SOUTHERN SANDOVAL COUNTY
ARROYO FLOOD CONTROL AUTHORITY
FISCAL YEAR 2013 STORMWATER MANAGEMENT PROGRAM
ANNUAL REPORT
(JULY 1st, 2013 THROUGH JUNE 30th, 2014)

The Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA) was created in 1990 as a quasi-municipality to address regional flooding and stormwater drainage problems in the urbanized area of southern Sandoval County. Sandoval County is located just north of and abutting Bernalillo County in central New Mexico. SSCAFCA's jurisdiction includes the Village of Corrales, the Town of Bernalillo west of the Rio Grande and portions of the City of Rio Rancho and Sandoval County. SSCAFCA currently owns or operates stormwater facilities including dams, channels, ponds, piping systems and other stormwater related infrastructure within its jurisdiction. SSCAFCA's jurisdiction is approximately 225 square miles with an estimated population of 90,000.

SSCAFCA's Stormwater Management Plan (SWMP) was submitted on May 24, 2007. This is SSCAFCA's **seventh** annual report under the NPDES Phase II General Permit NMR040000 which was administratively extended. This report documents the progress achieved over the program year on the activities associated with the six Minimum Control Measures as indicated in the SWMP.

At the September 19, 2014 meeting of the SSCAFCA Board of Directors, the public was invited to address the Board with any environmental concerns (See attached agenda in Appendix A) and to provide input on the draft annual report.

Note: Actions taken by SSCAFCA during the program year are indicated in bold text after each section.

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly 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.

_____ Date:_____

Charles Thomas, PE
Executive Engineer

1. Public Education and Outreach

SSCAFCA believes that public education is fundamental to addressing stormwater pollution and therefore will implement the following practices. All activities related to public education and outreach will be documented in the annual report.

Proposed Best Management Practices:

BMP 1-A: Develop and distribute educational material concerning impacts of stormwater discharge to watershed.

BMP 1-B: Conduct outreach activities about the impacts of stormwater discharges on local water bodies and the steps that can be taken to reduce stormwater pollution.

Actions taken:

- **SSCAFCA conducted a large variety of outreach programs to both adults and children targeted at providing information regarding stormwater quality preservation and an overall understanding of New Mexico's arid environmental stormwater quality's impact on our water resources. These efforts reached an estimated 7,075 adults and school children, a 61% increase over the number of individuals reached during the 2013-2014 reporting cycle. A summary table of SSCAFCA-attended events is located in Appendix B1.**

- **SSCAFCA continued to fund and participate in an intergovernmental Stormwater Quality Team (SQT). Other members include the City of Albuquerque, New Mexico Department of Transportation, Bernalillo County, and AMAFCA. The primary objective of this team is to implement the goals of this minimum control measure to educate the public on stormwater impacts to the watershed. The following efforts and actions were conducted by the Team this program year:**
  - **Continued funding for water and watershed education program focused on the Rio Grande for public school students: Bosque Education Monitoring Program (BEMP) 2013-2014 BEMP Stormwater Science Education Overview and associated listing of programs delivered by BEMP (see Appendix B2)**
  - **Continued funding of the RiverXchange program in 5th grade classes throughout Albuquerque, Corrales, Rio Rancho, San Felipe and Cochiti Pueblos. The 2013 RiverXchange report is located in Appendix B3.**

- **SSCAFCA was an event planner, committee member, and participant in the Rio Rancho Children's Water Festival. This program is based on fourth grade educational standards and promotes awareness of our watershed and water in a desert environment. Students attend a day-long event with six breakout sessions. Each breakout session concentrates on an aspect of water**

in the desert, with sessions specifically focused on stormwater and stormwater pollution prevention. The report detailing the October 2013 Children's Water Festival is contained in Appendix B4.

- **SSCAFCA separately funded and implemented the Arroyo Classroom Education Program for delivery to third grade classrooms at four elementary schools Elementary School in Rio Rancho. This program is focused on the microhabitat of arroyos and arroyo safety with educational materials regarding the arroyo ecosystem and live animal presentations. This program builds a greater understanding of healthy natural arroyo systems and the plants and animals that inhabit them. The report on the implementation of this program is located in Appendix B5.**

- **SSCAFCA separately funded the RiverXchange program to increase the program's exposure within the SSCAFCA jurisdiction. A total of 22 of classes from Rio Rancho and Corrales participated with representatives from SSCAFCA directly participating as guest speakers regarding non-point source pollution issues. A watershed model was used to demonstrate the cumulative effects of NPS on the local watershed, highlighting what the students could actively do to prevent such pollution. The year-end summary report can be found in Appendix B2.**

- **SSCAFCA continued to be an active participant and proponent of the Biological Alternative to Spraying Program (BATS), which SSCAFCA created to educate the public about bats. This program aims to reduce pesticide use in and around stagnant waters in SSCAFCA's jurisdiction. The current ponding areas in the jurisdiction have bat boxes, therefore no additional bat boxes were added in 2013-2014. The 2013-2014 focus of the BATS program was education and outreach, focusing on young children that have a misconception that bats turn into vampires. With the current vampire craze, children don't have an understanding of the positive impact real bats have and how many bugs they can eat in one night. SSCAFCA placed influence on the positive aspects of bats in our environment to insure children understand that bats were working hard to eat huge amounts of bugs and to show them that bats are not big, scary monsters. The BATS information was integrated into the Arroyo Classroom Program, including educational elements with live bats in the classroom along with awareness of bats and how they benefit communities. The BATS material was presented to 19 classes of students at four elementary schools in Rio Rancho. The goal of the education element of this program is to build an awareness of animals and habitat, how animals help us, the impact of biodiversity in our neighborhoods, and a sense of protecting our environment and its inhabitants.**

- **Completed design of a water harvesting shade structure with integral**

components for water harvesting as an Arid LID demonstration facility at Roskos Field in Rio Rancho, New Mexico. This project demonstrates Arid LID techniques that can be used by architects, engineers, landscape architects, and home owners for capturing rainwater and applying to landscape. Educational panels were installed that discuss the rainwater harvesting features/Arid LID concepts that were installed at the Roskos Field demonstration area. The design for the shelter and photographs of educational panels are located in Appendix B6

- **Began implementation of the Black Arroyo Open Space Wildlife Park Master Plan. The Master Plan incorporates recreational elements with education oriented space for usage by the local Elementary School in studying site biology, ecology of arroyo systems, hydrology and geology. Funding was obtained for the first phase of implementation is the construction of the trail system to focus pedestrian traffic on an improved surface and reduce the amount of traffic across the fragile native vegetation. Funding has also been obtained to construct a rainwater harvesting shade structure which will be used by students in the delivery of educational programming.**

2. Public Participation/Involvement

SSCAFCA is particularly aware of the value of public involvement and acceptance of its mission as it is dependent on publicly voted bonds for funding. As such, SSCAFCA takes every opportunity to understand and accommodate the public needs, which include protecting water quality.

Proposed Best Management Practices:

BMP 2-A: Provide notice to public of upcoming NOI submittal and subsequent annual BMP evaluations that result in changes or additions.

BMP 2-B: Investigate feasibility of supporting established anti-litter program(s) or initiating new programs seeking public participation in ensuring flood control facilities remain free of trash and debris.

Actions taken:

- **SSCAFCA has provided public notice and invited participation for input on the preparation of this report on September 19, 2014 as well as posting the draft report on our website, www.sscafca.com. See Appendix A for Board meeting agenda opening up public comment period.**

- **SSCAFCA continued to support and participate with other governmental entities and citizen action groups to raise awareness and conduct cleanup operations of illegal dump sites within the local watersheds. This is primarily**

accomplished through the City or Rio Rancho sponsored Keep Rio Rancho Beautiful (KRRB) program. KRRB's mission is to educate, facilitate, and inspire our community to take pride and ownership in proper solid waste handling practices, recycling, litter prevention, beautification, and environmental education. KRRB has been an affiliate of Keep America Beautiful since 1989. SSCAFCA participated with the City of Rio Rancho at the 2014 Great American Cleanup where 1,316 (a 25% increase above the 2012-2013 reporting year) volunteers picked up 141 tons of trash from drainage facilities and the contributing watershed. SSCAFCA also participated with the City of Rio Rancho in the Toss No Mas event. For this event, 144 volunteers who collected 6.05 tons of trash (see Appendix C1).

- **SSCAFCA continued for a fifth year in a row to participate in the AridLID conference that was held in February 2014 in Albuquerque, New Mexico. This conference sought to bring together a wide array of technical and organizational knowledge concerning the implementation of Low Impact Development and Green Infrastructure techniques in an arid environment. SSCAFCA provided a sponsorship for this conference. The conference also sponsored a roundtable with EPA, the development community, and AridLID subject matter experts for conference attendees to better comprehend the upcoming Watershed Based MS4 permit. Conference agenda is included in Appendix C2.**

- **This reporting cycle (2013-2014) was the first time SSCAFCA worked with high schools students on the Rio Rancho Sustainability film series. High School students educated peers on the impact of animal was on stormwater and signed up 150 students who pledged to "scoop the poop" for cleaner stormwater.**

3. Illicit Discharge Detection and Elimination (IDDE)

Under the authority granted to SSCAFCA (NMSA 1978: 72-19-22), connection to any stormwater drain or flood control facility of the authority must be approved. SSCAFCA has recently undertaken the process of setting up an in-house GIS system to be utilized for purposes such as maintaining information on all connections to SSCAFCA facilities. It is anticipated that control of potential illicit discharges from connected municipal stormwater infrastructure will fall under the purview of the respective municipality. SSCAFCA proposes the following practices seeking to minimize non-stormwater discharges within its facilities.

Proposed Best Management Practices:

BMP 3-A: Development of a system-wide stormwater infrastructure map.

BMP 3-B: Develop program to identify unapproved connections to SSCAFCA conveyances/facilities, and potential sources of illicit discharge.

BMP 3-C: Review and update policy to prohibit non-stormwater discharges to SSCAFCA facilities.

BMP 3-D: Partner with local municipalities to support education concerning ordinances preventing unauthorized discharges to MS4s (ties in with MCM 1).

- **No incidences of illicit discharges were noted this program year.**
- **SSCAFCA continues to maintain and update a GIS-based map of all SSCAFCA drainage and water quality facilities**

4. Construction Site Runoff Control

SSCAFCA recognizes the potential for excess sediment and other pollutants from construction site runoff to be transported to receiving watercourses and proposes the following mitigation measures.

Proposed Best Management Practices:

BMP 4-A: Evaluate adoption of enhanced erosion control policies for disturbed land areas of 1 acre or greater.

BMP 4-B: Conduct contractor training courses regarding stormwater management guidelines for construction practices.

BMP 4-C: Evaluate development of tracking program to monitor construction site runoff control implementation for projects within jurisdiction.

BMP 4-D: Evaluate training opportunities for SSCAFCA staff tasked with NPDES program management.

Actions taken:

- **Both the City of Rio Rancho and SSCAFCA policies and procedures outline erosion control requirements for development:**
    - **Final Development Process Manual for SSCAFCA and City of Rio Rancho (7/31/09) – Section 5. Design Grading and Erosion Control**
    - **SSCAFCA Drainage Policy (6/20/08)**
    - **SSCAFCA Drainage Policy Amendment 2004-1**
    - **City of Rio Rancho Ordinance - Chapter 153: Erosion Control; Storm Drainage**

- **Sediment and Erosion Design Guide (November 2008)**

- **SSCAFCA had two agency-sponsored construction projects, Harvey Jones Channel Outlet reconfiguration and the Lomitas Negras Water Quality Facility, during the reporting cycle that required construction site runoff management activities. Stormwater Pollution Prevention Plans were developed and implemented for these projects and Notices of Intent were filed with EPA on the eNOI website.**

5. Post-Construction Runoff Control

SSCAFCA recognizes that many of its primary functions as a flood control agency also serve as ongoing controls on sediment transport to receiving waters. As such, SSCAFCA proposes to leverage flood control projects and practices to benefit the NPDES program.

Proposed Best Management Practices:

BMP 5-A: Review existing construction standard details regarding stormwater quality and evaluate promulgation of details for use in commercial and residential development projects.

BMP 5-B: Continue implementation of current policy DPA 2004-1.

BMP 5-C: Evaluate adoption of policy creating land conservancy areas.

BMP 5-D: Evaluate, develop, and implement O&M performance bond/administrative policy.

BMP 5-E: Develop, fund, and implement SSCAFCA capital improvement projects incorporating water quality features such as stormwater detention, erosion control, stream bank protection, and etcetera.

Actions taken:

- **SSCAFCA continued to mandate compliance with all of the policies and procedures outlined in MCM 4 with respect to post-construction runoff control through reviewing and approving all multi-unit residential and commercial construction within the jurisdiction.**

- **SSCAFCA designed and constructed a Water Quality facility on the Lomitas Negras Arroyo (a tributary to the Montoyas Arroyo). The purpose of this project was for sediment reduction to stormwater flows to the Rio Grande. Project construction was initiated in April 2014 and completed in June 2014 and consists of four check dam structures made of soil cement within the arroyo. The structures were designed to have the capacity to remove approximately 50,000 cubic yards of sediment during large storm events. An**

as-built site plan for this facility as well as pictures of the completed facility are located in Appendix E1

- **SSCAFCA completed the Preliminary Engineering Report (PER) and all environmental documentation necessary to proceed with the design of a second water quality facility, the Lower Montoyas Water Quality facility. The facility is currently in design and is scheduled to be constructed in the winter and spring of 2015. This facility will be designed using AridLID techniques and incorporate green infrastructure as an integral component of the stormwater treatment aspect of the project. In addition to providing significant sediment removal capacity, the green infrastructure is intended to provide a mechanism for floatable removal from stormwater flows. The final PER is located in Appendix E2.**

- **Progressing on the acquisition of approximately 200 acres of playa land identified in the last reporting cycle. Acquisition of this property will protect this natural flood attenuation land form as well as protect this valuable groundwater recharge area. A map showing the location of these playas is located in Appendix E3.**

6. Pollution Prevention/Good Housekeeping

Proposed Best Management Practices:

BMP 6-A: Review previous SSCACFA facility operations impact determination and make changes as appropriate.

BMP 6-B: Develop and implement standard operating procedure (SOP) for disposition of waste material recovered from flood control facilities.

BMP 6-C: Evaluate, develop and implement enhanced O&M program utilizing newly obtained GIS resources.

Actions taken:

- **An evaluation of SSCAFCA facility operations yielded no changes or improvements necessary.**

- **Ongoing collection and disposal of gross debris captured in SSCAFCA water quality facilities was performed during the program year. Floatable debris included disposable plastic drinking bottles, miscellaneous trash, construction debris, and vegetation/foliage. Normal post-2013 monsoon trash removal operations at the Black Arroyo water quality feature yielded 126-50 gallon capacity bags of trash, 70% of which was plastic water bottles and plastic grocery bags. Normal pre-2014 monsoon trash removal**

operations at one of our water quality facilities yielded 17, 55-gallon trash bags of debris collected from the Black Arroyo water quality feature. The trash primarily consisted of plastic bottles and debris.

List of Appendixes

Appendix A

SSCAFCA Board Meeting Agendas

Appendix B1

2012 Bosque Education Monitoring Program Summary Reports

Appendix B2

2011 Monsoon Season Media Buy Proposal

Appendix B3

New SQT-Produced Brochures

Appendix B4

2011/2012 School Year – RiverXchange Summary Report

Appendix B5

Pet Waste Editorials

Appendix C1

Great American Cleanup Participation

Appendix C2

Clean Arroyos Task Force Final Report

Appendix C3

Trash Reduction and Elimination Committee Essay Contest Articles in Local Newspaper

Appendix C4

2012 AridLID Conference Agenda

Appendix C5

Public Awareness of Stormwater Pollution Survey

Appendix D1

2003 NPDES Storm Water Management Guidelines for Construction and Industrial Activities Manual Update – Schedule of Meetings

Appendix E1

UNM BMP Research Final Report