



Maricopa County

Environmental Services Department

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November 17, 2014

Nicole Coronado
Project Manager
Arizona Department of Environmental Quality
1110 W. Washington Ave.
Phoenix, AZ 85007

Dear Ms. Coronado;

Maricopa County is pleased to submit an amended annual report in response to the letter dated October 21, 2014. Per the instructions, and per the discussion of October 14, 2014, responses to the questions may be seen highlighted in the Updated FY2014 Annual Report.

Maricopa County appreciates the ability to add clarity to the annual report so that its intended purpose, reporting compliance activities performed, may be met.

Please address all comments or inquires to Robert van den Akker at 602-506-6944, or rvandenakker@mail.maricopa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "John Kolman", with a long horizontal flourish extending to the right.

John Kolman,
Director, Maricopa County Environmental Services Department



**Maricopa County
Environmental Services Department
Quality and Compliance Division
Stormwater Quality Program**



Environmental Services
Department

AZPDES Phase II FY2014 Annual Report

Updated

Introduction

Since 2003 Maricopa County has invested significant resources to regulate stormwater pollution and provide protection to our surface waters. The Maricopa County Board of Supervisors was authorized to operate the Municipal Separate Storm Sewer System (MS4) under the Phase II Arizona Pollution Discharge Elimination System (AZPDES) permit AZG2002-002 on December 19, 2007; the required Stormwater Management Program (SWMP) was approved on November 25, 2009. This is the sixth annual report that has been issued since the SWMP has been adopted, and each year the County strives to integrate the iterative process of review and perfection into all related permit compliance activities. It is the County's intent to continue the stormwater pollution prevention efforts, to protect environmental quality for the benefit of the citizens, and to be a leader in the local community in all actions and activities related to environmental quality.

The annual report form authored by the Arizona Department of Environmental Quality (ADEQ) has been a good tool for reporting activities performed under this permit. ADEQ has indicated that the form contains a suggested format for an annual report; therefore, using this document as a guide, the County has altered the items and format to report additional information. This updated format provides the requested data as well as information that may be used by the County for the future of the program. Please accept this updated format with the following changes:

- Part A, "General Information", including the technical and billing contact for this permit.
- Part B, "Additional Information"
- Part C.a., "Stormwater Management Program Status", including the following columns:

MCM	Minimum Control Measure - The six MCMs listed in Part V.B. of the permit.
BMP	Best Management Practice activities in the Stormwater Management Program agreed upon through direction of the State on November 25, 2009, and updated through each annual report.
Measurable Goal	Achievable goals in the Stormwater Management Program agreed upon through direction of the State on November 25, 2009 and altered as necessary by Maricopa County to ensure Maximum Extent Practicable (MEP) activity continues.
New or Revised	Place an X in this column if the BMP or measurable goal is new or revised, such as replacement with another BMP, addition of a new measurable goal, or revision of a start date, etc. Briefly explain the change to the SWMP in the "Implementation Status" column.
Start Date	The scheduled start date (month and year) for each measurable goal. Enter the actual start date of the activity or program.
Implementation Status/Frequency/Achievement	This column is for enumerating the compliance activities performed during the reporting period and may include the actual number of activities, percent reached, or frequencies performed. Additionally, it may indicate comments on the implementation status (such as "completed", "in progress", or "not started"), notes on permit compliance status, or an explanation for any BMP for which a zero (0) has been reported. If an activity is in progress, but has an expected end or completion date, indicate the expected achievement date.
Responsible Entity	The department or division in the municipality responsible for performing this activity.
Documentation	List the documentation used to support the reported number, status, and/or achievement date.

- Part C.b., "Stormwater Management Program Changes" including changes that are to be added to the program. This includes new or altered BMPs or minor SWMP changes found to be lacking during the program year. These BMPs or minor SWMP changes will be implemented immediately in the next reporting period. Additionally, significant SWMP changes will be added here as a formal request to ADEQ for approval.
- Part D, "Certification"
- Part E, " Attachment"

AZDEQ Phase II MS4 Annual Report Form

A. General Information

Permittee:	Maricopa County Board of Supervisors
Permit number:	AZG2002-002
County:	Maricopa County
Annual Report Period:	FY2014: 07/01/2013 – 06/30/2014
Annual Report due date:	09/30/2014
Responsible Authority:	John Kolman
Title:	Director
Section:	Environmental Services Department, Office of the Director
Address:	1001 N. Central Ave., Suite 401, Phoenix, AZ 85004
Telephone Number:	(602) 506-4847
Email Address:	jkolman@mail.maricopa.gov
Technical Contact:	Robert van den Akker
Title:	Environmental Specialist Supervisor
Section:	Environmental Services Department, Quality & Compliance Division, Stormwater Quality Program
Address:	1001 N. Central Ave., Suite 401, Phoenix, AZ 85004
Telephone Number:	(602) 506-6944
Email Address:	rvandenakker@mail.maricopa.gov
Billing Contact:	Diane Cabanillas
Title:	Finance Manager
Address:	1001 N. Central Ave., Suite 400, Phoenix, AZ 85004
Telephone Number:	(602) 506-6703

B. Additional Information. See Attachment E for additional information for any item checked "yes" below.

1. Changes have been made or are proposed to the SWMP since the last annual report, including changes in response to ADEQ's review.	YES	NO	X
2. The MS4 has annexed lands.	YES	NO	X
3. Impaired Waters			
a. The MS4 discharges directly to an impaired water.	YES	NO	X
b. Impaired waters within 10 miles of the MS4's jurisdiction.	YES	X NO	
4. TMDLs			
a. The MS4 discharges directly to water for which a TMDL has been established.	YES	NO	X
b. A TMDL has been established for surface waters within 10 miles of the MS4's jurisdiction.	YES	NO	X
5. The MS4 has conducted analytical monitoring of stormwater quality.	YES	NO	X
6. The MS4 is relying on another government entity to satisfy some permit obligations.	YES	NO	X

C.a. Stormwater Management Program Status:

MCM	BMP	Measurable Goal	New or Revised	Start Date	Implementation Status / Frequency / Achievement	Responsible Entity	Documentation
1. Public Education and Outreach							
	1.1 Develop and distribute educational materials						
		Distribute at least 500 pamphlets annually		12/2006	Completed and ongoing	ESD	Minimum Control Measures FY14.xls
		Number of pamphlets distributed		12/2006	<p>8,036 pamphlets</p> <p>The County provides a variety of educational materials to the public that are considered “pamphlets” including bookmarks, brochures, fact sheets, and coloring books. These materials are distributed at public events, in public buildings, and over the internet. The number reported includes all educational materials on all stormwater pollution prevention topics. This is significantly more educational material distributed compared to the 2,000 pamphlets distributed in FY2013.</p> <p>In addition, the County has distributed 8,043 promotional items with educational information and stormwater pollution prevention slogans including Frisbees, magnetic clips, pencils, pens, pet waste containers, and more.</p> <p>Note: due to consideration for responsible use of citizen’s resources, promotional items will no longer be purchased for dispersal in the next fiscal year.</p> <p>During FY2014, educational material provide to the consisted of brochures, pamphlets, and other printed material. This included all material with descriptive language on stormwater pollution prevention (material included: the 10 tips bookmark, City of Phoenix Brochure, EPA after the Storm, EPA Solution to Pollution, MC Animal Handling Fact Sheet, MC Auto</p>	ESD	<p>Public Education-revised.accdb</p> <p>Fact Sheets Brochures Coloring books</p>

MCM	BMP	Measurable Goal	New or Revised	Start Date	Implementation Status / Frequency / Achievement	Responsible Entity	Documentation
					All numbers reported in this column were performed during this reporting year.		
					Recycling Fact Sheet, MC Basin Safety Fact Sheet, MC Auto Repair Facilities fact sheet, MC Brochure, MC Brochure in Spanish, MC Food Services Fact Sheet, MC Home Repair Fact Sheet, MC landscaping Fact Sheet, MC Construction Site Fact Sheet, MC Pest Waste fact sheet, MC Pet Waste fact sheet in Spanish, MC Post Construction packet, MC Pre-Con Packet, MC Regulation, MC Stockpiles fact sheet, MC Surface Cleaning fact sheet, MC Swimming Pools fact sheet, MC vehicle Care fact sheet, MC waste handling fact sheet, STORM brochure, Storm Drain Dan coloring book). Additionally, there have been over 12,000 downloads of the MC SWMP over the internet. This makes a total of over 20,000 educational pieces of material provided to the public.		
		Website activity		12/2006	502,356 Page views 21,941 Downloads These numbers represent all page views and downloaded information for all Stormwater related web pages within the County, including 19,281 Stormwater Management Plan downloads.	ESD	Minimum Control Measures FY14.xls PageViewsFY14-Webtrends.docx FY14-Downloads-Wtrends.docx SWMP-FY14-Downloads-Wtrends.docx
1.2 Public education radio campaign on stormwater							
		PSA aired for at least 4 weeks		12/2006	Performed annually*	ESD	STORM Annual Report: FY2014.pdf
		PSA aired timeframe	X	12/2014	1 Movie Campaign 95 Facebook Posts *Our original Best Management Practice (BMP) called for a Radio Campaign, but with the widespread use of cellphone technology competing with traditional media, there has been a concern that radio use may be in rapid decline. With this consideration, Maricopa	ESD	FBpostsFY14.xlsx

MCM	BMP	Measurable Goal	New or Revised	Start Date	Implementation Status / Frequency / Achievement All numbers reported in this column were performed during this reporting year.	Responsible Entity	Documentation
					<p>County, along with members of STORM have moved to reach this non-traditional population that uses cell phones, podcasts, social media, and movies as their source of information. The PSA outreach method has focused on social media (Facebook) and movie advertisement.</p> <p>Movie Campaign: The movie campaign ran for 6 weeks with 27,510 screenings and was estimated to have been observed by 850,000 people.</p> <p>Facebook posts: The Stormwater Quality Program issued a total for 96 posts on stormwater pollution prevention and educational outreach events on stormwater from July 2013 through June, 2014, and received a total of 6691 total Post Impressions, a total Post Reach of 1830, and 913 Likes. “Post Impressions” are the number of times a post from a Page is displayed, whether the post is clicked on or not. “Post Reach” is the number of people who have seen the post. A post counts as reaching someone when it's shown in News Feed. “Likes” are means of the audience participation by making a connection with the posting without leaving a comment.</p> <p>Note: Although the STORM Organization performed or sponsored some activities reported in this measure, the responsibility of performing the activity remains on the County.</p>		
		Estimate of population reached		12/2006	856,691 people	ESD	
1.3 Maintain and update the Maricopa County Stormwater Website							

MCM	BMP	Measurable Goal	New or Revised	Start Date	Implementation Status / Frequency / Achievement All numbers reported in this column were performed during this reporting year.	Responsible Entity	Documentation
		Website maintained with the SWMP and NOI		12/2006	Completed and updated as needed The County has 11 pages on the Maricopa County Environmental Services Department website that are dedicated to the program. These pages have links to downloadable items and resources for business, construction, and citizens. The SWMP, NOI, and Maricopa County Stormwater Regulation are located on the main program web page.	ESD	http://www.maricopa.gov/stormwater Home _ Quality & Compliance _ Stormwater Quality _ Stormwater Quality.pdf Minimum Control Measures FY14.xls
		SWMP and NOI website activity		12/2006	19,281 Downloads This is the number of downloads recorded for the SWMP and NOI only.	ESD	SWMP-FY14-Downloads-Wtrends.docx
2. Public Involvement / Participation							
2.1 Provide various vehicles of communication to the general public for feedback to the County							
		Provide 500 surveys annually		12/2009	Completed and ongoing	ESD	Minimum Control Measures FY14.xls
		Number of surveys provided		12/2009	1,037 The outreach program provided 1037 surveys to the public this year, and received 668 responses from paper and on-line forms. This compares to 422 responses for FY2013, and 155 for FY2012. During FY2014, surveys were provided at public events, were posted on the internet, and were accessible via QR (Quick Response) code and link from the Environmental Services Department web page. The survey is used to initiate conversation with the public on outreach activities, obtain an assessment of the public's concept of stormwater pollution prevention and to adjust our outreach activities based on the analysis of results.	ESD	FY2014 Survey Report
		Survey responses received		12/2009	668 responses	ESD	
2.2 Develop a Stormwater Stakeholder Workshop							
		Stakeholder workshop(s) held		12/2009	1	ESD	Minimum Control Measures FY14.xls
		Number of attendees		12/2009	1	ESD	SignIn 9_11_2013.pdf

MCM	BMP	Measurable Goal	New or Revised	Start Date	Implementation Status / Frequency / Achievement	Responsible Entity	Documentation
					All numbers reported in this column were performed during this reporting year.		
					One Public meeting for the draft FY2013 annual report held on September 11, 2013.		Release--130826-Public Meeting Notice.pdf
2.3 Establish stormwater related contests for school children and local communities							
		Minimum of one contest per year		12/2009	Completed and ongoing	ESD	Minimum Control Measures FY14.xls adoptahighway2014.pdf
		Number of contests		12/2009	1	ESD	
		Number of submittals		12/2009	252	ESD	
		Number of participating schools		12/2009	8	ESD	
		Public/Private Collaboration		8/2011	5 participating entities In FY2014, Maricopa County Environmental Services Department Stormwater Quality Program entered into a partnership with The Children’s Museum of Phoenix, The Wildlife World Zoo and Aquarium, the Desert Botanical Garden, the Arizona State Parks, and the Maricopa County Library District to support the poster contest. The theme of the poster contest was “Be the Solution to Stormwater Pollution”. With over 252 entrants, and 5 public participants this was the largest poster contest performed to date. Posters were judged based on artwork, originality, and message conveyance. The winning entrants were presented with prizes and a special award certificate at a Maricopa County Board of Supervisors public meeting. In addition to sponsoring the poster contest, Stormwater Program calendars created from this contest have been placed on display at Maricopa County Parks and Libraries, and have been handed to residents during outreach events. Additionally, the Maricopa County Department of Transportation held adopt-a-highway events with over 300 citizens participating.	ESD	
3. Illicit Discharge Detection and Elimination							
3.1 Identification of illicit discharges through an inspection program							
		Storm sewer system map with location of outfalls and receiving WoUS		12/2009	In Progress, expected achievement date December of 2017.	ESD	GIS map and inventory

MCM	BMP	Measurable Goal	New or Revised	Start Date	Implementation Status / Frequency / Achievement	Responsible Entity	Documentation
					<p>All numbers reported in this column were performed during this reporting year.</p> <p>Storms sewer system mapping has been the main focus of the program since its inception. The storm sewer is a complex and intermittent system of inlets and curb cuts associated with pipes ditches and basins; the majority of the system consists of inlets that discharge to private systems, and is based on the planning and zoning regulation and the location of the urbanized area. (Zoning Ordinance (P-18) link: http://www.maricopa.gov/planning/Resources/Ordinances/ZoningOrdinance.aspx)</p> <p>The County MS4 urbanized jurisdiction has been updated per the decennial census. The first jurisdiction implemented in the program was from the 2000 census. The 2010 census data was available from the federal Census Bureau in May of 2012, and was implemented into the program immediately, changing our jurisdiction from 80 square miles to 150 square miles. This, along with annexations and changes in documentation of stormwater structures, required the program to restart our storm sewer system map. By the end of FY2014, 80% of these 150 square miles had received storm sewer system inlet and outfall investigation and inspection activities. Since the system added to the Unincorporated Urbanized Area (UUA) has already been developed, and due to the planning and approval process of the structures in these areas, there are no maps available to represent the stormwater infrastructure for the new UUA. The program has adopted a multi staged approach to mapping the storm sewer system. Stage one has been to find all municipal storm systems, map all inlets and outfalls, and stop any illicit discharges and improper disposal to the storm system. During this process, all Waters of the United States (WOUS) have been mapped, and jurisdictional boundaries have been confirmed. Stage two will be to</p>		

MCM	BMP	Measurable Goal	New or Revised	Start Date	Implementation Status / Frequency / Achievement	Responsible Entity	Documentation
					All numbers reported in this column were performed during this reporting year.		
					perform recurring inspections on a percentage of the known outfalls each year, proactively inspect and verify ownership of stormwater structures, and map the municipal surface and subsurface linear stormwater structures.		
		Illicit discharge improper disposal detection and elimination program		12/2009	Completed and ongoing	ESD	
		Illicit discharge improper disposal detection and elimination citation		12/2009	3 Citations 3 citations in the form of Letters of Outstanding Violation (LOVs) were documented for discharges to the MS4 that may be recognized as violations of the Stormwater Quality Regulation. Additionally, 19 inspections were documented against food establishments for possible pollutant discharge violations against the Maricopa County Health Code (protecting waters of the County). All documented violations were addressed by the responsible parties, and no follow-up enforcement action was needed.	ESD	LOV 218-45-051-20140428 LOV 218-45-050-20140428 LOV 218-45-049-20140428 ViolationTotalsFY14_20140820.xlsx
		Staff performing inspections (at least one staff)		12/2009	3 The Stormwater Quality Program maintains 3 fulltime inspector positions.	ESD	Environmental_Services_SWQP_contact_list-2014-2015.pdf
		Percent of outfalls inspected for Fiscal Year (Minimum 20 Percent annually)		12/2009	As the entire UUA has not been inspected, the total number of outfalls is not known. Since the inclusion of the updated UUA in 2012 from the Census Bureau update, the county has found 169 outfalls, and 16% of these have been found in the UUA during FY2014. Additionally, approximately 40% of the UUA has been inspected over FY2014. At this time, 20% of this updated UUA has still to be inspected. Maricopa County continues with its commitment to address this new jurisdictional area, and inspections are in progress. Mapping completion of the entire storm system is expected in December 2017.	ESD	GIS maps
		Percent of outfalls inspected in total		12/2009			

MCM	BMP	Measurable Goal	New or Revised	Start Date	Implementation Status / Frequency / Achievement	Responsible Entity	Documentation
					<p>All numbers reported in this column were performed during this reporting year.</p> <p>Maricopa County is performing a two stage field screening process that includes dry weather outfall screening. During the first stage of the inspection program, the outfalls and other MS4 structures are mapped, and during the second stage, staff will perform inspections on the SWMP approved 20% of outfalls. During FY2014, 90% of all inspections occurred during dry weather (1750 of 1932 inspections of stormwater structures for the year). "Dry weather" has been defined as a period of no rain during which an inspection shall occur to ensure no illegal discharges are observed from the storm sewer system. Although a national standard of a "dry period" has been recognized to be 72 hours (EPA, Sept 1993 NPDES Storm Water Program Q&A Part II), a regional approach to the concept is needed because of the unique weather observed in the arid South West. The Stormwater Quality Program uses a 48 hour timeframe after a storm event as the minimum time that inspections must wait after a storm event before regular inspection activities may occur. All inspections of the MS4 include documentation of characteristics of a flow if observed, and any flow observed will be traced to its source.</p>		
3.2 Implement a complaint response program							
		Complaints received		12/2009	<p>154 total complaints</p> <p>This total number of complaints includes 123 from MCDOT, 1 from FCD, and 30 from ESD.</p>	ESD MCDOT FCD	<p>ESD - ACCELA database report.xlsx</p> <p>MCDOT-Report for ill Discharge FY14.xlsx of the MCDOT: 61-office CR database</p>
		Enforcement actions taken		12/2009	<p>7 LOVs issued</p> <p>*Letters of Outstanding Violations (LOVs) are considered the beginning of enforcement actions. 7 were issued due to possible violations to the</p>	ESD MCDOT FCD	<p>FCD Information Annual Report 2013_2014-attachement.pdf</p>

MCM	BMP	Measurable Goal	New or Revised	Start Date	Implementation Status / Frequency / Achievement All numbers reported in this column were performed during this reporting year.	Responsible Entity	Documentation
					Stormwater Quality Management and Discharge Control Regulation. All LOVs were addressed without need for further enforcement. Note, all violations found by staff or residents are recorded in the complaint system as the procedural method of entering data prior to and in preparation for potential enforcement. This includes illicit discharge, improper disposal, and construction related violations to the Stormwater Quality regulation.		LOV 220-05-087-20140402 LOV 303-28-980_20140327 LOV 303-06-004J_20140327 LOV 218-45-051-20140428 LOV 218-45-050-20140428 LOV 218-45-049-20140428
		Average Complaint Response time(days) (≤ 15 days)		12/2009	100%	ESD MCDOT FCD	
		Complaint type(s)		12/2009	Wash water discharge, construction without permit, road debris, illegal dumping, pool water discharges, and hazardous material response.	ESD MCDOT FCD	
3.3 Educate businesses and the general public about hazards associated with illegal discharges to storm sewer systems							
		Distribute 5,000 Pamphlets annually		12/2009	Completed and ongoing	ESD	Minimum Control Measures FY14.xls
		Number of pamphlets distributed		12/2009	21,983 This is a cumulative number of illicit discharge materials distributed at events and web information downloaded about illicit discharges to the storm sewer system.	ESD	Public Education-revised.accdb Handouts by Activity-DownloadsFY14.xls
4 Construction Site Stormwater Runoff Control							
4.1 Establish an enforcement mechanism to require erosion and sediment controls at construction sites ≥ 1 acre							
		Rules established		12/2009	Completed	ESD	MARICOPA COUNTY STORMWATER QUALITY MANAGEMENT AND DISCHARGE CONTROL REGULATION C-88-09-008-7-00 05/06/2009
		Rules drafted		12/2009	0 Maricopa County has a fully functional Stormwater Quality Regulation for permit compliance requirements.	ESD	
		Newly established rules		12/2009	Completed	ESD	
4.2 Review and update Maricopa County construction site BMP Manual							
		Research BMPs for Vol. III 2009 update		12/2009	Completed	FCD	ErosionControlManualDraft.pdf
		Additional updates or changes made		12/2009	The final edition of the Erosion Control Manual was	FCD	

MCM	BMP	Measurable Goal	New or Revised	Start Date	Implementation Status / Frequency / Achievement	Responsible Entity	Documentation
					All numbers reported in this column were performed during this reporting year.		
					issued July of 2012. Note: the pdf (portable document format) available on the internet is entitled "draft" as that was the title of the document that was accepted by the board.		http://www.fcd.maricopa.gov/Pub/manuals/downloads/ErosionControlManualDraft.pdf
4.3 Review plans and permit applications							
		Implement plan review process		12/2009	Completed	ESD	
		Staff performing plan review		12/2009	1	ESD	Bill-FY14.pdf and Mark-FY14.pdf
		Number of permit applications reviewed		12/2009	12	ESD	Construction Database.accdb
4.4 Establish a stormwater inspection program							
		Number of Stormwater inspections		12/2009	98 8 pre-construction and 90 construction BMP follow-up inspections. Follow-up inspections include monthly inspections during dry months, twice per month during wet weather months, and 48 hrs. after rain events that are 0.50 inches or greater.	ESD	Construction Database.accdb Inspection forms LOV 220-05-087-20140402 LOV 303-28-980_20140327 LOV 303-06-004J_20140327
		Problems observed		12/2009	1 One problem with BMP installation was noted during this reporting year.	ESD	SW20130014-addendum-MCDOT.pdf
		Enforcement actions taken		12/2009	3 3 Letters of Outstanding Violations have been issued. All violations noted are inspection findings of construction occurring without program approval.	ESD	
4.5 Establish a complaint response program							
		Number of construction complaints received		12/2009	3	ESD	Construction Database.accdb
		Type of construction complaints		12/2009	Operating a construction site without a permit	ESD	Inspection forms
		Construction compliant response times (≤15 days)		12/2009	All construction complaints are responded to in less than 15 business days.	ESD	LOV 220-05-087-20140402 LOV 303-28-980_20140327 LOV 303-06-004J_20140327
		Enforcement actions taken on construction sites		12/2009	3	ESD	

MCM	BMP	Measurable Goal	New or Revised	Start Date	Implementation Status / Frequency / Achievement All numbers reported in this column were performed during this reporting year.	Responsible Entity	Documentation
					3 Letters of Outstanding Violations have been issued. All violations noted are inspection findings of construction occurring without program approval.		ACCELA automation
4.6 Provide educational information on the County's Stormwater Website							
		Active web pages for construction		12/2009	3	ESD	Construction, Forms, and PostConstruction pdfs of webpages
		Number of webpage hits		12/2009	40,669 pre-construction web page views. Of these webpage hits, 38 pre-construction applications have been downloaded. Additionally, Maricopa County participated in two events promoting the education of the MS4 and CGP construction processes. These events included the STORM Construction General Permit Seminar with a total of 141 attendees for a 3 hour presentation as well as a STORM Sponsored MS4 Statewide Summit meeting that included a 40 minute presentation on the State CGP with a over 90 attendees.	ESD STORM	Public Education-revised.accdb Minimum Control Measures FY14.xls STORM Annual Report: FY 2014
5 Post construction Stormwater Management in New Development and Redevelopment							
5.1 Develop and adopt technical guidance materials							
		Review and develop technical guidance		12/2009	Completed and ongoing	ESD	Minimum Control Measures FY14.xls
		Available on County Website		12/2009	Completed and ongoing	ESD	
		Distribute guidance materials annually (Minimum 500)		12/2009	Completed and ongoing	ESD	Public Education-revised.accdb
		Number of materials distributed		12/2009	37,9847 web page views 0 post-construction application downloads Although there were no downloads of the post construction permit application form, there were 37,948 page views recorded for this information online. Also, there were no post construction related activities	ESD	fy13 pageviews.pdf PageViewsFY14-Webtrends.docx

MCM	BMP	Measurable Goal	New or Revised	Start Date	Implementation Status / Frequency / Achievement All numbers reported in this column were performed during this reporting year.	Responsible Entity	Documentation
					initiated in FY2014.		
		Method of distribution		12/2009	Internet pages views and web information downloads.	ESD	
5.2 Review plans and permit applications							
		Implement plan review process		12/2009	Completed	ESD	
		Staff person for plan review		12/2009	1	ESD	Bill-FY14.pdf and Mark-FY14.pdf
		Number of permit applications reviewed		12/2009	0	ESD	Construction Database.accdb
5.3 Conduct construction site inspections							
		Establish stormwater inspection program		12/2009	Completed		
		Number of Inspections performed		12/2009	2 Post-construction inspections	ESD	Construction Database.accdb
		Number of Violations observed		12/2009	0	ESD	
		Number of Corrective actions required		12/2009	0	ESD	
		Number of Enforcement actions performed		12/2009	0 No violations were observed, no corrective actions were required, and no enforcement actions were performed during this reporting period.	ESD	
5.4 Create and distribute educational materials for the development community							
		Create and publish educational materials for development		12/2011	Completed and ongoing	ESD	Minimum Control Measures FY14.xls
		Distribute 500 annually		12/2011	Completed and ongoing	ESD	Fact Sheet Brochure
		Number distributed		12/2011	37,9847 web page views 0 post-construction application downloads There were no downloads of the post construction permit application form; however, there were 37,948 page views recorded for this information online.	ESD	Public Education-revised.accdb PageViewsFY14-Webtrends.docx
6 Pollution Prevention/Good Housekeeping for Municipal Operations							
6.1 Maintain a regular street sweeping program							
		Maintain a regular street sweeping program		12/2009	Completed and ongoing	MCDOT	

MCM	BMP	Measurable Goal	New or Revised	Start Date	Implementation Status / Frequency / Achievement All numbers reported in this column were performed during this reporting year.	Responsible Entity	Documentation
		Number of miles swept		12/2009	7027 miles	MCDOT	Printout of sweeper data
		Frequency of sweeping		12/2009	16 week frequency for arterial streets, 8 week for residential and 2 week for special cycle streets	MCDOT	Hard copy maps of areas swept and contract billing schedule
6.2 Evaluate County facilities with regards to pollution prevention practices							
		Number of County facilities inspected/yr (Minimum 20%/yr)		12/2011	171 (32% of the County facilities)	ESD MCDOT EQSR	Minimum Control Measures FY14.xls
		Total number of facilities		12/2011	528		Monthly Work Orders Daily inspection form and SOP for ESQR Calculation page
		Number of Inspections		12/2011	1231 This number includes EQSR inspections of 4 facilities with inspections daily, quarterly, and annually (1060), and the Stormwater Quality Program inspections of County operations (171).		ArcGIS Online StormwaterFY14 map
		Recommendations for change (Minimum 2/yr)		12/2011	2 Animal Care and Control retention pond overflow and Equipment Services car wash discharge.		SWQP Inspection forms Email communication SWQP Inspection spreadsheet
6.3 Development of a centralized, County-wide employee education and training program regarding pollution prevention							
		Number of educational workshops (Minimum 2/yr)		12/2009	28 Online staff training included a series of six training presentations that were also available for staff that were not able to take the training course. This information was available to all staff that might have the potential to see stormwater pollution or work with potentially polluting materials as a part of their job. Additionally, the county held a total of 271 online classes.	AQ EQSR ESD FACILITIES FLOOD MCDOT P&D PARKS RISK SO WRR	Public Education-revised.accdb Minimum Control Measures FY13.xls List of Classes provided online staff training - FY14 - formatted.xls
		Number of staff trained		12/2009	436 employees This total number is the number of employees that had taken the 28 educational workshops (274) as well as		

MCM	BMP	Measurable Goal	New or Revised	Start Date	Implementation Status / Frequency / Achievement	Responsible Entity	Documentation
					All numbers reported in this column were performed during this reporting year.		
					the staff that had taken the online training (162).		

C.b. Stormwater Management Program Changes

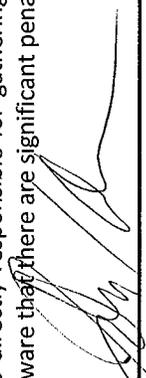
This information is suggested to show the removal or change of SWMPs, and should provide all applicable information:

- i. Analysis of ineffective or infeasible SWMP(including cost prohibitive),*
- ii. Expectations on the effectiveness of the replacement practice*
- iii. Analysis of why the replacement practice is expected to achieve the goals of the replaced practice*

- In MCM 1.1, the Stormwater Management Program calls for distributing pamphlets, the County would like to change the name of “pamphlets” to “educational material”. This would account for printed and downloaded educational material and more accurately represent the media type and method of distribution of education, allowing the County to adjust to the changing activities of its population. This change in the Measurable Goal will occur if no response from ADEQ is received by the January 30, 2015.
- In MCM 1.2, the Stormwater Management Program has been updated to present the Public Service Announcement (PSA) as a commitment to an outreach activity. Please note, the County would like to change the designation from a specific outreach type to any type of PSA. Being required to perform a set type of PSA does not allow the municipality the flexibility to adjust to the ever changing landscape of the public access to news and information in this modern “information age”. Instead, the method of PSA use will be determined by the most effective and financially responsible method available during the reporting year based on results from the previous year’s data and observed trends in public access of information.

D. Certification (40 CFR 122.22)

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



Signature

John Koljman

Name (printed)

11/17/14

Date

Director

Title

E. Attachment

Acronyms

AQ	Maricopa County Air Quality Department
EQSR	Maricopa County Equipment Services Department
ESD	Maricopa County Environmental Services Department
FACILITIES	Maricopa County Facilities Department
FLOOD	Maricopa County Flood Control Department
MCDOT	Maricopa County Department of Transportation
P&D	Maricopa County Planning and Development Department
PARKS	Maricopa County Parks Department
RISK	Maricopa County Risk Management Department
SO	Maricopa County Sheriff's Office
WoUS	Water of the United States
WRR	Maricopa County Waste Resources and Recycling
STORM	STormwater Outreach for Regional Municipalities
SWQP	Stormwater Quality Program

Instructions (From the official report form)

Regulated Municipal Separate Storm Sewer Systems (MS4s) must submit annual reports to Arizona Department of Environmental Quality (ADEQ) for each year of the permit term. In compliance with the MS4 General Permit, an MS4 must annually review its Stormwater Management Program (SWMP) in conjunction with the preparation of the annual report. This document is a suggested format for annual reporting.

Submit a signed copy of your annual report no later than September 30 of each year to:

Arizona Department of Environmental Quality
Surface Water Section/ Stormwater & General Permits Unit (5415A-1)
1110 West Washington Street
Phoenix, AZ 85007

Additional Information - From Part B.3.b of the report

B.3.b. Impaired waters within 10 miles of the MS4's jurisdiction. YES X NO

- The Salt River, Gila, and Hassayampa Rivers have been noted as impaired for Chlordane, DDT, and Toxaphene. All of these chemicals have been banned and are no longer used. The EPA has directed that a TMDL is needed but has not been established. The regular use of these chemicals has been with agriculture, and the authority over agricultural practices is with the state Department of Agriculture. **These waterbodies do not receive a direct discharge from the County UUA.** The chemicals of concern, Organochlorines, originally used widely as insecticides beginning in the 1940's, are runoff/leaching agents for stormwater and surface water pollution, and have been implicated by federal agencies as a significant health related concern for citizens and the environment. They strongly bind to soils and the sediments of waterbodies, and it is believed they gradually evaporate to the air where they are slowly broken down by sunlight.*

Organochlorines:

- Chlordane, or chlordan, is an organochlorine insecticide. It was banned in 1983, but is very persistent in the environment and may remain in soils for 20 - 30 years before it breaks down. It was used to control insects on crops. Chlordane is very stable in the environment.*
- DDT (dichlorodiphenyltrichloroethane) is an organochlorine insecticide. It was banned in 1972 but is persistent in the environment, taking between 12 to 15 years or more to break down and commonly causes fish

consumption advisories. Its uses include combating malaria, typhus, and the other insect-borne human diseases and for insect control in crop and livestock production.*

3. Toxaphene, also known as camphechlor, chlorocamphene, polychlorocamphene, and chlorinated camphene, is an organochlorine insecticide. It was banned by the EPA in 1982. Relatively nontoxic to bees, toxaphene was used to control insects on cotton, corn, fruit, vegetables, and small grains as well as to protect livestock from such pests as lice, fleas, ticks, mange, and scab mites. Persistent in nature, it remains in soil for up to 14 years.*

The information above is a consideration for the impairment of surface waters listed for these Organochlorines; however, recent evidence published in a 2013 report entitled Organochlorine Pesticide Delist Report and Fish Consumption Advisory Withdrawal For the Middle Gila, Salt, and Hassayampa Rivers and Painted Rocks Reservoir and Borrow Pit Lake by ADEQ shows that “Pesticide residues in fish tissues, while present in some instances, have decreased substantially since the 1999 survey for all pesticides previously found to have caused impairment. The majority of pesticides analyzed for in this study were not detected at detection limits of 0.02 mg/kg (DDTr, chlordane) or a conservative 0.034 mg/kg (toxaphene, MDL varied by specimen).” Additionally, this report found that the Organochlorines appear to be bound in the sediment of the rivers. It is apparent that the pollutants found in fish tissue are not a result of municipal stormwater runoff, but are due to the latent characteristics of the interaction of the chemicals to the river sediments, and the benthic feeding activities of fish. Because of the findings of this study, and because the listed surface waters do not receive a direct discharge from the Maricopa County Separate Stormwater System, no further action from the Maricopa County Stormwater Quality Program is considered necessary regarding the Organochlorine pollutants. (*Information obtained from the WHO, USEPA, and ATSDR Toxicological Profile)

- Canyon Lake is impaired for Dissolved Oxygen. This waterbody does not receive a direct discharge from the County UUA.
- Chaparral Park Lake is impaired for Dissolved Oxygen and E. Coli. This waterbody does not receive a direct discharge from the County UUA.
- Alvord Park Lake is impaired for un-ionized Ammonia; no TMDL’s have been established. This waterbody does not receive a direct discharge from the County UUA.
- Cortez Park Lake is impaired for Dissolved Oxygen and pH. No TMDL’s have been established. This waterbody does not receive a direct discharge from the County UUA.
- Lake Pleasant is impaired for Mercury due to Mercury in fish. No TMDL’s have been established. This waterbody does not receive a direct discharge from the County UUA.

Assessment

According to 40CFR122.34(g) and Part F.1. of the permit, Maricopa County is to evaluate how the Stormwater Management Program (SWMP) complies with permit requirements, and according to the 40CFR122.34(i) and part G.1.a of the permit, the county is to report:

1. The status of compliance with permit conditions,
2. An assessment of the appropriateness of the identified best management practices,
3. Progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and
4. The measurable goals for each of the minimum control measures;

As referenced in Part F.1. of the permit, since there are no impaired waters that receive direct discharges from the MS4, measurable goals do not contain numeric pollutant reduction levels, and water quality monitoring of outfalls has not been performed. The information for condition 3 and 4, listed above, may be observed in the table C.a. of the report, while condition 1 and 2 may be seen in the following narrative.

Due to a lack of impaired waters, lack of waters with a TMDL receiving a direct MS4 discharge, and the recognition that implementing practices consistent with the permit through an approved Stormwater Management Program (SWMP) constitutes compliance with the standard of reducing pollutants to the “maximum extent practicable” (MEP), the Maricopa County Stormwater Quality Program provides the following assessment of the SWMP activities, and believes these practices represent compliance with the goal of pollution reduction in stormwater runoff to the MEP.

With a lack of surface waters available for ambient water quality monitoring, and the general understanding of population and businesses types in the region, we have created an presumed list of pollutants on which we focus our activities. The pollutant sources include pesticides, herbicides and fertilizers; Fats, Oils, and greases; yard debris; waste from residential and small business; pet waste; petroleum spills; and construction trash, debris, and sediment.

MCM 1

The permit requires the provision of educational material to the public.

The approved SWMP commits the County to provide outreach to the population with a measurable goal of at least 500 brochures distributed.

The County has provided over 8000 printed educational materials to the public and has had contact with over 850,000 people with the stormwater pollution prevention message. With the consideration, according to the 2010 Census, that the total population in the county is 3.8 million, and the UUA population is approximately 150,000; we have far exceeded our population in our outreach efforts, the county estimates that we have reached almost a quarter of our total population. The permit requires for the County to have a target audience: Our population is too separated in island areas to focus on a specific population type; therefore, use of demographic information from the Census Bureau is required to make a determination on the average population group that might exist in our UUA. According to the 2010 Federal Census Bureau, 60% of the population in Maricopa County is white, 30% is Hispanic, and other cultures are less than 10% of the remaining population. No known pollution concern exists for the cultural activities associated with the known population groups in the Unincorporated Urbanized Area; therefore, English and Spanish language speaking general public, and school children, as approved in the SWMP, remains an appropriate target audience.

The County meets the requirements of the permit through the ongoing activities and program objectives written in the SWMP, and shown through the annual report, and believes the Best Management Practices performed are appropriate to remove the presumed pollutants to the MEP.

MCM 2

The permit requires Maricopa County to provide for public involvement and participation in the SWMP.

The SWMP commits the County to provide a method for public access and public feedback, to have a hotline, to monitor citizen comments, and to provide a public workshop on the Annual report prior to submitting the report to ADEQ.

The county has provided the Stormwater Management Program and contact information (phone and email) to the public and held public meetings to discuss SWMP implementation, but no response from the public have been received on this activity and public meetings on SWMP implementation and the annual report have been very poorly attended. This year there was one attendee, and she was only interested in non-municipal issues. The only public participation efforts that have produced public involvement are the poster contest and the stormwater survey. The poster contest is a public and private collaboration where private supporters offer prizes to school children for artwork on pollution prevention. This contest involves students from the entire County. This measure has had significant success by not making the involvement about the SWMP, but instead, creating an activity about educating children, promoting art, and cleaning the environment. The SWMP committed the County to hold one contest per year. With implementation of the survey, we attempt to obtain public opinion on a number of topics including the understanding of pollution, the storm system, and citizen’s comments on the stormwater activities performed by the County. Additional activities include supporting volunteer cleanup events for public streets by MCDOT, and promoting trash cleanup events of natural drainage ways and rivers. This activity meets the requirement of getting the public involved with the implementation of the SWMP.

The County meets the requirements of the permit through the ongoing activities and objectives written in the SWMP, and may be seen through data submitted in the annual report. The County believes the Best Management Practices performed are appropriate to remove the presumed pollutants to the MEP.

MCM3

The Permit requires implantation of an illicit discharge detection and elimination program, development of a storm sewer system map, education to businesses and the public on the effect of the waste on surface water, conducting dry weather outfall screening, responding to complaints of discharges, and addressing waste water discharges to the MS4.

The SWMP commits the county to create an IDDE program, with a minimum goal of 1 new staff, 20% of county outfalls inspected annually, maintaining a compliant response program with responses occurring within 5 business days for non emergencies, distributing pamphlets to businesses and the public, establishing performance goals for ongoing outfall inspections, and completing an MS4 map showing outfalls and Waters of the United States.

The County activities for the reporting year include operating a “Proactive Inspection program” that includes Illicit Discharge/Improper Disposal inspections, dry weather outfall screening, mapping of stormwater structures, a general review of the MS4, and complaint response. As reported, the program includes 3 staff positions that search the MS4 for illicit discharges and improper disposal while mapping the system, a multi-year activity as they explore areas newly added to the jurisdiction by the 2010 census. Staff have reviewed over 40% of the entire system this year (approximately 70 square miles) through the Proactive Inspection program. Dry weather outfall screening is an integral part of the activity, and by the nature of the region, defines the method of the Proactive Inspection action. Over 90 percent of the system inspections for this year, which include searching for and mapping of outfalls, has been performed during dry weather. Dry weather is defined by our program as at least 48 hours after a rain event. This activity includes inspecting every part of the observable storm system, looking for illicit discharges, documenting all observed potential illicit discharges, and backtracking flows to their source. During this reporting year, no emergency response activities have been needed in the UUA, and the program has educated business and the general public about the hazards associated with pollutants to surface waters with the measurable goal of distributing 5000 pamphlets each year. The County remains committed to providing fact sheets online and at public events and to educate businesses and citizens of the need for proper waste disposal, and has passed this measurable goal. A storm sewer system map has been created and has been in progress with outfalls and waters of the United States that flow in or near our jurisdiction. This map work has been ongoing since its inception in 2009, and was still underway in 2012 when the jurisdiction was adjusted due to the 2010 census data update. This update changed our UUA from approximately 82 square miles to over 150 square miles. All of the Waters of the US to which the county assumes it might have a discharge have been mapped, 80% of the UUA has been inspected since 2012, and 40% of this inspection activity occurred during FY2014. Sewer system mapping is expected to be completed by the end of 2017.

Wastewater discharges to the MS4 are not allowed, and any found are addressed with education and enforcement. During FY2014, three wastewater discharges to the storm system were found from private residences. The residents received education, were required stop the discharge, and the discharges were successfully removed without need for escalated enforcement action. The County meets the requirements of the permit through the ongoing activities and objectives written in the SWMP, and may be seen through data submitted in the annual report. The County believes the Best Management Practices performed are appropriate to remove the presumed pollutants to the MEP.

MCM 4

The County construction activities have not been a very active because being included in this UUA Requires an area to already be developed.

The Permit calls for a program to provide Stormwater Pollution Prevention education to the construction industry, legal authority to require E&S and waste controls, a review of plans for potential water quality impacts, erosion, sedimentation, and waste control, a review of plans before construction to verify that the plans are appropriate, and to have a method for site inspection and enforcement.

The SWMP commits the county to:

- Developing a regulation and enforcement mechanism to require erosion, sedimentation, and waste controls on construction sites. This was initiated as a program in 2009 and is still exists.
- Reviewing and updating of the BMP manual. This was reviewed and was finally updated in 2012. Further products have been reviewed for new technologies, but no updates have been considered for the manual.
- Reviewing plans and permit applications was committed to be performed, with the measurable goal of implanting the plan review process and having one staff position to assist in the plan review needs. This position has been created in 2009 and remains an active part of the program.
- Establishing a stormwater inspection program with a measurable goal of reporting the overall inspection activity including the number of inspections, the types of problems identified and enforcement actions, establishing a complaint

response program for construction. This inspection program has been in place for this entire permit year and remains active.

- Establishing a complaint response program. This compliant response program has been in place since 2009, and remains active through this reporting year.
- Providing education on the stormwater website. This activity has been initiated each year since 2009, and has remained in effect through this reporting year. Education during this reporting year included pamphlets hand outs and direct contact with developers as they have applied for permits through various county sources as well as our continued participation with STORM outreach events.

The program is effective in reducing trash and sediment to the MS4 by ensuring plans require and site staff are aware of and frequently reminded of the requirements of the BMP implementation.

The County meets the requirements of the permit through the ongoing activities and objectives written in the SWMP, and may be seen through data submitted in the annual report. The County believes the Best Management Practices performed are appropriate to remove the presumed pollutants to the MEP.

MCM 5

The permit calls for stormwater pollution prevention from runoff to the MS4 from development and redevelopment and ensuring long term operation and maintenance occurs.

The SWMP commits the County to provide updated guidance materials, and also distribute guidance to 500 customers annually. The county has performed the technical guidance drainage design manual review in 2009, although this is an ongoing review, no changes have occurred. An educational distribution of a minimum of 500 educational materials was to occur, and the county maintains information on a website that has had over 37,000 through page views. Although no applications were downloaded and no applications were processed, all existing pre-construction plan reviews have been monitored for potential post construction plan status. Since its inception, 13 post construction plan reviews were received and performed. The process calls for an operational and maintenance plan to be approved and implemented for the property. The county performs follow-up inspections immediately upon completion of site development following an approved post-construction plan and has scheduled follow-up inspections 5 years after site finalization to check for compliance with the approved plans. The first re-inspection is scheduled to occur in 2015.

Due to the limited nature of completed stormwater structures that might discharge into our MS4, the actions performed by the County to date are appropriate for the impact that these systems might have on allowing pollutants into our storm system.

The County meets the requirements of the permit through the ongoing activities and objectives written in the SWMP, and may be seen through data submitted in the annual report. The County believes the Best Management Practices performed are appropriate to remove the presumed pollutants to the MEP.

MCM6

The permit calls for an Operation and Maintenance Program that includes training and the SWMP commits the County to the following:

- Street sweeping with an anticipation of 4000 miles swept annually,
- An evaluation of at least 20 of the more than 200 facilities owned by the County each year and a recommendation for change for at least two sites each year. And,
- A staff education program, with at least two workshops each year.

The county has a regular street sweeping program that has performed over 7000 miles of sweeping during this reporting year. There are an estimated 500 facilities owned by the county and 171 were evaluated this year, with 2 that received recommendations for change to structural controls for pollution prevention concerns. There were 28 workshops provided to 274 employees and additional training provided online to 162 employees. The number of employees trained has been focused to those employees that work with pollutants or work in the UUA and might see pollutants. There are 590 staff that fit into this category and during FY2014, 73% of these staff received this training. In addition, all staff who work directly with illicit discharge detection and elimination receive annual training.

The County meets the requirements of the permit through the ongoing activities and objectives written in the SWMP, and may be seen through data submitted in the annual report. The County believes the Best Management Practices performed are appropriate to remove the presumed pollutants to the MEP.