0.03	0.022	0.05
Selenium Total Recoverable, (mg/L as Se)	1.41	0.0027	0.0020	0.005
Silver, Total Recoverable, (mg/L as Ag)	0.00	0.00	0.00	0.00
Thallium Total Recoverable, (mg/L as Th)	Insufficient Data, Not Calculated			
Zinc, Total Recoverable, (mg/L as Zn)	323.5	0.46	0.62	1.08

ASSESSMENT OF POLLUTANT LOADS

The City uses a pollutant load model that estimates individual pollutant loads by basin and season. As discuss at the end of Part 5 of this report, land use data obtained from the FCDMC has been used exclusively for this reporting year because it is viewed as more accurate and consistent.

The load is a function of rainfall amounts in each basin, the areal percentage of four land-use classifications (undeveloped, residential, commercial and industrial) and a set of event mean concentrations (EMCs). For each of the City subwatersheds, the same land-use classifications, rainfall-runoff relationship, and EMCs have been used. The only variable has been the amount of rainfall. In this way, the load has decreased or increased as rainfall has changed from year to year and only reflects this variation.

Because rainfall and runoff in central Arizona follow a discontinuous and unpredictable pattern, especially during summer monsoon season when local convection patterns drive rainfall patterns, the volume of runoff observed at a specific outfall can vary by several orders of magnitude from year to year, and can vary just as much from one outfall location to another (i.e., rainfall associated with a specific storm event will vary widely across the COP system). Although some sampled outfalls may receive abundant runoff, precipitation may not occur at others. These factors skew data obtained via statistical analysis; thus efforts to identify overall patterns or trends in pollutant concentrations based on statistical analysis is not meaningful.

Table 11-15 contains a summary of the pollutant load data calculated for reporting years 2013 through the current reporting year. As discussed above, the data demonstrate that changes in pollutant load calculations vary strictly with rainfall volume.

Table 11-15
Pollutant Load Comparison 2013-2016

Constituent	Total Annual Pollutant Load 2012/2013 (pounds)	Total Annual Pollutant Load 2013/2014 (pounds)	Total Annual Pollutant Load 2014/2015 (pounds)	Total Annual Pollutant Load 2015/16 (pounds)
BOD_5 (mg/L)	2,143,423	2,127,604	3,733,690	1,839,037
COD High Level (mg/L)	10,440,225	10,426,176	18,377,162	8,971,215
Residue, Total at 105 Deg.C (TDS)	11,721,289	11,704,768	20,634,575	10,081,558
Nitrogen NO2 + NO3, Total, (mg/L as N)	199,772	199,774	352,787	171,979
Nitrogen Organic, Total Kjeldahl (mg/L as N)	282,545	281,558	494,542	242,821
Phosphorous, Total, (mg/L as P)	38,343	38,294	67,305	32,947
Arsenic, Total, (mg/L as As)	409	404	726	43,969
Antimony Total (mg/l as Sb)	176	175	309	151
Barium Total (mg/l as Ba)	10,093	10,054	17,722	8,669
Beryllium, Total Recoverable, (mg/L as Be)	46	46	81.2	39.9
Cadmium, Total Recoverable, (mg/L as Cd)	282	280	492	241
Chromium, Total Recoverable, (mg/L as Cr)	1,624	1,610	2,844	1,395
Copper, Total Recoverable, (mg/L as Cu)	3,807	3,784	6,588	3,260
Lead, Total Recoverable, (mg/L as Pb)	2,236	2,220	3,908	1,920
Mercury, Total Recoverable, (mg/L as Hg)	54	54	94.9	46.6
Nickel, Total Recoverable, (mg/L as Ni)	1,834	1,819	3,206	1,574
Selenium Total Recoverable, (mg/L as Se)	320	317	560	275
Silver, Total Recoverable, (mg/L as Ag)	0	0	0.00	0.00
Thallium Total Recoverable, (mg/L as Th)	Insufficient Data, Not Calculated[1]			
Zinc, Total Recoverable, (mg/L as Zn)	12,674	13,083	22,934	11,294
Total Annual Runoff (millions of cubic feet)	1,645.9	1,633.2	2,882.6	1,404.1

1 - A statistically representative event mean concentration for thallium could not be calculated as thallium occurs infrequently in stormwater samples regionally .

PART 12: ANNUAL EXPENDITURES

Provide a brief statement of the expenditures incurred each reporting period (July 1-June 30) to implement and maintain the stormwater management program, including associated monitoring and reporting activities. This figure should include funds related exclusively to implementation of the stormwater program. Provide the estimated budget for implementing and maintaining the stormwater program in the subsequent reporting period. Include a statement of the funding sources used to support program expenditures.

Personnel from the City departments responsible for implementation of the stormwater program provided actual and estimated expenditure data for each fiscal year, including an estimate for the current year. The expenditures are included in Table 12-1.

Table 12-1
Annual Expenditures Stormwater Program Implementation

	Fiscal Year 2011	Fiscal Year 2012	Fiscal Year 2013	Fiscal Year 2014	Fiscal Year 2015	Fiscal Year 2016	Fiscal Year 2017 (Estimated)
Street Transportation Department	$1,391,509	$,2,126,525 (revised)	$1,805,029	$2,407,926 (revised)	$1,886,898	$1,949,181	$2,597,479
Water Services Department	$1,438,427	$1,677,371 (revised)	$1,646,649 (revised)	$1,947,736	$1,867,870	$1,702,105	$2,046,081
Planning and Development Department	$407,431	$400,928	$484,000	$487,100	$910,900	$1,288,398	$1,327,000
Office of Environmental Programs	$150,349	$104,212 (revised)	$131,845 (revised)	$119,840 (revised)	$121,232 (revised)	$139,424	$149,653
Office of Environmental Programs – Capital Improvement Projects*		$101,061 (revised)	$232,556 (revised)	$231,076 (revised)	$240,854 (revised)	$231,716	$250,000
TOTALS	$3,387,716	$4,410,097 (revised)	$4,300,079 (revised)	$5,193,678 (revised)	$5,027,754 (revised)	$5,310,824	$6,370,213

* Up to $250,000 in capital improvement project funding is made available each year, and used as necessary to ensure compliance and/or enhance the City's overall stormwater program.
Revisions to prior year's expenditures are based on a recent re-evaluation of program expense tracking.

The City collects a stormwater fee to defray the costs of operating the stormwater management program. Stormwater program charges from the WSD, STD, and OEP are paid out of these funds. The fee does not cover the costs for maintenance of the storm drain system, infrastructure improvements, or other ancillary programs (e.g., HHW, street sweeping, etc.). Stormwater program costs for PDD are funded by construction permit fees.

PART 13: ATTACHMENTS

Attach a copy of each of the following documents for the first year Annual Report, and each subsequent year if changes are made. If no changes are made to these during a reporting period, indicate, *'no changes were made this period, the 2009 submittal is current'.*

☒ Drainage System Maps

The City considers the storm drains to be protected critical infrastructure. As such, the City has not provided an electronic copy of the GIS maps as an attachment. GIS maps are available for review by ADEQ upon request. Hard copies of the drainage basin maps are provided.

☒ List of major outfalls

☒ List of changes to the major outfall inventory (new outfalls, outfalls out of service), including drainage area and coordinates for the outfalls listed in Table 1 of the permit (4^{th} year report).

☒ Laboratory reports for stormwater monitoring performed in the reporting period.

☐ New or revised ordinances associated with stormwater management.

☒ New or revised public outreach documents.

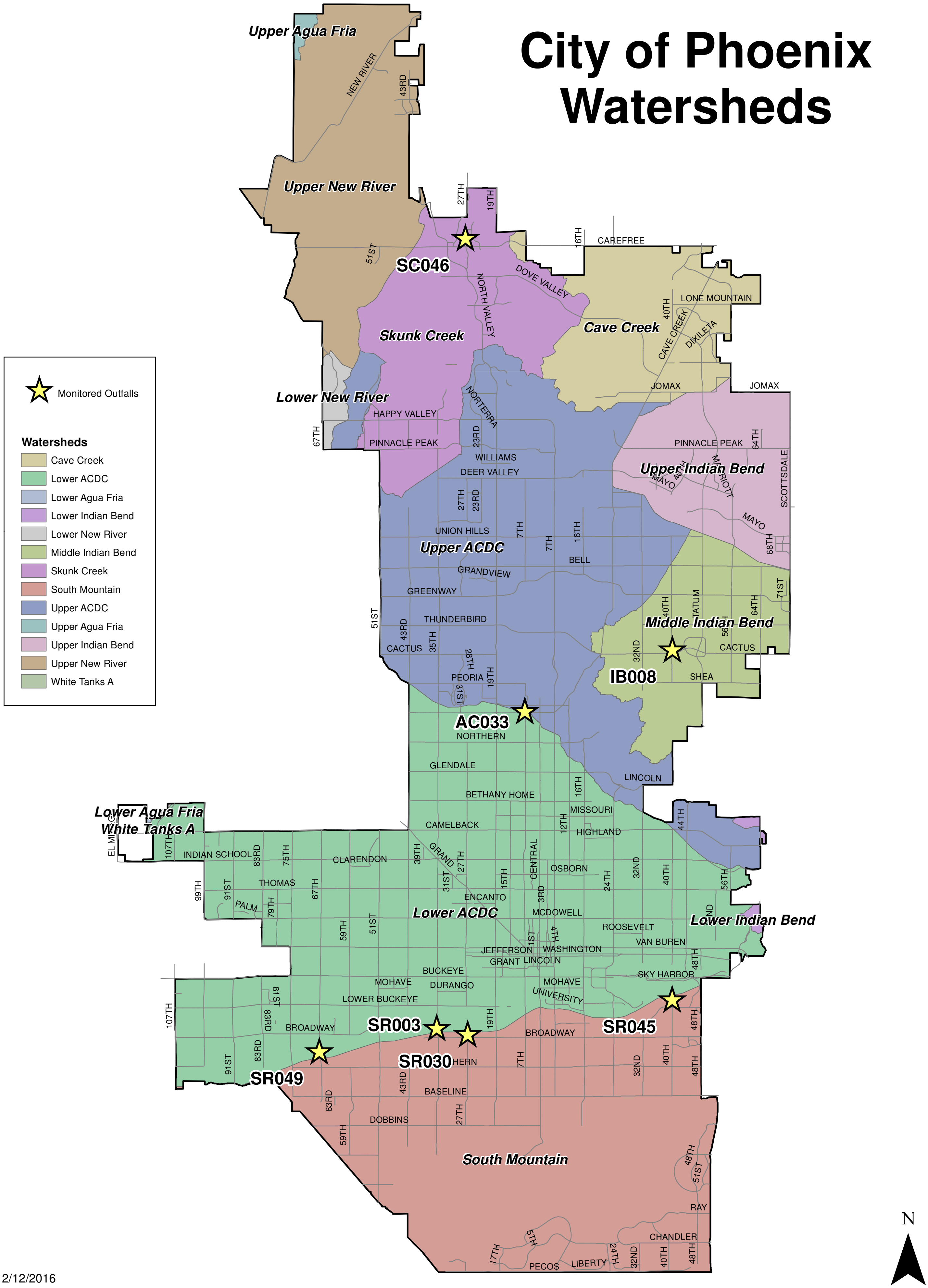
The following attachments to the Annual Report are in addition to those required as listed above:

☒ City of Phoenix General Plan, Stormwater Section

Attachments

Drainage System Maps

City of Phoenix Watersheds



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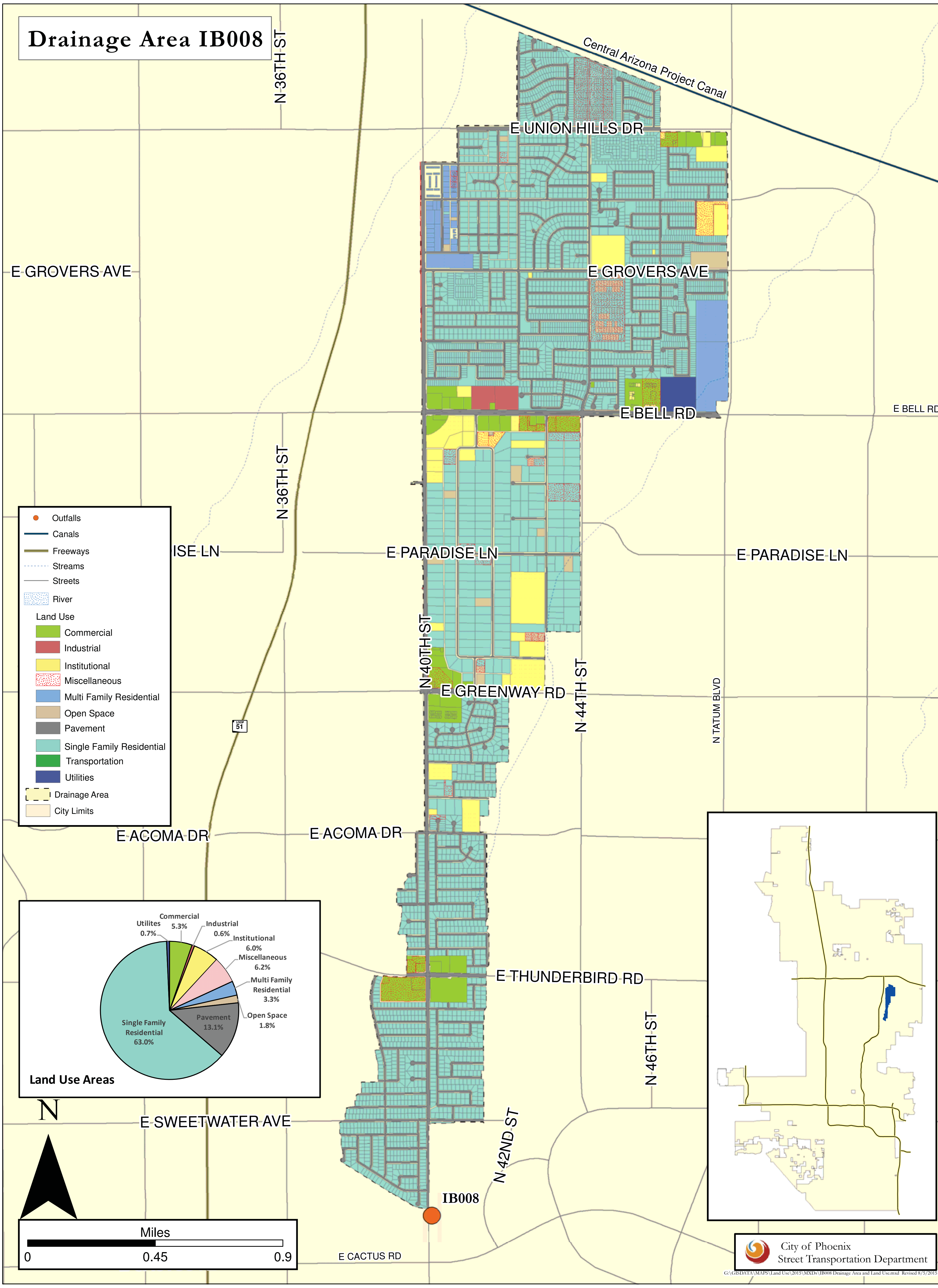


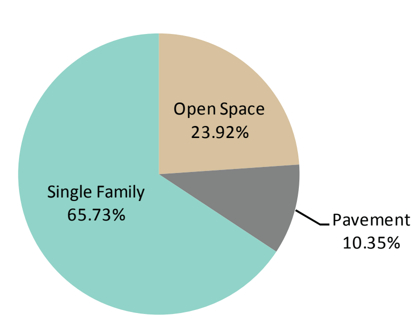
Drainage Area IB008
Central Arizona Project Canal
E UNION HILLS DR
E GROVERS AVE
E GROVERS AVE
E BELL RD
E BELL RD
N 36TH ST
N 36TH ST
ISE LN
E PARADISE LN
E PARADISE LN
N 40TH ST
E GREENWAY RD
N 44TH ST
N TATUM BLVD
E ACOMA DR
E ACOMA DR
E THUNDERBIRD RD
N 46TH ST
E SWEETWATER AVE
N 42ND ST
E CACTUS RD
IB008
Outfalls
Canals
Freeways
Streams
Streets
River
Land Use
Commercial
Industrial
Institutional
Miscellaneous
Multi Family Residential
Open Space
Pavement
Single Family Residential
Transportation
Utilities
Drainage Area
City Limits
Commercial 5.3%
Utilites 0.7%
Industrial 0.6%
Institutional 6.0%
Miscellaneous 6.2%
Multi Family Residential 3.3%
Open Space 1.8%
Pavement 13.1%
Single Family Residential 63.0%
Land Use Areas
N
Miles
0
0.45
0.9
City of Phoenix
Street Transportation Department

Drainage Area SC046

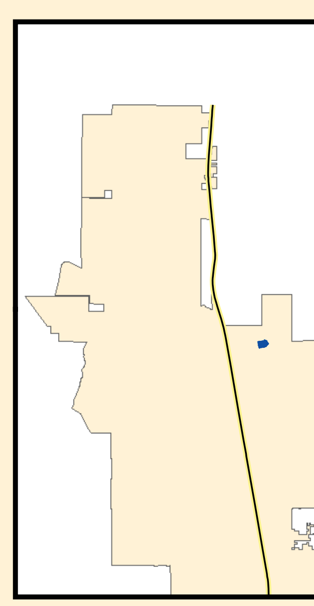
Outfalls
Canals
Freeways
Streams
Streets
River

Land Use
Commercial
Industrial
Institutional
Miscellaneous
Multi Family Residential
Open Space
Pavement
Single Family Residential
Transportation
Utilities
Drainage Area
City Limits

Feet
0 250 500



Land Use Areas



City of Phoenix
Street Transportation Department

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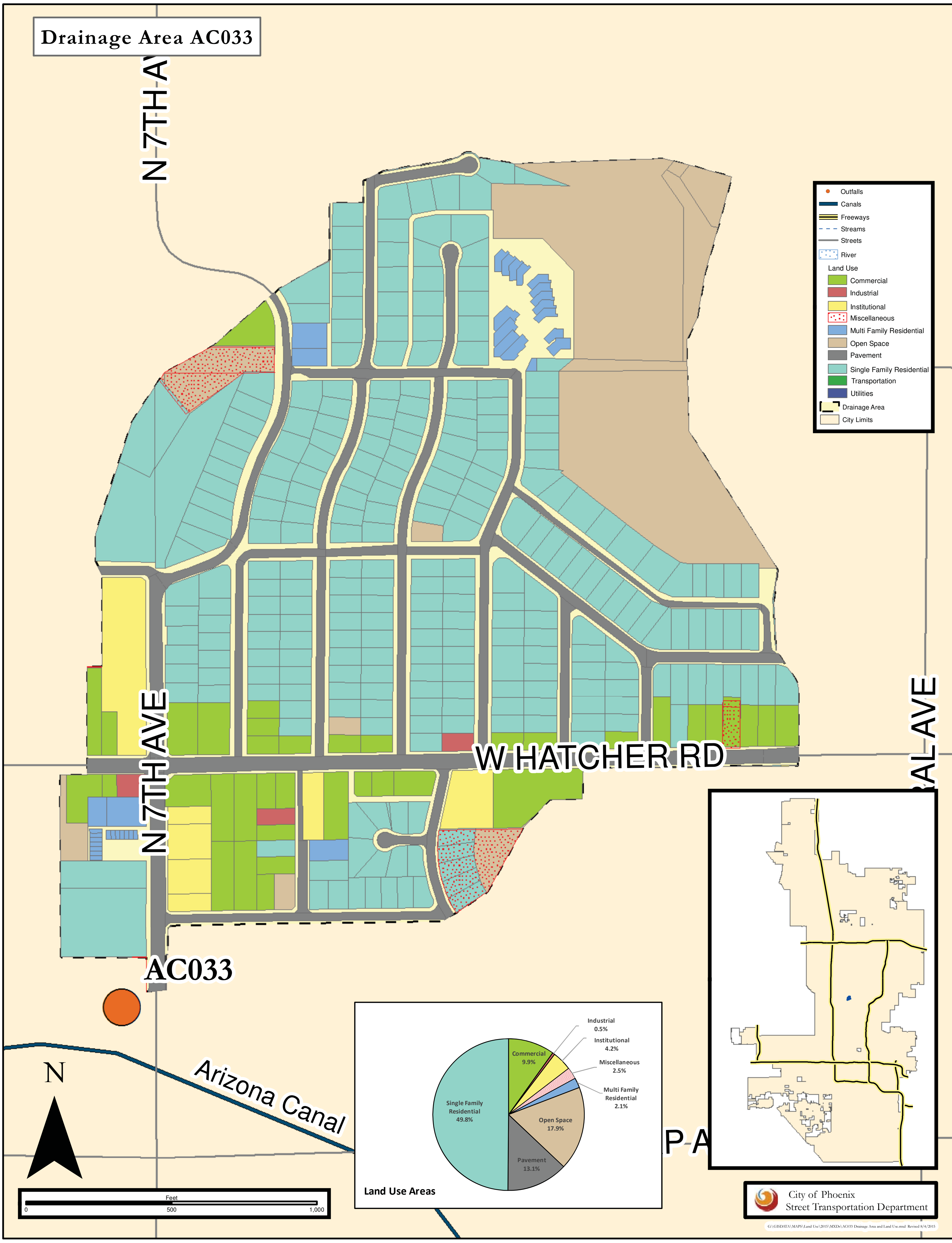
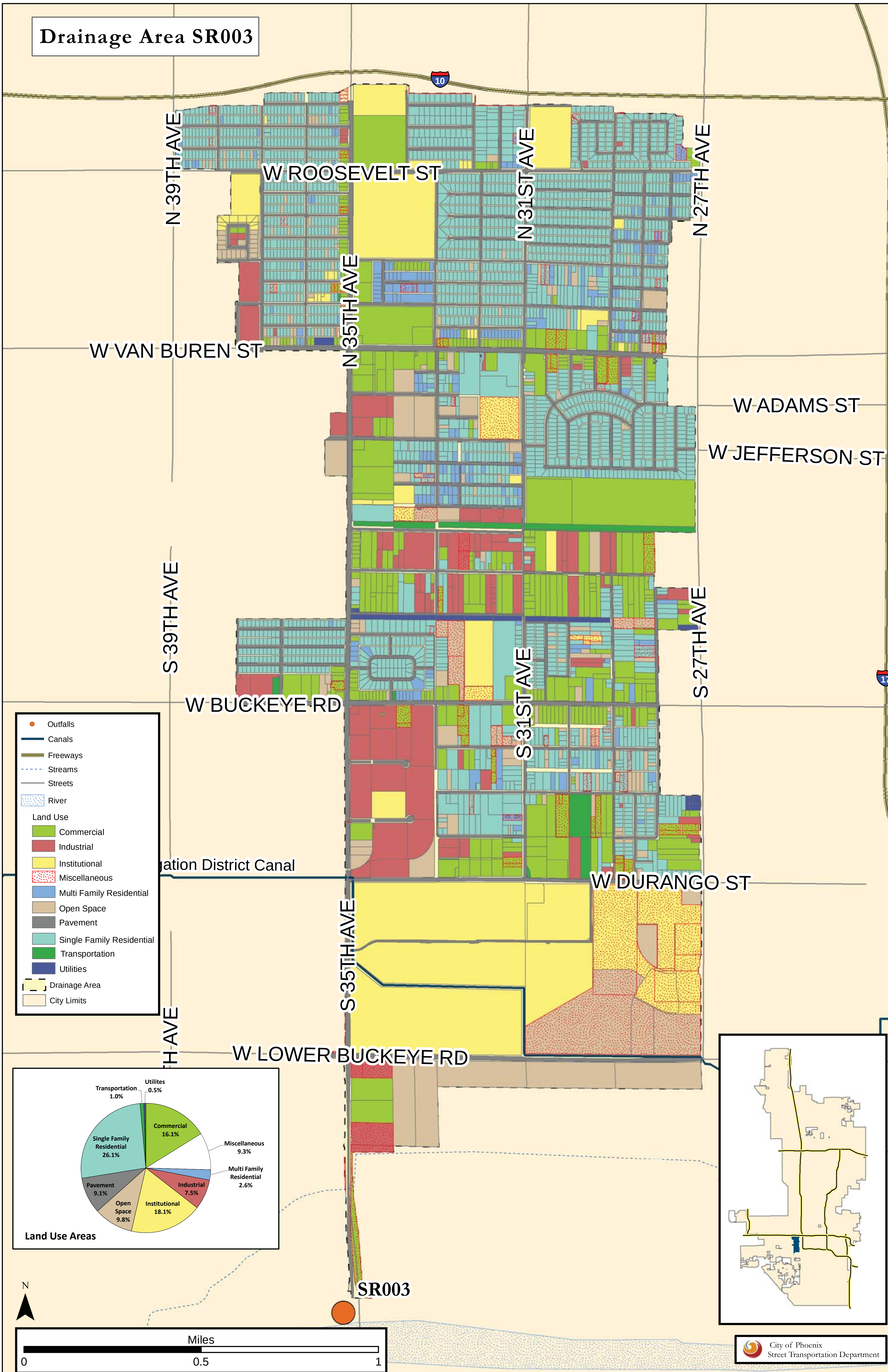
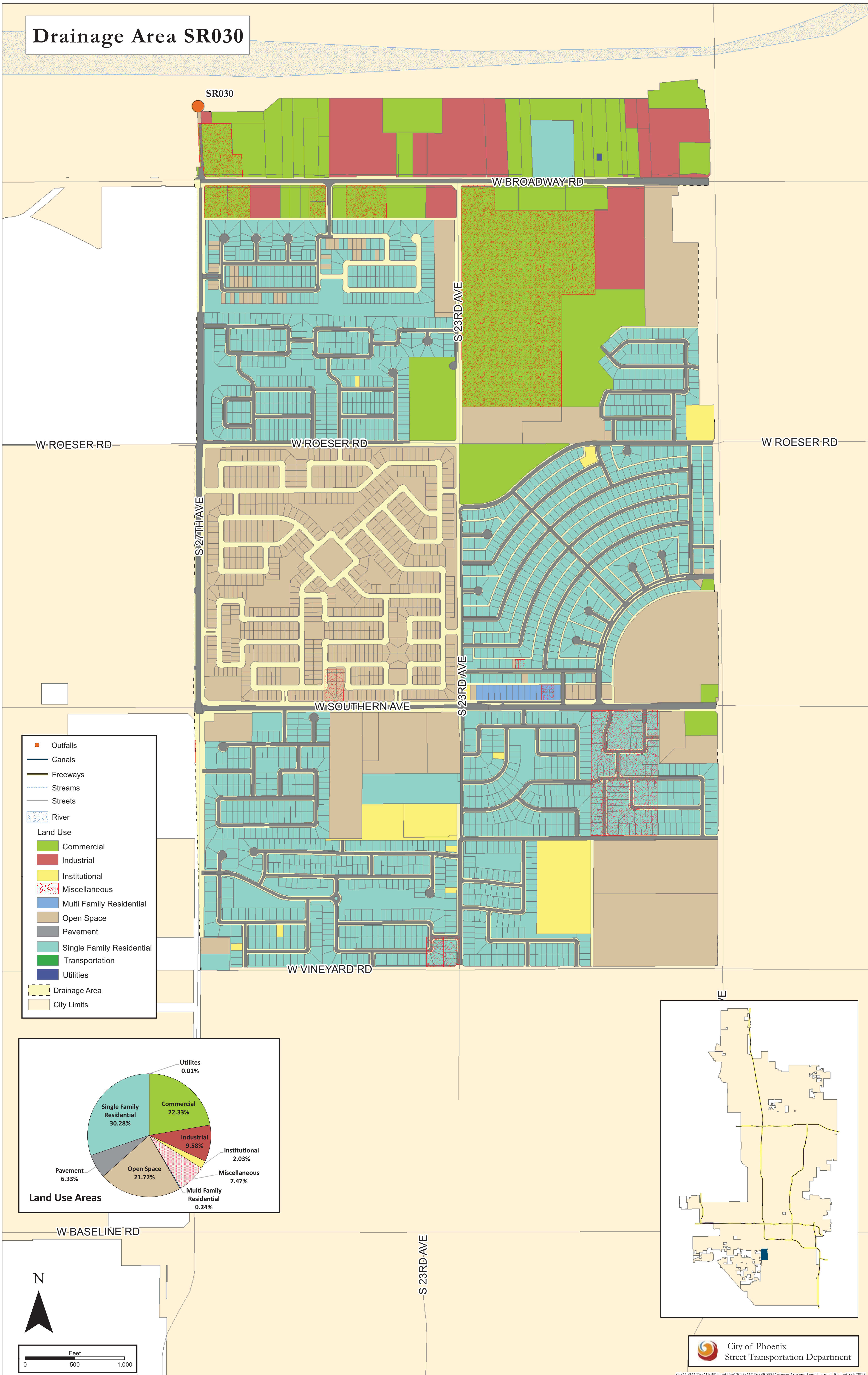

Drainage Area AC033
N 7TH AVE
W HATCHER RD
AC033
Arizona Canal
N
Feet
0
500
1,000
Outfalls
Canals
Freeways
Streams
Streets
River
Land Use
Commercial
Industrial
Institutional
Miscellaneous
Multi Family Residential
Open Space
Pavement
Single Family Residential
Transportation
Utilities
Drainage Area
City Limits
Land Use Areas
Industrial 0.5%
Institutional 4.2%
Miscellaneous 2.5%
Multi Family Residential 2.1%
Commercial 9.9%
Single Family Residential 49.8%
Open Space 17.9%
Pavement 13.1%
City of Phoenix
Street Transportation Department


Drainage Area SR003
W ROOSEVELT ST
N 39TH AVE
N 35TH AVE
N 31ST AVE
N 27TH AVE
W VAN BUREN ST
W ADAMS ST
W JEFFERSON ST
S 39TH AVE
S 35TH AVE
S 31ST AVE
S 27TH AVE
W BUCKEYE RD
W DURANGO ST
W LOWER BUCKEYE RD
gation District Canal
SR003
10
17
Outfalls
Canals
Freeways
Streams
Streets
River
Land Use
Commercial
Industrial
Institutional
Miscellaneous
Multi Family Residential
Open Space
Pavement
Single Family Residential
Transportation
Utilities
Drainage Area
City Limits
Transportation 1.0%
Utilites 0.5%
Commercial 16.1%
Miscellaneous 9.3%
Multi Family Residential 2.6%
Industrial 7.5%
Institutional 18.1%
Open Space 9.8%
Pavement 9.1%
Single Family Residential 26.1%
Land Use Areas
N
Miles
0
0.5
1
City of Phoenix
Street Transportation Department


Drainage Area SR030
SR030
W BROADWAY RD
S 23RD AVE
W ROESER RD
W ROESER RD
W ROESER RD
S 27TH AVE
S 23RD AVE
W SOUTHERN AVE
W VINEYARD RD
W BASELINE RD
S 23RD AVE
Outfalls
Canals
Freeways
Streams
Streets
River
Land Use
Commercial
Industrial
Institutional
Miscellaneous
Multi Family Residential
Open Space
Pavement
Single Family Residential
Transportation
Utilities
Drainage Area
City Limits
Utilites 0.01%
Commercial 22.33%
Industrial 9.58%
Institutional 2.03%
Miscellaneous 7.47%
Multi Family Residential 0.24%
Open Space 21.72%
Pavement 6.33%
Single Family Residential 30.28%
Land Use Areas
N
Feet
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City of Phoenix
Street Transportation Department
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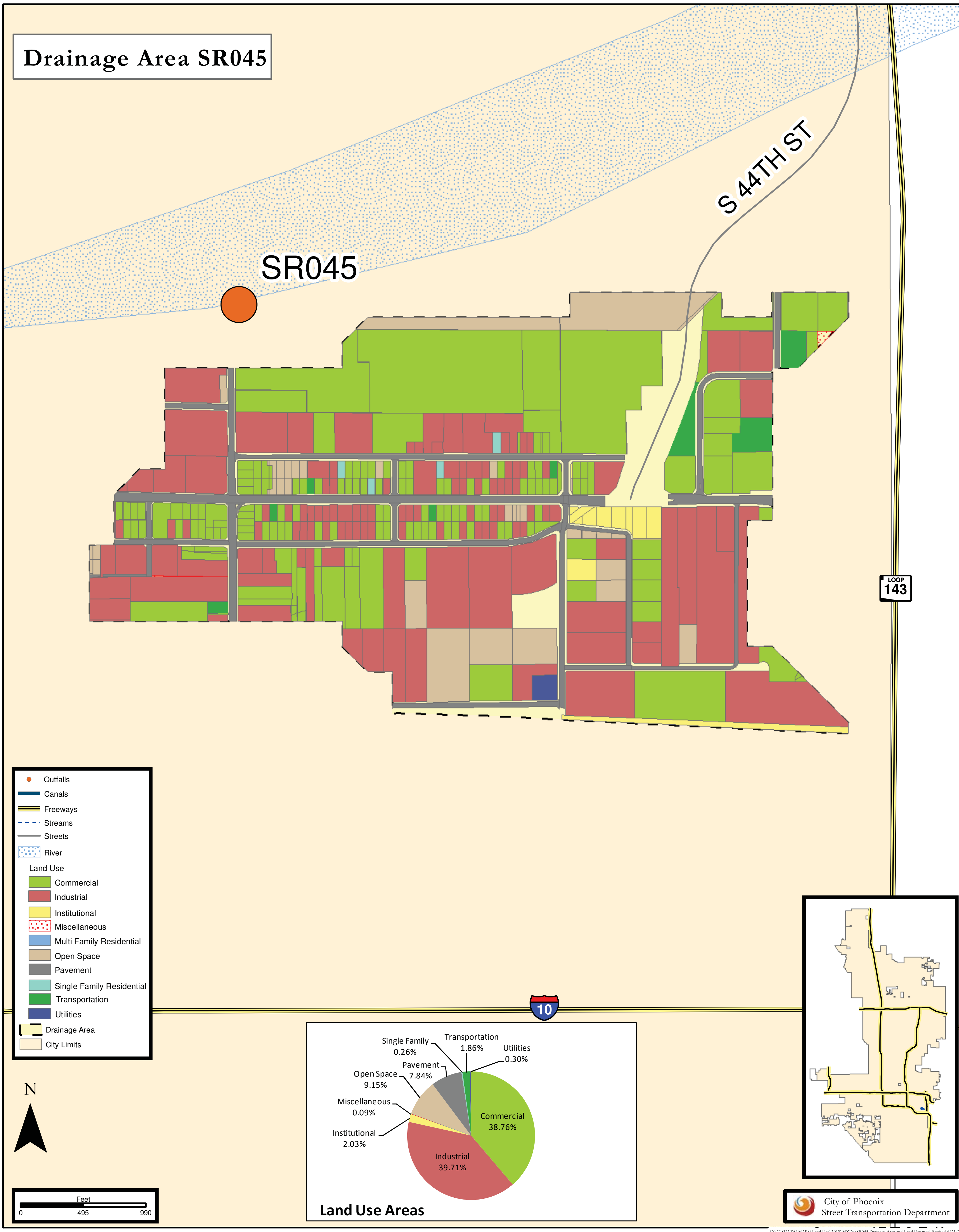
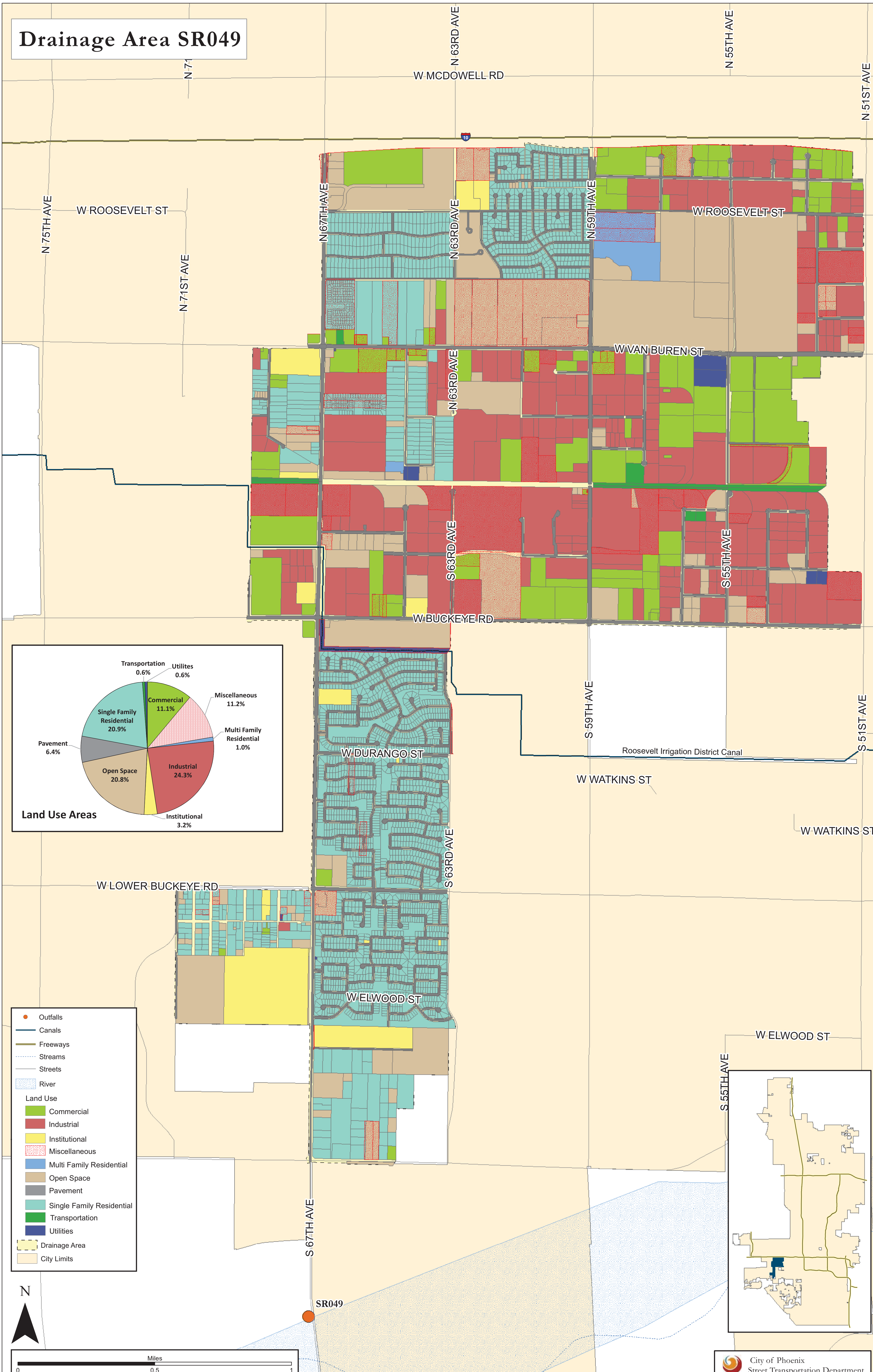


Drainage Area SR045
SR045
S 44TH ST
LOOP 143
10
Outfalls
Canals
Freeways
Streams
Streets
River
Land Use
Commercial
Industrial
Institutional
Miscellaneous
Multi Family Residential
Open Space
Pavement
Single Family Residential
Transportation
Utilities
Drainage Area
City Limits
N
Feet
0
495
990
Single Family 0.26%
Transportation 1.86%
Utilities 0.30%
Pavement 7.84%
Open Space 9.15%
Miscellaneous 0.09%
Institutional 2.03%
Commercial 38.76%
Industrial 39.71%
Land Use Areas
City of Phoenix
Street Transportation Department



G:\GISDATA\MAPS\Land Use\2015\MXDs\SR049 Drainage Area and Land Use.mxd Revised 8/5/2015

Inventory of Major Outfalls

City of Phoenix
WATER SERVICES DEPARTMENT

This report contains all active major outfalls 36" or greater serving >50 acres or 12" or greater outfalls serving >2 acres of industrial land use known to the City.

Stormwater Management
510 Major Outfalls

Outfall ID	Site Address	Latitude	Longitude	Type	Size	Last Inspection	Target Inspection
AC001	51ST AVE AND CACTUS ROAD	33 ° 35 ' 47 "	-112 ° 10 ' 11 "	Pipe	78 Inches	02/12/2016	2021
AC002	43RD AVE AND PEORIA AVE	33 ° 34 ' 58 "	-112 ° 9 ' 6 "	Pipe	90 Inches	02/12/2016	2021
AC003	43RD AVE AND PEORIA AVE	33 ° 34 ' 54 "	-112 ° 9 ' 0 "	Pipe	42 Inches	02/11/2016	2021
AC004	35TH AVE AND ACDC CHANNEL	33 ° 34 ' 21 "	-112 ° 8 ' 4 "	Pipe	96 Inches	02/23/2016	2021
AC005	30TH AVE AND METROCENTER	33 ° 34 ' 11 "	-112 ° 7 ' 32 "	Pipe	53 Inches	02/12/2016	2021
AC006	29TH AVE AND METROCENTER	33 ° 34 ' 15 "	-112 ° 7 ' 16 "	Pipe	48 Inches	02/11/2016	2021
AC007	29TH AVE AND METROCENTER	33 ° 34 ' 15 "	-112 ° 7 ' 16 "	Pipe	43 Inches	02/24/2016	2021
AC008	I-17 (BLACK CANYON FWY) AND ACDC CHANNEL	33 ° 34 ' 17 "	-112 ° 7 ' 3 "	Pipe	27 Inches	02/23/2016	2021
AC009	25TH AVE AND ACDC CHANNEL	33 ° 34 ' 18 "	-112 ° 6 ' 44 "	Pipe	12 Inches	02/23/2016	2021
AC010	19TH AVE AND ACDC CHANNEL	33 ° 34 ' 19 "	-112 ° 5 ' 58 "	Pipe	36 Inches	02/23/2016	2021
AC011	7TH ST AND ACDC CHANNEL	33 ° 35 ' 47 "	-112 ° 49 ' 50 "	Pipe	42 Inches	02/23/2016	2021
AC012	18TH PL AND ACDC CHANNEL	33 ° 32 ' 8 "	-112 ° 2 ' 32 "	Pipe	48 Inches	03/29/2016	2021
AC013	2 MILE TUNNEL AND ACDC CHANNEL	33 ° 31 ' 35 "	-112 ° 1 ' 51 "	Pipe	36 Inches	03/09/2016	2021
AC014	2 MILE TUNNEL AND ACDC CHANNEL	33 ° 35 ' 47 "	-112 ° 10 ' 9 "	Pipe	36 Inches	03/09/2016	2021
AC015	33RD DR AND ACDC CHANNEL	33 ° 34 ' 17 "	-112 ° 7 ' 51 "	Pipe	12 Inches	02/11/2016	2021
AC016	34TH LN AND ACDC CHANNEL	33 ° 34 ' 20 "	-112 ° 8 ' 0 "	Pipe	18 Inches	02/11/2016	2021
AC017	39TH AVE AND ACDC CHANNEL	33 ° 34 ' 41 "	-112 ° 8 ' 39 "	Pipe	18 Inches	02/11/2016	2021
AC018	18TH AVE AND HATCHER	33 ° 34 ' 17 "	-112 ° 5 ' 50 "	Pipe	36 Inches	02/23/2016	2021
AC021	49TH DR AND ACDC CHANNEL	33 ° 35 ' 30 "	-112 ° 9 ' 52 "	Spillway	50 Feet	02/11/2016	2021
AC022	LUPINE DR AND ACDC CHANNEL	33 ° 35 ' 23 "	-112 ° 9 ' 44 "	Spillway	50 Feet	02/11/2016	2021
AC023	YUCCA ST AND ACDC CHANNEL	33 ° 35 ' 15 "	-112 ° 9 ' 30 "	Spillway	27 Feet	02/11/2016	2021
AC024	39TH AVE AND ACDC CHANNEL	33 ° 34 ' 40 "	-112 ° 8 ' 38 "	Spillway	30 Feet	02/11/2016	2021
AC025	IRONWOOD DR AND ACDC CHANNEL	33 ° 34 ' 34 "	-112 ° 8 ' 28 "	Spillway	30 Feet	02/11/2016	2021
AC026	3RD ST AND ACDC CHANNEL	33 ° 33 ' 23 "	-112 ° 3 ' 45 "	Spillway	70 Feet	02/23/2016	2021
AC028	10TH ST AND ACDC CHANNEL	33 ° 33 ' 23 "	-112 ° 3 ' 45 "	Spillway	100 Feet	02/23/2016	2021
AC029	12TH ST AND ACDC CHANNEL	33 ° 32 ' 45 "	-112 ° 3 ' 24 "	Spillway	16 Feet	02/23/2016	2021

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Outfall ID	Site Address	Latitude	Longitude	Type	Size	Last Inspection	Target Inspection
AC030	13TH ST AND ORANGEWOOD	33 ° 32 ' 41 "	-112 ° 3 ' 16 "	Spillway	50 Feet	02/23/2016	2021
AC031	14TH ST AND STATE AVE	33 ° 32 ' 37 "	-112 ° 3 ' 6 "	Spillway	90 Feet	03/29/2016	2021
AC033	7TH AVE AND ACDC CHANNEL	33 ° 34 ' 7 "	-112 ° 4 ' 58 "	Pipe	42 Inches	02/23/2016	2021
AC034	12TH AVE AND ACDC CHANNEL	33 ° 34 ' 12 "	-112 ° 5 ' 29 "	Pipe	36 Inches	02/23/2016	2021
AC039	14TH ST AND ACDC CHANNEL	33 ° 34 ' 54 "	-112 ° 8 ' 59 "	Pipe	36 Inches	03/29/2016	2021
AC044	6TH ST AND ACDC CHANNEL	33 ° 33 ' 29 "	-112 ° 3 ' 58 "	Pipe	36 Inches	02/23/2016	2021
AC048	10TH ST AND ACDC CHANNEL	33 ° 33 ' 23 "	-112 ° 3 ' 45 "	Pipe	96 Inches	02/23/2016	2021
AC070	DUNLAP AVE AND SHORT TUNNEL	33 ° 34 ' 15 "	-112 ° 7 ' 14 "	Pipe	60 Inches	02/23/2016	2021
AC081	HWY 51 AND ACDC CHANNEL	33 ° 34 ' 17 "	-112 ° 7 ' 4 "	Box	6 x 6 Feet	03/29/2016	2021
AC083	2 MILE TUNNEL AND ACDC CHANNEL	33 ° 34 ' 17 "	-112 ° 7 ' 4 "	Pipe	36 Inches	03/29/2016	2021
AC085	2 MILE TUNNEL AND ACDC CHANNEL	33 ° 34 ' 17 "	-112 ° 7 ' 4 "	Pipe	30 Inches	03/09/2016	2021
AC093	2 MILE TUNNEL AND ACDC CHANNEL	33 ° 34 ' 17 "	-112 ° 53 ' 14 "	Pipe	30 Inches	03/09/2016	2021
AC094	2 MILE TUNNEL AND ACDC CHANNEL	33 ° 34 ' 17 "	-112 ° 53 ' 14 "	Pipe	36 Inches	03/09/2016	2021
AC098	2 MILE TUNNEL AND ACDC CHANNEL	33 ° 34 ' 17 "	-112 ° 53 ' 14 "	Pipe	30 Inches	03/09/2016	2021
AC100	2 MILE TUNNEL AND ACDC CHANNEL	33 ° 34 ' 19 "	-112 ° 54 ' 0 "	Pipe	30 Inches	03/09/2016	2021
AC101	2 MILE TUNNEL AND ACDC CHANNEL	33 ° 34 ' 19 "	-112 ° 54 ' 0 "	Pipe	36 Inches	03/09/2016	2021
AC103	2 MILE TUNNEL AND ACDC CHANNEL	33 ° 34 ' 19 "	-112 ° 54 ' 0 "	Pipe	30 Inches	03/09/2016	2021
AC106	2 MILE TUNNEL AND ACDC CHANNEL	33 ° 34 ' 19 "	-112 ° 54 ' 0 "	Pipe	36 Inches	03/09/2016	2021
AC107	2 MILE TUNNEL AND ACDC CHANNEL	33 ° 34 ' 19 "	-112 ° 54 ' 0 "	Pipe	48 Inches	03/09/2016	2021
AC109	2 MILE TUNNEL AND ACDC CHANNEL	33 ° 34 ' 19 "	-112 ° 5 ' 59 "	Pipe	96 Inches	03/09/2016	2021
AC110	2 MILE TUNNEL AND ACDC CHANNEL	33 ° 33 ' 27 "	-112 ° 56 ' 3 "	Pipe	96 Inches	03/09/2016	2021
AC128	7TH AVE AND DUNLAP AVE	33 ° 34 ' 5 "	-112 ° 4 ' 48 "	Pipe	12 Inches	02/23/2016	2021
AC130	PARADISE DR AND ACDC	33 ° 35 ' 35 "	-112 ° 9 ' 56 "	Spillway	64 Feet	02/11/2016	2021
AC131	47TH AVE AND ACDC	33 ° 35 ' 19 "	-112 ° 9 ' 37 "	Spillway	64 Feet	02/11/2016	2021
AC132	46TH AVE AND ACDC	33 ° 35 ' 5 "	-112 ° 9 ' 22 "	Spillway	32 Feet	02/11/2016	2021
AC133	43RD AVE AND ACDC	33 ° 35 ' 0 "	-112 ° 9 ' 12 "	Spillway	32 Feet	02/11/2016	2021
AC134	43RD AVE AND ACDC	33 ° 35 ' 0 "	-112 ° 9 ' 12 "	Spillway	32 Feet	02/11/2016	2021
AC135	43RD AVE AND ACDC	33 ° 34 ' 59 "	-112 ° 9 ' 8 "	Spillway	24 Feet	02/11/2016	2021
AC136	NORTH LN AND ACDC	33 ° 34 ' 52 "	-112 ° 8 ' 58 "	Spillway	24 Feet	02/11/2016	2021
AC137	41ST DR AND ACDC	33 ° 34 ' 50 "	-112 ° 8 ' 54 "	Spillway	24 Feet	02/11/2016	2021

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Outfall ID	Site Address	Latitude	Longitude	Type	Size	Last Inspection	Target Inspection
AC138	41ST LN AND ACDC	33 ° 34 ' 49 "	-112 ° 8 ' 53 "	Spillway	24 Feet	02/11/2016	2021
AC139	41ST AVE AND ACDC	33 ° 34 ' 48 "	-112 ° 8 ' 50 "	Spillway	24 Feet	02/11/2016	2021
AC140	40TH DR AND ACDC	33 ° 34 ' 46 "	-112 ° 8 ' 48 "	Spillway	24 Feet	02/11/2016	2021
AC141	40TH LN AND ACDC	33 ° 34 ' 45 "	-112 ° 8 ' 45 "	Spillway	24 Feet	02/11/2016	2021
AC142	40TH AVE AND ACDC	33 ° 34 ' 44 "	-112 ° 8 ' 45 "	Spillway	24 Feet	02/11/2016	2021
AC143	39TH LN AND ACDC	33 ° 34 ' 42 "	-112 ° 8 ' 41 "	Spillway	24 Feet	02/11/2016	2021
AC144	37TH AVE AND ACDC	33 ° 34 ' 27 "	-112 ° 8 ' 18 "	Spillway	64 Feet	02/11/2016	2021
AC145	36TH AVE AND ACDC	33 ° 34 ' 24 "	-112 ° 8 ' 11 "	Spillway	40 Feet	02/23/2016	2021
AC146	33RD AVE AND ACDC	33 ° 34 ' 16 "	-112 ° 52 ' 12 "	Spillway	48 Feet	02/23/2016	2021
AC147	23RD AVE AND ACDC	33 ° 34 ' 24 "	-112 ° 6 ' 26 "	Spillway	40 Feet	02/23/2016	2021
AC148	21ST DR AND ACDC	33 ° 34 ' 22 "	-112 ° 6 ' 16 "	Spillway	40 Feet	02/23/2016	2021
AC150	20TH DR AND ACDC	33 ° 34 ' 21 "	-112 ° 6 ' 11 "	Spillway	50 Feet	02/23/2016	2021
AC151	20TH AVE AND ACDC	33 ° 34 ' 20 "	-112 ° 6 ' 6 "	Spillway	40 Feet	02/23/2016	2021
AC152	20TH DR AND ACDC	33 ° 34 ' 19 "	-112 ° 6 ' 2 "	Spillway	24 Feet	02/23/2016	2021
AC153	16TH AVE AND ACDC	33 ° 34 ' 13 "	-112 ° 5 ' 36 "	Spillway	36 Feet	02/23/2016	2021
AC154	15TH AVE AND ACDC	33 ° 34 ' 12 "	-112 ° 5 ' 28 "	Spillway	60 Feet	02/23/2016	2021
AC155	14TH AVE AND ACDC	33 ° 34 ' 11 "	-112 ° 5 ' 24 "	Spillway	60 Feet	02/23/2016	2021
AC156	13TH AVE AND ACDC	33 ° 34 ' 10 "	-112 ° 5 ' 21 "	Spillway	60 Feet	02/23/2016	2021
AC157	9TH AVE AND ACDC	33 ° 34 ' 8 "	-112 ° 5 ' 7 "	Spillway	46 Feet	02/23/2016	2021
AC158	8TH AVE AND ACDC	33 ° 34 ' 7 "	-112 ° 5 ' 4 "	Spillway	48 Feet	02/23/2016	2021
AC159	CENTRAL AVE AND SHORT CHANNEL	33 ° 33 ' 42 "	-112 ° 4 ' 23 "	Spillway	30 Feet	02/23/2016	2021
AC160	8TH ST AND ACDC	33 ° 33 ' 26 "	-112 ° 3 ' 51 "	Spillway	24 Feet	02/23/2016	2021
AC161	8TH PL AND ACDC	33 ° 33 ' 25 "	-112 ° 3 ' 47 "	Spillway	24 Feet	02/23/2016	2021
AC162	HARMONT DR AND ACDC	33 ° 33 ' 16 "	-112 ° 3 ' 41 "	Spillway	56 Feet	02/23/2016	2021
AC163	NORTHERN AVE AND ACDC	33 ° 33 ' 7 "	-112 ° 3 ' 40 "	Spillway	80 Feet	02/23/2016	2021
AC164	BUD BROWN'S BARN AND ACDC	33 ° 33 ' 1 "	-112 ° 3 ' 36 "	Spillway	40 Feet	02/23/2016	2021
AC165	E DESERT PARK LN AND ACDC	33 ° 32 ' 59 "	-112 ° 3 ' 34 "	Spillway	40 Feet	02/23/2016	2021
AC166	HAYWOOD AVE AND ACDC	33 ° 32 ' 57 "	-112 ° 3 ' 32 "	Spillway	40 Feet	02/23/2016	2021
AC167	BELMONT AVE AND ACDC	33 ° 32 ' 55 "	-112 ° 3 ' 32 "	Spillway	40 Feet	02/23/2016	2021
AC168	E KALER DR AND ACDC	33 ° 32 ' 53 "	-112 ° 3 ' 30 "	Spillway	24 Feet	02/23/2016	2021

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AC169	MORTEN AVE AND ACDC	33 ° 32 ' 50 "	-112 ° 3 ' 28 "	Spillway	40 Feet	02/23/2016	2021
AC170	14TH ST AND ACDC	33 ° 32 ' 34 "	-112 ° 2 ' 56 "	Spillway	32 Feet	03/29/2016	2021
AC171	15TH ST AND ACDC	33 ° 32 ' 31 "	-112 ° 2 ' 54 "	Spillway	320 Feet	03/29/2016	2021
AC172	16TH PL AND ACDC	33 ° 32 ' 22 "	-112 ° 2 ' 48 "	Spillway	40 Feet	03/29/2016	2021
AC173	17TH ST AND ACDC	33 ° 32 ' 14 "	-112 ° 2 ' 40 "	Spillway	40 Feet	03/29/2016	2021
AC174	17TH PL AND ACDC	33 ° 32 ' 12 "	-112 ° 2 ' 36 "	Spillway	48 Feet	03/29/2016	2021
AC175	18TH ST AND ACDC	33 ° 32 ' 9 "	-112 ° 2 ' 33 "	Spillway	48 Feet	03/29/2016	2021
AC176	19TH ST AND ACDC	33 ° 31 ' 59 "	-112 ° 2 ' 24 "	Spillway	80 Feet	03/29/2016	2021
AC177	20TH ST AND ACDC	33 ° 31 ' 55 "	-112 ° 2 ' 19 "	Spillway	40 Feet	03/29/2016	2021
AC178	MARYLAND AVE AND ACDC	33 ° 31 ' 52 "	-112 ° 2 ' 17 "	Spillway	24 Feet	03/29/2016	2021
AC179	MARYLAND AVE AND ACDC	33 ° 31 ' 48 "	-112 ° 57 ' 42 "	Spillway	40 Feet	03/29/2016	2021
AC180	MARYLAND AVE AND ACDC	33 ° 31 ' 47 "	-112 ° 2 ' 13 "	Spillway	32 Feet	03/29/2016	2021
AC181	MARYLAND AVE AND ACDC	33 ° 31 ' 46 "	-112 ° 2 ' 12 "	Spillway	40 Feet	03/29/2016	2021
AC182	MARLETTE AVE AND ACDC	33 ° 31 ' 43 "	-112 ° 2 ' 9 "	Spillway	32 Feet	03/29/2016	2021
AC183	CLAREMONT ST AND ACDC	33 ° 31 ' 42 "	-112 ° 2 ' 7 "	Spillway	32 Feet	03/29/2016	2021
AC184	SQUAW PEAK WATER TREATMENT PLANT AND ACDC	33 ° 31 ' 41 "	-112 ° 2 ' 2 "	Spillway	72 Feet	03/29/2016	2021
AC185	SQUAW PEAK PKWY AND ACDC	33 ° 32 ' 3 "	-112 ° 2 ' 29 "	Spillway	48 Feet	03/29/2016	2021
AC187	14TH ST AND ACDC	33 ° 32 ' 36 "	-112 ° 3 ' 0 "	Spillway	50 Feet	03/29/2016	2021
AC191	I-17 AND ACDC CHANNEL	33 ° 34 ' 17 "	-112 ° 7 ' 3 "	Spillway	31 Feet	03/29/2016	2021
AC192	3858 W MALAPAI DR, NORTH WALL	33 ° 34 ' 40 "	-112 ° 8 ' 38 "	Spillway	25 Feet	02/11/2016	2021
AC193	3848 W MALAPAI DR	33 ° 34 ' 38 "	-112 ° 8 ' 36 "	Spillway	25 Feet	02/11/2016	2021
AC194	3832 W MALAPAI DR	33 ° 34 ' 37 "	-112 ° 8 ' 35 "	Spillway	25 Feet	02/11/2016	2021
AF002	ENCANTO BLVD AND SR101 WEST (9500 W)	33 ° 28 ' 20 "	-112 ° 15 ' 57 "	Pipe	42 Inches	07/16/2015	2020
AF003	MCDOWELL RD AND SR101 WEST (9700 W)	33 ° 27 ' 55 "	-112 ° 16 ' 3 "	Box	4 x 11 Feet	07/16/2015	2020
AF005	CAMELBACK RD AND SR LOOP 101	33 ° 30 ' 29 "	-112 ° 16 ' 6 "	Pipe	35 Inches	07/16/2015	2020
AF006	CAMELBACK ROAD AND 114TH AVEUNE	33 ° 30 ' 24 "	-112 ° 18 ' 15 "	Pipe	60 Inches	07/16/2015	2020
AW001	SOUTH CHANDLER BLVD (2700W) AND PECOS RD	33 ° 17 ' 23 "	-112 ° 7 ' 2 "	Pipe	36 Inches	07/03/2012	2017
AW003	25TH DR AND PECOS RD	33 ° 17 ' 26 "	-112 ° 6 ' 38 "	Pipe	24 Inches	07/03/2012	2017
AW006	24TH AVE AND PECOS RD	33 ° 17 ' 27 "	-112 ° 6 ' 42 "	Box	4 x 8 Feet	07/03/2012	2017
AW007	PECOS RD AND 23RD DR	33 ° 17 ' 26 "	-112 ° 6 ' 19 "	Box	4 x 8 Feet	07/03/2012	2017

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AW008	PECOS RD AND 23RD AVE	33 º 17 ' 26 "	-112 º 6 ' 19 "	Box	4 x 8 Feet	07/03/2012	2017
AW009	PECOS RD AND 22ND DR	33 º 17 ' 27 "	-112 º 6 ' 39 "	Box	4 x 8 Feet	07/03/2012	2017
AW010	PECOS RD AND 22ND AVE	33 º 17 ' 27 "	-112 º 6 ' 13 "	Box	4 x 8 Feet	07/03/2012	2017
AW011	PECOS RD AND 21ST DR	33 º 17 ' 26 "	-112 º 6 ' 33 "	Box	4 x 8 Feet	07/03/2012	2017
AW012	PECOS RD AND 21ST DR	33 º 17 ' 26 "	-112 º 6 ' 33 "	Box	4 x 8 Feet	07/03/2012	2017
AW013	PECOS RD AND 21ST AVE	33 º 17 ' 26 "	-112 º 6 ' 29 "	Box	4 x 8 Feet	07/09/2012	2017
AW014	PECOS RD AND 21ST AVE	33 º 17 ' 26 "	-112 º 6 ' 28 "	Box	4 x 8 Feet	07/09/2012	2017
AW015	PECOS RD AND 20TH DR	33 º 17 ' 26 "	-112 º 6 ' 25 "	Box	4 x 8 Feet	07/09/2012	2017
AW016	PECOS RD AND 20TH DR	33 º 17 ' 26 "	-112 º 6 ' 22 "	Box	4 x 8 Feet	07/09/2012	2017
AW017	PECOS RD AND 20TH DR	33 º 17 ' 26 "	-112 º 6 ' 20 "	Box	4 x 8 Feet	07/09/2012	2017
AW018	PECOS RD AND 20TH DR	33 º 17 ' 26 "	-112 º 6 ' 13 "	Box	4 x 8 Feet	07/09/2012	2017
AW020	PECOS RD AND 19TH DR	33 º 17 ' 26 "	-112 º 6 ' 9 "	Pipe	18 Inches	07/09/2012	2017
AW023	PECOS RD AND 19TH AVE	33 º 17 ' 26 "	-112 º 6 ' 1 "	Pipe	24 Inches	07/18/2012	2017
AW024	PECOS RD AND 17TH AVE	33 º 17 ' 26 "	-112 º 5 ' 50 "	Pipe	82 Inches	07/18/2012	2017
AW025	PECOS RD AND 15TH AVE	33 º 17 ' 26 "	-112 º 5 ' 34 "	Pipe	54 Inches	07/18/2012	2017
AW026	PECOS RD AND 14TH AVE	33 º 17 ' 27 "	-112 º 5 ' 23 "	Pipe	4 Feet	07/18/2012	2017
AW028	PECOS RD AND 2ND AVE	33 º 17 ' 27 "	-112 º 5 ' 6 "	Pipe	90 Inches	07/18/2012	2017
AW029	PECOS RD AND CENTRAL AVE	33 º 17 ' 26 "	-112 º 4 ' 54 "	Pipe	84 Inches	07/18/2012	2017
AW031	PECOS RD AND 2ND ST	33 º 17 ' 26 "	-112 º 4 ' 44 "	Pipe	72 Inches	07/18/2012	2017
AW032	PECOS RD AND 2ND PL	33 º 17 ' 26 "	-112 º 4 ' 24 "	Pipe	54 Inches	07/18/2012	2017
AW034	PECOS RD AND 3RD ST	33 º 17 ' 26 "	-112 º 4 ' 14 "	Pipe	78 Inches	07/18/2012	2017
AW035	PECOS RD AND 4TH ST	33 º 17 ' 27 "	-112 º 4 ' 10 "	Spillway	4 Feet	07/18/2012	2017
AW036	PECOS RD AND 6TH ST	33 º 17 ' 26 "	-112 º 4 ' 5 "	Pipe	48 Inches	07/18/2012	2017
AW037	PECOS RD AND S DESERT FOOTHILLS PKWY	33 º 17 ' 26 "	-112 º 3 ' 39 "	Pipe	42 Inches	07/18/2012	2017
AW038	PECOS RD AND 11TH WAY	33 º 17 ' 26 "	-112 º 3 ' 39 "	Pipe	8 Feet	07/02/2012	2017
AW039	PECOS RD AND 12TH WAY	33 º 17 ' 27 "	-112 º 3 ' 29 "	Pipe	60 Inches	07/18/2012	2017
AW041	PECOS RD AND 14TH ST	33 º 17 ' 27 "	-112 º 3 ' 9 "	Spillway		07/23/2012	2017
AW042	PECOS RD AND 15TH ST	33 º 17 ' 26 "	-112 º 3 ' 1 "	Pipe	66 Inches	07/23/2012	2017
AW044	PECOS RD AND 17TH ST	33 º 17 ' 26 "	-112 º 2 ' 50 "	Pipe	6 Feet	07/23/2012	2017
AW046	PECOS RD AND 18TH ST	33 º 17 ' 26 "	-112 º 2 ' 33 "	Pipe	6 Feet	07/23/2012	2017

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AW047	PECOS RD AND 20TH WAY	33 ° 17 ' 26 "	-112 ° 2 ' 15 "	Pipe	6 Feet	07/23/2012	2017
AW048	PECOS RD AND 24TH ST	33 ° 17 ' 26 "	-112 ° 1 ' 59 "	Pipe	6 Feet	07/23/2012	2017
AW049	PECOS RD AND 24TH ST	33 ° 17 ' 26 "	-112 ° 1 ' 52 "	Spillway		07/23/2012	2017
AW050	PECOS RD AND 24TH PL	33 ° 17 ' 26 "	-112 ° 1 ' 47 "	Pipe	6 Feet	07/23/2012	2017
AW051	PECOS RD AND 25TH ST	33 ° 17 ' 26 "	-112 ° 1 ' 45 "	Pipe	6 Feet	07/23/2012	2017
AW053	PECOS RD AND 26TH ST	33 ° 17 ' 26 "	-112 ° 1 ' 37 "	Spillway		07/25/2012	2017
AW054	PECOS RD AND 28TH PL	33 ° 17 ' 26 "	-112 ° 1 ' 20 "	Box	5 x 10 Feet	07/25/2012	2017
AW057	PECOS RD AND 36TH ST	33 ° 17 ' 27 "	-112 ° 0 ' 22 "	Box	4 x 8 Feet	07/25/2012	2017
AW058	PECOS RD AND 36TH ST	33 ° 17 ' 27 "	-112 ° 0 ' 21 "	Spillway	9 Feet	07/25/2012	2017
AW059	PECOS RD AND 37TH ST	33 ° 17 ' 27 "	-112 ° 0 ' 13 "	Pipe	9 Feet	07/25/2012	2017
AW060	PECOS RD AND 39TH ST	33 ° 17 ' 27 "	-111 ° 59 ' 57 "	Spillway	48 Feet	07/25/2012	2017
AW061	PECOS RD AND 41ST ST	33 ° 17 ' 28 "	-111 ° 59 ' 43 "	Box	10 x 6 Feet	07/25/2012	2017
AW062	PECOS RD AND 44TH ST	33 ° 17 ' 29 "	-111 ° 59 ' 25 "	Spillway		07/25/2012	2017
AZ001	ARIZONA CANAL AND 42ND ST	33 ° 30 ' 26 "	-111 ° 59 ' 28 "	Pipe	36 Inches	11/21/2014	2019
AZ002	ARIZONA CANAL AND 56TH ST	33 ° 29 ' 21 "	-111 ° 57 ' 38 "	Pipe	48 Inches	11/21/2014	2019
AZ003	ARIZONA CANAL AND 57TH ST	33 ° 29 ' 22 "	-111 ° 57 ' 34 "	Pipe	48 Inches	11/21/2014	2019
AZ024	ARIZONA CANAL AND 21ST ST	33 ° 31 ' 38 "	-112 ° 2 ' 4 "	Pipe	36 Inches	12/03/2014	2019
AZ025	ARIZONA CANAL AND 21ST ST	33 ° 31 ' 38 "	-112 ° 2 ' 4 "	Pipe	36 Inches	12/03/2014	2019
AZ028	ARIZONA CANAL AND 56TH ST	33 ° 29 ' 20 "	-111 ° 57 ' 39 "	Spillway	6 Feet	11/21/2014	2019
AZ030	ARIZONA CANAL AND 44TH ST	33 ° 30 ' 15 "	-111 ° 59 ' 12 "	Spillway	6 Feet	11/21/2014	2019
CC002	23RD AVE AND VOGEL AVE	33 ° 34 ' 26 "	-112 ° 6 ' 31 "	Pipe	48 Inches	08/29/2014	2019
CC003	PEORIA AVE AND CAVE CREEK WASH	33 ° 34 ' 54 "	-112 ° 6 ' 43 "	Pipe	84 Inches	04/06/2016	2021
CC004	25TH AVE AND CHOLLA RD	33 ° 35 ' 21 "	-112 ° 6 ' 52 "	Pipe	78 Inches	08/29/2014	2019
CC005	25TH AVE AND CACTUS RD	33 ° 35 ' 46 "	-112 ° 6 ' 43 "	Pipe	48 Inches	08/26/2014	2019
CC006	25TH AVE AND LARKSPUR DR	33 ° 35 ' 59 "	-112 ° 6 ' 39 "	Pipe	30 Inches	08/26/2014	2019
CC008	23RD AVE AND THUNDERBIRD RD	33 ° 36 ' 38 "	-112 ° 6 ' 28 "	Pipe	72 Inches	08/29/2014	2019
CC010	19TH AVE AND GREENWAY RD	33 ° 37 ' 28 "	-112 ° 5 ' 59 "	Pipe	90 Inches	08/29/2014	2019
CC041	901 W DANBURY RD	33 ° 38 ' 33 "	-112 ° 5 ' 5 "	Spillway	10 Feet	07/30/2014	2019
CC042	17407 N 8TH AVE	33 ° 38 ' 38 "	-112 ° 5 ' 3 "	Spillway	10 Feet	07/30/2014	2019
CC043	7TH AVE AND CAVE CREEK WASH	33 ° 38 ' 39 "	-112 ° 4 ' 59 "	Pipe	60 Inches	10/22/2014	2019

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Outfall ID	Site Address	Latitude	Longitude	Type	Size	Last Inspection	Target Inspection
CC044	3RD AVE AND GROVERS AVE	33 ° 38 ' 51 "	-112 ° 4 ' 43 "	Spillway	16 Feet	07/30/2014	2019
CC045	5TH AVE AND MICHELLE DR	33 ° 38 ' 58 "	-112 ° 4 ' 47 "	Spillway	10 Feet	07/30/2014	2019
CC046	5TH AVE AND MICHIGAN AVE	33 ° 39 ' 3 "	-112 ° 4 ' 47 "	Spillway	10 Feet	07/30/2014	2019
CC047	232 W MICHIGAN AVE	33 ° 39 ' 3 "	-112 ° 4 ' 41 "	Spillway	14 Feet	07/30/2014	2019
CC048	5TH AVE AND BLUEFIELD CIR	33 ° 39 ' 9 "	-112 ° 4 ' 47 "	Spillway	10 Feet	07/30/2014	2019
CC049	237 W WAGONER RD	33 ° 39 ' 9 "	-112 ° 4 ' 42 "	Spillway	8 Feet	07/30/2014	2019
CC050	UNION HILLS DR AND CAVE CREEK WASH	33 ° 39 ' 16 "	-112 ° 4 ' 43 "	Pipe	72 Inches	10/22/2014	2019
CC052	15478 N 13TH AVE	33 ° 37 ' 39 "	-112 ° 5 ' 26 "	Spillway	10 Feet	07/30/2014	2019
CC055	19TH AVE AND GREENWAY RD	33 ° 37 ' 27 "	-112 ° 5 ' 58 "	Spillway	3 x 6 Feet	07/30/2014	2019
CC056	19TH AVE AND GREENWAY RD	33 ° 37 ' 27 "	-112 ° 5 ' 59 "	Spillway	3 x 6 Feet	07/30/2014	2019
CC057	CAVE CREEK GOLF COURSE AT ACOMA DR	33 ° 37 ' 5 "	-112 ° 6 ' 24 "	Pipe	42 Inches	09/19/2014	2019
CC060	18019 N 3RD AVENUE	33 ° 38 ' 59 "	-112 ° 4 ' 42 "	Spillway	18 Feet	07/30/2014	2019
CC062	19823 N 3RD ST	33 ° 39 ' 59 "	-112 ° 4 ' 11 "	Spillway	29 Feet	07/31/2014	2019
CC063	19819 N 3RD ST	33 ° 39 ' 38 "	-112 ° 4 ' 12 "	Spillway	20 Feet	07/31/2014	2019
CC064	19801 N 3RD ST	33 ° 39 ' 56 "	-112 ° 4 ' 11 "	Spillway	7 Feet	07/31/2014	2019
CC065	301 E BEHREND DR	33 ° 39 ' 55 "	-112 ° 4 ' 11 "	Spillway	9 Feet	07/31/2014	2019
CC066	301 E WIKIEUP LN	33 ° 39 ' 54 "	-112 ° 4 ' 11 "	Spillway	9 Feet	07/31/2014	2019
CC067	301 E SEQUOIA DR	33 ° 39 ' 51 "	-112 ° 4 ' 11 "	Spillway	9 Feet	07/31/2014	2019
CC068	301 E ORAIBI DR	33 ° 39 ' 49 "	-112 ° 4 ' 11 "	Spillway	9 Feet	07/31/2014	2019
CC069	301 E PIUTE AVE	33 ° 39 ' 48 "	-112 ° 4 ' 11 "	Spillway	9 Feet	07/31/2014	2019
CC070	301 E UTOPIA RD	33 ° 39 ' 43 "	-112 ° 4 ' 11 "	Spillway	9 Feet	07/31/2014	2019
CC071	401 E WESCOTT DR	33 ° 39 ' 31 "	-112 ° 4 ' 10 "	Spillway	13 Feet	07/31/2014	2019
CC072	18650 N 2ND AVE	33 ° 39 ' 23 "	-112 ° 4 ' 33 "	Spillway	12 Feet	08/01/2014	2019
CC073	18819 N 2ND AVE	33 ° 39 ' 27 "	-112 ° 4 ' 32 "	Spillway	10 Feet	07/31/2014	2019
CC074	18802 N 2ND DR	33 ° 39 ' 24 "	-112 ° 4 ' 40 "	Spillway	9 Feet	07/31/2014	2019
CC075	201 W TARO LN	33 ° 39 ' 32 "	-112 ° 4 ' 33 "	Spillway	10 Feet	07/31/2014	2019
CC076	27TH AVE AND CHOLLA RD	33 ° 35 ' 21 "	-112 ° 6 ' 51 "	Spillway	62 Feet	07/22/2014	2019
CC077	519 W HELENA DR	33 ° 38 ' 40 "	-112 ° 4 ' 53 "	Spillway	15 Feet	07/22/2014	2019
CC078	4TH AVE AND MURIEL DR	33 ° 38 ' 47 "	-112 ° 4 ' 45 "	Spillway	24 Feet	07/22/2014	2019
CC079	4TH AVE AND ANGELA DR	33 ° 38 ' 44 "	-112 ° 4 ' 46 "	Spillway	16 Feet	07/22/2014	2019

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CC080	4TH AVE AND ANGELA DR	33 ° 38 ' 44 "	-112 ° 4 ' 46 "	Spillway	16 Feet	07/22/2014	2019
CC081	17415 N 6TH AVE	33 ° 38 ' 38 "	-112 ° 4 ' 55 "	Spillway	19 Feet	07/22/2014	2019
CC082	CAVE CREEK GC AND CAVE CREEK WASH	33 ° 37 ' 26 "	-112 ° 6 ' 19 "	Pipe	42 Inches	09/19/2014	2019
CC083	23RD AVE AND GREENWAY RD	33 ° 37 ' 25 "	112 ° 6 ' 20 "	Pipe	48 Inches	09/19/2014	2019
CC087	DEER VALLEY ROAD AND 11TH PL	33 ° 41 ' 3 "	-112 ° 3 ' 27 "	Pipe	66 Inches	11/14/2014	2019
CC094	7TH ST AND LONE CACTUS	33 ° 41 ' 5 "	112 ° 3 ' 55 "	Pipe	54 Inches	10/13/2015	2020
EF001	CAVE CREEK RD AND GREENWAY PKWY	33 ° 37 ' 54 "	-112 ° 1 ' 52 "	Pipe	72 Inches	09/30/2015	2020
EF002	16TH ST AND GREENWAY PKWY	33 ° 38 ' 3 "	-112 ° 2 ' 38 "	Pipe	84 Inches	09/30/2015	2020
EF003	18TH ST AND GREENWAY PKWY	33 ° 38 ' 3 "	-112 ° 2 ' 39 "	Pipe	84 Inches	09/30/2015	2020
EF004	20TH ST AND GREENWAY PKWY	33 ° 37 ' 56 "	-112 ° 2 ' 22 "	Pipe	96 Inches	09/30/2015	2020
EF006	9TH ST AND GREENWAY PKWY	33 ° 38 ' 13 "	-112 ° 3 ' 41 "	Pipe	96 Inches	08/20/2015	2020
EF007	9TH ST AND GREENWAY PKWY	33 ° 38 ' 14 "	-112 ° 3 ' 41 "	Pipe	36 Inches	08/27/2015	2020
EF008	CAVE CREEK RD AND GREENWAY PKWY	33 ° 37 ' 54 "	-112 ° 1 ' 53 "	Pipe	72 Inches	10/01/2015	2020
EF009	16TH ST AND GREENWAY PKWY	33 ° 38 ' 10 "	-112 ° 2 ' 52 "	Pipe	48 Inches	09/30/2015	2020
EF010	7TH ST AND GREENWAY PKWY	33 ° 38 ' 14 "	-112 ° 3 ' 57 "	Pipe	84 Inches	08/21/2015	2020
EF011	7TH ST AND GREENWAY PKWY	33 ° 38 ' 13 "	-112 ° 3 ' 56 "	Pipe	36 Inches	08/20/2015	2020
EF012	7TH ST AND GREENWAY PKWY	33 ° 38 ' 14 "	-112 ° 3 ' 56 "	Pipe	36 Inches	08/20/2015	2020
EF013	CAVE CREEK RD AND GREENWAY PKWY	33 ° 37 ' 54 "	-112 ° 1 ' 53 "	Spillway	22 Feet	08/19/2015	2020
EF014	22ND PL AND MONTE CRISTO	33 ° 37 ' 56 "	-112 ° 2 ' 5 "	Spillway	50 Feet	08/19/2015	2020
EF015	22ND ST AND EAST FORK	33 ° 37 ' 56 "	-112 ° 2 ' 6 "	Pipe	36 Inches	09/30/2015	2020
EF016	22ND ST AND EAST FORK	33 ° 37 ' 56 "	-112 ° 2 ' 6 "	Pipe	36 Inches	09/30/2015	2020
EF017	22ND ST AND MONTE CRISTO	33 ° 37 ' 56 "	-112 ° 2 ' 7 "	Spillway	40 Feet	08/19/2015	2020
EF018	21ST ST AND EAST FORK	33 ° 37 ' 56 "	-112 ° 2 ' 14 "	Pipe	36 Inches	09/30/2015	2020
EF019	21ST ST AND EAST FORK	33 ° 37 ' 56 "	-112 ° 2 ' 14 "	Pipe	42 Inches	09/30/2015	2020
EF020	20TH PL AND MONTE CRISTO	33 ° 37 ' 56 "	-112 ° 2 ' 18 "	Spillway	12 Feet	08/19/2015	2020
EF021	2012 E MONTE CRISTO AVE	33 ° 37 ' 56 "	-112 ° 2 ' 20 "	Spillway	21 Feet	08/19/2015	2020
EF022	20TH ST AND GREENWAY PKWY	33 ° 37 ' 56 "	-112 ° 2 ' 21 "	Spillway	15 Feet	08/19/2015	2020
EF023	19TH ST AND EAST FORK (1926 E MONTE CRISTO)	33 ° 37 ' 56 "	-112 ° 2 ' 26 "	Spillway	10 Feet	08/19/2015	2020
EF025	1410 E SANDRA TERRACE	33 ° 38 ' 10 "	-112 ° 3 ' 4 "	Spillway	15 Feet	08/19/2015	2020
EF026	14TH ST AND GRANDVIEW RD	33 ° 38 ' 10 "	-112 ° 3 ' 9 "	Spillway	21 Feet	08/19/2015	2020

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EF027	12TH ST AND EAST FORK	33 ° 38 ' 13 "	-112 ° 3 ' 26 "	Box	36 Feet	08/26/2015	2020
EF028	16431 N 12TH ST	33 ° 38 ' 10 "	-112 ° 3 ' 20 "	Spillway	50 Feet	08/19/2015	2020
EF033	301 W LEMARCHE AVE	33 ° 37 ' 54 "	-112 ° 4 ' 36 "	Spillway	10 Feet	08/27/2015	2020
EF034	301 W MONTE CRISTO AVE	33 ° 37 ' 52 "	-112 ° 4 ' 37 "	Pipe	6 Feet	08/27/2015	2020
EF035	15802 N 4TH AVE	33 ° 37 ' 48 "	-112 ° 4 ' 43 "	Spillway	12 Feet	08/27/2015	2020
EF036	15803 N 4TH DR	33 ° 37 ' 47 "	-112 ° 4 ' 44 "	Spillway	14 Feet	08/27/2015	2020
EF037	MOON VALLEY PARK	33 ° 37 ' 38 "	-112 ° 4 ' 54 "	Pipe	5 Feet	08/27/2015	2020
EF038	214 W KATHLEEN RD	33 ° 37 ' 47 "	-112 ° 4 ' 38 "	Spillway	10 Feet	08/27/2015	2020
EF039	16042 N 1ST ST	33 ° 37 ' 57 "	-112 ° 4 ' 24 "	Pipe	8 Feet	08/27/2015	2020
EF040	1407 W BECK LN	33 ° 37 ' 33 "	-112 ° 5 ' 26 "	Spillway	21 Feet	08/26/2015	2020
EF041	1101 W BECK LN	33 ° 37 ' 34 "	-112 ° 5 ' 9 "	Spillway	19 Feet	08/26/2015	2020
EF042	15406 N 7TH DR	33 ° 37 ' 32 "	-112 ° 5 ' 0 "	Spillway	25 Feet	08/26/2015	2020
EF043	1527 W CARIBBEAN LN	33 ° 37 ' 27 "	-112 ° 5 ' 35 "	Spillway	10 Feet	08/26/2015	2020
EF044	1445 W CARIBBEAN LN	33 ° 37 ' 30 "	-112 ° 5 ' 23 "	Spillway	6 Feet	08/26/2015	2020
EF045	1455 W CARIBBEAN LN	33 ° 37 ' 30 "	-112 ° 5 ' 27 "	Spillway	10 Feet	08/26/2015	2020
EF046	1503 W CARIBBEAN LN	33 ° 37 ' 30 "	-112 ° 5 ' 31 "	Spillway	6 Feet	08/26/2015	2020
EF051	19TH PL AND GREENWAY PKWY	33 ° 37 ' 59 "	-112 ° 2 ' 31 "	Pipe	36 Inches	09/30/2015	2020
EF052	CAVE CREEK RD AND GREENWAY PKWY	33 ° 37 ' 54 "	-112 ° 1 ' 51 "	Spillway	48 Feet	08/19/2015	2020
EF053	1802 E PARADISE LN	33 ° 37 ' 59 "	-112 ° 4 ' 12 "	Spillway	18 Feet	08/20/2015	2020
EF054	16TH ST AND GREENWAY PKWY	33 ° 38 ' 9 "	-112 ° 2 ' 53 "	Spillway	23 Feet	08/20/2015	2020
EF055	16TH ST AND GREENWAY PKWY	33 ° 38 ' 9 "	-112 ° 2 ' 53 "	Spillway	14 Feet	08/20/2015	2020
EF056	1610 E SANDRA TERRACE	33 ° 38 ' 8 "	-112 ° 2 ' 52 "	Spillway	6 Feet	08/20/2015	2020
EF057	1526 W CARIBBEAN LN	33 ° 37 ' 27 "	-112 ° 5 ' 35 "	Spillway	12 Feet	08/26/2015	2020
EF058	15406 N 7TH DR	33 ° 37 ' 32 "	-112 ° 5 ' 0 "	Pipe	90 Inches	08/26/2015	2020
EF063	7TH ST AND GREENWAY PKWY	33 ° 38 ' 15 "	-112 ° 3 ' 59 "	Spillway	150 Feet	08/27/2015	2020
EF065	UNION HILLS AND 25TH WAY	33 ° 39 ' 17 "	112 ° 1 ' 35 "	Pipe	48 Inches	07/22/2015	2020
EF066	UNION HILLS AND 25TH WAY	33 ° 39 ' 17 "	112 ° 1 ' 34 "	Pipe	63 Inches	07/22/2015	2020
EF069	UTOPIA RD BETWEEN 27TH AND 28TH STREET	33 ° 39 ' 44 "	112 ° 1 ' 26 "	Pipe	48 Inches	07/22/2015	2020
EF070	UTOPIA ROAD BETWEEN 27TH AND 28TH ST.	33 ° 39 ' 44 "	112 ° 1 ' 26 "	Pipe	96 Inches	07/22/2015	2020
EF086	20300 N. 26TH ST.	33 ° 40 ' 29 "	112 ° 1 ' 71 "	Pipe	76 Inches	07/24/2015	2020

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EF087	20300 N. 26TH ST.	33 ° 40 ' 29 "	112 ° 1 ' 6 "	Pipe	76 Inches	07/24/2015	2020
EF088	CAVE CREEK AND 101	33 ° 40 ' 29 "	112 ° 1 ' 83 "	Pipe	58 Inches	07/24/2015	2020
EF091	2302 E. GROVERS AVE	33 ° 38 ' 89 "	112 ° 1 ' 88 "	Pipe	96 Inches	08/04/2015	2020
GC001	GRAND AVE AND GRAND CANAL	33 ° 29 ' 21 "	-112 ° 7 ' 38 "	Pipe	24 Inches	01/07/2015	2020
GC002	GRAND AVE AND GRAND CANAL	33 ° 29 ' 21 "	-112 ° 7 ' 40 "	Pipe	36 Inches	01/07/2015	2020
GC033	GRAND CANAL AND E OF PUEBLO GRANDE MUSEUM PARK	33 ° 26 ' 40 "	-111 ° 58 ' 58 "	Spillway	14 Feet	01/07/2015	2020
IB001	52ND ST AND SHEA BLVD	33 ° 34 ' 57 "	-111 ° 58 ' 4 "	Pipe	36 Inches	08/15/2013	2018
IB002	52ND ST AND SHEA BLVD	33 ° 34 ' 57 "	-111 ° 58 ' 8 "	Pipe	84 Inches	07/18/2013	2018
IB003	TATUM BLVD AND CHOLLA ST	33 ° 35 ' 24 "	-111 ° 58 ' 47 "	Pipe	66 Inches	02/05/2014	2019
IB004	TATUM BLVD AND CHOLLA ST	33 ° 35 ' 40 "	-111 ° 58 ' 40 "	Pipe	66 Inches	02/05/2014	2019
IB005	52ND ST AND INDIAN BEND WASH	33 ° 35 ' 1 "	-111 ° 58 ' 8 "	Box	14 x 3 Feet	07/18/2013	2018
IB007	36TH ST AND SWEETWATER AVE	33 ° 36 ' 13 "	-112 ° 0 ' 15 "	Pipe	78 Inches	08/05/2013	2018
IB008	40TH ST AND INDIAN BEND WASH	33 ° 35 ' 58 "	-111 ° 59 ' 44 "	Pipe	66 Inches	08/23/2013	2018
IB010	32ND ST AND ACOMA DR	33 ° 37 ' 7 "	-112 ° 0 ' 47 "	Pipe	66 Inches	08/05/2013	2018
IB011	56TH ST AND INDIAN BEND WASH	33 ° 34 ' 26 "	-111 ° 57 ' 39 "	Pipe	66 Inches	06/13/2014	2019
IB013	CACTUS RD AND INDIAN BEND WASH	33 ° 35 ' 50 "	-111 ° 59 ' 35 "	Pipe	72 Inches	08/14/2013	2018
IB016	TATUM BLVD AND CHOLLA ST	33 ° 35 ' 29 "	-111 ° 58 ' 40 "	Pipe	36 Inches	08/22/2013	2018
IB018	CACTUS RD AND INDIAN BEND WASH	33 ° 35 ' 50 "	-111 ° 59 ' 35 "	Pipe	72 Inches	08/15/2013	2018
IB021	10202 N 54TH PL	33 ° 34 ' 45 "	-111 ° 57 ' 51 "	Pipe	36 Inch	10/14/2013	2018
IB023	3526 E DAHLIA DR	33 ° 36 ' 13 "	-112 ° 0 ' 16 "	Spillway	20 Feet	08/14/2013	2018
IB024	3631 E DAHLIA DR	33 ° 36 ' 13 "	-112 ° 0 ' 10 "	Spillway	21 Feet	08/14/2013	2018
IB025	3716 E ASTER DR	33 ° 36 ' 10 "	-112 ° 0 ' 9 "	Spillway	19 Feet	08/14/2013	2018
IB026	12806 N 37TH CT	33 ° 36 ' 8 "	-112 ° 0 ' 4 "	Spillway	8 Feet	08/14/2013	2018
IB027	CACTUS RD AND INDIAN BEND WASH	33 ° 35 ' 53 "	-111 ° 59 ' 35 "	Spillway	11 Feet	08/14/2013	2018
IB035	THUNDERBIRD RD AND INDIAN BEND WASH	33 ° 36 ' 42 "	-112 ° 0 ' 32 "	Pipe	60 Inches	08/05/2013	2018
IB036	THUNDERBIRD RD AND INDIAN BEND WASH	33 ° 36 ' 43 "	-112 ° 0 ' 32 "	Pipe	60 Inches	08/05/2013	2018
IB037	THUNDERBIRD RD AND INDIAN BEND WASH	33 ° 36 ' 46 "	-112 ° 0 ' 36 "	Box	6 x 10 Feet	08/05/2013	2018
IB038	THUNDERBIRD RD AND INDIAN BEND WASH	33 ° 36 ' 46 "	-112 ° 0 ' 32 "	Pipe	84 Inches	08/05/2013	2018
IB039	13636 N 34TH PL	33 ° 36 ' 39 "	-112 ° 0 ' 28 "	Spillway	10 Feet	08/15/2013	2018
IB040	13614 N 34TH PL	33 ° 36 ' 36 "	-112 ° 0 ' 27 "	Spillway	10 Feet	08/15/2013	2018

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IB041	PRESIDIO RD AND INDIAN BEND WASH	33 º 36 ' 33 "	-112 º 0 ' 28 "	Spillway	30 Feet	08/15/2013	2018
IB042	13402 N 35TH ST	33 º 36 ' 29 "	-112 º 0 ' 25 "	Spillway	30 Feet	08/15/2013	2018
IB043	10811 N 52ND ST	33 º 35 ' 5 "	-111 º 58 ' 9 "	Spillway	18 Feet	07/18/2013	2018
IB044	11016 N 50TH ST	33 º 35 ' 14 "	-111 º 58 ' 14 "	Spillway	12 Feet	07/18/2013	2018
IB045	4943 E CHOLLA ST	33 º 35 ' 24 "	-111 º 58 ' 27 "	Spillway	7 Feet	07/18/2013	2018
LC001	4532 W ALTA VISTA RD	33 º 23 ' 18 "	-112 º 9 ' 23 "	Spillway	9 Feet	04/25/2012	2017
LC002	6616 S 45TH GLEN	33 º 23 ' 10 "	-112 º 9 ' 26 "	Spillway	13 Feet	04/25/2012	2017
LC003	46TH DR AND VINEYARD RD	33 º 23 ' 5 "	-112 º 9 ' 30 "	Spillway	32 Feet	04/25/2012	2017
LC008	53RD LN AND BASELINE RD	33 º 22 ' 41 "	-112 º 10 ' 30 "	Pipe	66 Inches	04/30/2012	2017
LC012	FREMONT RD AND S 53RD LN	0 º 0 ' 0 "	0 º 0 ' 0 "	Pipe	42 Inches	05/16/2012	2017
LC017	7377 W MAGDALENA LN	33 º 22 ' 13 "	112 º 12 ' 49 "	Pipe	34 Inches	05/16/2012	2017
LC018	7810 S 74TH AVE	33 º 22 ' 27 "	-112 º 13 ' 9 "	Pipe	36 Inches	05/16/2012	2017
LC020	S 63RD AVE AND LACC	33 º 22 ' 23 "	112 º 11 ' 41 "	Pipe	60 Inches	05/22/2012	2017
MV001	19TH AVE AND SWEETWATER AVE	33 º 36 ' 14 "	-112 º 5 ' 59 "	Pipe	48 Inches	09/06/2012	2017
MV002	19TH AVE AND SWEETWATER AVE	33 º 36 ' 14 "	-112 º 5 ' 59 "	Pipe	24 Inches	09/06/2012	2017
MV004	14TH DR AND SWEETWATER AVE	33 º 36 ' 14 "	-112 º 5 ' 27 "	Spillway	8 Feet	09/06/2012	2017
MV005	12TH AVE AND THUNDERBIRD RD	33 º 36 ' 27 "	-112 º 5 ' 16 "	Pipe	54 Inches	09/20/2012	2017
MV007	7TH ST AND HEARN RD	33 º 36 ' 55 "	-112 º 3 ' 56 "	Pipe	48 Inches	09/20/2012	2017
MV010	17TH DR AND SWEETWATER AVE	33 º 36 ' 14 "	-112 º 5 ' 48 "	Spillway	9 Feet	09/06/2012	2017
MV011	17TH AVE AND SWEETWATER AVE	33 º 36 ' 14 "	-112 º 5 ' 43 "	Spillway	20 Feet	09/06/2012	2017
MV012	16TH DR AND SWEETWATER AVE	33 º 36 ' 14 "	-112 º 5 ' 40 "	Spillway	20 Feet	09/06/2012	2017
MV013	16TH AVE AND SWEETWATER AVE	33 º 36 ' 14 "	-112 º 5 ' 37 "	Spillway	20 Feet	09/06/2012	2017
MV014	15TH DR AND SWEETWATER AVE	33 º 36 ' 14 "	-112 º 5 ' 33 "	Spillway	21 Feet	09/06/2012	2017
MV015	15TH AVE AND SWEETWATER AVE	33 º 36 ' 14 "	-112 º 5 ' 30 "	Spillway	18 Feet	09/06/2012	2017
MV016	13TH LN AND THUNDERBIRD RD	33 º 36 ' 27 "	-112 º 5 ' 15 "	Spillway	11 Feet	09/20/2012	2017
MV017	N 3RD AVE AND MV WASH	33 º 36 ' 50 "	112 º 4 ' 42 "	Spillway	15 Feet	09/20/2012	2017
MV018	N. 3RD AVENUE AND MV WASH	33 º 36 ' 50 "	112 º 4 ' 42 "	Spillway	12 Feet	09/20/2012	2017
MV019	7TH ST. AND E. ROBERTS RD. WEST SIDE OF STREET	33 º 39 ' 57 "	-112 º 1 ' 36 "	Pipe	60 Inches		
MV020	7TH ST. AND E. ROBERTS RD. WEST SIDE OF STREET.	33 º 39 ' 57 "	-112 º 1 ' 36 "	Pipe	54 Inches		
NM001	6TH ST AND MOUNTAIN VIEW RD	33 º 34 ' 33 "	-112 º 3 ' 59 "	Pipe	42 Inches	07/01/2011	2016

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NR004	4640 WEST HEYERDAHL COURT	33 ° 52 ' 21 "	112 ° 9 ' 40 "	Pipe	40 Inches	02/29/2012	2017
NR005	N 45TH AVE AND W EMILY DR	33 ° 52 ' 43 "	112 ° 9 ' 27 "	Pipe	40 Inches	04/17/2012	2017
NR006	45TH AVE AND JUDSON DRIVE	33 ° 52 ' 35 "	112 ° 9 ' 29 "	Pipe	36 Inches	04/17/2012	2017
OC001	OLD CROSS CUT AND WASHINGTON ST, SOUTH TUNNEL	33 ° 26 ' 52 "	-111 ° 58 ' 50 "	Pipe	36 Inches	06/03/2014	2019
OC002	OLD CROSS CUT AND VAN BUREN ST, SOUTH TUNNEL	33 ° 27 ' 4 "	-111 ° 58 ' 53 "	Pipe	42 Inches	06/03/2014	2019
OC004	46TH ST AND MCDOWELL RD	33 ° 28 ' 5 "	-111 ° 58 ' 44 "	Pipe	42 Inches	01/28/2014	2019
OC005	48TH ST AND THOMAS RD	33 ° 28 ' 49 "	-111 ° 58 ' 41 "	Pipe	36 Inches	01/29/2014	2019
OC006	48TH ST AND EARLL DR	33 ° 29 ' 1 "	-111 ° 58 ' 41 "	Pipe	52 Inches	01/28/2014	2019
OC007	48TH ST AND INDIAN SCHOOL RD	33 ° 29 ' 37 "	-111 ° 58 ' 41 "	Pipe	36 Inches	01/28/2014	2019
OC008	46TH ST AND MCDOWELL RD	33 ° 27 ' 56 "	-111 ° 58 ' 51 "	Pipe	54 Inches	01/28/2014	2019
OC022	48TH ST AND OAK ST	33 ° 28 ' 23 "	-111 ° 58 ' 42 "	Pipe	48 Inches	01/28/2014	2019
OC028	48TH ST AND INDIAN SCHOOL RD	33 ° 29 ' 46 "	-111 ° 58 ' 39 "	Spillway	5 Feet	01/28/2014	2019
OC039	46TH STREET AND ROOSEVELT STREET - OLD CROSS CUT	33 ° 27 ' 29 "	-111 ° 58 ' 56 "	Box	6 x 5 Feet	05/16/2014	2019
OC053	48TH ST AND OSBORN RD	33 ° 29 ' 13 "	-111 ° 58 ' 41 "	Pipe	52 Inches	01/28/2014	2019
OC054	48TH ST AND OSBORN RD	33 ° 29 ' 14 "	-111 ° 58 ' 41 "	Box	8 x 6 Feet	01/28/2014	2019
OC055	48TH ST AND WELDON AVE	33 ° 29 ' 24 "	-111 ° 58 ' 41 "	Pipe	48 Inches	01/28/2014	2019
OC062	48TH ST AND THOMAS RD	33 ° 28 ' 44 "	-111 ° 58 ' 41 "	Pipe	36 Inches	01/28/2014	2019
OC072	OLD CROSS CUT AND GRANADA	33 ° 28 ' 5 "	-111 ° 58 ' 41 "	Pipe	42 Inches	01/28/2014	2019
OC073	47TH ST AND MELVIN ST	33 ° 27 ' 7 "	-111 ° 58 ' 53 "	Spillway	13 Feet	03/07/2014	2019
OC074	46TH ST AND TAYLOR ST	33 ° 27 ' 14 "	-111 ° 58 ' 55 "	Spillway	28 Feet	03/07/2014	2019
OC075	46TH ST AND TAYLOR ST	33 ° 27 ' 15 "	-111 ° 58 ' 55 "	Spillway	12 Feet	03/07/2014	2019
OC076	46TH ST AND FILLMORE ST	33 ° 27 ' 17 "	-111 ° 58 ' 55 "	Spillway	29 Feet	03/07/2014	2019
OC077	46TH ST AND PIERCE ST	33 ° 27 ' 20 "	-111 ° 58 ' 56 "	Spillway	30 Feet	03/07/2014	2019
OC078	46TH ST AND MCKINLEY ST	33 ° 27 ' 22 "	-111 ° 58 ' 56 "	Spillway	27 Feet	03/07/2014	2019
OC083	48TH ST AND EARLL DR	33 ° 29 ' 1 "	-111 ° 58 ' 41 "	Spillway		01/28/2014	2019
PD001	91ST AVE AND PAPAGO DIVERSION CHANNEL	33 ° 27 ' 49 "	-112 ° 15 ' 20 "	Pipe	90 Inches	04/07/2014	2019
PD002	83RD AVE AND PAPAGO DIVERSION CHANNEL	33 ° 27 ' 47 "	-112 ° 45 ' 42 "	Pipe	90 Inches	04/07/2014	2019
PD003	75TH AVE AND PAPAGO DIVERSION CHANNEL	33 ° 37 ' 49 "	-112 ° 13 ' 15 "	Pipe	90 Inches	05/22/2014	2019
PD004	67TH AVE AND PAPAGO DIVERSION CHANNEL	33 ° 27 ' 49 "	-112 ° 12 ' 13 "	Pipe	90 Inches	04/07/2014	2019
PD005	59TH AVE AND PAPAGO DIVERSION CHANNEL	33 ° 27 ' 50 "	-112 ° 48 ' 46 "	Pipe	90 Inches	04/07/2014	2019

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PD006	51ST AVE AND PAPAGO DIVERSION CHANNEL	33 ° 27 ' 50 "	-112 ° 10 ' 10 "	Pipe	84 Inches	04/07/2014	2019
PD007	43RD AVE AND PAPAGO DIVERSION CHANNEL	33 ° 27 ' 45 "	-112 ° 9 ' 6 "	Pipe	96 Inches	05/28/2014	2019
PD008	43RD AVE AND PAPAGO DIVERSION CHANNEL	33 ° 27 ' 45 "	-112 ° 9 ' 4 "	Pipe	54 Inches	05/28/2014	2019
PD009	39TH AVE AND PAPAGO DIVERSION CHANNEL	33 ° 27 ' 44 "	-112 ° 8 ' 35 "	Pipe	78 Inches	05/29/2014	2019
PD010	35TH AVE AND PAPAGO DIVERSION CHANNEL	33 ° 34 ' 19 "	-112 ° 8 ' 1 "	Pipe	54 Inches	05/28/2014	2019
PD011	31ST AVE AND PAPAGO DIVERSION CHANNEL	33 ° 27 ' 44 "	-112 ° 7 ' 33 "	Box	10 x 4 Feet	12/13/2013	2018
PD014	31ST AVE AND PAPAGO DIVERSION CHANNEL	33 ° 27 ' 44 "	-112 ° 7 ' 33 "	Pipe	48 Inches	05/28/2014	2019
PD015	32ND AVE AND PAPAGO DIVERSION CHANNEL	33 ° 27 ' 45 "	-112 ° 7 ' 38 "	Pipe	40 Inches	12/13/2013	2018
PD016	34TH AVE AND PAPAGO DIVERSION CHANNEL	33 ° 27 ' 47 "	-112 ° 7 ' 54 "	Pipe	42 Inches	05/28/2014	2019
PD017	43RD AVE AND PAPAGO DIVERSION CHANNEL	33 ° 27 ' 46 "	-112 ° 9 ' 7 "	Pipe	18 Inches	05/28/2014	2019
PD023	2901 W CULVER ST IN PAPAGO DIVERSION	33 ° 27 ' 47 "	-112 ° 7 ' 17 "	Spillway	14 Feet	04/07/2014	2019
PV001	33RD ST AND LINCOLN DR	33 ° 31 ' 55 "	-112 ° 0 ' 42 "	Pipe	36 Inches	10/09/2012	2017
PV002	34TH ST AND LINCOLN DR	33 ° 31 ' 54 "	-112 ° 0 ' 34 "	Pipe	48 Inches	09/26/2012	2017
PV004	35TH ST AND LINCOLN DR	33 ° 31 ' 55 "	-112 ° 0 ' 24 "	Pipe	48 Inches	09/26/2012	2017
PV005	35TH PL AND LINCOLN DR	33 ° 31 ' 55 "	-112 ° 0 ' 19 "	Pipe	36 Inches	09/26/2012	2017
PV006	3636 E LINCOLN DR	33 ° 31 ' 55 "	-112 ° 0 ' 10 "	Pipe	5 Feet	10/09/2012	2017
PV007	3762 E LINCOLN DR	33 ° 31 ' 55 "	-111 ° 59 ' 59 "	Pipe	48 Inches	10/09/2012	2017
PV008	3843 E LINCOLN DR	33 ° 31 ' 55 "	-111 ° 59 ' 50 "	Pipe	36 Inches	10/18/2012	2017
PV009	3865 E LINCOLN DR	33 ° 31 ' 53 "	-111 ° 59 ' 47 "	Pipe	75 Inches	10/18/2012	2017
PV010	35TH PLACE AND LINCOLN DR	33 ° 31 ' 55 "	-112 ° 0 ' 19 "	Spillway	7 Feet	09/26/2012	2017
SC001	56TH AVE AND UNION HILLS DR	33 ° 39 ' 19 "	-112 ° 10 ' 45 "	Box	10x11 Feet	04/23/2012	2017
SC002	51ST AVE AND SKUNK CREEK, NEAR NORHTWEST BIKE LANE OFF BRIDGE.	33 ° 39 ' 44 "	-112 ° 10 ' 9 "	Pipe	36 Inches	07/07/2016	2021
SC006	19432 N 50TH AVE	33 ° 39 ' 46 "	-112 ° 10 ' 5 "	Spillway	10 Feet	07/07/2016	2021
SC008	19653 N 48TH LN	33 ° 39 ' 49 "	-112 ° 9 ' 52 "	Spillway	16 Feet	01/09/2012	2017
SC009	19623 N 48TH AVE	33 ° 39 ' 49 "	-112 ° 9 ' 46 "	Spillway	24 Feet	07/07/2016	2021
SC010	47TH DR AND BEHREND DR	33 ° 39 ' 52 "	-112 ° 9 ' 43 "	Spillway	6 Feet	07/07/2016	2021
SC012	4790 W ORAIBI DR	33 ° 39 ' 44 "	112 ° 9 ' 52 "	Spillway	6 Feet	12/23/2011	2016
SC013	19634 N 47TH DR	33 ° 39 ' 50 "	-112 ° 9 ' 40 "	Spillway	4 Feet	07/07/2016	2021
SC014	19640 N 47TH AVE	33 ° 39 ' 51 "	-112 ° 9 ' 37 "	Pipe	6 Feet	07/07/2016	2021
SC015	46TH DR AND BEHREND DR	33 ° 39 ' 54 "	-112 ° 9 ' 37 "	Pipe	6 Feet	07/07/2016	2021

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SC016	19810 N 46TH AVE	33 º 39 ' 58 "	-112 º 9 ' 33 "	Pipe	6 Feet	07/07/2016	2021
SC017	19828 N 45TH LN	33 º 39 ' 58 "	112 º 9 ' 31 "	Spillway	6 Feet	11/18/2011	2016
SC022	2749 W DARIEN WAY	33 º 48 ' 10 "	-112 º 7 ' 12 "	Spillway	10 Feet	12/08/2011	2016
SC023	27TH CT AND FLORIMOND RD	33 º 48 ' 13 "	-112 º 7 ' 13 "	Spillway	50 Feet	12/08/2011	2016
SC024	27TH LN AND VIA AQUILA	33 º 48 ' 26 "	-112 º 7 ' 11 "	Box	4 x 2 Feet	12/08/2011	2016
SC025	27TH LN AND VIA AQUILA, WEST SIDE	33 º 48 ' 26 "	-112 º 7 ' 12 "	Box	4 x 2 Feet	12/08/2011	2016
SC027	CAREFREE HWY AND 27TH DR	33 º 47 ' 55 "	-112 º 7 ' 6 "	Pipe	36 Inches	12/09/2011	2016
SC031	35TH DR AND SOFT WIND DR	33 º 42 ' 6 "	-112 º 8 ' 8 "	Pipe	30 Inches	04/23/2012	2017
SC032	20659 N 41ST LN	33 º 40 ' 28 "	-112 º 8 ' 55 "	Spillway	18 Feet	04/17/2012	2017
SC033	20669 N 41ST LN	33 º 40 ' 29 "	-112 º 8 ' 55 "	Spillway	17 Feet	04/17/2012	2017
SC034	20657 N 42ND AVE	33 º 40 ' 28 "	-112 º 8 ' 58 "	Spillway	18 Feet	04/17/2012	2017
SC035	20622 N 42ND AVE	33 º 40 ' 23 "	-112 º 8 ' 59 "	Spillway	17 Feet	04/17/2012	2017
SC036	20670 N 41ST AVE	33 º 40 ' 29 "	-112 º 8 ' 52 "	Spillway	45 Feet	04/17/2012	2017
SC037	SC WASH AND SR101 FRONTAGE RD	33 º 40 ' 12 "	-112 º 9 ' 4 "	Pipe	36 Inches	04/30/2013	2018
SC040	VIA PUZZOLA AND VIA DEL DESERTO	33 º 48 ' 32 "	-112 º 7 ' 18 "	Pipe	36 Inches	12/12/2011	2016
SC043	2761 W VIA CALABRIA	33 º 47 ' 58 "	112 º 7 ' 12 "	Spillway	19 Feet	12/09/2011	2016
SC044	35TH AVE AND PARKSIDE LN	33 º 41 ' 38 "	112 º 8 ' 4 "	Pipe	35 Inches	10/22/2009	2014
SC046	35206 N 27TH DRIVE	33 º 48 ' 12 "	-112 º 7 ' 7 "	Pipe	36 Inches	12/09/2011	2016
SC048	W OBERLIN WAY AND N 26TH AVE	33 º 44 ' 12 "	112 º 6 ' 53 "	Spillway	32 Feet	05/07/2012	2017
SC049	PINNACLE PEACK ROAD AND 40TH LANE	33 º 41 ' 53 "	112 º 8 ' 50 "	Pipe	62 Inches	01/22/2015	2020
SC050	SOUTH SIDE OF PINNACLE PEAK ROAD AT 40TH LANE.	33 º 41 ' 53 "	112 º 8 ' 51 "	Pipe	60 Inches	01/22/2015	2020
SR001	51ST AVE AND SALT RIVER	33 º 24 ' 31 "	-112 º 10 ' 10 "	Pipe	96 Inches	04/18/2016	2021
SR002	43RD AVE AND SALT RIVER	33 º 24 ' 44 "	-112 º 9 ' 6 "	Pipe	90 Inches	04/18/2016	2021
SR003	35TH AVE AND SALT RIVER	33 º 24 ' 43 "	-112 º 8 ' 5 "	Pipe	75 Inches	05/25/2016	2021
SR004	27TH AVE AND SALT RIVER	33 º 25 ' 3 "	-112 º 7 ' 1 "	Pipe	72 Inches	05/24/2016	2021
SR005	25TH AVE AND SALT RIVER	33 º 25 ' 0 "	-112 º 6 ' 47 "	Pipe	102 Inches	04/18/2016	2021
SR006	22ND AVE AND SALT RIVER	33 º 25 ' 7 "	-112 º 6 ' 24 "	Pipe	72 Inches	05/25/2016	2021
SR007	19TH AVE AND SALT RIVER	33 º 24 ' 39 "	-112 º 5 ' 59 "	Pipe	54 Inches	04/05/2016	2021
SR008	15TH AVE AND SALT RIVER	33 º 24 ' 53 "	-112 º 5 ' 27 "	Pipe	96 Inches	09/18/2015	2020
SR009	11TH AVE AND SALT RIVER	33 º 25 ' 14 "	-112 º 5 ' 17 "	Pipe	81 Inches	04/09/2015	2020

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SR010	7TH AVE AND SALT RIVER	33 ° 25 ' 10 "	-112 ° 4 ' 56 "	Pipe	54 Inches	06/17/2016	2021
SR012	CENTRAL AVE AND SALT RIVER	33 ° 25 ' 24 "	-112 ° 4 ' 26 "	Pipe	42 Inches	05/11/2015	2020
SR013	CENTRAL AVE AND SALT RIVER	33 ° 25 ' 25 "	-112 ° 4 ' 25 "	Box	10 x 21 Feet	04/07/2015	2020
SR014	3RD ST AND SALT RIVER	33 ° 25 ' 2 "	-112 ° 4 ' 1 "	Pipe	36 Inches	05/31/2016	2021
SR015	3RD ST AND SALT RIVER	33 ° 25 ' 21 "	-112 ° 4 ' 10 "	Pipe	84 Inches	06/01/2016	2021
SR016	10TH ST AND SALT RIVER	33 ° 25 ' 18 "	-112 ° 3 ' 37 "	Pipe	54 Inches	04/15/2015	2020
SR017	12TH ST AND SALT RIVER	33 ° 25 ' 16 "	-112 ° 3 ' 22 "	Pipe	96 Inches	04/15/2015	2020
SR018	16TH ST AND SALT RIVER	33 ° 25 ' 11 "	-112 ° 2 ' 54 "	Pipe	66 Inches	01/05/2015	2020
SR019	20TH ST AND SALT RIVER	33 ° 25 ' 13 "	-112 ° 2 ' 21 "	Box	10 x 21 Feet	04/05/2016	2021
SR020	24TH ST AND SALT RIVER	33 ° 25 ' 6 "	-112 ° 1 ' 49 "	Pipe	84 Inches	03/09/2016	2021
SR024	28TH ST AND SALT RIVER	33 ° 25 ' 13 "	-112 ° 1 ' 6 "	Pipe	90 Inches	05/07/2015	2020
SR026	37TH ST AND SALT RIVER	33 ° 25 ' 37 "	-112 ° 0 ' 19 "	Pipe	42 Inches	05/12/2015	2020
SR027	36TH ST AND SALT RIVER, UNDER SKY HARBOR	33 ° 25 ' 39 "	-112 ° 0 ' 4 "	Pipe	82 Inches	05/27/2016	2021
SR029	47TH ST AND SALT RIVER	33 ° 26 ' 0 "	-111 ° 58 ' 53 "	Pipe	78 Inches	05/27/2016	2021
SR030	27TH AVE AND SALT RIVER	33 ° 24 ' 31 "	-112 ° 6 ' 59 "	Pipe	108 Inches	04/06/2016	2021
SR031	19TH AVE AND SALT RIVER	33 ° 24 ' 35 "	-112 ° 5 ' 59 "	Pipe	60 Inches	04/05/2016	2021
SR032	7TH AVE AND SALT RIVER	33 ° 24 ' 59 "	-112 ° 4 ' 56 "	Pipe	72 Inches	06/15/2016	2021
SR033	CENTRAL AVE AND SALT RIVER	33 ° 25 ' 15 "	-112 ° 4 ' 25 "	Pipe	66 Inches	04/14/2015	2020
SR035	7TH ST AND SALT RIVER	33 ° 25 ' 13 "	-112 ° 3 ' 54 "	Pipe	72 Inches	06/15/2016	2021
SR036	15TH ST AND SALT RIVER	33 ° 25 ' 4 "	-112 ° 2 ' 59 "	Pipe	72 Inches	05/07/2015	2020
SR037	16TH ST AND SALT RIVER	33 ° 25 ' 3 "	-112 ° 2 ' 56 "	Pipe	36 Inches	05/07/2015	2020
SR038	24TH ST AND SALT RIVER	33 ° 24 ' 55 "	-112 ° 1 ' 49 "	Pipe	72 Inches	04/08/2015	2020
SR039	28TH ST AND SALT RIVER	33 ° 24 ' 59 "	-112 ° 1 ' 15 "	Pipe	96 Inches	05/07/2015	2020
SR045	40TH ST AND SALT RIVER	33 ° 25 ' 34 "	-111 ° 59 ' 43 "	Pipe	54 Inches	05/07/2015	2020
SR046	7TH ST AND SALT RIVER	33 ° 25 ' 17 "	-112 ° 3 ' 54 "	Pipe	24 Inches	04/16/2015	2020
SR048	45TH ST AND SALT RIVER	33 ° 25 ' 44 "	-111 ° 59 ' 5 "	Pipe	48 Inches	05/12/2015	2020
SR049	67TH AVE AND SALT RIVER	33 ° 24 ' 1 "	-112 ° 12 ' 15 "	Pipe	96 Inches	02/11/2016	2021
SR052	52ND ST AND HOHOKAM FRWY	33 ° 26 ' 27 "	-111 ° 58 ' 9 "	Box	8 x 5 Feet	01/29/2015	2020
SR056	28TH ST AND SALT RIVER	33 ° 25 ' 11 "	-112 ° 1 ' 11 "	Pipe	36 Inches	05/07/2015	2020
SR059	25TH AVE AND SALT RIVER	33 ° 25 ' 0 "	-112 ° 8 ' 4 "	Pipe	60 Inches	04/18/2016	2021

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SR061	32ND ST AND SALT RIVER	33 º 25 ' 23 "	-112 º 0 ' 47 "	Box	7 x 5 Feet	05/27/2016	2021
SR062	38TH ST AND SALT RIVER	33 º 25 ' 39 "	-112 º 0 ' 4 "	Pipe	60 Inches	05/12/2015	2020
SR063	15TH AVE AND SALT RIVER	33 º 24 ' 53 "	-112 º 5 ' 27 "	Pipe	60 Inches	04/08/2015	2020
SR064	19TH AVE AND SALT RIVER	33 º 24 ' 41 "	-112 º 5 ' 56 "	Pipe	36 Inches	04/06/2015	2020
SR068	28TH ST AND SALT RIVER	33 º 25 ' 14 "	-112 º 1 ' 6 "	Box	8 x 8 Feet	05/27/2016	2021
SR069	31ST ST AND SALT RIVER	33 º 25 ' 22 "	-112 º 0 ' 51 "	Pipe	60 Inches	05/12/2015	2020
SR070	33RD ST AND SALT RIVER	33 º 25 ' 24 "	-112 º 0 ' 44 "	Pipe	36 Inches	05/12/2015	2020
SR071	33RD ST AND SALT RIVER	33 º 25 ' 28 "	-112 º 0 ' 37 "	Pipe	60 Inches	05/12/2015	2020
SR072	45TH ST AND SALT RIVER	33 º 25 ' 52 "	-111 º 59 ' 12 "	Pipe	48 Inches	05/12/2015	2020
SR073	45TH ST AND SALT RIVER	33 º 25 ' 52 "	-111 º 59 ' 12 "	Pipe	60 Inches	05/12/2015	2020
SR075	43RD AVE AND BROADWAY RD	33 º 24 ' 14 "	-112 º 9 ' 5 "	Box	10 x 5 Feet	04/06/2016	2021
SR076	43RD AVE AND BROADWAY RD	33 º 24 ' 15 "	-112 º 9 ' 5 "	Pipe	48 Inches	04/06/2016	2021
SR077	22ND AVE AND RIO SALADO SERVICE YARD	33 º 25 ' 6 "	-112 º 6 ' 25 "	Spillway	17 Feet	04/18/2016	2021
SR079	35TH AVE AND SALT RIVER	33 º 24 ' 34 "	-112 º 8 ' 4 "	Pipe	42 Inches	04/18/2016	2021
SR080	51ST AVE AND SALT RIVER	33 º 24 ' 15 "	-112 º 10 ' 9 "	Pipe	42 Inches	04/18/2016	2021
SR082	75TH AVE S/O BROADWAY RD	33 º 23 ' 46 "	112 º 13 ' 14 "	Pipe	84 Inches	04/05/2016	2021
SR083	83RD AVE AND SALT RIVER	33 º 23 ' 10 "	112 º 13 ' 53 "	Pipe	12 Inches	04/05/2016	2021
SR084	SW CORNER OF THE 153 EXPRESSWAY AND THE SALT RIVER	33 º 25 ' 51 "	-111 º 58 ' 48 "	Pipe	72" Inches	05/12/2015	2020
ST002	33RD PL AND PERSHING AVE	33 º 36 ' 24 "	-112 º 0 ' 36 "	Spillway	33 Feet	09/14/2012	2017
ST003	33RD PL AND CAPTAIN DREYFUS AVE	33 º 36 ' 20 "	-112 º 0 ' 36 "	Spillway	50 Feet	09/14/2012	2017
ST004	SWEETWATER AVE AND 35TH ST	33 º 36 ' 15 "	-112 º 0 ' 22 "	Pipe	36 Inches	09/14/2012	2017
SW001	33RD AVE AND DEER VALLEY RD	33 º 41 ' 2 "	-112 º 7 ' 36 "	Pipe	54 Inches	11/21/2012	2017
SW006	43RD AVE AND BEHREND DR	33 º 39 ' 54 "	-112 º 9 ' 7 "	Pipe	36 Inches	11/28/2012	2017
SW009	21041 N 33RD AVE	33 º 40 ' 39 "	-112 º 7 ' 49 "	Pipe	8 Feet	11/14/2012	2017
SW010	3201 W SALTER DRIVE	33 º 40 ' 55 "	-112 º 7 ' 41 "	Spillway	37 Feet	11/14/2012	2017
SW011	33RD AVE AND DEER VALLEY RD	33 º 41 ' 2 "	-112 º 7 ' 37 "	Pipe	36 Inches	11/21/2012	2017
SW013	3143 W QUAIL AVE	33 º 40 ' 45 "	-112 º 7 ' 40 "	Spillway	22 Feet	11/07/2012	2017
SW014	3223 W ROSE GARDEN LN	33 º 40 ' 35 "	-112 º 7 ' 44 "	Spillway	16 Feet	11/07/2012	2017
SW015	38TH AVE AND BEARDSLEY RD	33 º 40 ' 8 "	-112 º 8 ' 27 "	Pipe	78 Inches	11/28/2012	2017
SW019	31ST DR AND DEER VALLEY RD	33 º 41 ' 2 "	-112 º 7 ' 36 "	Pipe	36 Inches	11/21/2012	2017

Outfall Identification Legend

AC = Arizona Canal Diversion Canal	EF = East Fork of the Cave Creek	NM = North Mountain Wash	SC = Skunk Creek Wash	TS = Tenth Street Wash
AF = Agua Fria (West Hwy loop 101)	GC = Grand Canal	OC = Old Cross Cut Canal	SR = Salt River	UC = Upper Cave Creek Wash
AW = Ahwatukee	IB = Indian Bend Wash	PD = Papago Diversion Canal	ST = Sweetwater Tributary of IB	ZT = Emile Zola Tributary of IB
AZ = Arizona Canal	LC = Laveen Area Conveyance Channel	PV = Paradise Valley	SW = Scatter Wash	
CC = Cave Creek Wash	MV = Moon Valley Wash	RID = Roosevelt Irrigation District	TD = Tempe Drainage Channel	

Outfall ID	Site Address	Latitude	Longitude	Type	Size	Last Inspection	Target Inspection
SW020	3173 W MATTHEW DRIVE	33 ° 40 ' 38 "	-112 ° 7 ' 44 "	Spillway	18 Feet	11/07/2012	2017
SW021	3119 W MELINDA LANE	33 ° 40 ' 59 "	-112 ° 7 ' 37 "	Spillway	12 Feet	11/07/2012	2017
SW022	3135 W SALTER DRIVE	33 ° 40 ' 57 "	-112 ° 7 ' 38 "	Spillway	13 Feet	11/07/2012	2017
SW023	3135 W ABRAHAM LANE	33 ° 40 ' 53 "	-112 ° 7 ' 39 "	Spillway	22 Feet	11/07/2012	2017
SW024	3135 W LONE CACTUS DRIVE	33 ° 40 ' 50 "	-112 ° 7 ' 39 "	Spillway	24 Feet	11/07/2012	2017
SW025	3240 W ROSS AVE	33 ° 40 ' 32 "	-112 ° 7 ' 49 "	Spillway	17 Feet	01/22/2013	2018
SW026	31ST AVE AND DEER VALLEY RD	33 ° 41 ' 5 "	-112 ° 7 ' 34 "	Pipe	36 Inches	11/21/2012	2017
SW027	21064 N 32ND DRIVE	33 ° 40 ' 42 "	-112 ° 7 ' 47 "	Spillway	14 Feet	11/14/2012	2017
SW028	3204 W LONE CACTUS DR	33 ° 40 ' 50 "	-112 ° 7 ' 42 "	Spillway	10 Feet	11/14/2012	2017
SW029	22202 N 29TH DRIVE	33 ° 41 ' 15 "	-112 ° 7 ' 21 "	Spillway	4 Feet	01/22/2013	2018
SW030	22220 N 27TH AVE	33 ° 41 ' 19 "	-112 ° 7 ' 2 "	Spillway	4 Feet	01/22/2013	2018
SW031	22220 N. 27TH AVE.	33 ° 41 ' 19 "	-112 ° 7 ' 3 "	Spillway	4 Feet	01/22/2013	2018
SW032	22125 SANDS DR	33 ° 41 ' 12 "	-112 ° 7 ' 17 "	Pipe	53 Inches	01/22/2013	2018
SW037	35TH AVENUE AND MOHAWK LANE	33 ° 40 ' 20 "	112 ° 8 ' 7 "	Pipe	48 Inches	02/11/2013	2018
SW038	NORTH 26TH AVENUE AND WEST ADOBE DRIVE	33 ° 41 ' 21 "	112 ° 6 ' 58 "	Spillway	4 Feet	02/11/2013	2018
TD002	4350 E SUPERIOR AVE	33 ° 25 ' 2 "	-111 ° 59 ' 15 "	Spillway	6 Feet	08/14/2012	2017
TD003	4302 E SUPERIOR AVE, PHOENIX, AZ 85040	33 ° 25 ' 2 "	-111 ° 59 ' 21 "	Spillway	6 Feet	08/14/2012	2017
TD004	4116 E SUPERIOR AVE, PHOENIX, AZ 85040	33 ° 25 ' 2 "	-111 ° 59 ' 28 "	Spillway	10 Feet	08/14/2012	2017
TD006	4048 E SUPERIOR AVE	33 ° 25 ' 0 "	-111 ° 59 ' 33 "	Spillway	11 Feet	08/14/2012	2017
TD007	4031 E SUPERIOR AVE	33 ° 25 ' 9 "	-111 ° 59 ' 37 "	Spillway	6 Feet	08/14/2012	2017
TD008	3402 S 40TH ST	33 ° 24 ' 57 "	-111 ° 59 ' 44 "	Pipe	36 Inches	08/14/2012	2017
TS002	11421 N CAVE CREEK RD	33 ° 35 ' 21 "	-112 ° 2 ' 43 "	Pipe	48 Inches	07/28/2011	2016
TS007	1425 E DESERT COVE RD	33 ° 35 ' 13 "	-112 ° 3 ' 7 "	Pipe	36 Inches	07/28/2011	2016
TS008	14TH ST AND DESERT COVE AVE	33 ° 35 ' 9 "	-112 ° 3 ' 7 "	Spillway	52 Feet	07/28/2011	2016
UC001	CAVE CREEK RD AND CAVE BUTTE DAM	33 ° 43 ' 18 "	-112 ° 0 ' 39 "	Box	14 x 15 Feet	09/19/2013	2018
UC002	29221 N CAVE CREEK RD	33 ° 45 ' 1 "	-111 ° 59 ' 37 "	Box	3 x 15 Feet	09/19/2013	2018
UC003	CAVE CREEK RD AND TATUM BLVD	33 ° 45 ' 20 "	-111 ° 59 ' 24 "	Box	4 x 14 Feet	09/19/2013	2018
UC004	40TH ST AND TATUM BLVD	33 ° 45 ' 30 "	-111 ° 59 ' 44 "	Box	4 x 8 Feet	09/19/2013	2018
UC005	40TH ST AND CASCALOTE DR	33 ° 45 ' 40 "	-111 ° 59 ' 43 "	Box	4 x 9 Feet	09/19/2013	2018
UC006	40TH ST AND MONTGOMERY RD	33 ° 45 ' 47 "	-111 ° 59 ' 44 "	Box	3 x 10 Feet	09/19/2013	2018

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Outfall ID	Site Address	Latitude	Longitude	Type	Size	Last Inspection	Target Inspection
UC007	40TH ST AND LONE MOUNTAIN RD	33 ° 46 ' 11 "	-111 ° 59 ' 43 "	Box	4 x 8 Feet	09/19/2013	2018
UC008	BLACK MOUNTAIN PKWY	33 ° 47 ' 5 "	-111 ° 59 ' 42 "	Box	4 x 16 Feet	09/19/2013	2018
ZT001	33RD PL AND SHARON DR	33 ° 36 ' 41 "	-112 ° 0 ' 38 "	Spillway	18 Feet	07/14/2011	2016
ZT002	33RD PL AND EMILE ZOLA AVE	33 ° 36 ' 28 "	-112 ° 0 ' 37 "	Spillway	46 Feet	07/14/2011	2016

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9 New Outfalls 2015-2016

LC001 **4532 W ALTA VISTA RD**
Coordinates: *Latitude* 33 ° 23 ' 18 " *Longitude* -112 ° 9 ' 23 " **Map Number:** D-06 **Last Inspection:** 04/25/2012
Description: **Last Flow:** **Flow:**
Instructions: South of address **Type:** Concrete
☐ **Priority** ☑ **Major Outfall** ☐ **Impaired Water** ☐ **Monitoring Station** ☑ **Conveyance** **Drain Type:** Spillway **Count:** 1 **Size:** 9 Feet

LC002 **6616 S 45TH GLEN**
Coordinates: *Latitude* 33 ° 23 ' 10 " *Longitude* -112 ° 9 ' 26 " **Map Number:** D-06 **Last Inspection:** 04/25/2012
Description: **Last Flow:** **Flow:**
Instructions: West of Address in LACC **Type:** Concrete
☐ **Priority** ☑ **Major Outfall** ☐ **Impaired Water** ☐ **Monitoring Station** ☑ **Conveyance** **Drain Type:** Spillway **Count:** 1 **Size:** 13 Feet

LC003 **46TH DR AND VINEYARD RD**
Coordinates: *Latitude* 33 ° 23 ' 5 " *Longitude* -112 ° 9 ' 30 " **Map Number:** D-06 **Last Inspection:** 04/25/2012
Description: **Last Flow:** **Flow:**
Instructions: East of address in LACC **Type:** Concrete
☐ **Priority** ☑ **Major Outfall** ☐ **Impaired Water** ☐ **Monitoring Station** ☑ **Conveyance** **Drain Type:** Spillway **Count:** 1 **Size:** 32 Feet

LC008 **53RD LN AND BASELINE RD**
Coordinates: *Latitude* 33 ° 22 ' 41 " *Longitude* -112 ° 10 ' 30 " **Map Number:** D-05 **Last Inspection:** 04/30/2012
Description: **Last Flow:** **Flow:**
Instructions: south side of channel - across Baseline Rd from 5349 W Baseline Rd **Type:** Concrete
☐ **Priority** ☑ **Major Outfall** ☐ **Impaired Water** ☐ **Monitoring Station** ☑ **Conveyance** **Drain Type:** Pipe **Count:** 2 **Size:** 66 Inches

LC012 **FREMONT RD AND S 53RD LN**
Coordinates: *Latitude* 0 ° 0 ' 0 " *Longitude* 0 ° 0 ' 0 " **Map Number:** D5 **Last Inspection:** 05/16/2012
Description: **Last Flow:** **Flow:**
Instructions: On south side of channel. Located behind the NE corner of the home depot (access through parking lot). **Type:** Concrete
☐ **Priority** ☑ **Major Outfall** ☐ **Impaired Water** ☐ **Monitoring Station** ☑ **Conveyance** **Drain Type:** Pipe **Count:** 1 **Size:** 42 Inches

LC017 **7377 W MAGDALENA LN**
Coordinates: *Latitude* 33 ° 22 ' 13 " *Longitude* 112 ° 12 ' 49 " **Map Number:** D4 **Last Inspection:** 05/16/2012
Description: **Last Flow:** **Flow:**
Instructions: SE of house on north side of channel **Type:** Concrete
☐ **Priority** ☑ **Major Outfall** ☐ **Impaired Water** ☐ **Monitoring Station** ☑ **Conveyance** **Drain Type:** Pipe **Count:** 3 **Size:** 34 Inches

9 New Outfalls 2015-2016

LC018 **7810 S 74TH AVE**
Coordinates: *Latitude* 33 ° 22 ' 27 " *Longitude* -112 ° 13 ' 9 " **Map Number:** D4 **Last Inspection:** 05/16/2012
Description: **Last Flow:** **Flow:**
Instructions: NW of house on north side of channel (west of retention basin) **Type:** Concrete
☐ **Priority** ☑ **Major Outfall** ☐ **Impaired Water** ☐ **Monitoring Station** ☑ **Conveyance** **Drain Type:** Pipe **Count:** 3 **Size:** 36 Inches

LC020 **S 63RD AVE AND LACC**
Coordinates: *Latitude* 33 ° 22 ' 23 " *Longitude* 112 ° 11 ' 41 " **Map Number:** D4 **Last Inspection:** 05/22/2012
Description: **Last Flow:** **Flow:**
Instructions: North side of channel, under bridge on NE corner **Type:** Plastic Pipe
☐ **Priority** ☑ **Major Outfall** ☐ **Impaired Water** ☐ **Monitoring Station** ☑ **Conveyance** **Drain Type:** Pipe **Count:** 1 **Size:** 60 Inches

CC094 **7TH ST AND LONE CACTUS**
Coordinates: *Latitude* 33 ° 41 ' 5 " *Longitude* 112 ° 3 ' 59 " **Map Number:** **Foot Mark:** **Last Inspection:** 10/13/2015
Description: **Instructions:** Located at NW corner of bridge.
Type: Concrete ☑ **Major Outfall** ☐ **Impaired Waters** ☐ **Monitoring Station** ☐ **Culvert**
Drain Type: Pipe **Count:** 1 **Size:** 54 Inches
Inspection: 10/13/2015 **Inspector:** Smith **Flow:** 0 gpm **Sampled:** Yes

Laboratory Reports

New or Revised
Public Outreach Documents

Dear Home Owners' Association,

Monsoon season is here. During this time, thunderstorms with rain and wind can be more frequent or intense than at other times of the year causing damage and flooding.

In preparation for these storms, it is important that you check your storm water management system in your subdivision to ensure that it will perform as designed. Ensure that:

- **Culverts, catch basins and drainage grates within your subdivision are free of trash, overgrown vegetation or other debris that can restrict flow during a storm.**
- **Drainage channels and retention basins are not filled with plant material, trash or silt that will prevent them from conveying and retaining water.**
- **Drywells are functioning properly so that storm water will properly dissipate after an event to prevent mosquitoes. Drywells are typically at the bottom of retention areas and designed to slowly let water flow to the groundwater table. If not maintained they will back-up in multiple storm events and could cause flooding problems.**

Taking these steps will help storm water get to its intended location without causing excessive erosion, flooding or other damage to your home or nearby properties.

If you are experiencing excessive maintenance or damage, hiring a licensed professional engineer to perform an assessment of the drainage system may be a way to identify improvements. The city has a webpage that contains information on a variety of storm water topics, please visit our page at:

phoenix.gov/pdd/stormwatermaintenance

DURING MONSOON SEASON REMEMBER TO...

CLEAN SILT AND DEBRIS FROM DRAINAGE FACILITIES

REMOVE PLANT MATERIAL AND TRASH FROM DRAINAGE FACILITIES

MAINTAIN DRYWELLS

Think of a Slogan, like "When It Rains It Drains", "Make Clean Storm Drains Happen.", "Please Don't Feed the Storm Drain" for the Billboard Below to Help Spread the Word About Stormwater Pollution Prevention.

Sam the Sonoran Tiger Salamander

Common Stormwater Pollutants

- Grass Clippings
- Bug Spray
- Weed Killer
- Motor Oil
- Dog Waste
- Fertilizer

In the Valley Metro area, stormwater does NOT go to a treatment plant before entering our recreational or drinking waters. It travels by drains, streets, gutters, curbs, and open channels directly to our parks, washes, canal, lakes, and rivers.

Our STORM billboards were up this summer. Did you spot one? They helped educate us about keeping pollution out of the storm drains.

Attn: Educators — Maricopa County offers FREE hands-on stormwater workshops to all K-8th grade students within Maricopa County. Find out more at maricopa.gov/StormWater

Ad provided by:
STORM
Only rain in the stormdrain
http://azstorm.org/

Like us on Facebook

STORM is on Facebook! To connect with Stormwater Outreach for Regional Municipalities, like us on Facebook today!

Environmental Services Department

City of Phoenix Waste Services Department Facebook Posts

City of Phoenix Water Services Department added 2 new photos.
January 16 at 9:32am ·

#PHX Residents: Did you know proper vehicle maintenance keeps #stormwater and #stormdrains clean?!

Leaks, drips, and spills from your car are washed away when it rains, so be sure to absorb any leaks or spills with kitty litter or dry sweep and dispose of it properly!

#OnlyRainInTheStormDrain #PHXWater

Like Comment

City of Phoenix Water Services Department
January 23 at 9:11am ·

#PHX Residents: Did you know that 1 gallon of oil can contaminate 1 million gallons of water?!

Please be sure to clean up leaks and spills from vehicle engines with kitty litter or dry sweep and dispose of it properly.

Help #PHXWater keep #stormwater & #stormdrains clean!... See More

Share

In This Issue

- Pups Rescued at WWTP
- New Tax form
- Pelican Award Noms
- 2016 Get Fit Challenge
- Milestone Reached

PHX WATER SMART

WATER COOLER

A Monthly Publication for Phoenix Water Employees February 2016

New Tax Form

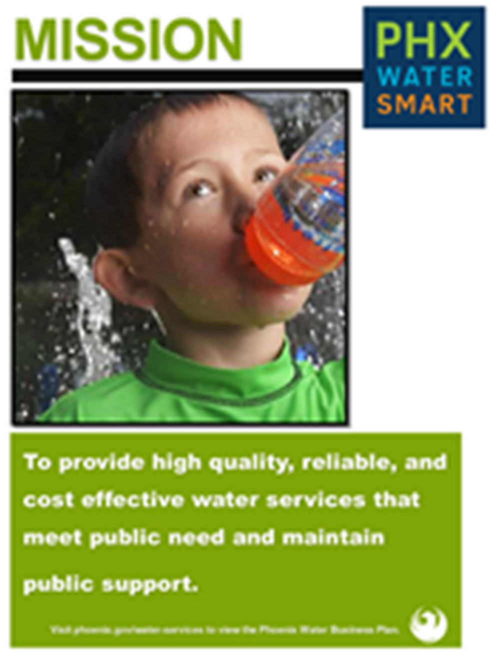
For the first time, employers must provide their benefits-eligible employees with Form 1095-C to document that medical coverage was offered. Every city employee who was eligible for medical coverage in 2015 should receive a Form 1095-C by mail. Even if you declined to sign up for a work medical plan, you will still receive the form. Information on this form will also be reported to the IRS.

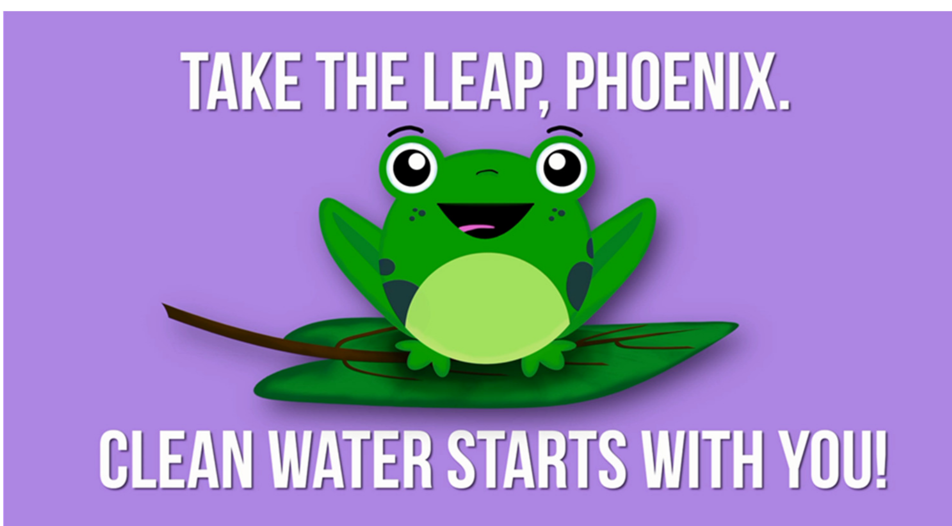
Keep Form for Your Tax Records

The form will indicate your name and the name of your employer, the months during 2015 when you were eligible for coverage, and the cost of *the least expensive plan you could have enrolled in* through your employer, which is the Savers Choice Health Plan, single coverage. When you file your Federal tax return for 2015 there will be a space for you to indicate that you had medical plan coverage for the full year. Additional help can be found at phoenix.gov.

On a Mission

The Phoenix Water "Mission" statement (at right) will soon be posted at all Water Services facilities. Get to know our Mission, Vision and Values (coming soon.)





https://www.phoenix.gov/phxtv/phxtv-media/video/3365

Stormwater PSA

The Stormwater Management Section of the Environmental Services Division recently completed a public service announcement (PSA) to raise awareness about stormwater pollution. The PSA reminds viewers that simple actions, such as properly disposing of trash and picking up after your pet can reduce stormwater pollution. Take the leap, Phoenix.

Jamie Campbell (middle) was recognized as “Shining Star” WSD CSFD Chair 2015!

Shining Star

This year the CSFD Executive lead, Jamie Campbell, (in photo) revamped the CSFD campaign by recruiting a new committee and creating new fundraising events which gave renewed energy to the initiative for the Water Services Department. Jamie empowered committee members by establishing roles and responsibilities for each member and then let each member pursue their ideas for hosting an event, creating gift baskets, collecting items for the silent auction, coordinating the Hands & Hearts event, or educating employees on pledge cards.

What’s PHXnext Sharing what’s next now ?

This month, you’ll hear important updates from an employee group called “PHXnext.” City Manager Ed Zuercher appointed the PHXnext Committee, made up of staff from all over the city, to communicate initiatives, programs and updates that affect us.

PHXnext will focus on making employee communication more timely, relevant and interesting and provide updates on city events and news that impacts all of us and inform you of upcoming changes - 'what's next'. And why. When we change how we print documents, take training or build budgets, it's important to hear what, when and why. That's what PHXnext is about. Stay tuned to PHXnext!

Pelican Award Nominations

Pelican Awards nominations are due ? When considering a WSD team to nominate, think about: Who’s working safely? Did you receive a compliment for excellent customer service? Did you witness great teamwork and creative thinking? How to Nominate: Submit your nomination to your supervisor or division head. Include your name/division, name of nominee/division, which category and what the team accomplished. Visit Inside Phoenix/Water for full details.

Abandoned Collie Pups Rescued

These beautiful girl pups were safely rescued on January 14 at the 91st Avenue WWTP by the Border Collie Rescue.

Thanks to Process Control Technology Support Samantha Thomson and all 91st Avenue staff for facilitating the rescue. The pups were unfortunately abandoned near the plant and were hungry and scared.

“Water Cooler” will keep readers informed about their progress and hopefully their new parents.

Border Collies Rescued at WWTP

Follow Phoenix Water on Facebook, Twitter & Instagram at home to get the latest news & events!

Protect Your Ears

Ears come in all shapes and sizes and noise is one of the most common causes of hearing loss in the U.S. Repeated exposures to loud machinery may present serious risks to human hearing. Ten million Americans have already suffered irreversible hearing damage from noise; 30 million are exposed to hazardous noise levels each day. The risk and harmful effects of noise are often underestimated because the damage happens gradually.

Check with your supervisor to make sure your jobsite has an effective program to adequately protect your hearing that meets federal or state regulations. Wear hearing protection, such as earplugs or earmuffs, when using loud equipment at work or at home.

Limit exposure to noisy activities at home. Monitor your listening level and how long you are listening to personal listening devices like MP3 players, etc. Consider investing in higher quality earphones that block out background noise.

Keep an "eye" on your hearing – see a hearing health professional routinely for hearing testing, and make sure you know your hearing test results and track it year-to-year.

Contributed by Chris Strand, Safety Analyst II

(L-R): Andy Terrey, Jami Erickson, Darlene Helm, Gary Griffith and Sumeet Mohan, doing a heart healthy team walk outside the City Hall during a morning break.

2016 Miles in 2016 Challenge

The *2016 Miles in 2016 Challenge* started out as a personal goal to exercise more in 2016. Last year, I logged about 1,600 miles on my Fitkik over a 10-month period, so I figured I could do 2,000 miles if a put my mind to it. I settled on 2,016 miles in 2016 because it was not much more than 2,000 and it had a nice “ring” to it. This is equivalent to walking from Phoenix to Cleveland, Ohio.

I told my coworker Sumeet Mohan about my goal and he thought it was a great idea to start this challenge. Active friends and coworkers on the 8th and 9th floors, like us, track our exercise mileage using Fitkiks, Fitbits, iPhones, etc. These folks tend to be competitive, so Sumeet latched onto the concept of creating a group challenge to keep us motivated. The charter members of the **WSD 2016 in 2016** are: Sumeet Mohan, Andy Terrey, Brandy Kelso, Darlene Helm, Gary Griffith, Jami Erickson, Karla Lu, Ling-Xiao Wang, Lucy Graham, Nazario Prieto, Patty Kennedy, Sandra Brown, Tammy Ryan (WSD MSA emeritus), and Terry Dorscheid.

We report out mileage to Sumeet on weekly basis, who will then sends out an email to the group listing our progress. No plan for a prize or prizes at this point, but we will probably have tee shirts made for those who complete the challenge. We encourage other WSD employees to try this challenge for a healthier, more fit, 2016!

Contributed by Andy Terrey, Water Engineering & Construction Management

Stay Informed

In 2011, the Department of Homeland Security (DHS) replaced color-coded alerts with the National Terrorism Advisory System (NTAS). Originally NTAS consisted of two types of "Alerts:" Elevated or Imminent. Recently DHS introduced a new component: the "Bulletin." A "Bulletin" describes current developments or general trends regarding threats of terrorism. An "Elevated Alert" warns of a credible terrorism threat against the U.S. An "Imminent Alert" warns of a credible, specific and impending terrorist threat.

The most recent DHS Bulletin which remains in effect through June 2016 informs us that, *"We are in a new phase in the global threat environment, which has implications on the homeland. Particularly with the rise in use by terrorist groups of the Internet to inspire and recruit, we are concerned about the "self-radicalized" actor(s) who could strike with little or no notice. Recent attacks and attempted attacks internationally and in the homeland warrant increased security, as well as increased public vigilance and awareness."*

The best security practice is to remain informed; and vigilant in our workplace and community. If you see something – say something! Contact the Security Management, 24/7 at 602-388-5244 or call law enforcement.

Contributed by Barb Cole, Security Management Unit

(Photo above:) Water Services Director Kathryn Sorensen congratulates the Customer Services Division after it reached a milestone; 100 percent of the calls were answered within two minutes!

Staff has been working together to reach this accomplishment! Thank you and keep up the great work everyone!!

Congratulations!

Insider Info:

Have a great story, photo or idea for the "Water Cooler?" Email victoria.welch@phoenix.gov.

Catch up on Water "insider" news at http://insidephx/depts/wsd. Read about who is receiving "kudos" and fellow employees getting promotions, retiring and new employees!

Follow Phoenix Water from home on Facebook at Facebook.com/PHXwater and on Twitter at Twitter.com/PHXwater.

Be up-to-date on everything PHX Water!

5 Years

Joseph Brimmage

Daniel Fierro

10 Years

Norma Bustos

Errick Earl

Gary Gin

Raul Ortega

Matthew Robinson

Steve Rodriguez

Kenneth Stilgenbauer

Estella VanWinkle

Luis Weisel

15 Years

Sheila Gonzaga

Jesse Rubio

20 Years

Michael Campbell

Debbie Sue Estrada

Promotions

Patrick Anderson

Trudy Bennett

Gregory Enouen

Lisa Frias

William Knight

Justin Porter

Steve Reid

Ernie Ruiz

New Employees

Gabriela Anaya

Steven Bunz

Danielle Cardona

Lisa-Marie Carlson

James Czarnik

Jeffrey Doten

Jeffery Eddy

Daniel Flores

Emily Goodwill

Virginia Hernandez

Stacey Kissling

Claudia Leyva

Betty Lucero

Ruben Mejias

Haydn Owens

Alfonso Paniagua

Ronald Parker

David Payton

Maria Ramirez

Hermina Rojas

Denisa Simpson

Cindy Smith

Keith Spencer

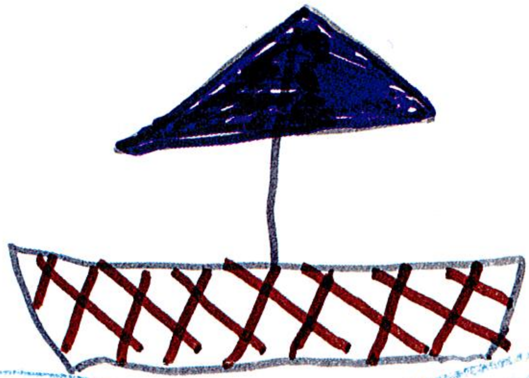
Kennethy Franklin

Peter Urias

Lucas Zackaj

Contributed by Patricia Albanese, Human Resources

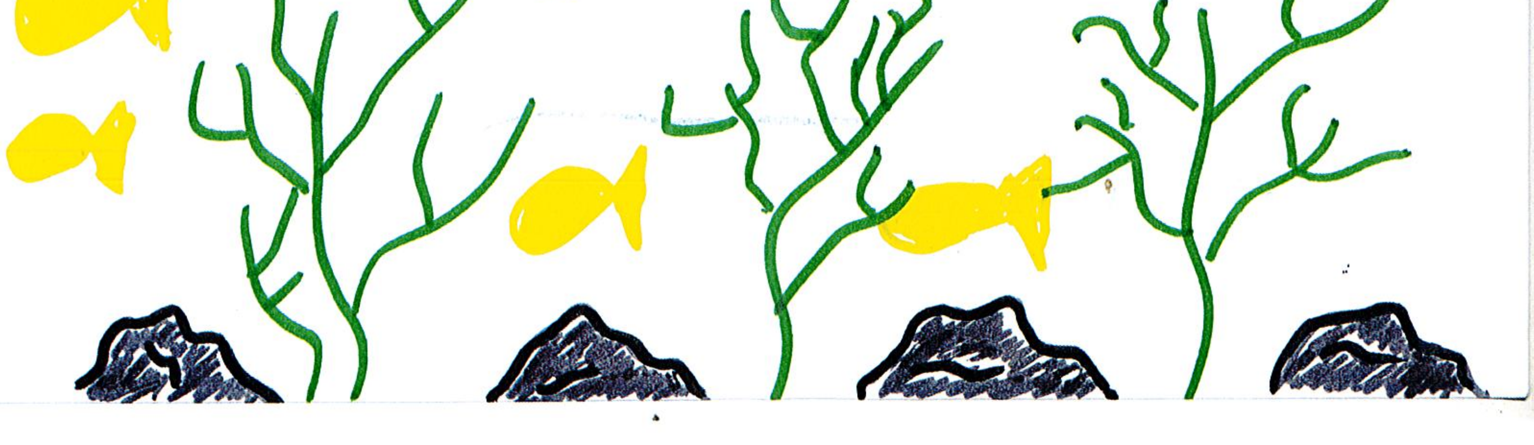
Tina –
Thank you so much for all your amazing Activities! You are the Best!
Patrice



Dear Tina and city of Pheonix volunteers:
Linda, Mario, David, Chelsea, Monica, and Larry,

Thank you for volunteering at Waterfest! Without your help, all this wouldn't be possible. Your work and talent was appreciated by the students and staff of St. John Bosco. We hope you have a wonderfull Thanksgiving at wherever you are.

God Bless,
St. John Bosco



Education campaign targets pet waste piling up on Piestewa trail - azfamily.com 3TV | Phoenix Breaking News, Weather, Sport

PHOENIX (KPHO/KTVK) -
The Quartz Ridge Trail at Piestewa Peak is the latest site of a city of Phoenix education campaign to encourage people to pick up after their pets.

Sabah Lawitz hikes with her pup quite often and says what her dog does on the trail comes off the trail with her.

"I pick it up leave it in a bag and on my way down I throw it in the trash," she said.

It is clear, though, she's among a small group of like-minded pet parents at Piestewa.

"I see doggy doo-doo quite a bit and I think it's disgusting," Lawitz said.

Whether it was dumped and left behind or bagged then tossed off trail, it has been piling up.

"You have to constantly look at your feet for potential land mines walking around there," said hiker Ethan Webb.

The city is taking steps to curb the problem.

Using yellow flags, they place one in areas on and off trail where dog droppings have been found and there are a lot of flags on the trail.

"Once you see all the markings of it, it's quite surprising how much waste was left there," Webb said.

A city spokesperson said the flags have been on the Quartz Ridge trail for just about a week now with some signage at the trail head on 32nd Street and Lincoln Drive explaining their purpose.

"I think it's a cool campaign just to bring awareness so hopefully it will change behaviors," said hiker Lisa Beck.

Lawitz hopes so too and has a message of her own for other dog owners.

"Keep it clean," she said.

That is the ultimate goal of the campaign, to get people to pick up after their pets. The city says it's not just unsightly, but it can be a danger to wildlife and it's a violation of city ordinance to leave it behind.

The signs and flags will remain at Quartz Ridge for another week or so then the city says they will be moved to another yet-to-be-determined trail that needs the same messaging.

Agenda

May 3, 2016

ADOT Human Resources Development Center

1130 N. 22nd Avenue, Phoenix, Arizona 85009

Topic	Speaker	Times
Registration		*7:30 – 8:00*
Welcome & STORM overview	**John Cummings**	**8:00 – 8:20**
Segment 1 – Construction		
Introduction	**Todd Williams**	**8:20 – 8:25**
SWPPP Content and Preparation	**Kevin Boesch**	**8:25 – 8:55**
Inspections & Enforcement	**Kristie Chavero**	**8:55 – 9:25**
Panel for questions		**9:25 – 9:45**
Break		*9:45 – 10:00*
Segment 2 – Industrial		
Welcome and Introduction	**Justin Bern**	**10:00 – 10:05**
Overview of MSGP	**Spencer York**	**10:05 – 10:35**
Monitoring & Visual Assessments	**Rebecca Sydnor**	**10:35 – 11:05**
Panel for questions		**11:05 – 11:25**
Legislative Update	**Amanda Reeve**	**11:25-11:45**
Lunch		*11:45-1:00*
Segment 3 – Municipal		
Welcome and Introduction	**Ed Latimer**	**1:00 – 1:05**
LID Introduction	**Marie Light**	**1:05 – 1:25**
LID Toolkit	**Trace Baker**	**1:25 – 1:45**
LID Implementation	**Megan Sheldon & Angelica Guevara**	**1:45 – 2:05**
Steps to a Stormwater Utility	**London Lacy**	**2:05 – 2:20**
Break	*CCTV Demo*	*2:20 – 2:40*
IDDE Mapping and Tracking	**John Cummings**	**2:40 – 3:00**
TMDL Compliance	**Benjamin Burns**	**3:00 – 3:20**
Audits	**Christopher Henninger**	**3:20 – 3:40**
Panel		**3:40 – 4:00**

26th Construction Networking Event for All Contractors & Consultants

Sponsored by the City of Phoenix

Anticipated Agenda Items

- Future Construction Projects
- Update: SBE Program
- What's Happening around the Valley
- Questions and Answers

Where, When & Why?

Where? Burton Barr Library Pulliam Auditorium located at Central Avenue just South of McDowell Road (Free Parking)

When? Thursday, June 30, 2016
Sign-in 2:00 p.m. - 2:30 p.m.
Program 2:30 p.m. – 4:00 p.m.
Network: 4:00 p.m. - 4:30 p.m.

Why? To Better Inform Contractors & Consultants of Future Public Bid Opportunities

Cost? Free Admission.

RSVP at (602) 262-6284 (City of Phoenix) by June 3, 2016.

City of Phoenix

City of Phoenix General Plan, Stormwater Section

PART III

OUR CORE VALUES

Using the thousands of residents' ideas about the future of the city, 5 core values emerged. These 5 core values embody all that makes our city great and what residents believe will make it even better.

HOW TO USE THIS PLAN

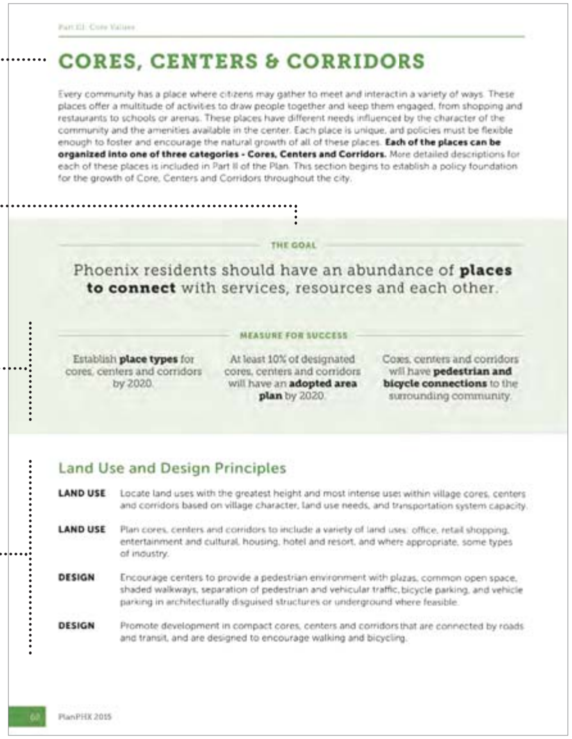
The General Plan was designed to be a document that is easy for the reader to understand and use. Each of the Core Values' subsections is divided into the following six parts highlighted below

Subsection Description
This is a brief overview of the subsection topic and its importance to the future of the city.

Goal
One or two statements about what we aspire to achieve with respect to this topic.

Measure for Success
These are items that the city will use to measure progress towards achieving the goal. In many cases the listed items are in need of refinement, but should be considered a first step toward developing more quantifiable measures in the near future. The measures will help to elevate the level of conversation about the topic during the regular review of the General Plan and add an element of accountability to the plan.

Land Use and Design Principles
The principles provide guidance on how development should take shape when addressing the particular topic. They will be used to evaluate development proposals when reviewing land use and design requests.


Part III: Core Values

CORES, CENTERS & CORRIDORS

Every community has a place where citizens may gather to meet and interactin a variety of ways. These places offer a multitude of activities to draw people together and keep them engaged, from shopping and restaurants to schools or arenas. These places have different needs influenced by the character of the community and the amenities available in the center. Each place is unique, and policies must be flexible enough to foster and encourage the natural growth of all of these places. **Each of the places can be organized into one of three categories - Cores, Centers and Corridors.** More detailed descriptions for each of these places is included in Part II of the Plan. This section begins to establish a policy foundation for the growth of Core, Centers and Corridors throughout the city.

THE GOAL

Phoenix residents should have an abundance of **places to connect** with services, resources and each other.

MEASURE FOR SUCCESS

Establish **place types** for cores, centers and corridors by 2020.

At least 10% of designated cores, centers and corridors will have an **adopted area plan** by 2020.

Cores, centers and corridors will have **pedestrian and bicycle connections** to the surrounding community.

Land Use and Design Principles

LAND USE Locate land uses with the greatest height and most intense uses within village cores, centers and corridors based on village character, land use needs, and transportation system capacity.

LAND USE Plan cores, centers and corridors to include a variety of land uses: office, retail shopping, entertainment and cultural, housing, hotel and resort, and where appropriate, some types of industry.

DESIGN Encourage centers to provide a pedestrian environment with plazas, common open space, shaded walkways, separation of pedestrian and vehicular traffic, bicycle parking, and vehicle parking in architecturally disguised structures or underground where feasible.

DESIGN Promote development in compact cores, centers and corridors that are connected by roads and transit, and are designed to encourage walking and bicycling.

60 PlanPHX 2015


Connect People & Places

Policy Documents and Maps

Camelback East Primary Core Specific Plan
Deer Valley Core Specific Plan
Desert Ridge Specific Plan
Estrella Village Core Plan
North Gateway Village Core Plan
Urban Villages and Core Maps
North 32nd Policy Plan
North Mountain Redevelopment Area Plan
Maryvale Core Urban Design Plan
Urban Village Model

Tools: Policies and Actions*

PLANS Update or develop core, center or corridor plans to be incorporated into the General Plan or adopted as specific plans. The plans should provide the desired mixture of uses, with separate vehicular and pedestrian traffic, reduce through-traffic when practical and desirable, and achieve a high level of integrated urban design. Major property owners and developers, staff, and citizen volunteers should cooperate to develop individual core plans based on the above principles and village plan policies. Village core master plans, and tools to implement them, should be developed to coordinate and integrate individual center developments.

PLANS Work with Village Planning Committees to identify each core, center or corridor and an associated place type for their respective village.

CODES Support healthy urban villages, with a balance mix of housing, employment opportunities and services as a principal means to reduce vehicle trip length and associated emissions.

CODES Continue to update the Zoning Ordinace to faciliate appropriate growth in the city's cores, centers and corridors.

24th Street & Baseline Rd

Many of Phoenix's centers evolved naturally out of a need from the community for a gathering place. One such center is at 24th Street and Baseline Road. Because of the support of the community, the intersection now boasts a major shopping center, a community college and a library. This intersection has become the center of the community.

Tools: Policies and Actions
A list of items that utilize the categories from the Tools layer of the PlanPHX Framework that provide a summary of what will be done to help achieve the goal.

*In some cases there are additional Tools listed that do not appear on the page. In those instances (identified by an asterisk), please reference Appendix E: Supplementary Tools.

Spotlight
The spotlights profile places in the city that are already helping to achieve the goal. They are meant to celebrate the many community assets that Phoenix already has in place and serve as examples that can be followed in other parts of the city.

North Mountain

BUILD THE SUSTAINABLE **DESERT CITY**

The city of Phoenix is a pioneer in environmental stewardship. Flagship projects including the Tres Rios Wetlands, Energize Phoenix program, the Rio Salado riparian restoration project and numerous water conservation efforts have won the city many awards.

Residents want to see Phoenix expand its role as an environmental leader including more neighborhoods, businesses and facilities that are designed and built using environmentally progressive planning and building practices along with locally produced and lasting materials.

Residents envision strategic uses of natural and man-made elements to increase the shade cover in our city and the widespread use of solar energy in everything from homes to streetlights. Through the wise use of zoning and other tools, residents want to be able to individually harness and enhance these environmental resources to uplift their businesses, neighborhoods and families. This includes the creation of safe, clean, sustainable neighborhoods free of pollution. Phoenix is renowned for its beautiful Sonoran Desert setting. Our world-class parks, desert recreation areas and mountain preserves are a testament to decades of forward-thinking citizens working to conserve this precious resource. Residents envision continuing this legacy by enhancing and expanding our existing parks and preserves and cementing their place as our city's most iconic features.

Residents also want to add another element to our city's landscape – urban farming. Residents see a robust network of community gardens and urban farms activating underutilized properties and resulting in greater access to healthy foods, neighborhood revitalization, reduced pollution and improved opportunity for economic development.

The big ideas for Building THE Sustainable Desert City are interlaced throughout the General Plan. Sustainability is an element that runs its course throughout the efforts of the document to add value and create a truly Connected Oasis.

This Core Value focuses on the following Growth/Preservation and Infrastructure areas.

Growth / Preservation Areas
- Desert Landscape
- Rivers, Washes and Waterways
- Redeveloped Brownfields

Infrastructure
- Green Buildings
- Trees and Shade
- Healthy Food System
- Energy Infrastructure
- Waste Infrastructure
- Water Infrastructure
  - Water Supply
  - Stormwater
  - Wastewater

STORMWATER

Proper stormwater management can reduce flooding and prevent pollutants from entering our surface waters. With over 100 years of experience in managing our water resources, Phoenix is dedicated to providing efficient and economical management of our stormwater. Living in a desert necessitates sensitivity and long-range planning for the use, conservation and protection of the water supply. Only through the efforts of the entire community can this be accomplished.

THE GOAL

Manage our stormwater efficiently and economically, **while minimizing** stormwater pollution.

MEASURE FOR SUCCESS

Ensure that all applicable National Pollutant Discharge Elimination System (NPDES) or Arizona Pollutant Discharge Elimination System (AZPDES) permits have been obtained **prior to discharging stormwater.**

Land Use and Design Principles

DESIGN Pursue creative, innovative, and environmentally-sound methods to capture and use stormwater and urban runoff for beneficial purposes.

DESIGN Minimize the impact of urban activities on the quality of stormwater and surface water.

DESIGN Encourage stormwater management through innovative solutions such as the use of permeable surfaces, protecting vegetative surfaces, and implementing surface water buffers.

DESIGN Encourage construction plans that reflect a systematic and integrated approach to building design, civil engineering, and landscape architecture in order to maximize the potential for rainwater harvesting and stormwater retention for landscape watering.

Policy Documents and Maps

Stormwater Policies and Standards Manual

Tools: Policies and Actions

OPERATIONS Provide a safe, reliable, and efficient stormwater management system that protects both human health and the environment.

OPERATIONS Provide a comprehensive public outreach program to educate residents and local businesses about the importance of stormwater pollution prevention.

OPERATIONS Pursue creative, innovative, and environmentally-sound methods to capture and use stormwater and urban runoff for beneficial purposes.

OPERATIONS Provide an active inspection and enforcement program to ensure that private and publicly-owned industrial facilities are adhering to the city's Stormwater Quality Protection Ordinance.

OPERATIONS Maintain the authority to protect the city's stormwater quality.

OPERATIONS Provide technical assistance that supports and encourages the use of green infrastructure for stormwater management.

Taylor Mall

This project implemented a variety of innovative Green Infrastructure techniques, such as permeable parking spaces, curb cuts, and vegetative swales to manage stormwater onsite. The project also provides an opportunity to evaluate the long-term effectiveness of these stormwater management techniques in our unique arid environment.

City of Phoenix