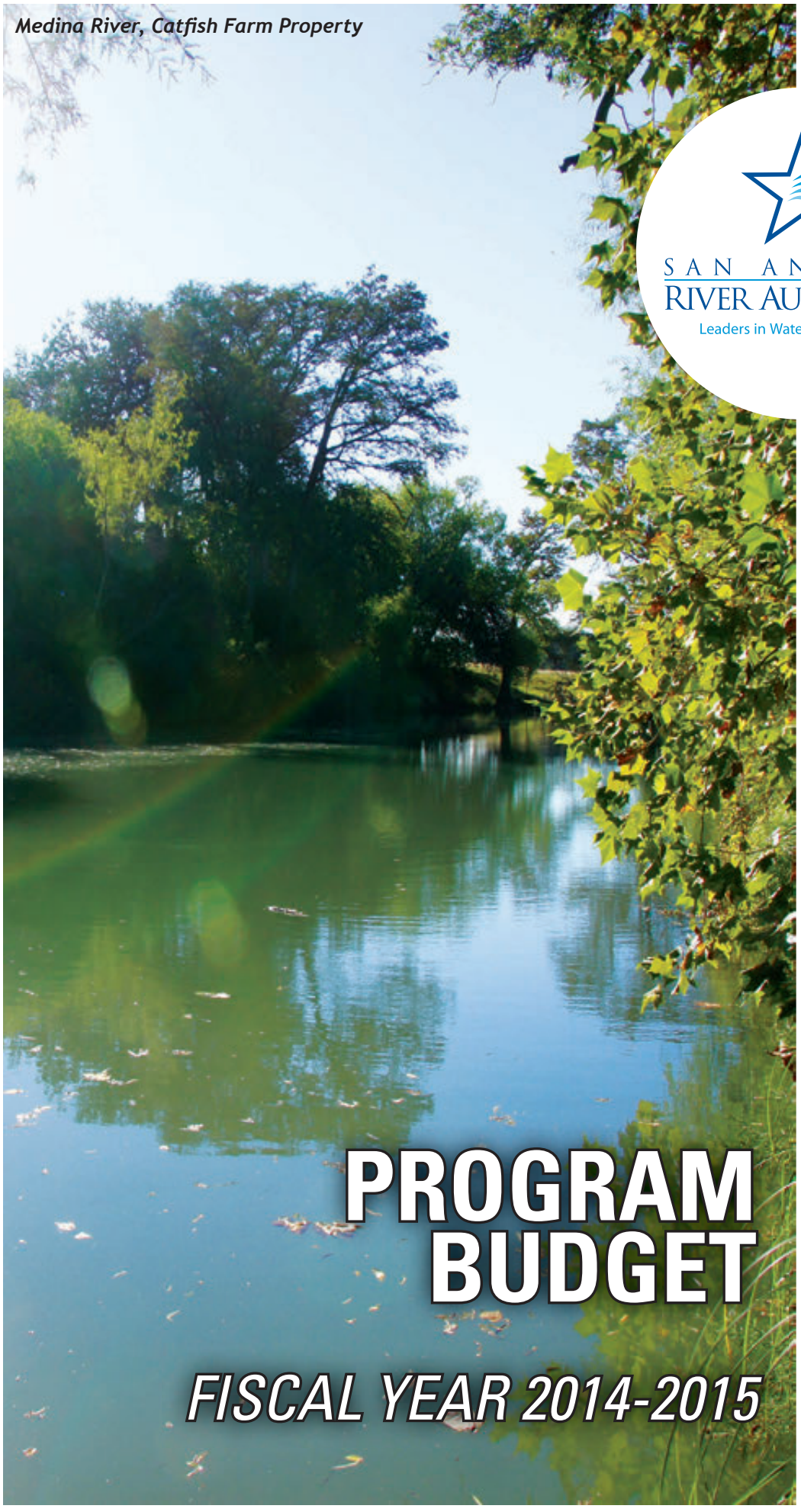

Medina River, Catfish Farm Property

SAN ANTONIO
RIVER AUTHORITY
Leaders in Watershed Solutions

PROGRAM BUDGET

FISCAL YEAR 2014-2015

San

SAN ANTONIO RIVER AUTHORITY
TEXAS

PROGRAM BUDGETS

July 1, 2014 - June 30, 2015

Presented to the
Board of Directors

Name	Title	County
Jerry G. Gonzales		Bexar County, District 1
Lourdes Galvan		Bexar County, District 2
Michael W. Lackey, PE		Bexar County, District 3
Thomas G. Weaver	Executive Member	Bexar County, District 4
Sally Buchanan	Chairman	Bexar County, At Large
Hector R. Morales	Secretary	Bexar County, At Large
Terry E. Baiamonte	Vice-Chair	Goliad County
James Fuller		Goliad County
Gaylon J. Oehlke	Treasurer	Karnes County
H. B. Ruckman III		Karnes County
Darrel T. Brownlow, Ph.D.	Executive Member	Wilson County
John J. Flieller		Wilson County

Management

Name	Title
Suzanne B. Scott	General Manager
Stephen T. Graham	Assistant General Manager
Steven J. Raabe	Director of Technical Services
John A. Chisholm III	Director of Operations
Bruce E. Knott	Director of Human Resources
Kristen Hansen	Watershed & Park Operations Manager
Claude Harding	Real Estate Manager
Art Herrera	Information Technology Manager
Steve Lusk	Environmental Sciences Manager
Linda Muñoz	Human Resource Manager
Russell Persyn	Watershed Engineering Manager
Steven Schauer	External Communications Manager

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Sustainable Watersheds Implementation Program

Utilities Program

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Watershed Safety and Response Program

Support Services Efforts

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SAN ANTONIO
RIVER AUTHORITY
Leaders in Watershed Solutions

June 18, 2014

To the San Antonio River Authority Board of Directors:

In accordance with the provisions of Article VI, Section 2, of the Bylaws of the San Antonio River Authority (River Authority), submitted herewith for your consideration is the Annual Budget for fiscal year 2014/15 for the period July 1, 2014 to June 30, 2015.

For the fiscal year 2014/15, the total budget is $95,722,554, with a General Fund budget of $25,869,221. The proposed fiscal year 2014/15 budget is presented in three books to address the different needs of the reader(s). The first book is the Executive Summaries and Five Year Service & Financial Plan. The second book is the Annual Budget Detail which presents the complete budget for each River Authority fund. The third book consists of the Program Budgets and details the River Authority's active programs and projects.

The proposed fiscal year 2014/15 budget supports the mission, goals and objectives of the River Authority's approved strategic plan. Programs, projects and departmental activities and expenditures are linked through the strategic plan to produce desired results in the services provided by the River Authority.

Strategic Planning

Each year the River Authority's executive and management staff, working under the policy and fiscal guidance of the Board of Directors (Board), begins the annual budget process with a review and update to the River Authority's strategic plan. The strategic plan sets both multi-year and annual measurable goals with tangible results. The latest update to that 12-month plan is for fiscal year 2014/15. This updated strategic plan serves as the foundation for the expenditures reflected in the budget and for the results staff will work to accomplish within our district through the projects and efforts in our departments and programs. The annual strategic plan is not an exhaustive list of every project, initiative, and opportunity being worked on by the River Authority, but instead it is a representation of key efforts that we hope are indicative of how the River Authority will advance its mission that year.

The multi-year goals within the strategic plan are identified as Agency Goals and Strategic Opportunities. Currently the Goals consist of the following:

- Generate lasting and recognized improvements to the health and safety of the San Antonio River Watershed and the bay and estuaries into which it drains.
- Enhance community appreciation for and access to the San Antonio River and its tributaries.

100 East Guenther St. ☆ P.O. Box 839980 ☆ San Antonio, TX 78283-9980 ☆ www.sara-tx.org
(210) 227-1373 ☆ (866) 345-7272 ☆ Fax (210) 227-4323

- Strengthen, develop and anticipate expertise at all levels to enhance service efficiencies and build employee dedication.
- Expand, diversify and leverage funding sources and partnerships through delivery of quality services and adherence to project management best practices.
- Advance our science, technology and expertise to influence, develop and implement sustainable watershed solutions by balancing the environmental, economic and quality of life needs of our communities.

The Strategic Opportunities are as follows:

- Launch targeted educational and outreach activities to broaden community knowledge and value of the River Authority and the watersheds throughout the River Authority's district.
- Expand our stormwater role.
- Target efforts that integrate and implement recommendations of watershed plans to maximize their utilization.
- Undertake efforts that support the successful implementation of the Whooping Crane Recovery Plan and develop the critical scientific knowledge to support stewardship of the Golden Orb Mussel and other species at risk in the San Antonio River Basin.

The Board has targeted policy decisions to direct the River Authority's service to meet the needs of the basin, while remaining accountable to the efficient and effective allocation of limited funding resources. Projects and programs are aimed at promoting appreciation for the river and tributaries by enhancing recreational accessibility and enjoyment and restoring degrading ecosystems; expanding the utility system to support economic development; and continuing to shape the expertise of the River Authority staff to effectively meet the needs of the communities within the district.

The River Authority is also advancing sustainability in the projects and programs it undertakes. The River Authority has focused its sustainability efforts toward strengthening the compatibility between environmental and human uses within the watershed. River Authority projects and programs support the continued economic growth and vitality of the basin while encouraging sustainable practices that balance costs without compromising the future health of our rivers and creeks. Sustainable projects are designed to promote lasting solutions which improve the watersheds of the basin and leverage resources toward shared environmental stewardship. Developing sustainable solutions requires a long-term, holistic, watershed-based approach that integrates activities internal and external to the River Authority, including the application of science, engineering, land management, education, regulation, and legislation.

The River Authority acknowledges that the watershed needs of the district will likely remain greater than the resources available to meet those needs; therefore, reliance upon the strategic plan to prioritize needs and available resources is critical to successfully attaining the agency's mission and goals. The strategic plan sets both annual and multi-year measurable goals with tangible results. These quarterly results are tracked and reported to assigned board committees for oversight. The results-oriented accountability to achieving the goals of the strategic plan is also measured through three key performance indicators.

First, the River Health Index (RHI) is used to track whether the River Authority's programs and efforts are making demonstrated improvements in the health, safety and sustainability of the San Antonio River and its tributaries. The RHI is a composite score derived by a summation of measured values in the areas of public safety, environmental protection, public awareness, and public access to the San Antonio River and its tributaries. Ten-year targets have been established for identified activities along with the annual projected improvement levels the River Authority seeks to attain each year to reach the 2020 goals. Attainment toward the targets is reported to the Board in January.

Two financial performance measures have also been established to indicate the extent to which the financial resources of the River Authority are being leveraged. Being prudent financial managers means making sure that we generate the maximum amount of service from all available resources. The Financial Leveraging Index (FLI) tracks how the River Authority's direct funding is leveraged with other funding resources to advance watershed-wide goals. The Project Leveraging Index (PLI) tracks total value of projects managed by the River Authority on behalf of others that also progress our agency mission and objectives.

2014/15 Operational Objectives

To be "Leaders in Watershed Solutions," we believe we must be results-oriented. To obtain results and to hold ourselves accountable, several Annual Objectives have been developed for the River Authority as a whole. Each department and program has measurable objectives that align with and support the attainment of these Annual Objectives. The objectives in fiscal year 2014/15 are as follows:

Watershed Health & Safety

1. Expand expertise by implementing techniques for water quality monitoring by developing metals in sediment capabilities.
2. Create community understanding and value of Risk Map products to reduce flood risk.
3. Develop and implement a plan for evaluating pipeline integrity on river crossings within the River Authority district's Eagle Ford Shale region.

Community Appreciation & Access

4. Implement communications plan promoting the River Authority's expertise and services.
5. Develop and execute monthly park programs.
6. Improve and expand the River Authority parks and paddling trail opportunities as identified in the Nature-Based Park Resources Plan update.

Employee Expertise & Dedication

7. Develop and implement a Leadership Development Program.

8. Increase access to and use of wellness programs by all covered individuals to control healthcare costs.

Quality Services Delivery

9. Encourage the growth of our utilities systems by adding 250 connections and promoting sustainable development practices.

10. Manage capital improvement projects' schedules and budgets to meet community expectations and project milestones.

11. Develop partnership strategy for river and creek operations and maintenance.

Watershed Science & Technology

12. Advance low impact development (LID) in development codes throughout the basin.

13. Develop and promote implementation of best management practices (BMPs) and Operations and Maintenance (O&M) strategies for Upper San Antonio River, Leon and Salado creeks watersheds.

14. Develop a SARA-wide geographic information system (GIS) integration plan with a timeline and resources needed to implement.

15. Implement systems applications to increase operational efficiencies and responses to information needs.

16. Complete studies to support development of a Candidate Conservation Agreement with Assurances for the Golden Orb Mussel and other mussel species at risk.

Sources of Funds

The extensive portfolio of programs, projects, and efforts requires significant resources to fund. The River Authority's *ad valorem* maintenance and operations tax funds only about a quarter of the budget. The River Authority receives revenues from several sources to support the activities in the Annual Budget. These sources include federal appropriations, interlocal agreements, fund balances, grants and private donations, and the River Authority's *ad valorem* maintenance and operations tax. The River Authority continually looks to leverage and optimize existing revenue sources with funds from external sources. Each funding source for fiscal year 2014/15 is discussed on the following page.

Federal and State Appropriations

The River Authority has taken great advantage of federal appropriations to support its wastewater and flood control functions. The potential exists to significantly increase funds available from existing and untapped sources of federal and state funds. The Annual Budget does not reflect an increased level of funding from these sources significantly affecting the bottom line in the short term, but it is believed the increases in planning activity proposed will increase the flow of federal and state funds for water-related programs and projects in the district. Regionalization of public functions and services fosters increased levels of federal and state participation. For example, in the State's grant program for recreation facilities, the region-wide recreation plan proposed will improve evaluation scores and thereby the chances of individual city or county recreation projects to be funded by the state program. In addition, entities such as the Federal Emergency Management Agency (FEMA), the Texas Water Development Board (TWDB), and others desire to develop and implement water-related programs with regional entities, particularly entities with jurisdiction over river basins and associated watersheds. These entities realize that the hydrology and hydraulics of water on a watershed basis are more significant in water issues than the boundaries of local jurisdictions.

In fiscal year 2012/13, as a Coordinating Technical Partner (CTP) with FEMA, the River Authority was approved for both Letter of Map Revisions (LOMR) Delegation and Risk MAP product development. As FEMA's LOMR Delegate, the River Authority will be paid by FEMA to review and make recommendations regarding changes to the federal flood maps that might be proposed by developers. The vision for Risk MAP is to deliver quality data that increases public awareness and leads to action that reduces risk to life and property. Risk MAP builds on flood hazard data and maps produced during the Flood Map Modernization (Map Mod) program. The River Authority was awarded a grant in fiscal year 2012/13 to develop the Risk MAP for the Upper San Antonio River and in fiscal year 2013/14 the River Authority was awarded a grant to develop the Risk MAP for the Medina River. In fiscal year 2014/15, the River Authority hopes to continue the relationship it has formed with FEMA and secure additional grant funding.

Interlocal Agreements

The River Authority prides itself on partnerships. The River Authority has formalized these partnerships at the federal, state, and local levels through various contracts and interlocal agreements (ILAs). Through partnerships the River Authority is able to leverage its expertise to design and construct water-related projects through arrangements that are mutually beneficial to the participating public agencies. These agreements continue to be an important revenue source for the River Authority. The River Authority has executed ILAs with the City of San Antonio and Bexar County, for example, whereby the River Authority provides certain technical services and project management for flood control, river improvement and water quality projects. Other examples include the Regional Water Resources Development Group (RWRDG), which is the joint effort to buy Edwards Aquifer water rights administered by the River Authority, and the SB-1

Regional Planning (Region L) process, both of which are funded by the program participants.

Fund Balances

The River Authority has adopted a fund balance policy which describes the protocol for use of the fund balances including maintenance of reserves to protect the River Authority's financing capability and to provide operating reserves. The Annual Budget recommends that the Unassigned Reserve fund balances be used to fund capital projects rather than O&M activities. Beginning three years ago, the River Authority expanded O&M activity on the Museum Reach, Eagleland and Mission Reach of the San Antonio River Improvements Project. The Board established an Unassigned-Operating Reserve Account portion of fund balance to offset unexpected costs associated with project maintenance.

Grants and Private Donations

During the past four fiscal years, the River Authority has increased its application for and receipt of grant funding and will continue to seek this source of funding for activities consistent with the Annual Budget. In addition, many charitable trusts and other sources of private funds have recreational or environmental protection, enhancement, and education activities as key elements. Two grant writing consultants have been engaged to further help identify and apply for relevant grants. The River Authority works closely with the San Antonio River Foundation to direct private funding toward projects and activities that advance our mission and stewardship of the resources of the San Antonio River. The improved planning tools and products, such as master plans, that will be developed according to the Annual Budget will improve the River Authority's opportunities to access private donations.

Maintenance and Operations Tax

Many of the River Authority's activities, such as flood control and water quality protection, do not have revenue sources and are typically supported as a governmental function by an *ad valorem* tax. The River Authority is authorized to collect an *ad valorem* tax at a maximum of $0.02 per $100 of assessed property value. The tax may be used for O&M activities, which include all activities other than direct capital investment in infrastructure. The fiscal year 2014/15 budget is based on a proposed tax rate of $0.017798 which was the rate assessed in fiscal year 2013/14. The final tax rate calculation will be prepared when the certified tax rolls are received by the River Authority in late July. The Board will hold a public hearing and vote on the tax rate in late August or early September.

In all that the River Authority does, we strive to provide valued public service, to be accountable to our constituents, and to be good fiscal stewards of the public resources with which we are entrusted. The budget, programs, projects and activities presented in these documents are provided to promote quality service and responsiveness to the needs of the community we serve.

Respectfully submitted,

SUZANNE B. SCOTT
General Manager

STEPHEN T. GRAHAM
Assistant General Manager

Definitions

Programs, projects, and efforts have specific definitions as used in this book, and it is important to provide those definitions so all stakeholders have a common understanding. The River Authority has a portfolio grouped by programs and under them are projects and efforts.

Program

A program is a group of projects managed in a coordinated way to obtain benefits not available from managing them individually. (Programs can have an end date or can be ongoing.)

Project

A project is a temporary endeavor that has a start and end date and will produce a unique product or service. The River Authority project threshold is $50,000 or above estimated value (including out-years) and 6 months or longer in duration. All programs and projects are listed in the River Authority's project management system.

Effort

An effort is an activity that does not fit into the project definition and threshold, requires expending significant amount of the River Authority's resources, and/or activities that may be of interest to our constituents.

Processes

Especially for project-driven organizations like the River Authority, where the majority of the business is projects, managing the projects consistently and effectively is critical to managing the entrusted public funds and successfully serving our constituents. For this purpose there are various internal processes and tools that take a project from the first step, which we call the idea stage, to a successful completion.

Project Proposal Process

The majority of the River Authority's projects start with an idea unless projects are mandated by law. During the budgeting process, programs put forth their project ideas for the upcoming fiscal year. These project ideas are scrutinized by what is called the Project Evaluation Process.

Project Evaluation Process

Evaluation of each project is done at the concept level. As a result, all projects are evaluated against the River Authority's strategic plan, goals and priorities. A comprehensive and dynamic evaluation questionnaire has been developed in an effort to integrate the River Authority's strategic goals, priorities and triple bottom line into projects. At the end of the evaluation process a priority score is established for each project. The projects that are published in this book have been through this process.

Sustainable projects are optimized through Triple Bottom Line analysis, which utilizes an objective accounting matrix to evaluate and seek balance among the economic, environmental, and quality of life project components. A balance among these factors is best achieved if multidiscipline teams, including the landscape architect, incorporate sustainable land use best management practices into initial site selection, project planning, and lifecycle operations and maintenance planning.

- Environmental: A sustainability outlook recognizes the value of environmental services.
- Economic: Evaluates immediate costs and life-cycle costs.
- Quality of Life: Quality of life is generally considered to be the quality of jobs, education, health, safety, recreation and social interaction possible in a community.

Project Management Process

Contemporary project-driven organizations are implementing project management best practices and disciplines to manage their projects. The River Authority initiated the Project Management Program in 2002 to achieve a level of maturity that is right for the organization. The scope of the program included the implementation of project management best practices, common processes and tools for all River Authority-managed projects. The River Authority's portfolio of projects includes engineering projects, utilities projects, watershed management projects, parks projects, water resources projects, information technology projects, study projects, and support projects.

The River Authority now has processes to take these projects from the idea stage, to prioritize them, and to implement those that are consistent with the strategic goals and priorities. As a result, the River Authority is already enjoying various benefits of the process including efficiency of resources, operational synergy and productivity. Also, all the project management processes and templates were gathered in one concise collaborative Project Portfolio Management (PPM) software application that has enabled transparency and efficiency.

Now programs and projects are accessible by all stakeholders, are executed cost-effectively and are managed consistently. As new project managers and project team-members are assigned to a project or transitioned from one project to another, there is a common understanding of how the project will work through its life-cycle, which in turn minimizes the learning curve related to handoffs. Also, with everyone being familiar with the common project management processes and tools, informed decisions are being made, thereby eliminating guesswork at all levels of the organization.

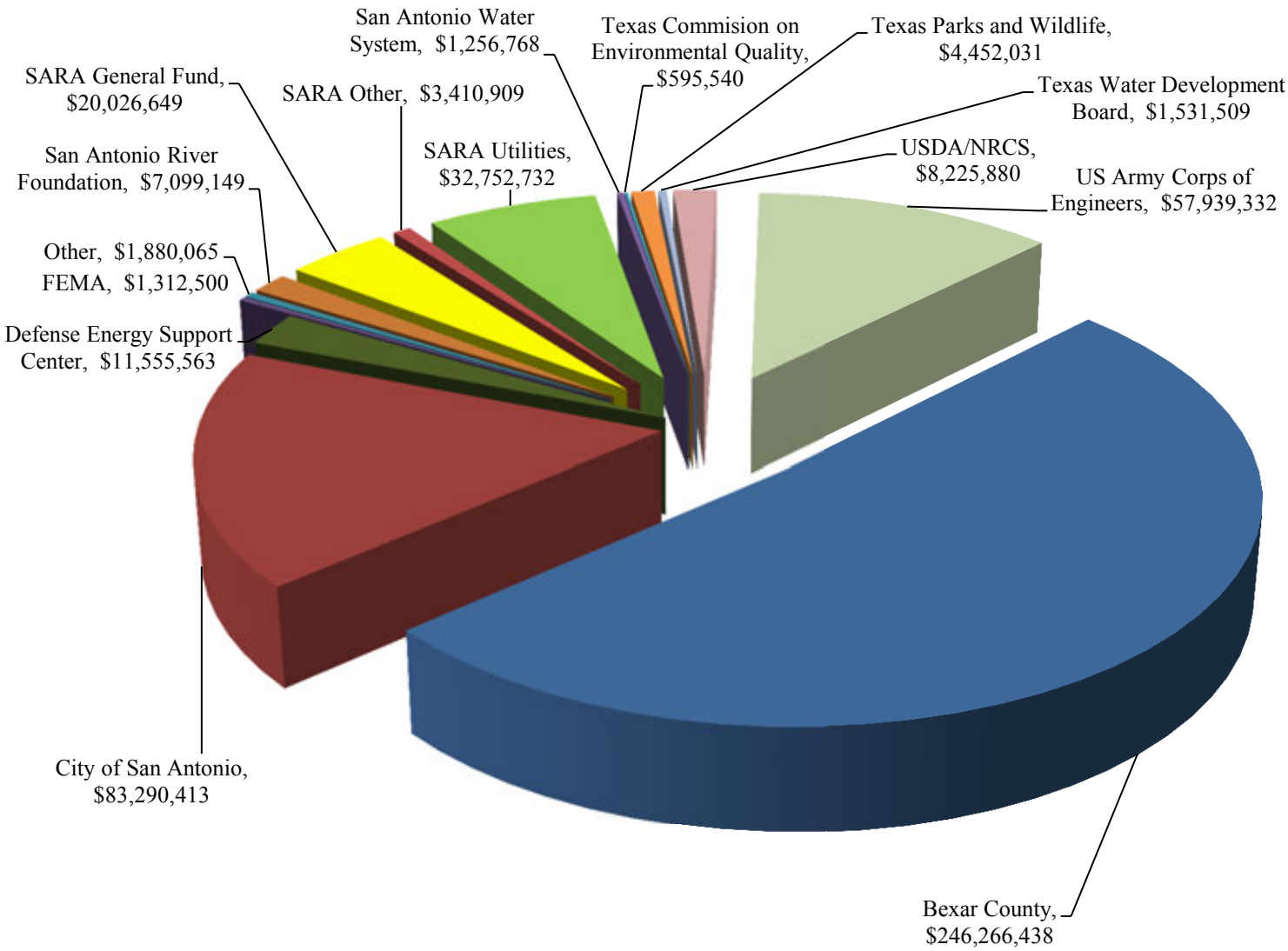
The River Authority continuously reviews its programs and projects and when there is a need programs, projects and efforts are rearranged or consolidated. Currently projects are consolidated under nine programs with some stand-alone projects and efforts. Program Leaders (PL) are assigned for each program and are responsible for managing these programs.

The River Authority utilizes the Project Management Institute's project management process and best practices as established by PMI. Project Management Institute (PMI) is a nonprofit association established for project management profession.

Charts

The charts relate to the River Authority's projects portfolio and include past years estimates, current year budget, and future year estimates.

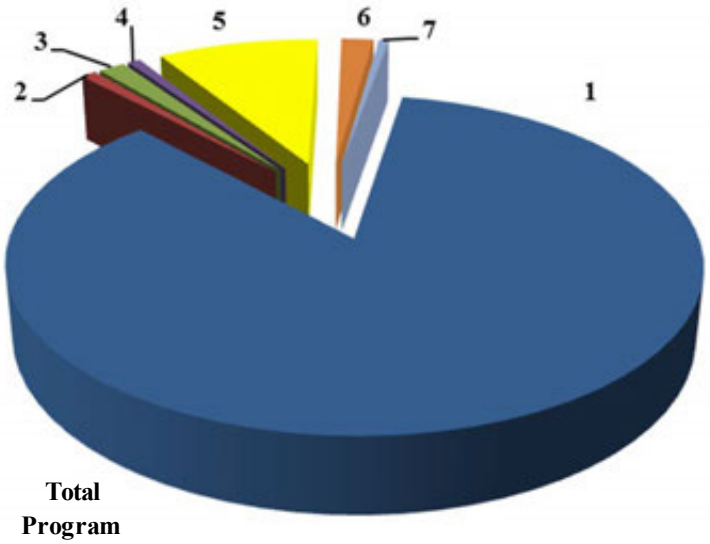
Funding Sources with Totals



Above: Chart illustrates funding sources and cost allocations for projects identified in the Fiscal Year 2014/15 Program Budget book.

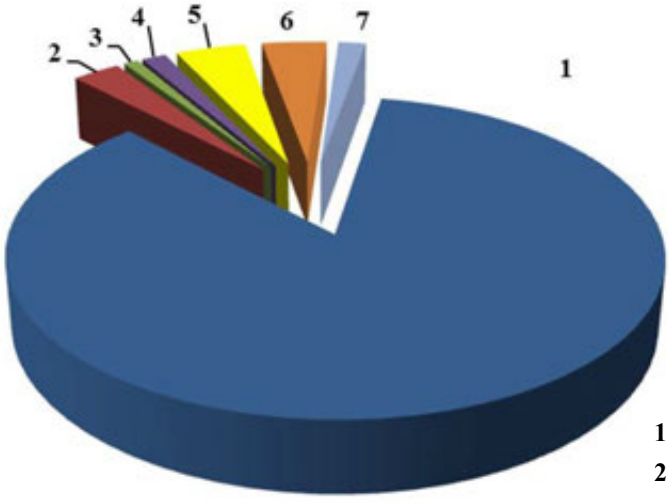
Total estimated funds managed by the River Authority as identified in the Fiscal Year 2014/15 Program Budget book: $481,595,478

Total Program Funding



	Program	Total Program
1	Capital Improvements Program	$ 410,576,060
2	Natural Resource Protection Program	4,132,887
3	Nature Based Park Program	7,425,413
4	Sustainable Watersheds Implementation Program	3,522,107
5	Utilities Program	44,308,295
6	Watershed Modeling, Studies, and Planning Program	8,885,695
7	Watershed Safety and Response Program	2,745,021
	Stand Alone Projects & Efforts	-
	Total	**$ 481,595,478**

Fiscal Year 2014/15 Program Funding



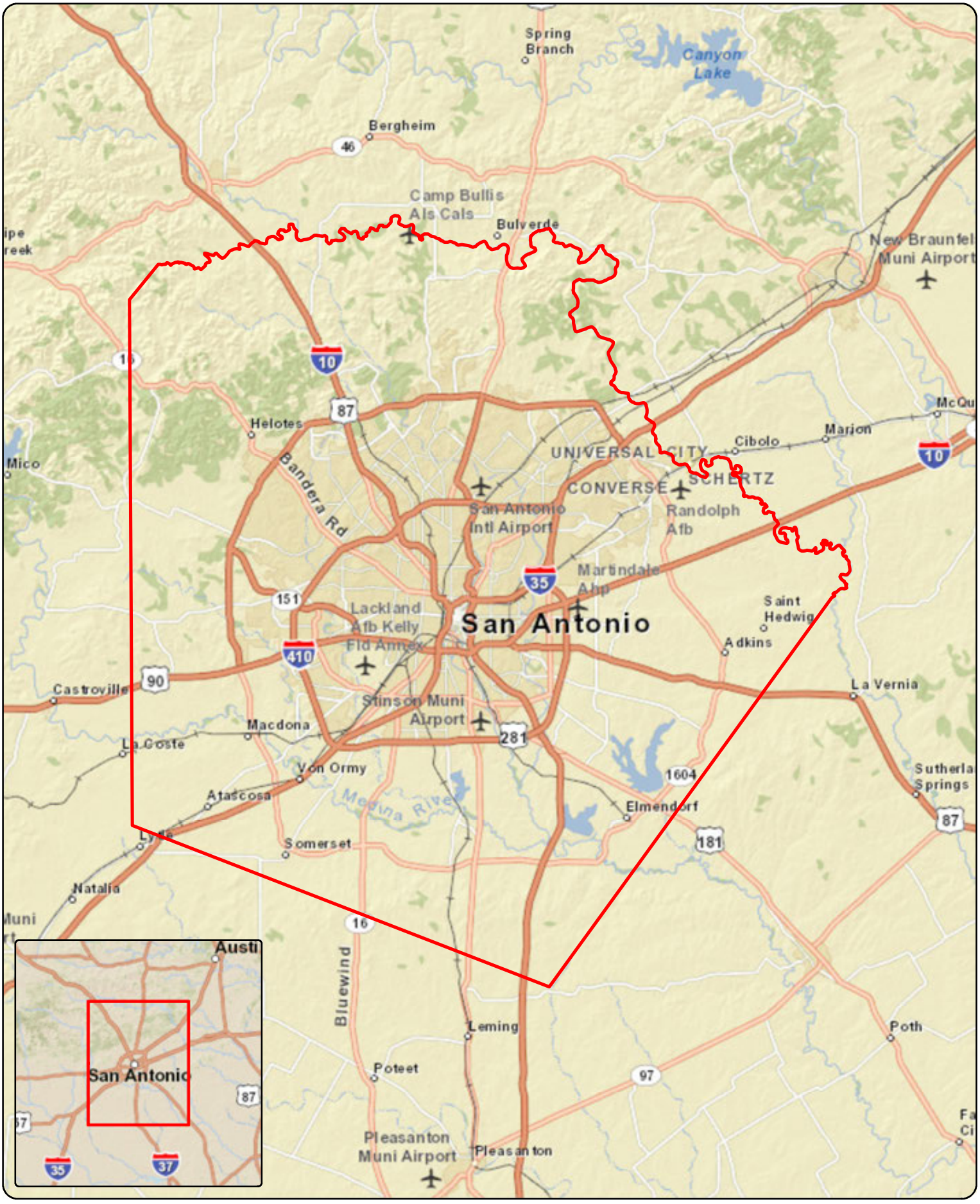
	Program	2014/15 Amount
1	Capital Improvements Program	$ 47,680,775
2	Natural Resource Protection Program	1,600,940
3	Nature Based Park Program	492,131
4	Sustainable Watersheds Implementation Program	823,431
5	Utilities Program	2,342,249
6	Watershed Modeling, Studies, and Planning Program	2,170,467
7	Watershed Safety and Response Program	926,619
	Stand Alone Projects & Efforts	-
	Total	**$ 56,036,612**

San Antonio River Authority
Program Budgets
Summary

Program/Project	Program Leader / Project Manager	2014/15 Budget	Total Budget
Capital Improvements Program	**Wayne Tschirhart**		
BCCIP-Real Estate Acquisitions	Georgia Snodgrass	826,736	4,535,798
Calaveras 10 Dam Rehab	Jeff Tyler	3,159,364	4,538,100
Martinez 1, 2 and 3 Dam Rehab	Jeff Tyler	5,846,933	8,117,100
Mission Reach Operations Center	Robert Perez	2,038,773	3,290,853
Museum Reach Maintenance Facility	Robert Perez	-	712,935
Olmos Creek Aquatic Ecosystem Restoration	Russell Persyn	291,229	291,229
San Antonio Housing Authority - Wheatley Courts	Gilbert Jimenez	1,585,618	1,635,864
San Antonio River Improvement Program			
Mission Reach	Mark Sorenson	5,061,442	263,683,096
Museum Reach (Park Segment)	Mark Sorenson	3,060,699	13,548,021
Museum Reach (Urban Segment)	Mark Sorenson	548,873	71,213,524
Westside Creeks Restoration			
WSC Elmendorf Lake Park	Jeff Tyler	12,282,824	14,250,000
WSC Linear Creekway Trails	Jeff Tyler	4,762,349	7,866,981
WSC San Pedro Creek	Mark Sorenson	8,215,935	16,892,559
PROGRAM TOTAL		**$ 47,680,775**	**$ 410,576,060**
Natural Resource Protection Program	**Rebecca Reeves**		
Bacterial Source Tracking	Hillary Halderman	39,740	241,688
Clean Rivers Program 2013 Grant	Charles Lorea	271,692	533,124
Environmental Flows - Validation	Rebecca Reeves	205,032	239,577
Holistic Freshwater Mussel Project	Larry Larralde	32,489	110,916
Lower Leon Creek Use-Attainability Analysis (UAA)	Charles Lorea	162,827	260,478
Rangia Clam Investigation	Rebecca Reeves	153,634	176,039
San Antonio River Basin Guadalupe Bass	Ernest Moran	13,632	381,528
SARA Automated Storm Water Stations	Ernest Moran	124,051	289,282
SARA Stream Monitoring 2014-2015	Karen Sablan	153,687	305,630
USGS Huisache Brush Management	Aarin Teague	16,969	212,307
USGS HF Groundwater Sampling	Michelle Garza	-	185,259
USGS Hydraulic Fracturing Phase II	Michelle Garza	137,408	391,367
USGS Leon Creek Sediment Analysis	Rebecca Reeves	89,809	305,825
USGS Westside Creek Sediment Study	Patty Carvajal	68,235	233,662
Water Quality Data Analytics Tool	Aarin Teague	131,735	266,205
PROGRAM TOTAL		**$ 1,600,940**	**$ 4,132,887**
Nature Based Park Program	**Tami Norton**		
Branch Property Site Development	Chris Giambernardi	59,915	430,677
Catfish Farm/Medina Paddling Trail	Chris Giambernardi	38,807	2,796,156
County Road (CR) 125 Site Development	Chris Giambernardi	26,987	1,072,595
Escondido Creek Parkway	Kristen Hansen	101,859	235,322
Helton SA River Nature Park	Chris Giambernardi	241,254	2,549,408
Otilla Access Site	Chris Giambernardi	13,309	166,255
Trueheart Park	Chris Giambernardi	10,000	175,000
PROGRAM TOTAL		**$ 492,131**	**$ 7,425,413**
Sustainable Watersheds Implementation Program	**Karen Bishop**		
2015 Unified Development Code (UDC) / SW BMPs	Karen Bishop	45,001	458,271
Bexar Regional Watershed Management (BRWM) Stream Mitigation Bank	LeeAnne Lutz	219,503	412,553
Guenther/Euclid Stormwater Retrofit	Russell Persyn	330,882	862,167
Natural Channel Design (NCD) Competition	Tami Norton	22,899	120,062
SARIP Outfalls Assessment	Reha Cimen	11,771	264,926
Storm Water Monitoring City of San Antonio (COSA) Pilots	Aarin Teague	108,729	485,138
Sustainability Tools	Aarin Teague	61,410	669,965
Sustainability Training	Aarin Teague	23,236	249,025
PROGRAM TOTAL		**$ 823,431**	**$ 3,522,107**

San Antonio River Authority
Program Budgets
Summary

Program/Project	Program Leader / Project Manager	2014/15 Budget	Total Budget
Utilities Program	**Dustin Krueger**		
City Metering for Salatrillo WWTP	Terry Ploetz	91,569	517,970
Graytown Road Wastewater System	Jim Doersam/Amy Middleton	46,813	15,553,806
Joint Base SA Utility Privatization	Terry Ploetz	10,000	97,615
Martinez II Recycling Facility	Jim Doersam	22,674	75,784
Randolph Air Force Base Year 11 (2014)	Terry Ploetz	-	329,627
Randolph Air Force Base Year 12 (2015)	Terry Ploetz	121,909	122,698
Randolph Air Force Base Years 13 - 50	Terry Ploetz	-	11,103,238
Rehabilitation Upper Martinez Clarifier	Amy Middleton	15,025	1,118,500
Replace Bar Screen at WWTPs	Daniel Flores	-	200,000
Salatrillo Collection Wholesale System I and I	Terry Ploetz	266,516	2,234,325
Salatrillo WWTP Screw Pump	Amy Middleton	1,102,434	1,178,473
Salatrillo WWTP Expansion	Jim Doersam	30,446	7,230,446
SARA Wastewater Collection System I and I	Terry Ploetz	563,527	3,764,740
Utilities SCADA System	Jim Doersam	71,336	781,073
PROGRAM TOTAL		**$ 2,342,249**	**$ 44,308,295**
Watershed Modeling, Studies, and Planning Program	**Melissa Bryant**		
Basin Future Land Use	Aarin Teague	-	158,339
Cibolo Creek Watershed Master Plan	Tami Norton	901,095	1,500,000
Ecosystem Dynamic Simulation (EDYS) - Goliad & Refugio Counties	Sheeba Thomas	-	173,202
Ecosystem Dynamic Simulation (EDYS) - Karnes & Wilson Counties	Sheeba Thomas	-	375,462
Environmental Monitoring System	Wayne Tschirhart	-	901,422
Light Detection and Ranging (LiDAR) Enhancement	John Refolo	3,187	128,916
Medina River Holistic Watershed Master Plan	Robert Perez	429,246	1,435,000
Olmos Basin Trash System	Karen Bishop	13,342	85,042
San Antonio Bay EDYS Model Development	Sheeba Thomas	173,980	675,756
SCTRWPG 2016 RWP Fourth Cycle	Julia Velez	383,207	1,181,509
USGS-LSAR Groundwater Surface Water Interaction Modeling	Aarin Teague	101,728	296,185
USGS Viral Source Tracking	Aarin Teague	-	172,136
Water Quality Modeling Tools	Sheeba Thomas	116,494	450,695
Wilson, Karnes, Goliad Watershed Master Plan	Melissa Bryant	48,188	1,352,031
PROGRAM TOTAL		**$ 2,170,467**	**$ 8,885,695**
Watershed Safety and Response Program	**Gloria Rodriguez**		
Calaveras 5 Dam Repair	Jim Doersam	56,177	56,177
Cooperating Technical Partners (CTP)	John Refolo	86,107	830,998
Cooperating Technical Partners - Risk Map Medina River	John Refolo	510,001	872,862
Cooperating Technical Partners - Risk Map Upper San Antonio River	John Refolo	274,334	984,984
PROGRAM TOTAL		**$ 926,619**	**$ 2,745,021**
GRAND TOTAL		**$ 56,036,612**	**$ 481,595,478**



SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Bexar County Capital Improvements Projects (BCCIP) - Real Estate Acquisitions

Project Service Area and/or Boundaries

N

0 4.5 9 Miles

Project Name: **BCCIP-Real Estate Acquisitions** **Project #** **00000394**

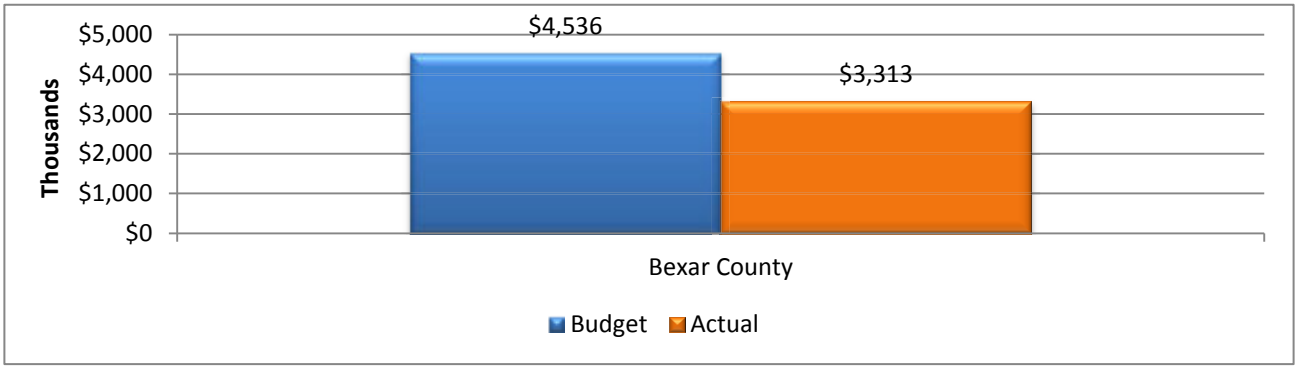
Project Start Date:	01/01/08	Total Project Budget:	$ 4,535,798
Project Finish Date:	06/30/16	Managing Department:	Real Estate

The Bexar County Commissioners Court approved a $500 million Flood Control Capital Improvements Program (CIP) in 2007. Projects within the program include regional storm water facilities, low water crossings, natural waterway conveyances (channelization), outfall structures and buyouts located throughout Bexar County. San Antonio River Authority Real Estate staff provides real estate acquisition services for the program including due diligence and negotiations with property owners under the threat of eminent domain. The 6th Amendment to the interlocal agreement with the County identifies a total of 42 projects. This includes one new project that was added and two projects from the 5th Amendment that were removed.

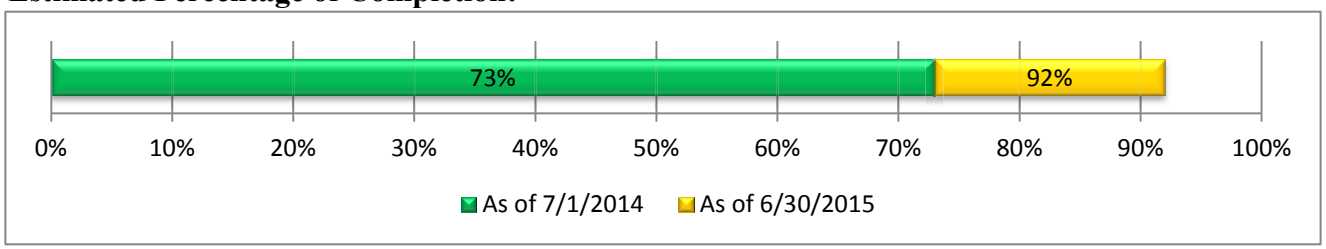
During fiscal year 2014/15, it is anticipated that four new projects will commence: Woodlawn at 36th Street Drainage; Elm Forest at Turtle Cross Street; Kirkner Road Low Water Crossing; and Prue Road Low Water Crossing. In addition, there will be 12 projects being completed: Old Fredericksburg Road; Knoll Creek Phase II; Grosenbacher Road South of Macdona; Huebner 17C Natural Waterway Conveyance; Bulverde and Jung at Mud Creek Tributary; Elm Forest at Turtle Cross Street; Real Road; Kirkner Road Low Water Crossing; Prue Road Low Water Crossing at French Creek; French Creek Natural Waterway Conveyance; Woodlawn at 36th Street Drainage; and Espada Road Flood Buyouts.

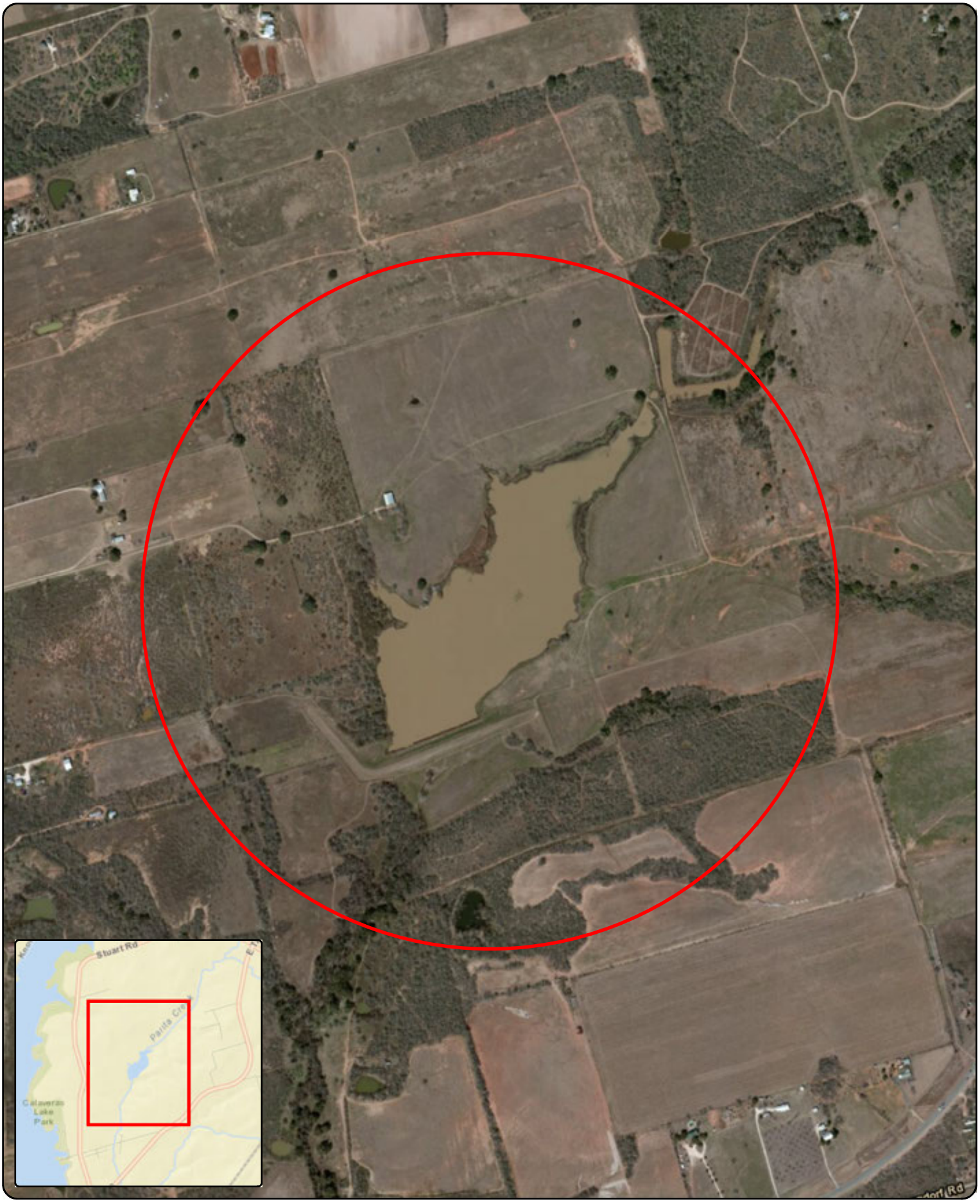
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 612,872	$ 409,575	$ 280,337	$ -	$ 1,302,784
Commodities	1,627,660	11,486	14,816	-	1,653,962
Contracts	1,072,443	405,675	100,934	-	1,579,052
Total	$ 3,312,975	$ 826,736	$ 396,087	$ -	$ 4,535,798

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Calaveras 10 Dam Rehabilitation

Project Service Area and/or Boundaries

N

0 0.095 0.19 Miles

Project Name: **Calaveras 10 Dam Rehab** **Project #** **00000373**

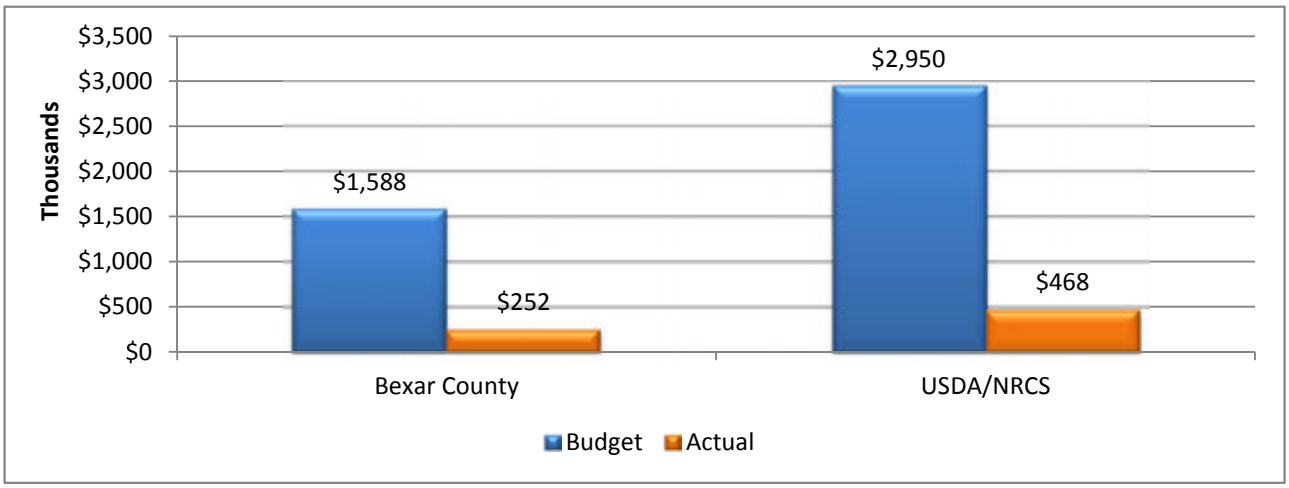
Project Start Date:	05/01/12	Total Project Budget:	$ 4,538,100
Project Finish Date:	10/28/15	Managing Department:	Watershed Parks Ops

The purpose of this project is to improve the Calaveras 10 Dam to current Texas Commission on Environmental Quality (TCEQ) standards. Improvements primarily include earthwork to increase the height of the dam and to improve the auxiliary spillways. According to the project plan and the operation and maintenance agreement for the rehabilitation project, the San Antonio River Authority (SARA) will be responsible for the operation and maintenance of Site 10 to assure it will function as designed and constructed. This project is 35% funded by Bexar County and 65% funded by the Natural Resources Conservation Service (NRCS). The design is being administered through SARA. SARA will also provide construction administration and project management services through construction.

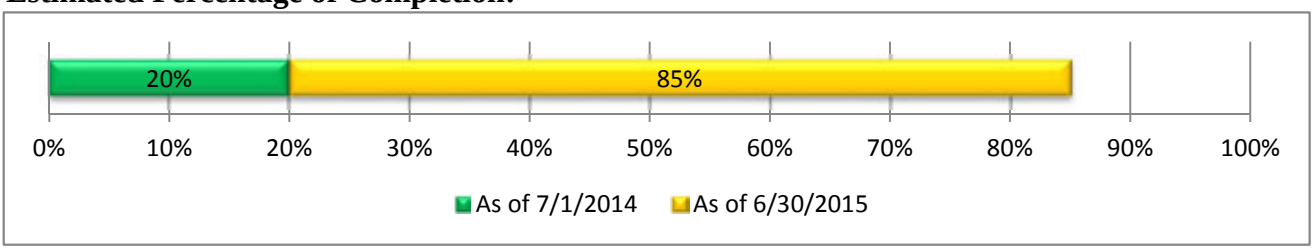
During the current fiscal year, the project tasks will include engineering design, regulatory approval, procurement of rights-of-way, preparation of construction bid documents, and the construction of the dam improvements.

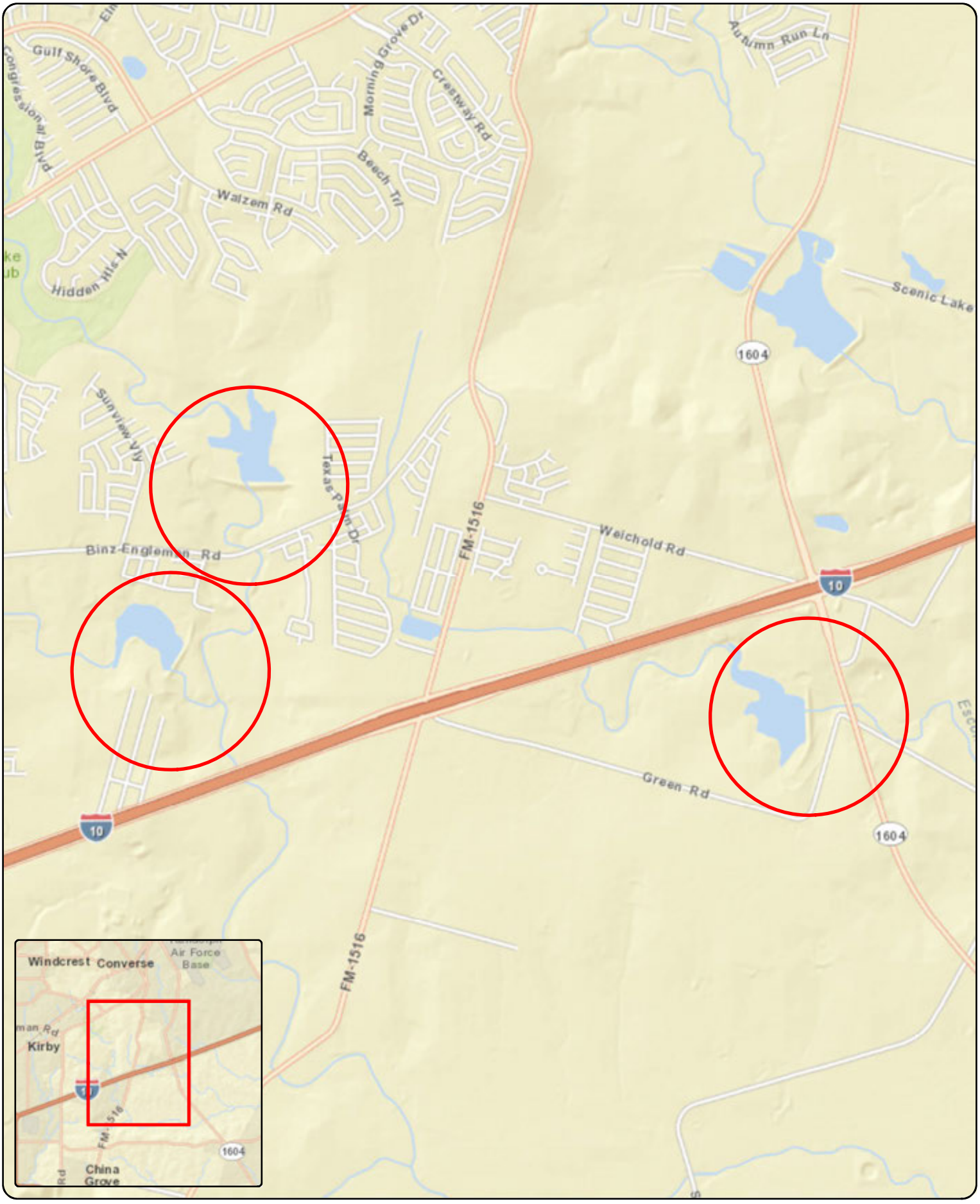
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 47,384	$ 114,364	$ 63,252	$ -	$ 225,000
Commodities	44,987	400,000	200,000	-	644,987
Contracts	628,113	2,645,000	395,000	-	3,668,113
Total	$ 720,484	$ 3,159,364	$ 658,252	$ -	$ 4,538,100

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
Martinez 1, 2 & 3 Dam Rehabilitation

Project Service Area and/or Boundaries

N

0 0.25 0.5 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Martinez 1, 2 and 3 Dam Rehab** **Project #** **00000374**

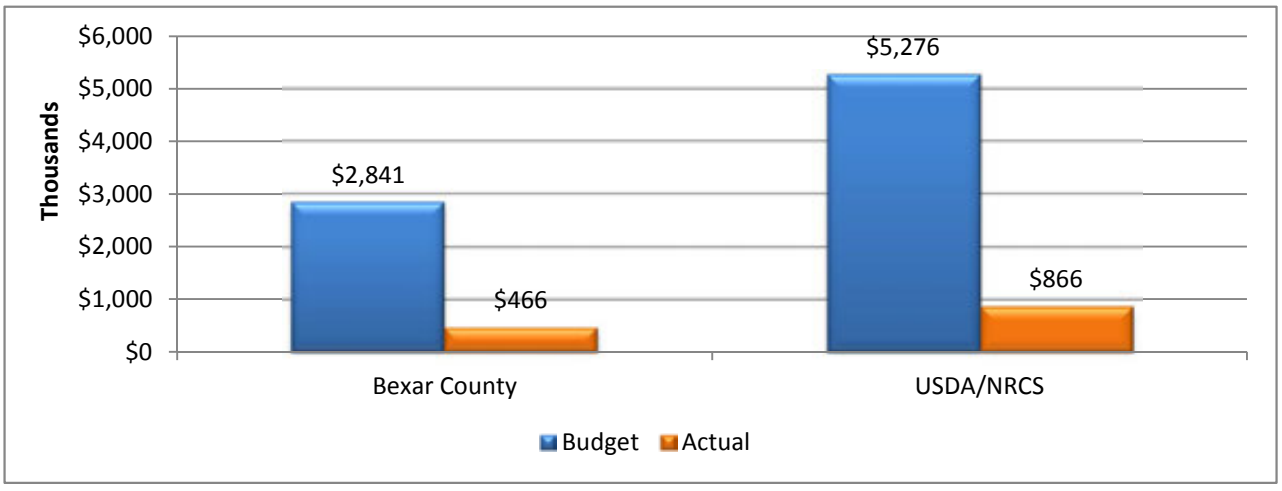
Project Start Date:	07/27/12	Total Project Budget:	$ 8,117,100
Project Finish Date:	12/22/15	Managing Department:	Watershed Parks Ops

The purpose of this project is to improve Martinez 1, 2 and 3 Dams to current Texas Commission on Environmental Quality (TCEQ) standards. Improvements primarily include earthwork to increase the height of the dams and to improve the auxiliary spillways. According to the project plan and the operation and maintenance agreement for the rehabilitation project, the San Antonio River Authority (SARA) will be responsible for the operation and maintenance of the dams to assure they will function as designed and constructed. This project is 35% funded by Bexar County and 65% funded by the Natural Resources Conservation Service (NRCS). The design is being administered through SARA. SARA will also provide construction administration and project management services through construction.

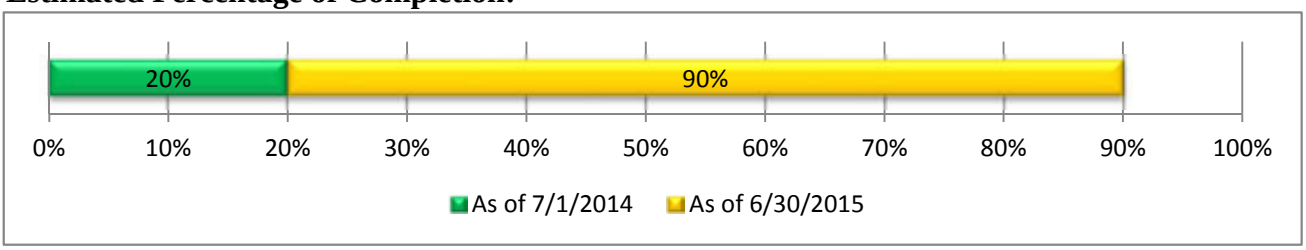
During the current fiscal year, the project tasks will include engineering design, regulatory approval, procurement of rights-of-way, preparation of construction bid documents, and the construction of improvements to these dams.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 78,968	$ 187,905	$ 108,127	$ -	$ 375,000
Commodities	37,499	275,100	42,064	-	354,663
Contracts	1,216,009	5,383,928	787,500	-	7,387,437
Total	$ 1,332,476	$5,846,933	$ 937,691	$ -	$ 8,117,100

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:



SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Mission Reach Operations Center

Project Service Area and/or Boundaries

N

0 0.095 0.19 Miles

Project Name: **Mission Reach Operations Center** **Project #** **00000299**

Project Start Date: 07/01/11
Project Finish Date: 06/30/15

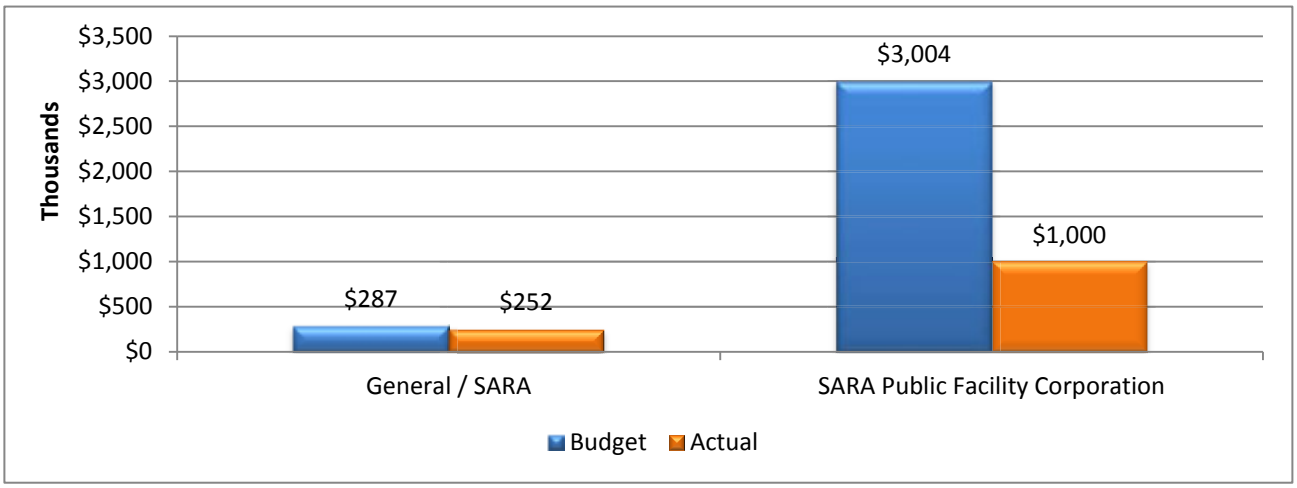
Total Project Budget: $ 3,290,853
Managing Department: Watershed Engineering

This project will include property purchase and the construction of a maintenance facility to house the central portion of the Mission Reach Project operations and maintenance activity building. The project site location is on approximately 4.5 acres of San Antonio River Authority property located between Mission Parkway and S. Presa, south of Espada Dam. The building planned for construction will include office space, a shop for the maintenance crews and equipment housing. This plan also includes associated improvements including security fencing, site work access to the trail system and secure internet connection.

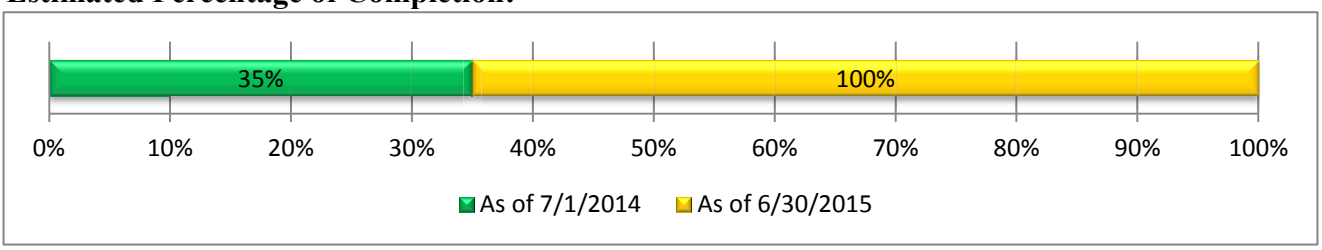
Fiscal year 2014/15 will support full design documents, construction documents and construction of the maintenance facility buildings.This facility also includes sustainability elements through Leadership in Energy and Environmental Design (LEED) certification along with computer connections and San Antonio River Authority enterprise security connectivity.

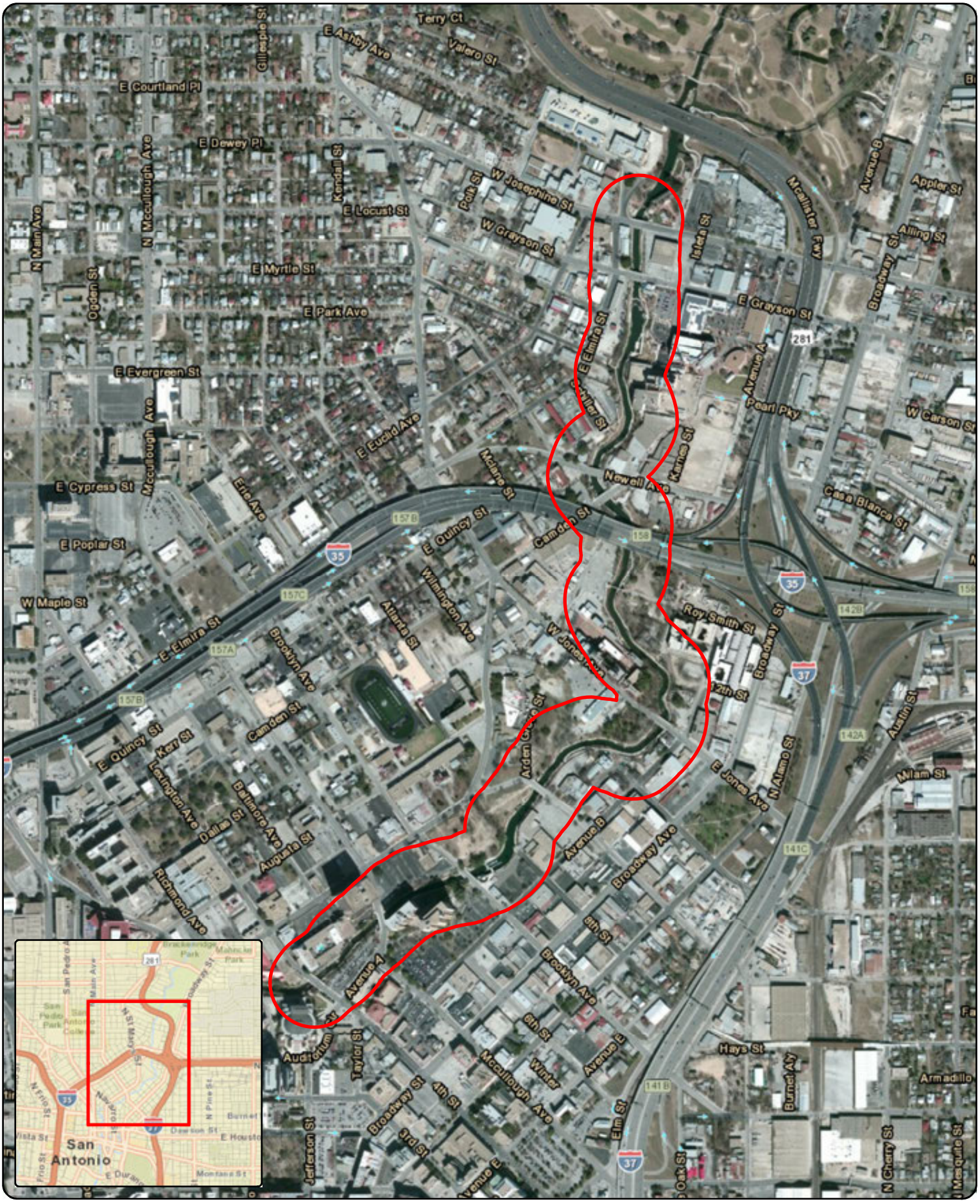
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 84,856	$ 34,738	$ -	$ -	$ 119,594
Commodities	273	145,000	-	-	145,273
Contracts	1,166,951	1,859,035	-	-	3,025,986
Total	$ 1,252,080	$ 2,038,773	$ -	$ -	$ 3,290,853

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
Museum Reach Maintenance Facility

Project Service Area and/or Boundaries

N

0 0.095 0.19 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Museum Reach Maintenance Facility** **Project #** **00000463**

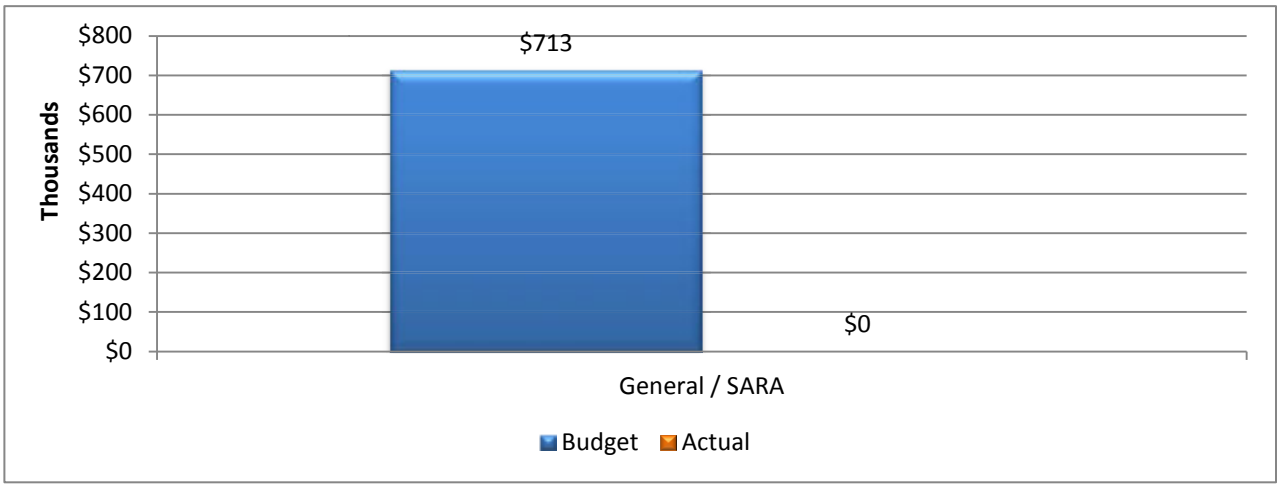
Project Start Date:	07/01/15	Total Project Budget:	$ 712,935
Project Finish Date:	06/30/16	Managing Department:	Watershed Engineering

This project will include property identification, research, and land purchase and the construction of a maintenance facility to house Museum Reach Project operations and maintenance activities. The building planned for construction will include office space, a shop for the maintenance crews and equipment housing. This plan also includes associated improvements including security, fencing, site work, access to the trail system and secure internet connection.

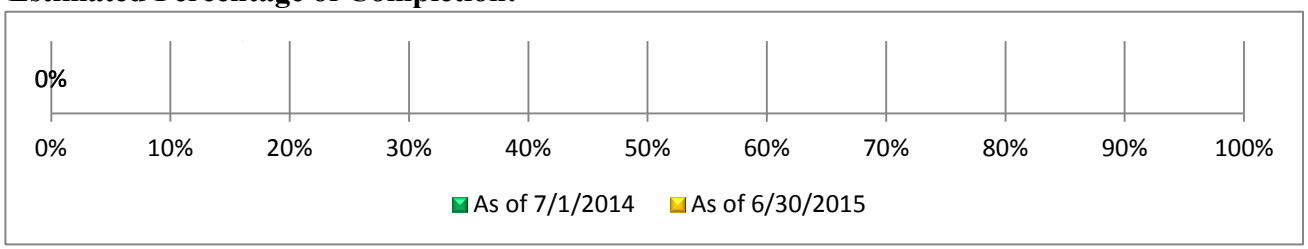
This project will include property identification, research, and land purchase and the construction of a maintenance facility to house Museum Reach Project operations and maintenance activities. The building planned for construction will include office space, a shop for the maintenance crews and equipment housing. This plan also includes associated improvements including security, fencing, site work, access to the trail system and secure internet connection.

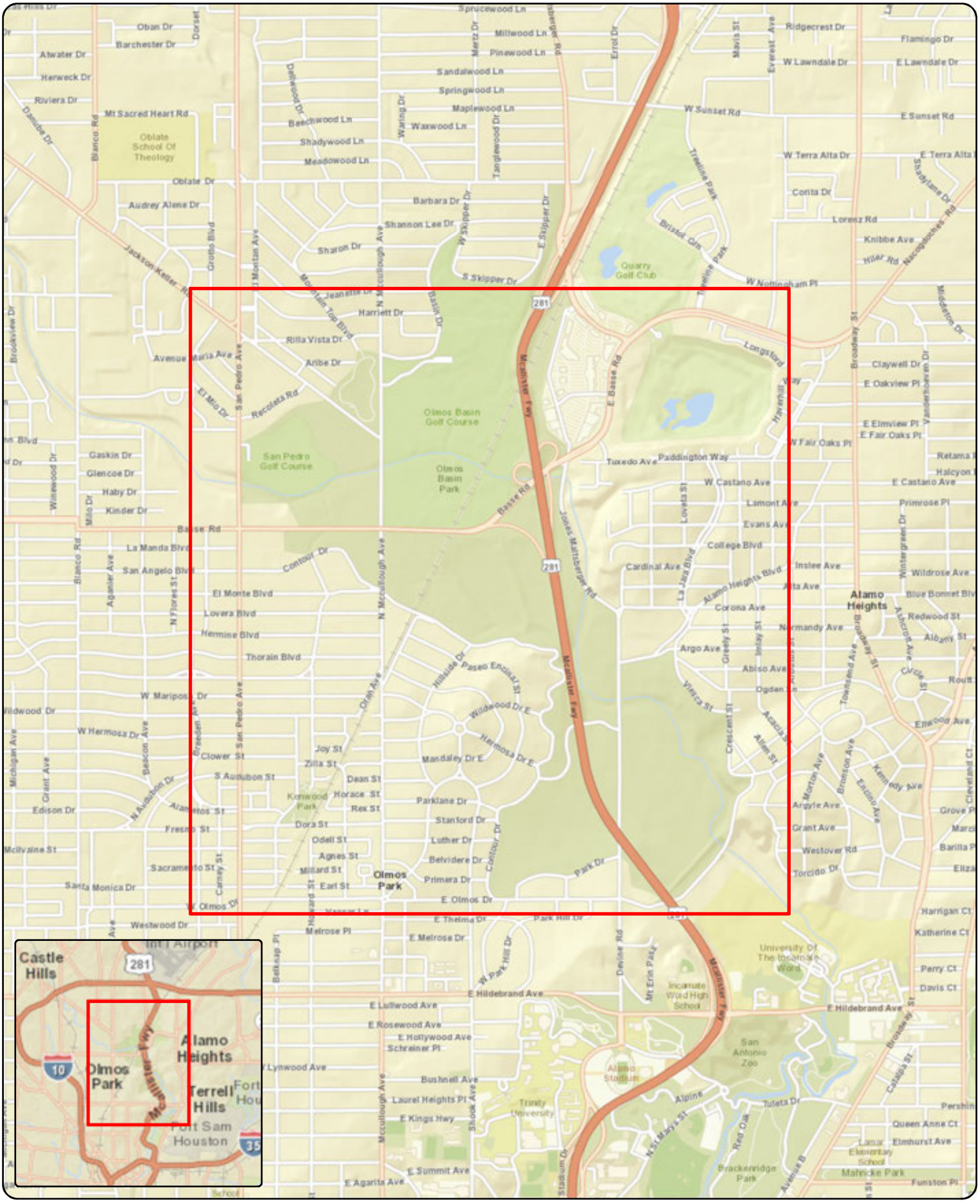
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ -	$ 12,935	$ -	$ 12,935
Commodities	-	-	-	-	-
Contracts	-	-	700,000	-	700,000
Total	$ -	$ -	$ 712,935	$ -	$ 712,935

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Olmos Creek Aquatic Ecosystem Restoration

Project Service Area and/or Boundaries

N

0 0.2 0.4 Miles

Project Name: **Olmos Creek Aquatic Ecosystem Restoration** **Project #** **00000458**

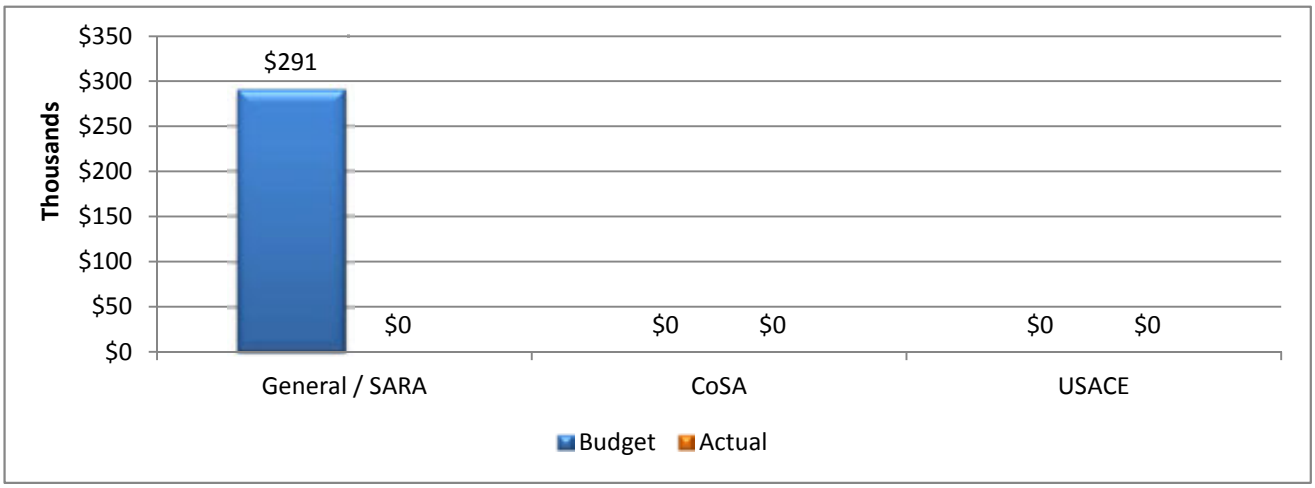
Project Start Date: 04/16/14
Project Finish Date: 06/30/15
Total Project Budget: $ 291,229
Managing Department: Watershed Engineering

This project is managed by the United States Army Corps of Engineers (USACE) and funded by USACE and City of San Antonio. This project will restore instream habitat and the riparian corridor in and along Olmos Creek between San Pedro Avenue and Olmos Dam. Instream habitat will be restored through erosion control techniques and an increase in stream shade. Riparian corridor restoration will be accomplished through invasive/exotic plant control, selective thinning and accompanied by woody and herbaceous plantings.

During the current fiscal year, the project will complete the design phase and begin construction if funding is secured from the City of San Antonio and USACE.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ 38,229	$ -	$ -	$ 38,229
Commodities	-	-	-	-	-
Contracts	-	253,000	-	-	253,000
Total	$ -	$ 291,229	$ -	$ -	$ 291,229

Budget to Actual by Funding Source as of 7/1/2014:



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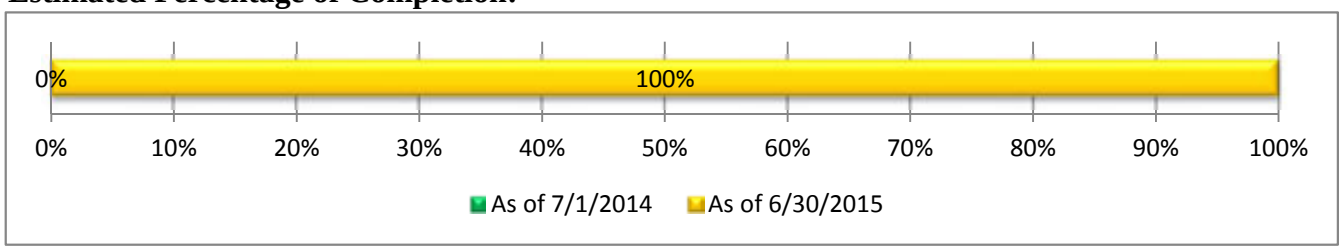


SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
SAHA Wheatley Courts

Project Service Area and/or Boundaries

N

0 0.015 0.03 Miles

Project Name: **SAHA Wheatley Courts** **Project #** **00000430**

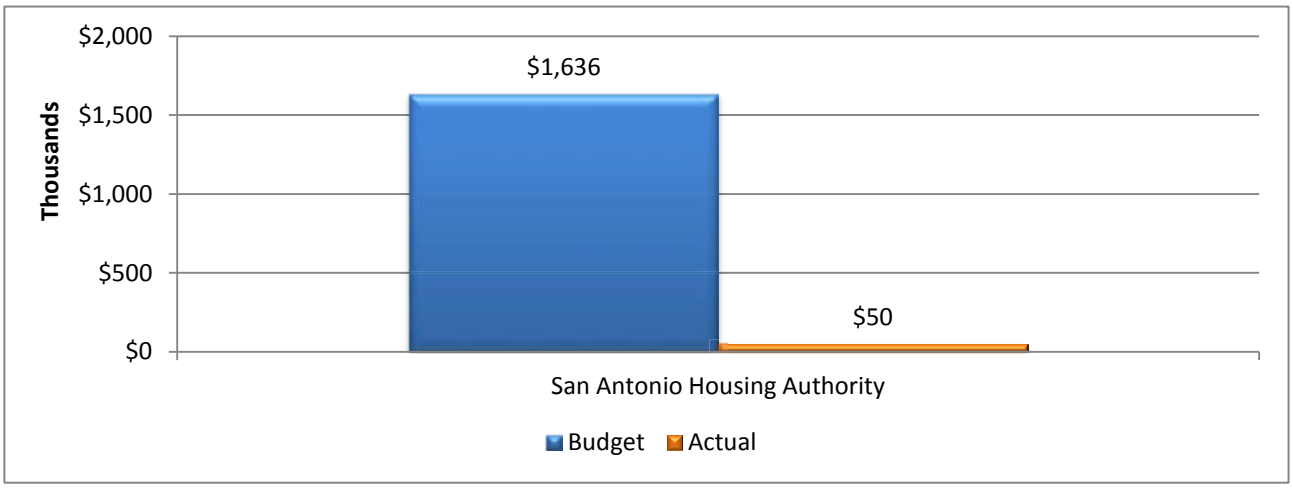
Project Start Date:	01/31/14	Total Project Budget:	$ 1,635,864
Project Finish Date:	02/23/15	Managing Department:	Real Estate

The San Antonio Housing Authority (SAHA), working with the Department of Housing and Urban Development's (HUD) CHOICE Neighborhood program, has developed a neighborhood transformation plan to develop a revitalized, mixed-income, low-impact, safe, and walkable community where residents have access to new parks and recreational opportunities along the Menger Creek. SAHA has developed an Interlocal Agreement (ILA) with the San Antonio River Authority (SARA) that will allow SARA to provide real estate acquisition services for the proposed SAHA Wheatley Courts Redevelopment Project. SAHA will incorporate Low Impact Design (LID) features to its stormwater management plan for this project.

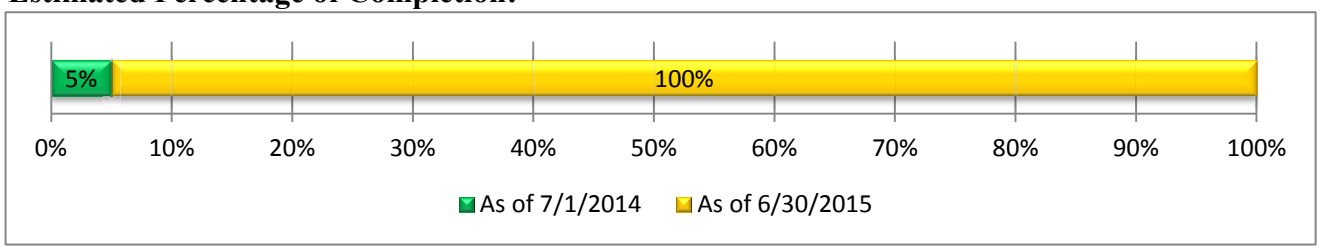
In the current fiscal year, SARA will provide acquisition services and oversight of consultants, including survey, appraisal and relocation. SARA will also provide project management and record keeping for the acquisition process and LID training.

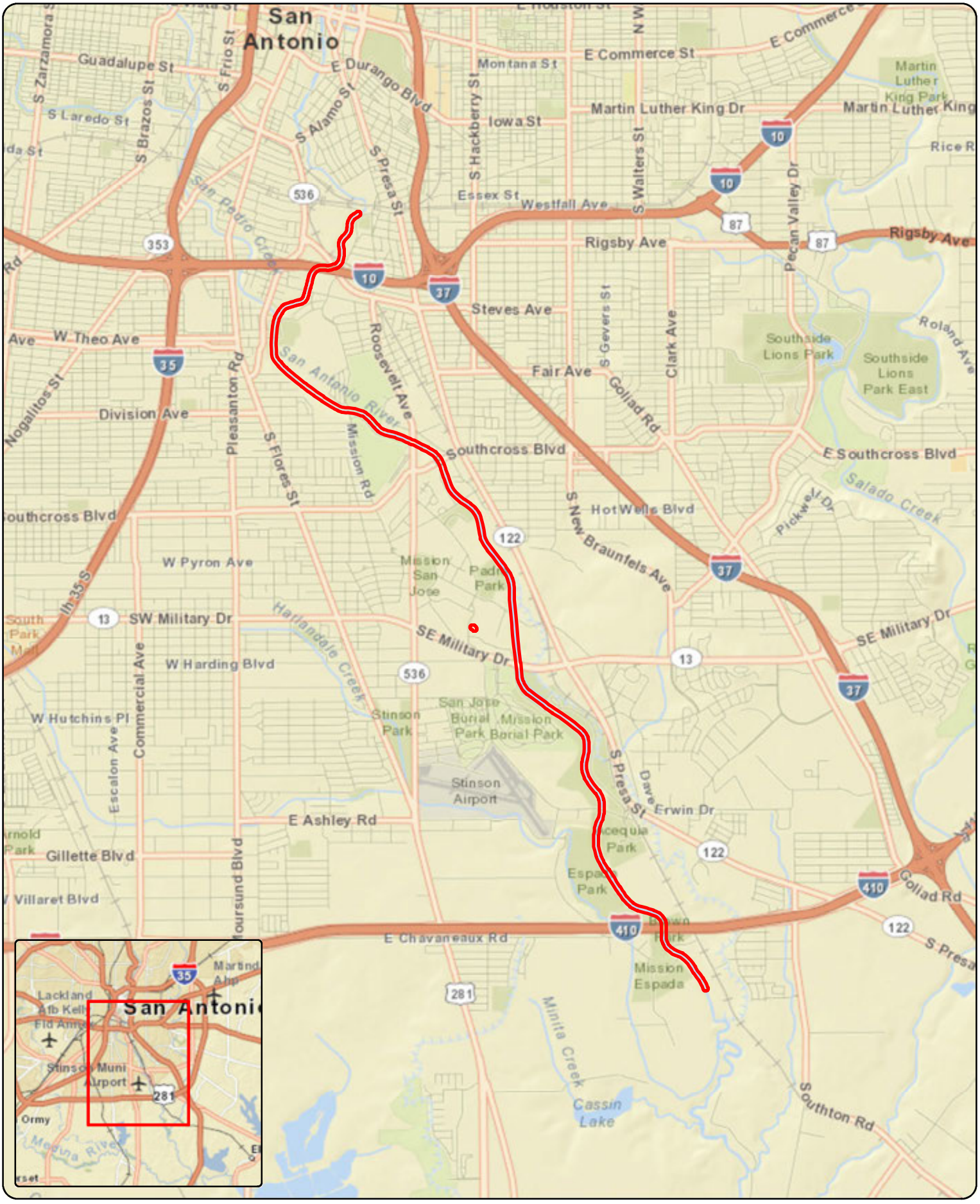
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 27,246	$ 148,818	$ -	$ -	$ 176,064
Commodities	-	900,000	-	-	900,000
Contracts	23,000	536,800	-	-	559,800
Total	$ 50,246	$ 1,585,618	$ -	$ -	$ 1,635,864

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
Mission Reach Project

Project Service Area and/or Boundaries

N

0 0.55 1.1 Miles

Project Name: **Mission Reach** **Project #** **00000136**

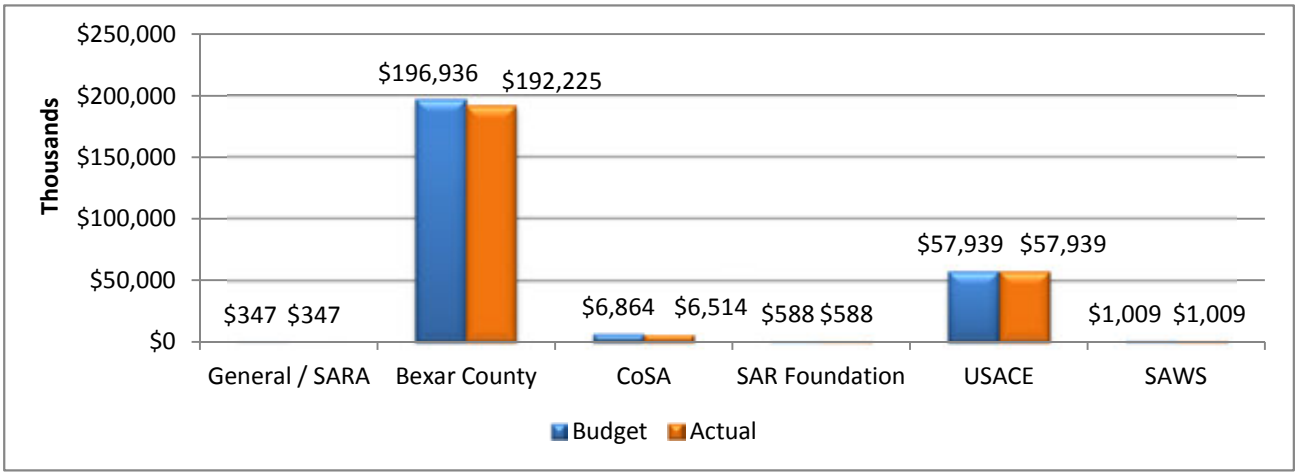
Project Start Date:	01/01/98	Total Project Budget:	$ 263,683,096
Project Finish Date:	10/31/14	Managing Department:	Watershed Engineering

The Mission Reach project is a joint effort between the U. S. Army Corps of Engineers (USACE), Bexar County, City of San Antonio, and San Antonio River Authority to provide ecosystem restoration while maintaining or improving flood reduction benefits to the San Antonio River from Lone Star Boulevard to Mission Espada. The San Antonio River Oversight Committee provides public direction and input. Preliminary authorization for the Historic Mission Reach was substantially completed in October 2003. The locally prepared design with modifications was selected by the USACE as the preferred plan; final design began in October 2004. Through the co-commitment of local and federal funding, Phase I construction was completed in December of 2009. Phase 2 construction was completed in May of 2011 with a formal Grand Opening of Phases I and 2 in June 2011. Phase 3 construction was completed in August 2013.

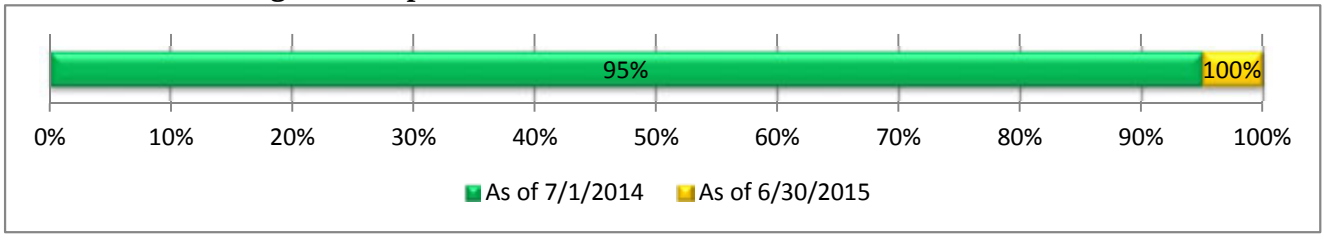
In fiscal year 2014/15, this project will include improvements in flood control, amenities, ecosystem restoration, and recreational opportunities to the river, both north and south of downtown.

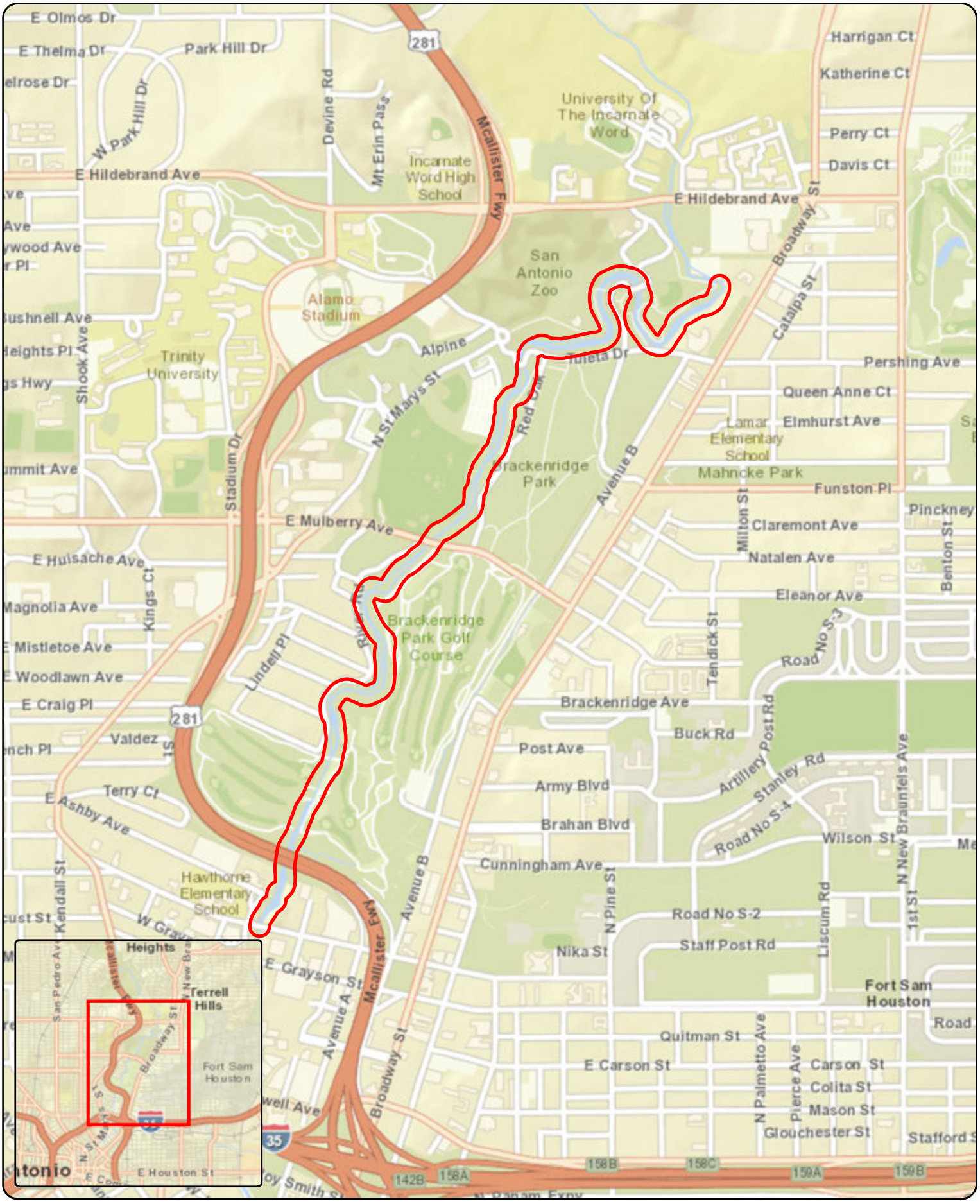
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 7,535,098	$ 387,392	$ -	$ -	$ 7,922,490
Commodities	12,625,067	40,550	-	-	12,665,617
Contracts	238,461,489	4,633,500	-	-	243,094,989
Total	$ 258,621,654	$ 5,061,442	$ -	$ -	$ 263,683,096

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
Museum Reach (Park Segment)

Project Service Area and/or Boundaries

N

0 0.1 0.2 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Museum Reach (Park Segment)** **Project #** **00000139**

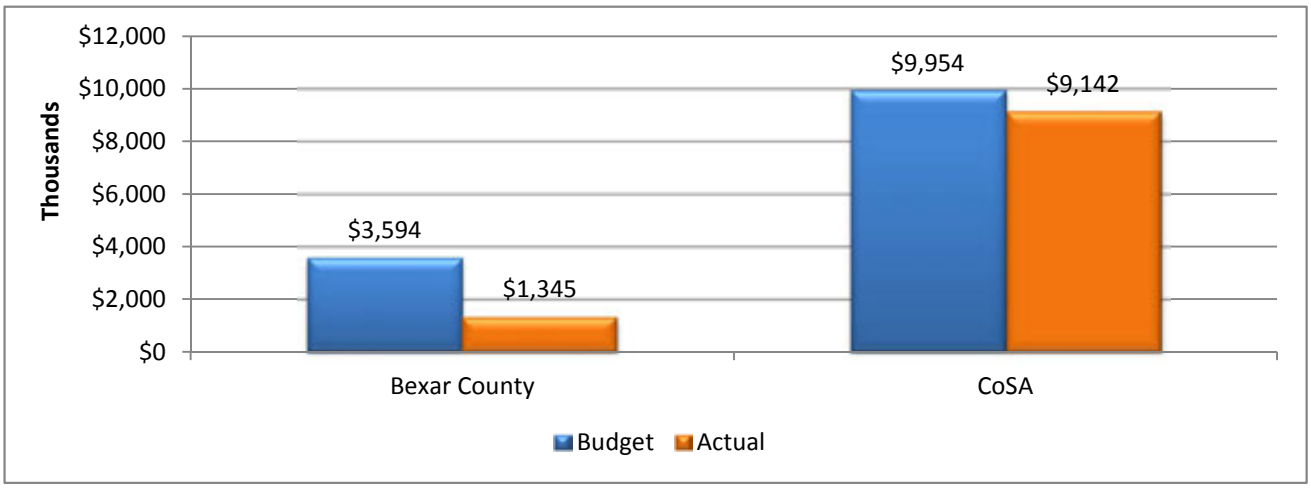
Project Start Date:	10/31/03	Total Project Budget:	$ 13,548,021
Project Finish Date:	07/31/15	Managing Department:	Watershed Engineering

As a component of the San Antonio River Improvement Project, this project fundeded investments in flood control, amentities, ecosystem restoration, and recreational improvements to the river, north of U. S. Highway 281 and south of Hildebrand Road.

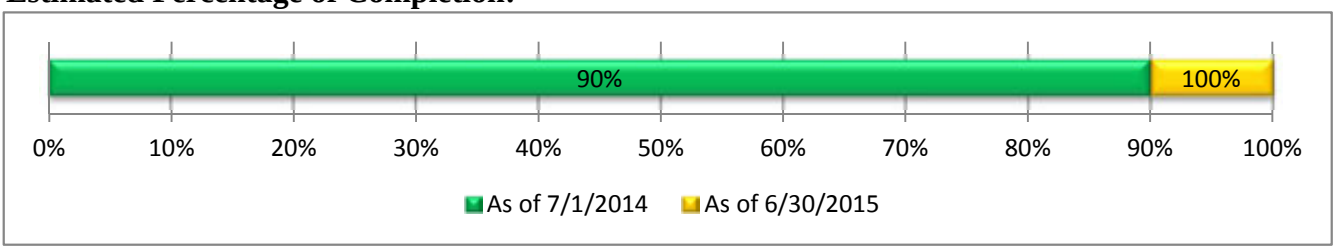
The fiscal year 2014/15 budget will extend the Museum Reach Urban Segment trail system from where it ended at Josephine Street into and through the Tunnel Inlet parking lot, under U.S. Highway 281 and east to Avenue B. From that point, the existing trails will be altered and enhanced so that hikers and cyclists can navigate their way to Hildebrand Avenue. This project will also help remove invasive vegetation along the Catalpa outfall and replant it with native species, create a wetland near the Witte Museum, and develop pedestrian crossings at Mulberry and Tuleta avenues.

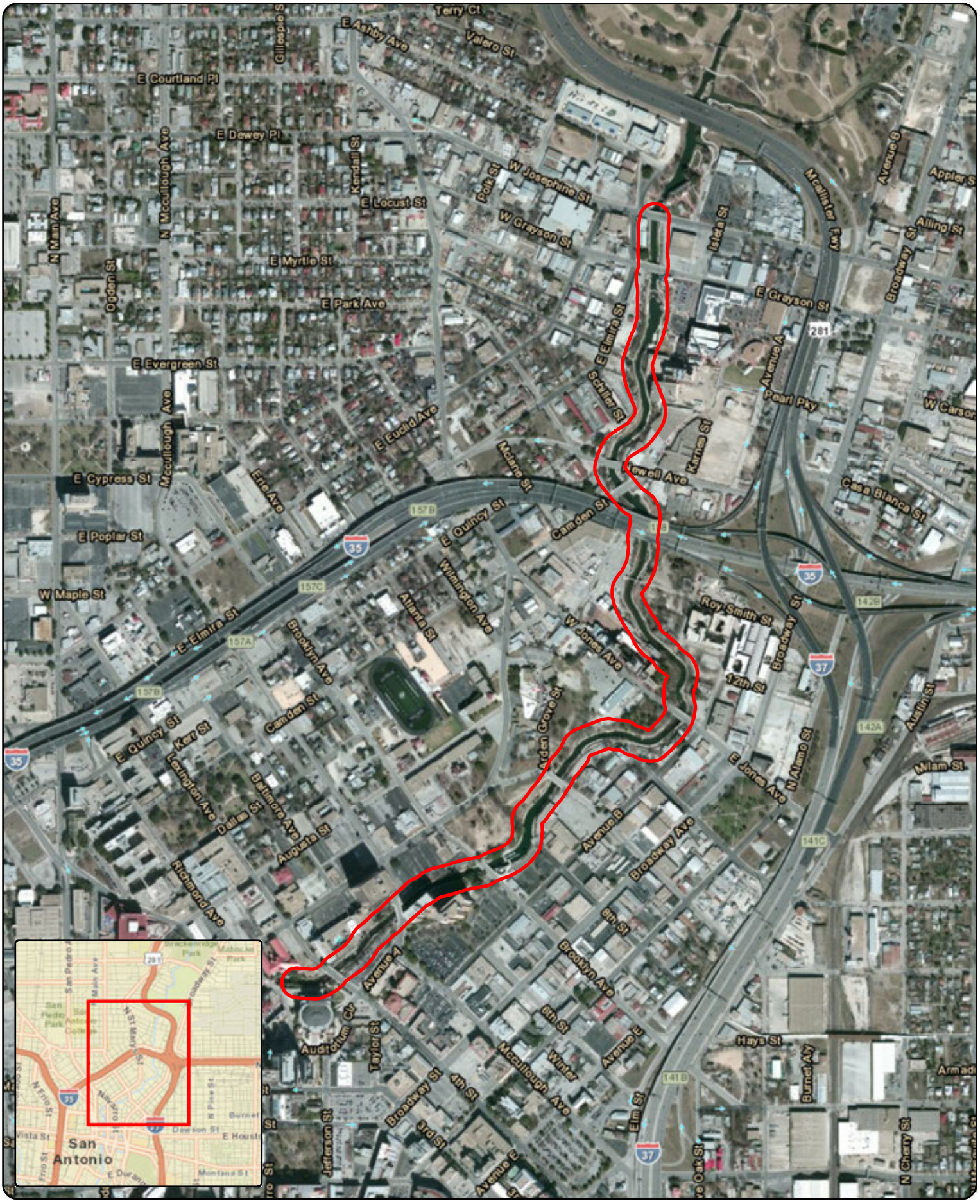
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 344,743	$ 24,832	$ -	$ -	$ 369,575
Commodities	22,413	2,550	-	-	24,963
Contracts	10,120,166	3,033,317	-	-	13,153,483
Total	$ 10,487,322	$ 3,060,699	$ -	$ -	$ 13,548,021

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
Museum Reach (Urban Segment)

Project Service Area and/or Boundaries

N

0 0.095 0.19 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Museum Reach (Urban Segment)** **Project #** **00000138**

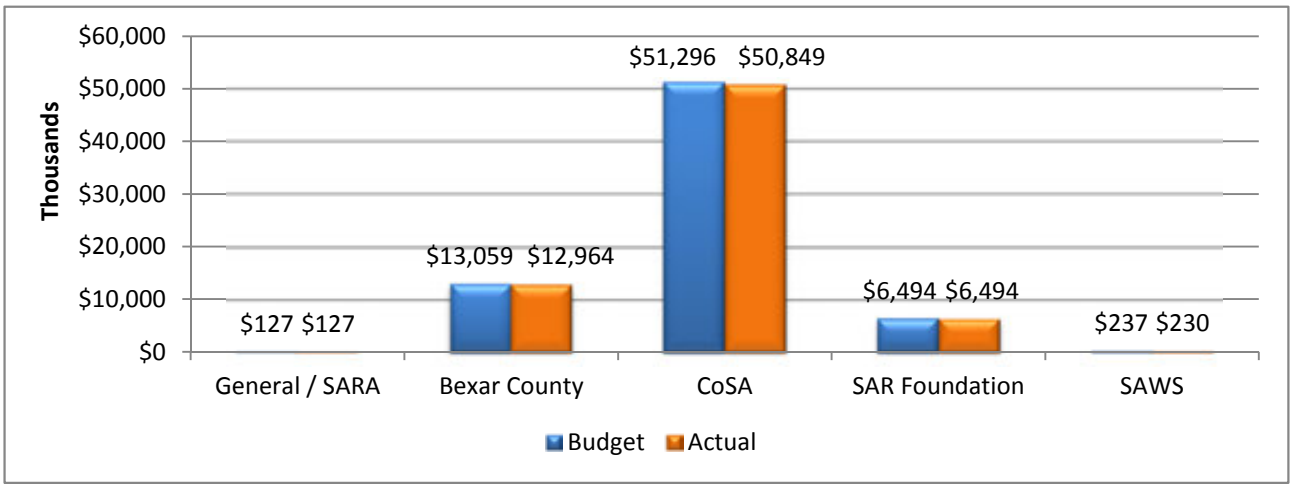
Project Start Date: 10/01/98
Project Finish Date: 12/31/14
Total Project Budget: $ 71,213,524
Managing Department: Watershed Engineering

This project extended the current River Walk from Lexington Avenue about 7000 feet to Josephine Street. Sidewalks with street-to-river access structures were provided on both banks of the project. The project has a Lock and Dam system that lifts the barges almost nine feet allowing them to traverse the additional 6500 feet needed to get to Grayson Avenue. The barge traffic stops at this location but the pedestrian traffic can continue another 500 feet to Josephine Street. At this point, the pedestrian traffic has the opportunity to access Josephine Street and use it along with other streets to continue on to Brackenridge Park. The project also included the completion of the Federal Emergency Management Agency (FEMA) Letter of Map Revision (LOMR).

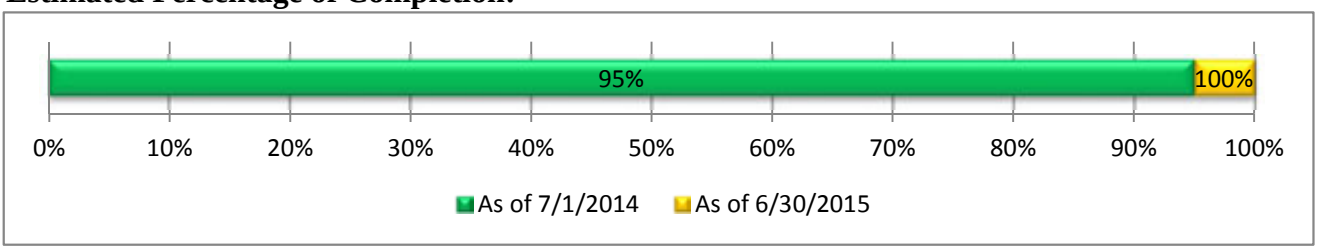
In fiscal year 2014/15 the budget will fund the final construction of the project which includes flood control, amenities, ecosystem restoration, and recreational improvements to the river within the Museum Reach Urban Segment.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 1,728,501	$ 93,739	$ -	$ -	$ 1,822,240
Commodities	494,149	1,220	-	-	495,369
Contracts	68,442,000	453,914	-	-	68,895,914
Total	$ 70,664,650	$ 548,873	$ -	$ -	$ 71,213,524

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:



Project Name:
WSC Elmendorf Lake Park

Project Service Area and/or Boundaries

N

0 0.045 0.09 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **WSC Elmendorf Lake Park** **Project #** **00000380**

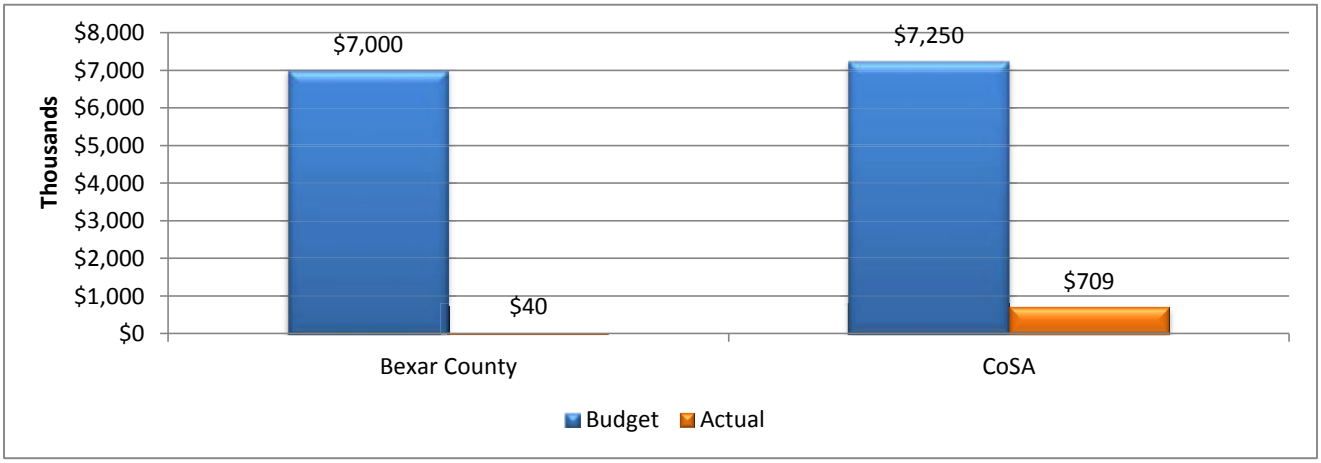
Project Start Date:	07/01/12	Total Project Budget:	$ 14,250,000
Project Finish Date:	10/27/15	Managing Department:	Watershed Engineering

The Elmendorf Lake Park Improvements Project was approved by voters in 2012 through the passage of the 2012 bond. The project stretches from 19th Street to Commerce Street. With support from the City of San Antonio and Bexar County, the total improvements project budget is $14.25 million. The improvements will include recreation enhancements such as a new swimming pool and shade structures, playgrounds, additional bridge crossings over the lake, a pier, trails, picnic areas throughout the park and an improved park plaza for large gatherings. In addition to the recreation elements, lake fountains and aeration bubblers, rain gardens and bio-swales will help to improve the lake's water quality. Design is nearing completion. A construction contract will be awarded in September 2014 and will last approximately 16 months.

In fiscal year 2014/15 bid documents will be prepared and the project will be awarded for construction. Construction is anticipated to be completed in fiscal year 2015/16.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 40,000	$ 240,000	$ -	$ -	$ 280,000
Commodities	-	-	-	-	-
Contracts	709,444	12,042,824	1,217,732	-	13,970,000
Total	$ 749,444	$ 12,282,824	$ 1,217,732	$ -	$ 14,250,000

Budget to Actual by Funding Source as of 7/1/2014:



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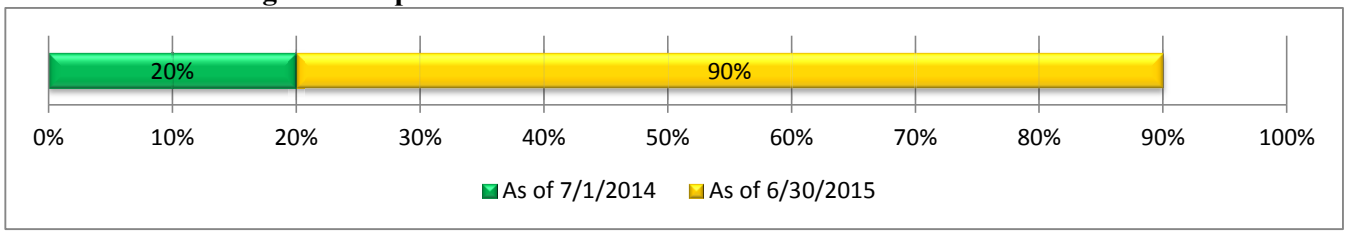
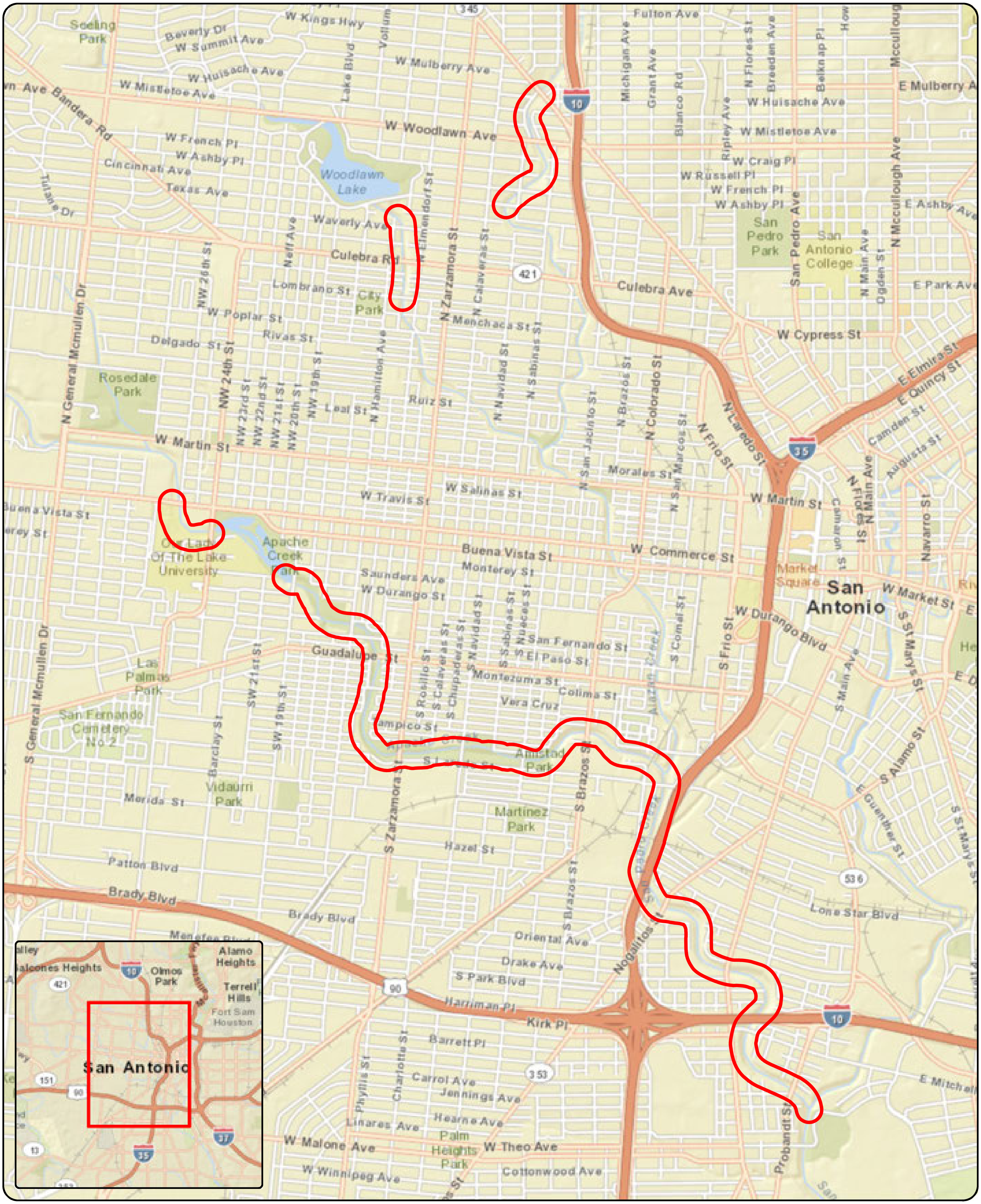




Seeling Park
Beverly Dr
W Summit Ave
W Kings Hwy
W Huisache Ave
W Mistletoe Ave
Bandera Rd
Lake Blvd
W Mulberry Ave
Fulton Ave
Michigan Ave
Grant Ave
Blanco Rd
N Flores St
Breeden Ave
Belknap Pl
Mccullough
E Mulberry
W Huisache Ave
W Mistletoe Ave
W Woodlawn Ave
W French Pl
W Ashby Pl
Cincinnati Ave
Texas Ave
Tulane Dr
Woodlawn Lake
Waverly Ave
Elmendorf St
Ripley Ave
W Craig Pl
W Russell Pl
W French Pl
W Ashby Pl
San Pedro Park
San Pedro Ave
San Antonio College
N Main Ave
N Mccullough Ave
Ogden St
E Ashby
E Park Ave
NW 26th St
Neff Ave
Culebra Rd
N Zarzamora St
N Calaveras St
421
Culebra Ave
Lombrano St
City Park
W Poplar St
Rivas St
N General Mcmullen Dr
Delgado St
NW 24th St
NW 19th St
N Hamilton Ave
N Menchaca St
N Sabinas St
N Navidad St
W Cypress St
E Elmira St
E Quincy St
Camden St
Augusta St
Rosedale Park
NW 23rd St
NW 22nd St
NW 21st St
NW 20th St
Leal St
Ruiz St
N San Jacinto St
N Brazos St
N Colorado St
N San Marcos St
N Frio St
N Laredo St
35
W Martin St
Morales St
W Salinas St
W Travis St
W Martin St
Camaron St
N Flores St
N Main Ave
Navarro St
Buena Vista St
Our Lady Of The Lake University
Apache Creek Park
Buena Vista St
Monterey St
W Commerce St
Market Square
San Antonio
W Market St
Saunders Ave
W Durango St
W Durango Blvd
S Comal St
S Frio St
S St Marys St
S Main Ave
Las Palmas Park
Guadalupe St
SW 21st St
SW 19th St
S Rosillo St
S Calaveras St
S Chupaderas St
S Navidad St
S Sabinas St
S Nuecas St
San Fernando St
El Paso St
Montezuma St
Colima St
Vera Cruz
Alazan Creek
San Fernando Cemetery No 2
S General Mcmullen Dr
Barclay St
Tampico St
Amistad Park
S Brazos St
S Alamo St
E Guenther St
S St Marys St
Merida St
Vidaurri Park
S Zarzamora St
Martinez Park
Hazel St
Patton Blvd
Brady Blvd
Brady Blvd
S Brazos St
536
Lone Star Blvd
Oriental Ave
Nogalitos St
Drake Ave
S Park Blvd
90
Harriman Pl
Kirk Pl
10
Barrett Pl
Carrol Ave
Jennings Ave
353
E Mitchell
Phyllis St
Charlotte St
Linares Ave
Hearne Ave
Palm Heights Park
W Malone Ave
W Theo Ave
W Winnipeg Ave
Cottonwood Ave
Probandt St
Alamo Heights
Balcones Heights
Olmos Park
Terrell Hills
Fort Sam Houston
San Antonio
421
151
90
13
37
35
10

Project Name:
WSC Linear Creekway Trails

Project Service Area and/or Boundaries

N

0 0.3 0.6 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **WSC Linear Creekway Trails** **Project #** **00000379**

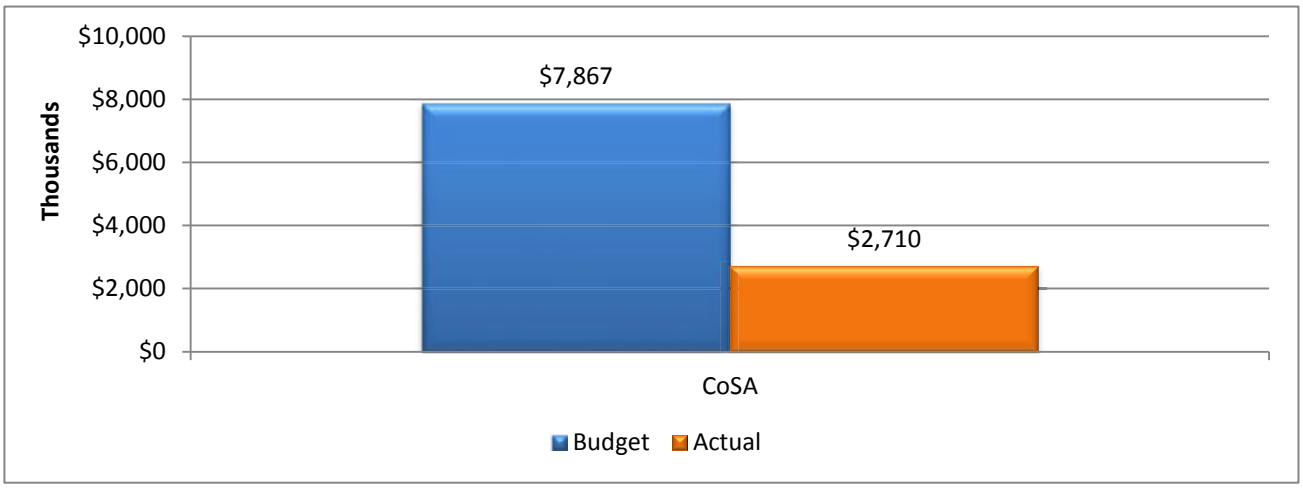
Project Start Date:	03/01/12	Total Project Budget:	$ 7,866,980
Project Finish Date:	11/19/15	Managing Department:	Watershed Engineering

Through the voter approved Proposition 2 in 2010, the City of San Antonio funded creekway trail improvements along the Westside Creeks. The improvements design and construction will be managed by the San Antonio River Authority and will provide increased opportunities for community enjoyment. The Apache and San Pedro Creeks trail will connect Elmendorf Lake Park to the San Antonio River. The 10-foot wide trail will include amenities such as shade structures, drinking fountains, signage, and seating. The Alazan Creek trail will connect Woodlawn Lake Park to West End Park. Along Martinez Creek, the trail will connect Fredericksburg Road to Cincinnati Avenue. This connection develops multimodal connections by linking VIA's Primo bus station to the creekway trail and a bike lane along Cincinnati Avenue that extends into Woodlawn Lake Park. Construction of the trails is anticipated to begin in November 2014 and be completed by November 2015.

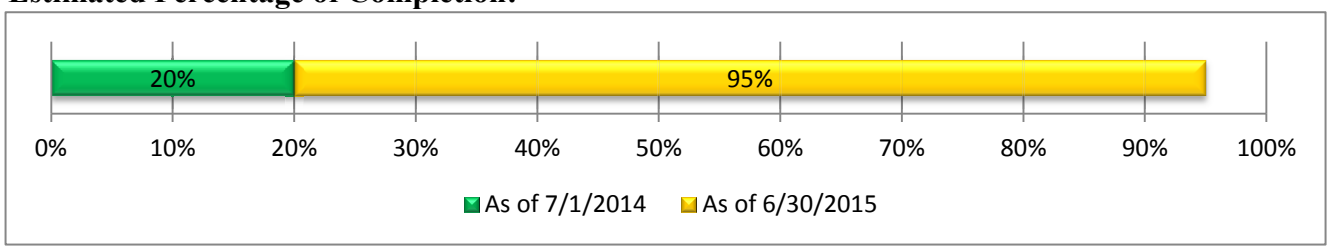
In fiscal year 2014/15 bid documents will be prepared and the project will be awarded for construction. Construction is anticipated to be complete in fiscal year 2015/16.

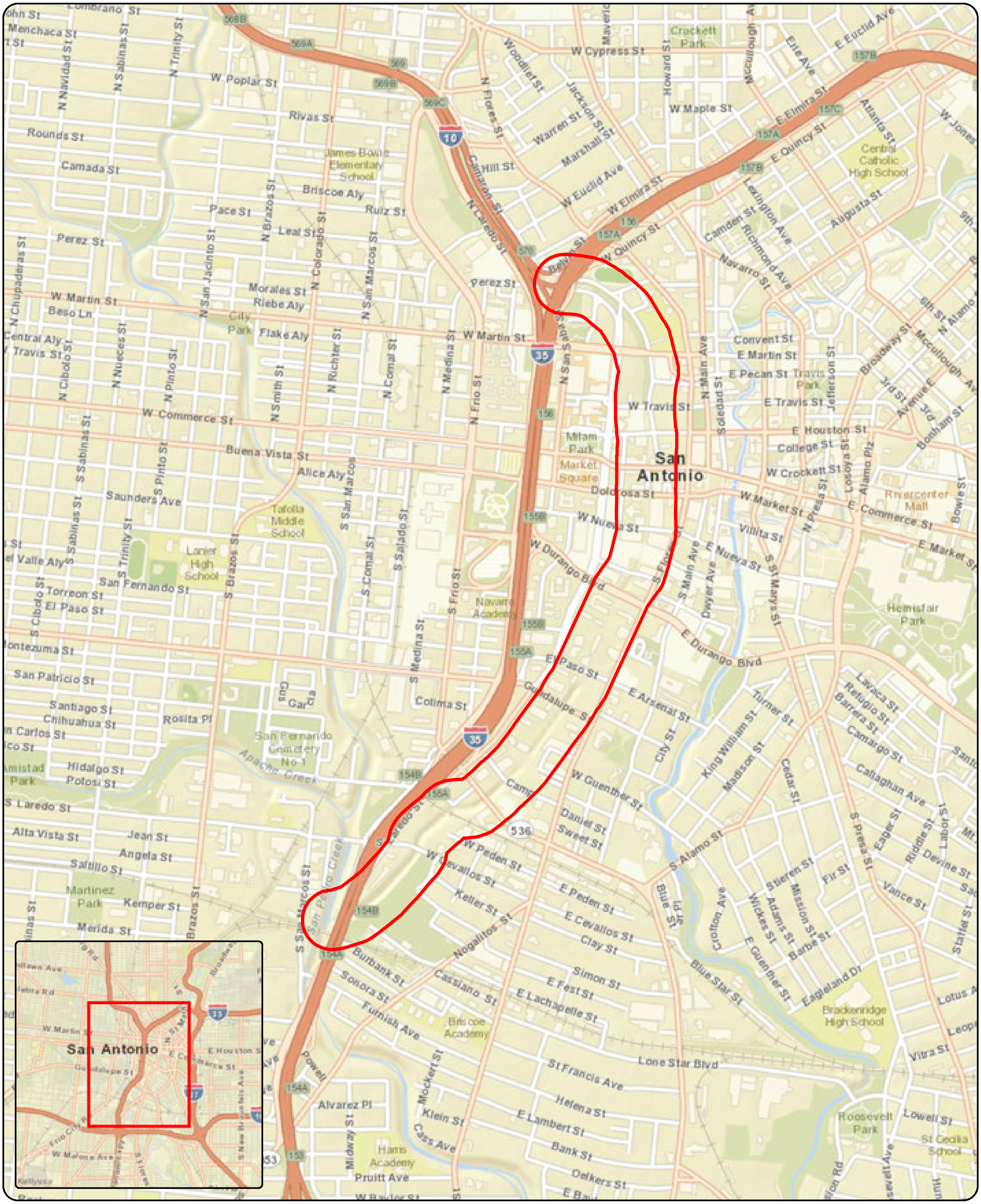
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ -	$ -	$ -	$ -
Commodities	16,959	-	-	-	16,959
Contracts	2,693,376	4,762,349	394,296	-	7,850,021
Total	$ 2,710,335	$ 4,762,349	$ 394,296	$ -	$ 7,866,980

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
WSC San Pedro Creek

Project Service Area and/or Boundaries

N

0 0.15 0.3 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **WSC San Pedro Creek** **Project #** **00000378**

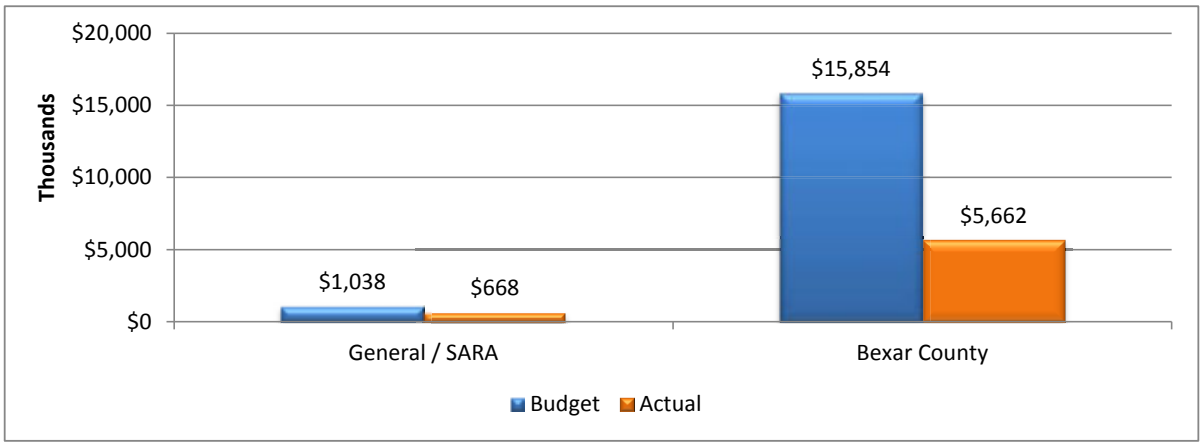
Project Start Date:	08/01/12	Total Project Budget:	$ 16,892,559
Project Finish Date:	12/31/18	Managing Department:	Watershed Engineering

In May 2013, the San Pedro Creek Study, also known as the Preliminary Engineering Report or PER, identified opportunities for containing the 100-year floodplain, restoring and improving water quality and creek functions, and reconnecting people to the community's storied and historic natural resource. Under the leadership of Commissioner Paul Elizondo, Bexar County Commissioners Court in February 2014, entered into an agreement with the San Antonio River Authority to begin the design phase of an ambitious $175 million revitalization project along a two-mile downtown creek segment. The design phase will build upon the results of the PER and will take approximately 24 months, from February 2014 to March 2016. Following final design, construction is anticipated to begin in 2016 and be completed in 2018 in celebration of the 300th anniversary of the establishment of the City.

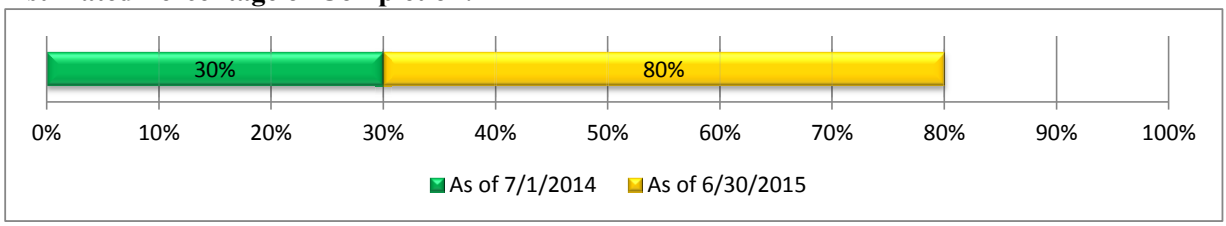
During fiscal year 2014/15, the design phase will involve completion of Rights of Entry agreements, a Level 2 Environmental Site Assessment, detailed survey data collection, mapping of existing utilities, and establishing the project's right-of-way needs. The hydraulics and hydrology model will be updated, data will be collected on existing buildings, bridges, and other structures and these structures will be evaluated. A forty percent level of design completion is anticipated.

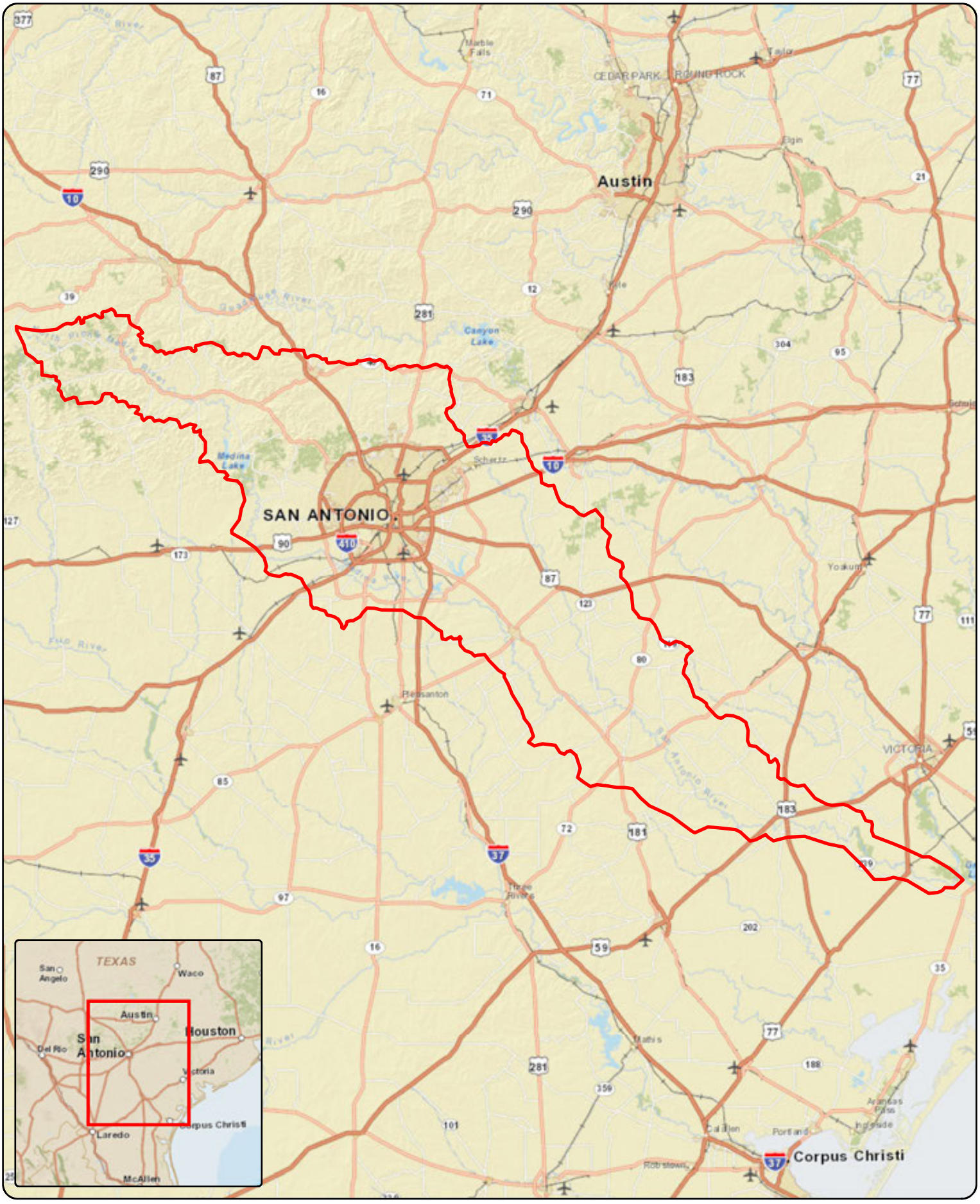
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 432,012	$ 727,722	$ 179,776	$ -	$ 1,339,511
Commodities	8,836	-	-	-	8,836
Contracts	5,889,871	7,666,073	1,988,268	-	15,544,212
Total	$ 6,330,720	$ 8,393,795	$ 2,168,044	$ -	$ 16,892,559

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
Bacterial Source Tracking 2015

Project Service Area and/or Boundaries

N

0 10 20 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Bacterial Source Tracking** **Project #** **00000443**

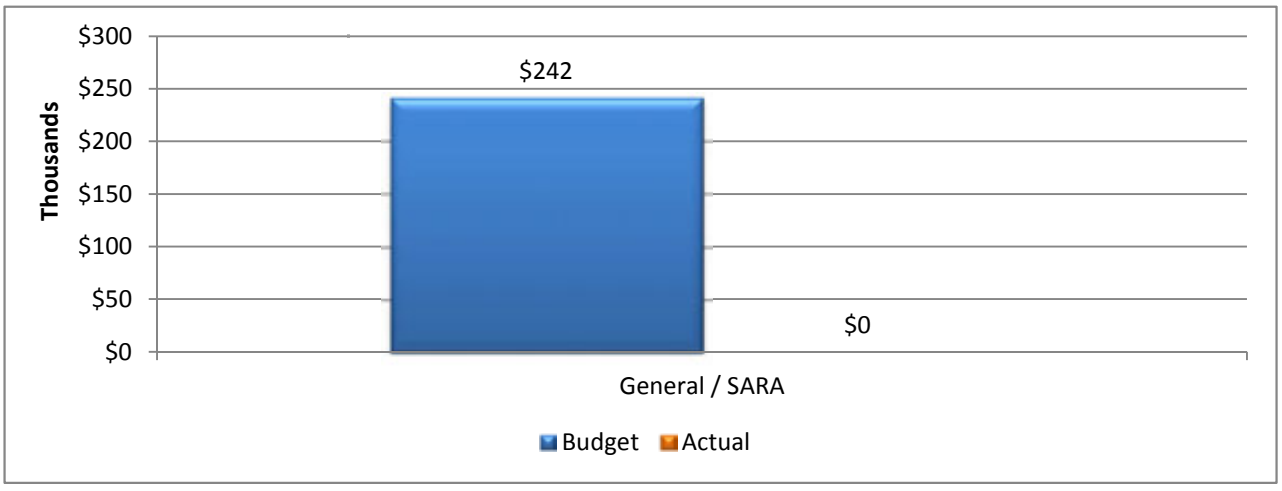
Project Start Date:	07/01/14	Total Project Budget:	$ 241,688
Project Finish Date:	06/30/16	Managing Department:	Environmental Sciences

Bacterial Source Tracking (BST) is an emerging scientific discipline used to determine the source of fecal indicator bacteria in the environment. This project will research various BST methodologies and instrumentation, along with technical and facility requirements needed to successfully incorporate this capability into laboratory operations. The development and implementation of this method will support and enhance efforts to identify and reduce Escherichia coli levels in the river.

In fiscal year 2014/15 this project will be dedicated to extended research into the field of bacterial source tracking. Analysts will attend training and workshops for BST instrumentation, visit labs that are currently running source tracking protocols, and initiate development of a BST Standard Operating Procedure. Deliverables for FY 2014/15 will include training with BST instrument suppliers, a visit to an area lab to view instrumentation first hand, and an overall year-end assessment of the project's progress and direction for fiscal year 2015/16.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ 31,740	$ 118,948	$ -	$ 150,688
Commodities	-	8,000	83,000	-	91,000
Contracts	-	-	-	-	-
Total	$ -	$ 39,740	$ 201,948	$ -	$ 241,688

Budget to Actual by Funding Source as of 7/1/2014:



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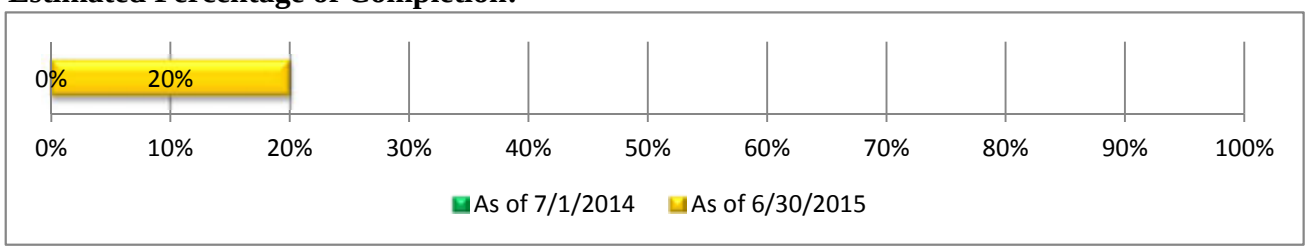
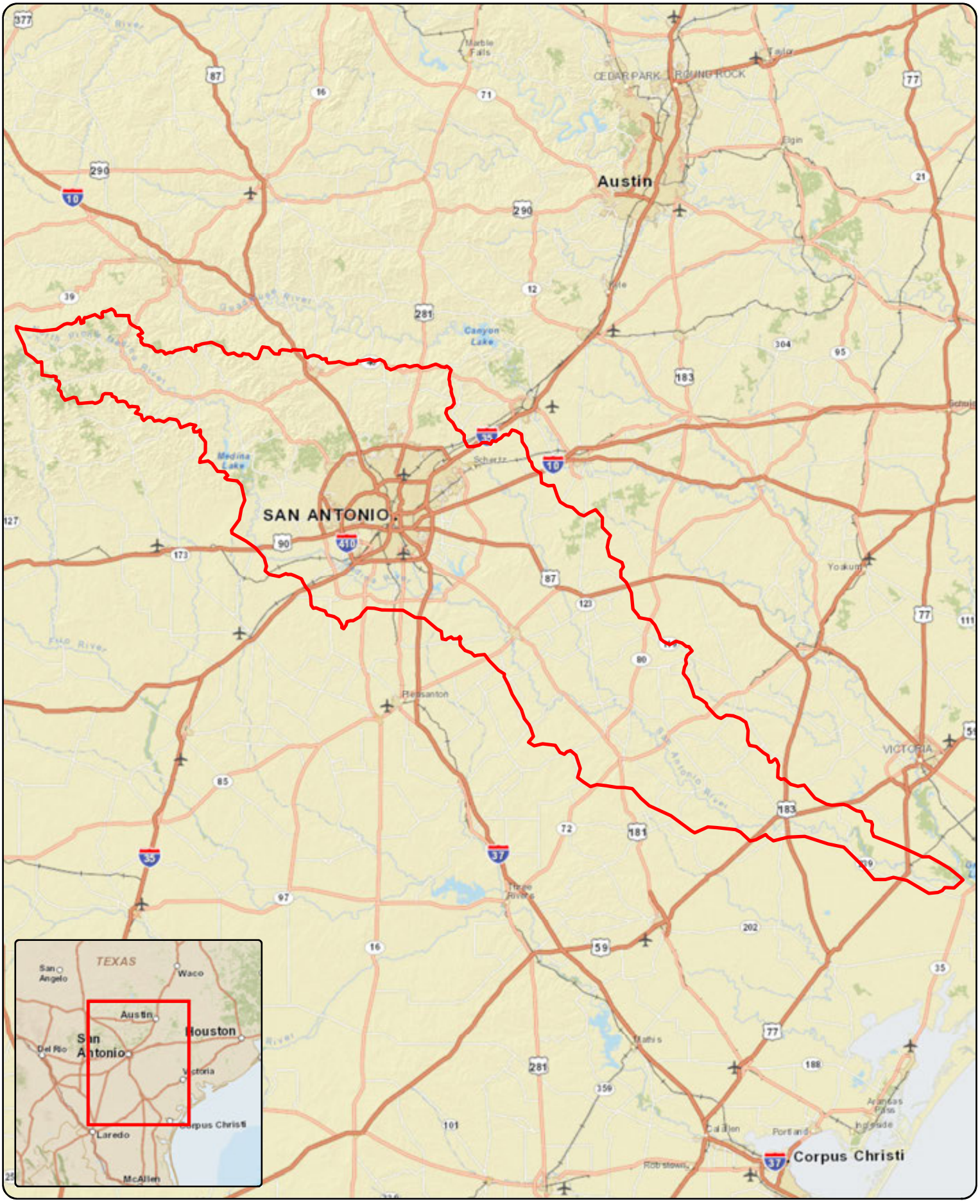




SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Clean Rivers Program 2013 Grant

Project Service Area and/or Boundaries

N

0 10 20 Miles

Project Name: **Clean Rivers Program 2013 Grant** **Project #** **00000404**

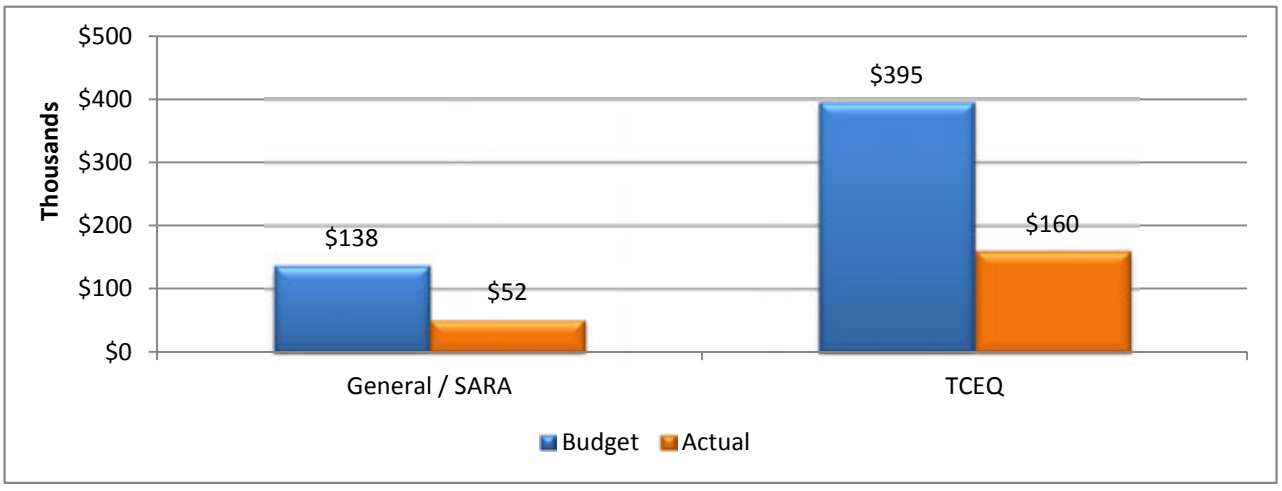
Project Start Date:	09/01/13	Total Project Budget:	$ 533,124
Project Finish Date:	12/31/15	Managing Department:	Environmental Sciences

There are two programs collecting routine surface water quality data in the San Antonio River Basin. One is the San Antonio River Authority Stream Monitoring Project, which is funded by the River Authority's general fund. The second is the Texas Clean Rivers Program (CRP), which is funded by the Texas Commission on Environmental Quality (TCEQ). The CRP, which has been on-going since 1992, provides funding to analyze and manage data gathered from surface water samples collected throughout the basin. In addition, the CRP allows for funding of both field equipment and laboratory instruments. The CRP will produce quality assured water quality data for the assessment of current water quality conditions and long-term trends. Information is shared with the community and stakeholders. This project includes two annual contract periods fiscal year 2013/14 and 2014/15.

In fiscal year 2014/15, the CRP will collect, analyze, and manage surface water quality data collected throughout the San Antonio River Basin. The San Antonio River Authority CRP utilizes a watershed approach to address impairments, concerns, and long-term trends while coordinating the monitoring resources of partnering agencies.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 190,822	$ 248,691	$ 48,610	$ -	$ 488,123
Commodities	22,000	23,001	-	-	45,001
Contracts	-	-	-	-	-
Total	$ 212,822	$ 271,692	$ 48,610	$ -	$ 533,124

Budget to Actual by Funding Source as of 7/1/2014:



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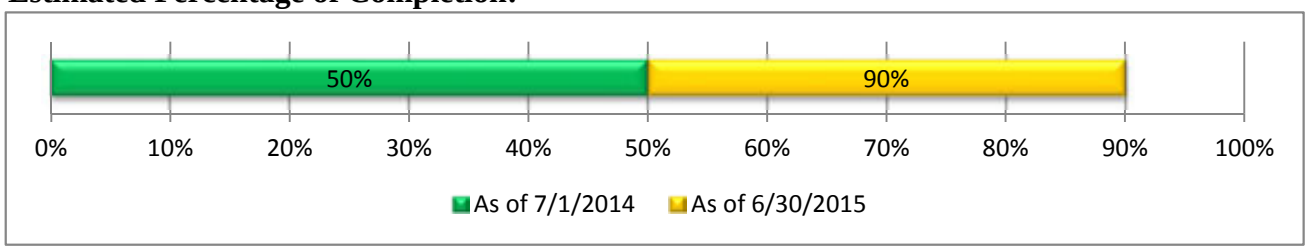
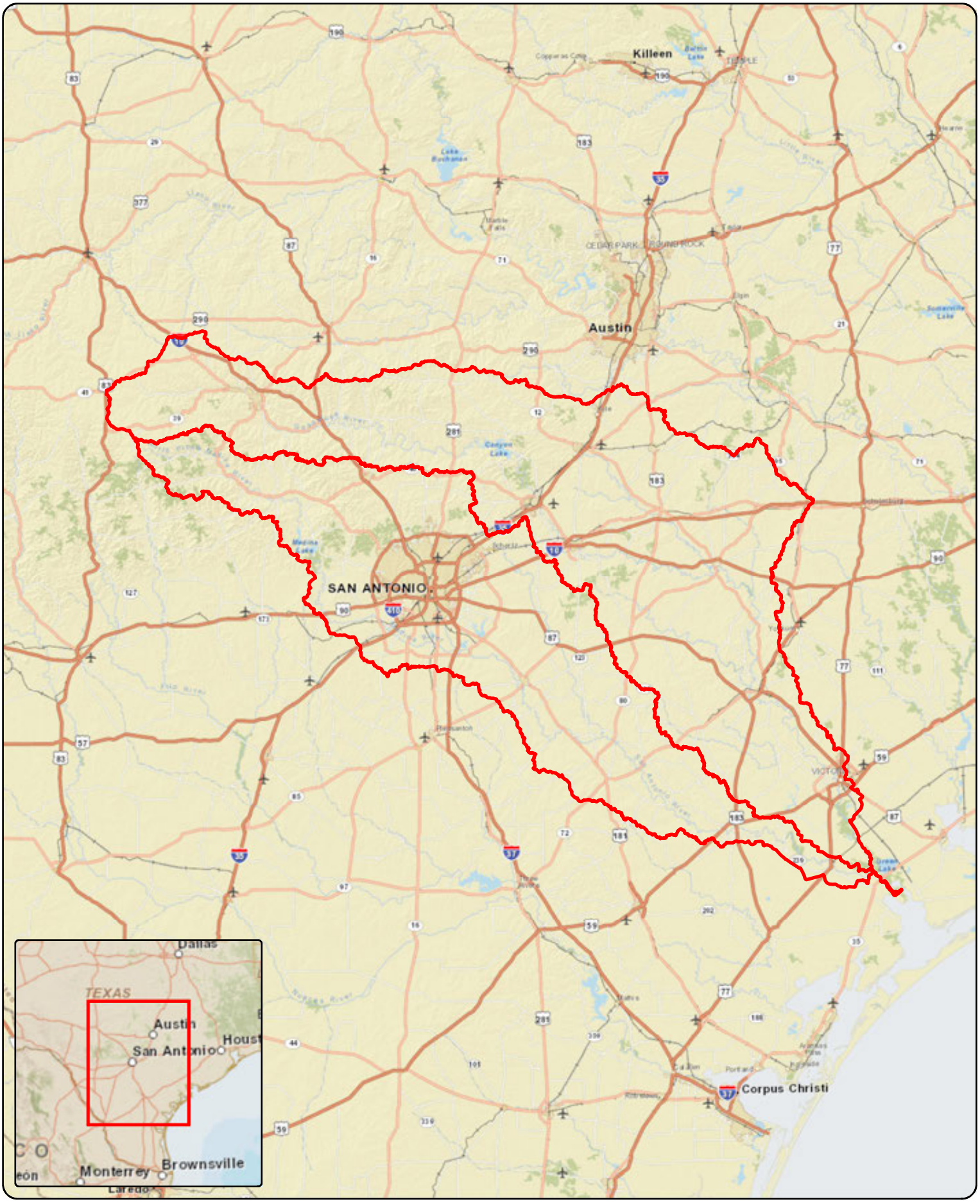




SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Environmental Flows-Validation

Project Service Area and/or Boundaries

N

0 10 20 Miles

Project Name: **Environmental Flows-Validation** **Project #** **00000447**

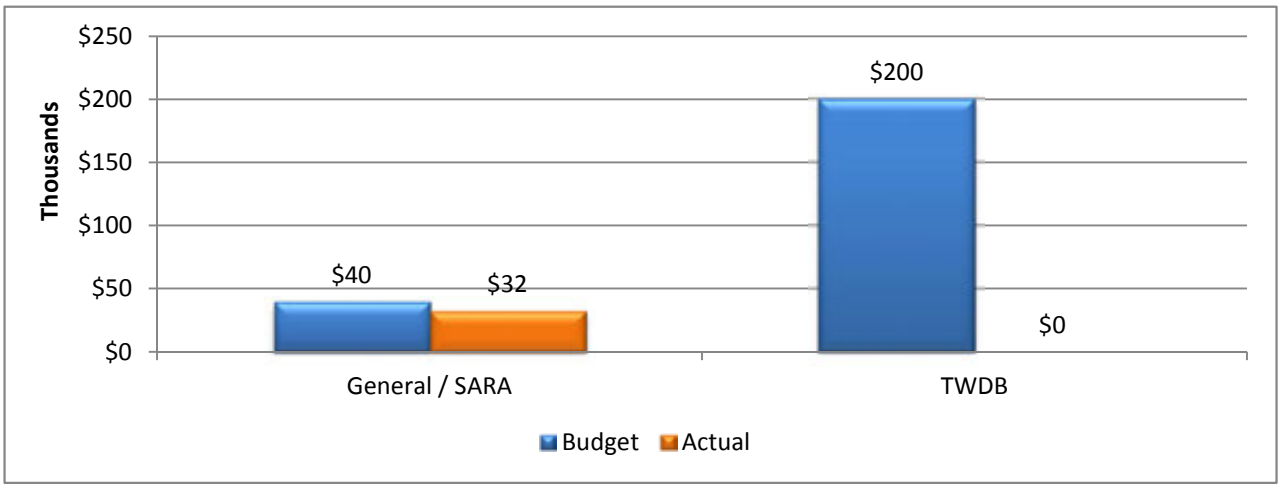
Project Start Date:	04/15/14	Total Project Budget:	$ 239,577
Project Finish Date:	08/31/15	Managing Department:	Environmental Sciences

The goal of this project is to develop methodologies to validate environmental flows adopted by the State. This will be accomplished by first conducting a workshop with an expert panel to develop several theories on how certain chemical and physical parameters as well as biological indicators will respond to the various tiered flow recommendations. These indicators will be identified by the expert panel. Then the selected indicators will be studied at several sites and under several flow regimes to validate the theories and the associated flow recommendations. This information can then be used to refine future environmental flow recommendations.

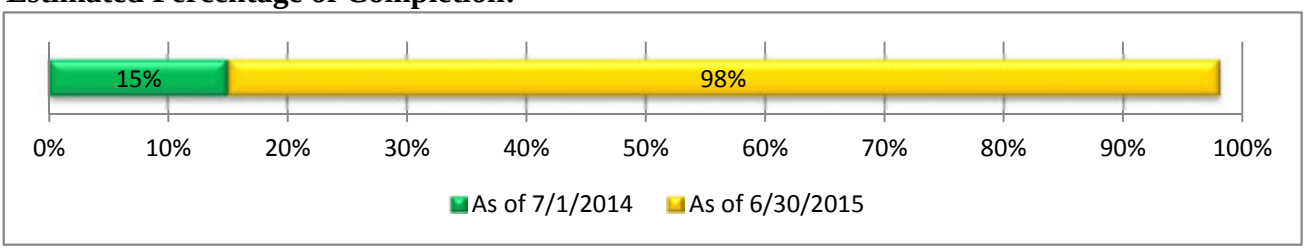
In fiscal year 2014/15, the expert workshop will be held, and the majority of the sampling will be completed.

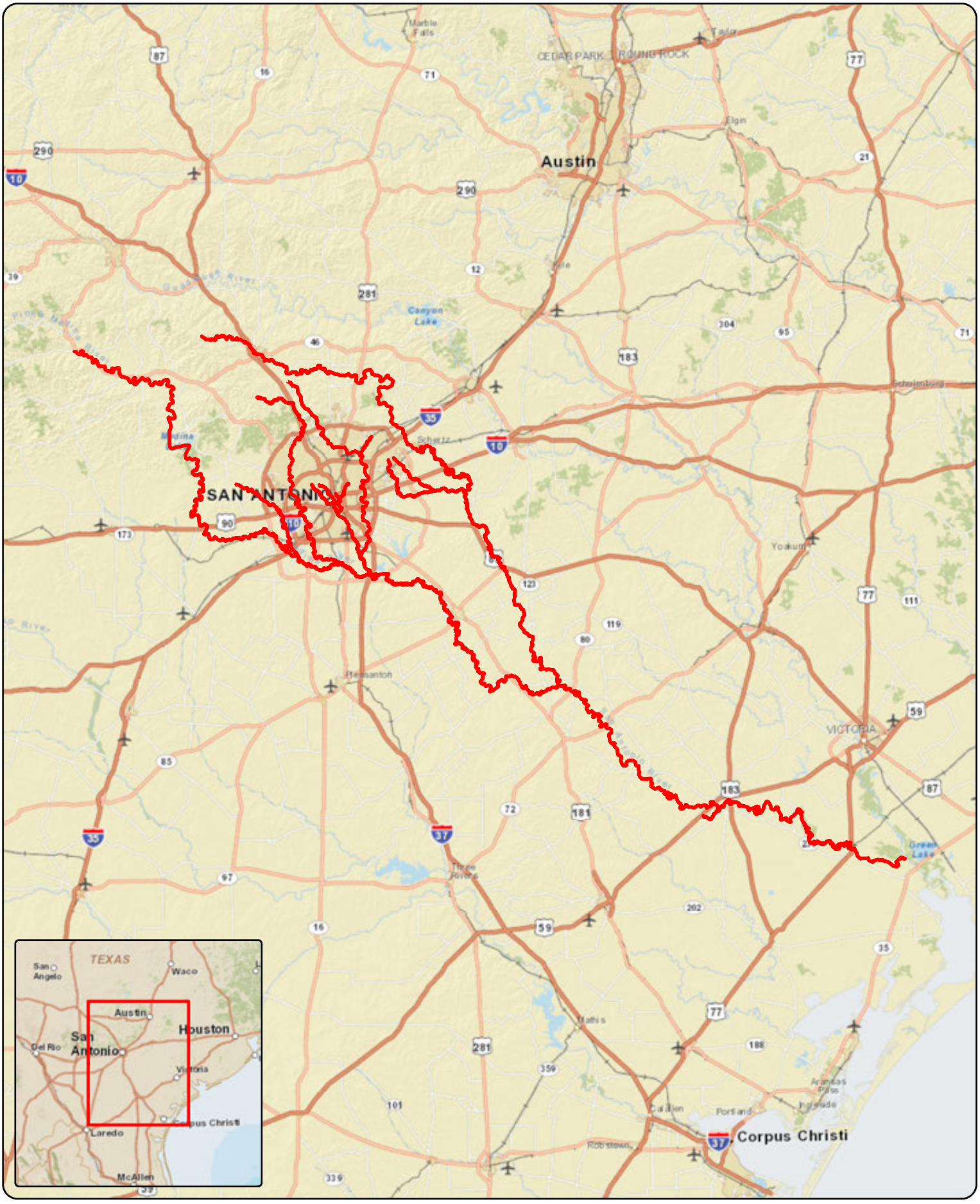
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 2,322	$ 5,032	$ 2,223	$ -	$ 9,577
Commodities	-	-	-	-	-
Contracts	30,000	200,000	-	-	230,000
Total	$ 32,322	$ 205,032	$ 2,223	$ -	$ 239,577

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
Holistic Freshwater Mussel Project

Project Service Area and/or Boundaries

N

0 10 20 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Holistic Freshwater Mussel Project** **Project #** **00000442**

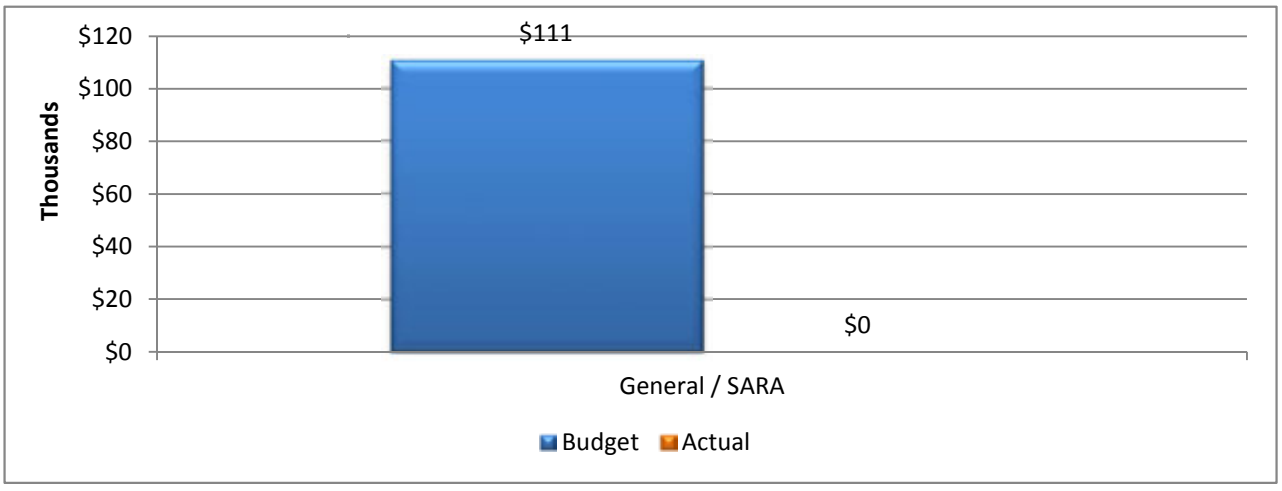
Project Start Date:	07/01/14	Total Project Budget:	$ 110,916
Project Finish Date:	12/15/19	Managing Department:	Environmental Sciences

Three freshwater mussel species under review for federal listing as threatened or endangered have historically been found in the San Antonio River Basin. One species, Golden Orb, has been recently found in numerous locations in the San Antonio River. In an effort to determine mussel densities and richness for the entire native mussel community in the San Antonio River Basin (SARB), the San Antonio River Authority (SARA) will be conducting reconnaissance surveys and mussel sample collections efforts throughout the basin. Data collected will be distributed to regulatory agencies to assist in decision-making for listing or delisting candidate species. Sampling locations include San Antonio River, Cibolo Creek, Salado Creek, Lower Leon Creek, Salatrillo and Martinez Creeks, lower Medina River and Medio Creek.

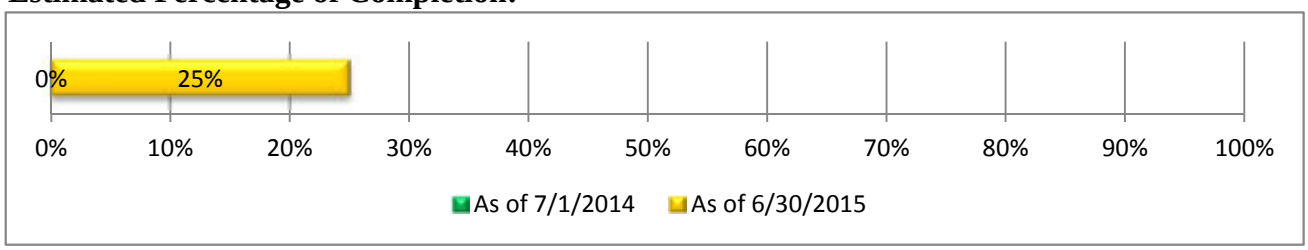
In fiscal year 2014, SARA biologists will conduct reconnaissance surveys and sampling efforts on Cibolo Creek, collecting data to estimate population parameters which includes species densities, variance, richness, habitat use and recruitment, while sampling efforts for the Westside creeks will be qualitative (strictly visual and not tactile) where mussel searches are timed in man effort hours over a defined area.

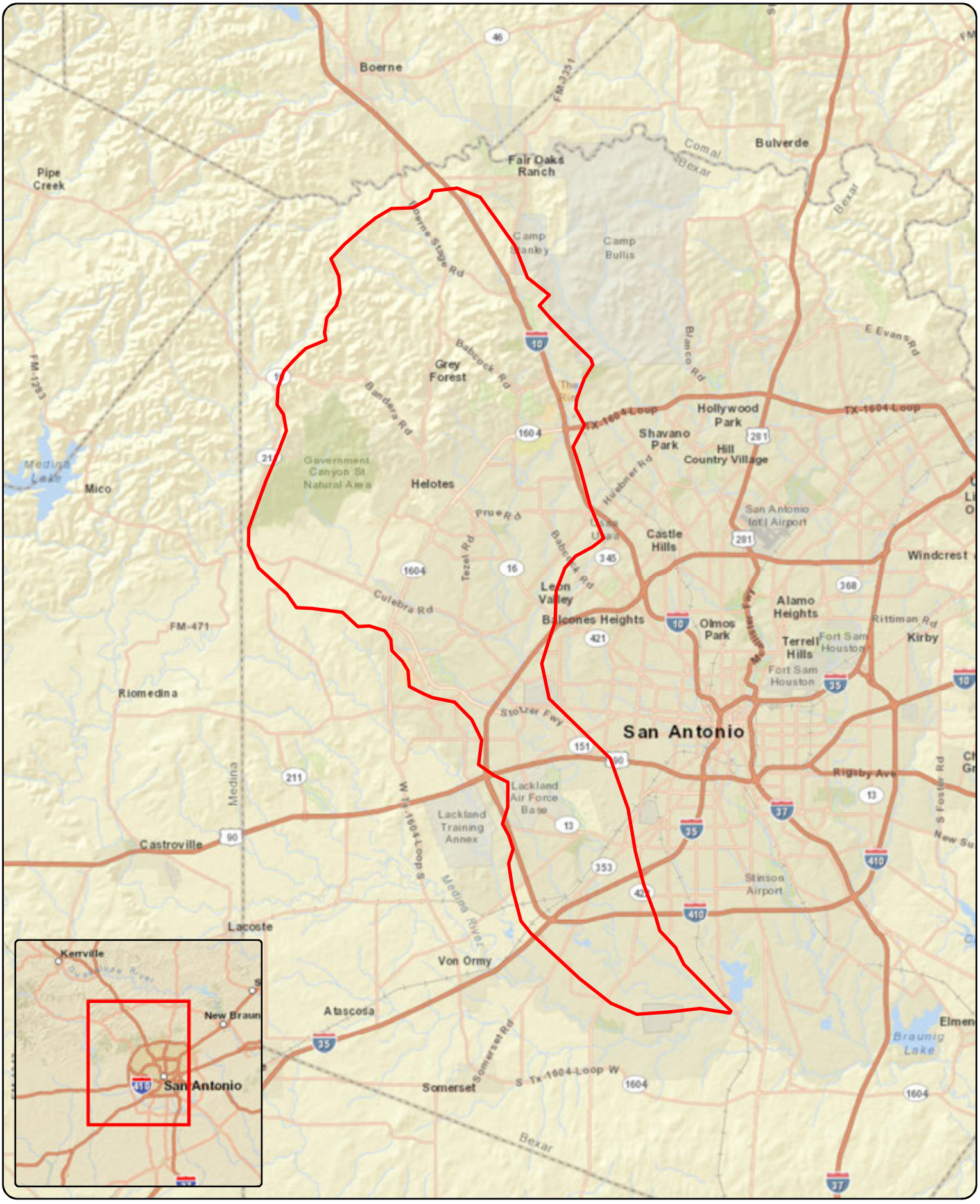
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ 26,289	$ 15,907	$ 53,860	$ 96,056
Commodities	-	3,700	1,160	-	4,860
Contracts	-	2,500	2,500	5,000	10,000
Total	$ -	$ 32,489	$ 19,567	$ 58,860	$ 110,916

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:




Boerne
Pipe Creek
Fair Oaks Ranch
Bulverde
Camp Stanley
Camp Bullis
Grey Forest
Government Canyon St Natural Area
Helotes
Mico
Medina Lake
Hollywood Park
Shavano Park
Hill Country Village
San Antonio Int'l Airport
Castle Hills
Windcrest
Leon Valley
Balcones Heights
Olmos Park
Alamo Heights
Terrell Hills
Fort Sam Houston
Kirby
Rittiman Rd
Riomedina
San Antonio
Lackland Air Force Base
Lackland Training Annex
Rigsby Ave
Castroville
Stinson Airport
Lacoste
Von Ormy
Atascosa
Somerset
Braunig Lake
Elmen
Kerrville
New Braun
San Antonio
Project Name:
Lower Leon Creek UAA
Project Service Area and/or Boundaries
N
0
3
6 Miles
SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Lower Leon Creek UAA** **Project #** **00000428**

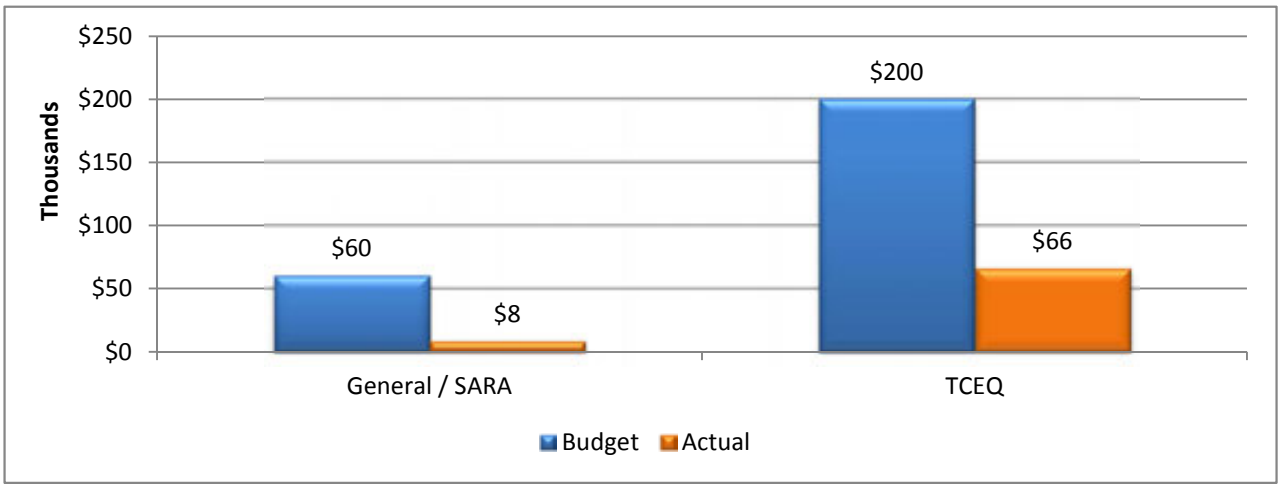
Project Start Date:	03/03/14	Total Project Budget:	$ 260,478
Project Finish Date:	01/01/16	Managing Department:	Environmental Sciences

The objective of the Lower Leon Creek Use-Attainability Analysis is to conduct monitoring in support of Texas Commission on Environmental Quality efforts to assign the appropriate aquatic life use and dissolved oxygen criterion in Lower Leon Creek; additional dissolved oxygen data on Menger and Picosa creeks will also be collected.

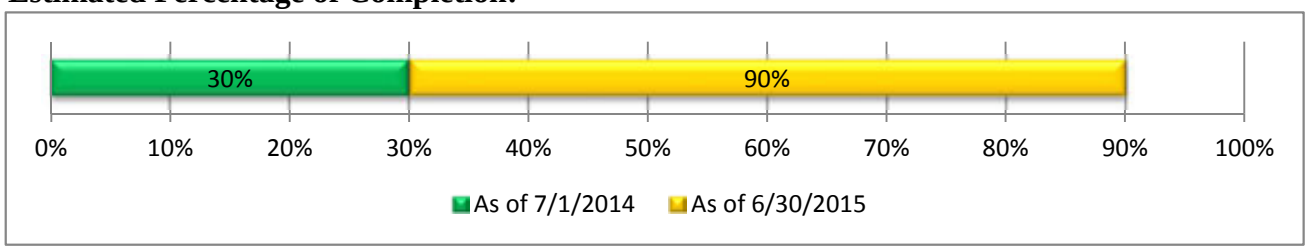
For fiscal year 2014/15, aquatic life, routine chemistry, 24-hour dissolved oxygen and flow measurements will be collected at eight monitoring stations along the Lower Leon Creek. One monitoring station on each of the Menger and Picosa creeks will be monitored for 24-hour dissolved oxygen and flow measurements.

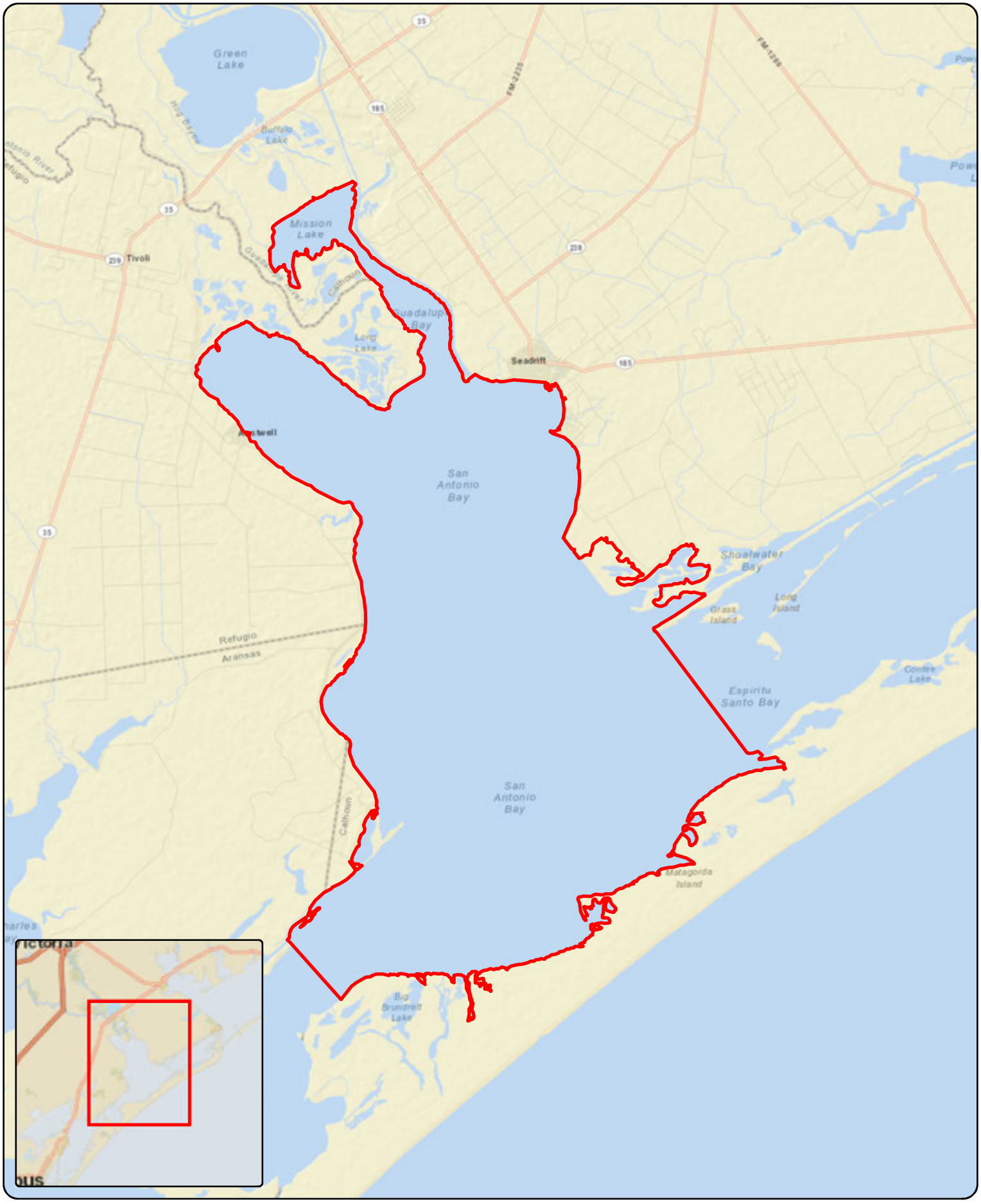
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 46,079	$ 156,522	$ 23,267	$ -	$ 225,868
Commodities	28,305	6,305	-	-	34,610
Contracts	-	-	-	-	-
Total	$ 74,384	$ 162,827	$ 23,267	$ -	$ 260,478

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
Rangia Clam Investigation

Project Service Area and/or Boundaries

N

0 2 4 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Rangia Clam Investigation** **Project #** **00000446**

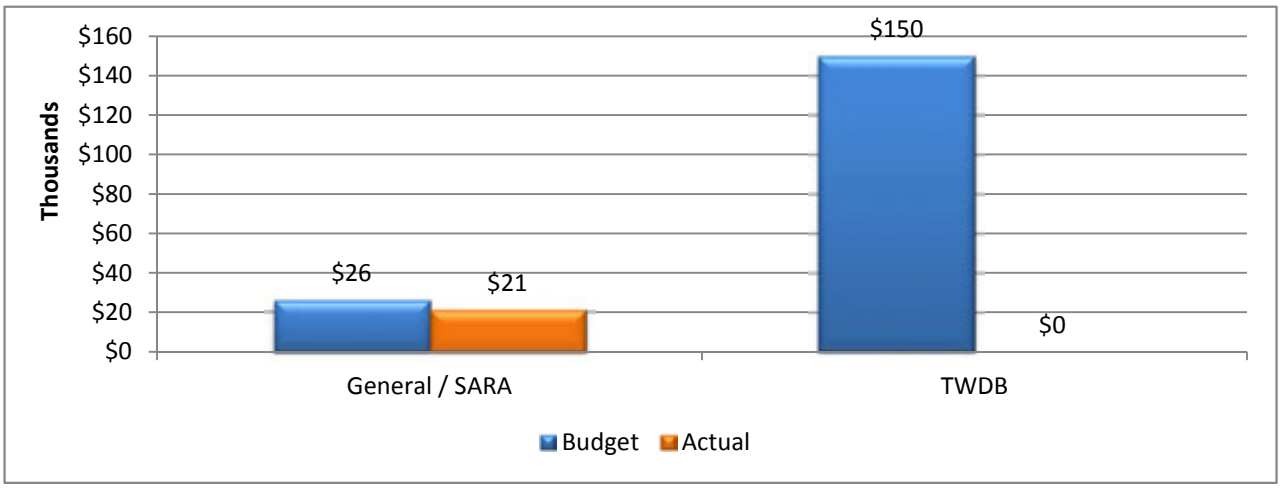
Project Start Date:	04/15/14	Total Project Budget:	$ 176,039
Project Finish Date:	08/31/15	Managing Department:	Environmental Sciences

The adopted environmental flow standards developed by the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays Basin and Bay Stakeholder Committee (BBASC) relied on limited data about the location, reproduction and recruitment of Rangia clams for the spring months. This study will develop maps of Rangia clam beds in Mission Lake, Guadalupe Bay and parts of Hynes and San Antonio Bay. Rangia clam growth rings will be examined to establish correlations between growth and recruitment with environmental flow conditions.

In fiscal year 2014/15, a workshop will be held to gather information from local residents, organizations and agencies. All field data will be collected. Side scan sonar will be used to identify and map the Rangia beds; both live and dead Rangia Clams will be collected to examine growth rings and build a chronology associated with river discharge, salinity and temperature.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 1,161	$ 3,634	$ 1,244	$ -	$ 6,039
Commodities	-	-	-	-	-
Contracts	20,000	150,000	-	-	170,000
Total	$ 21,161	$ 153,634	$ 1,244	$ -	$ 176,039

Budget to Actual by Funding Source as of 7/1/2014:



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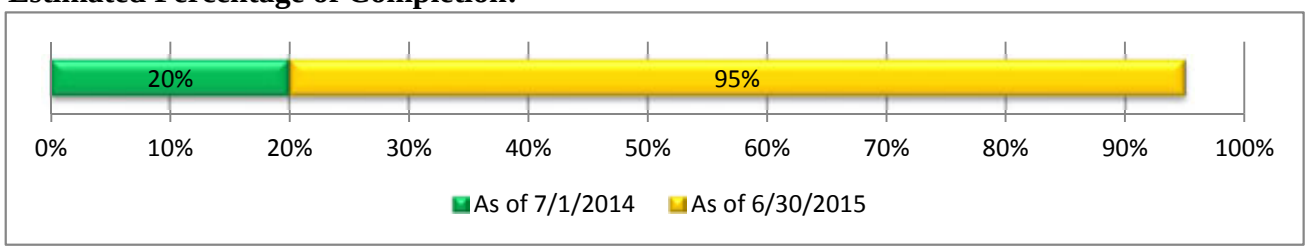
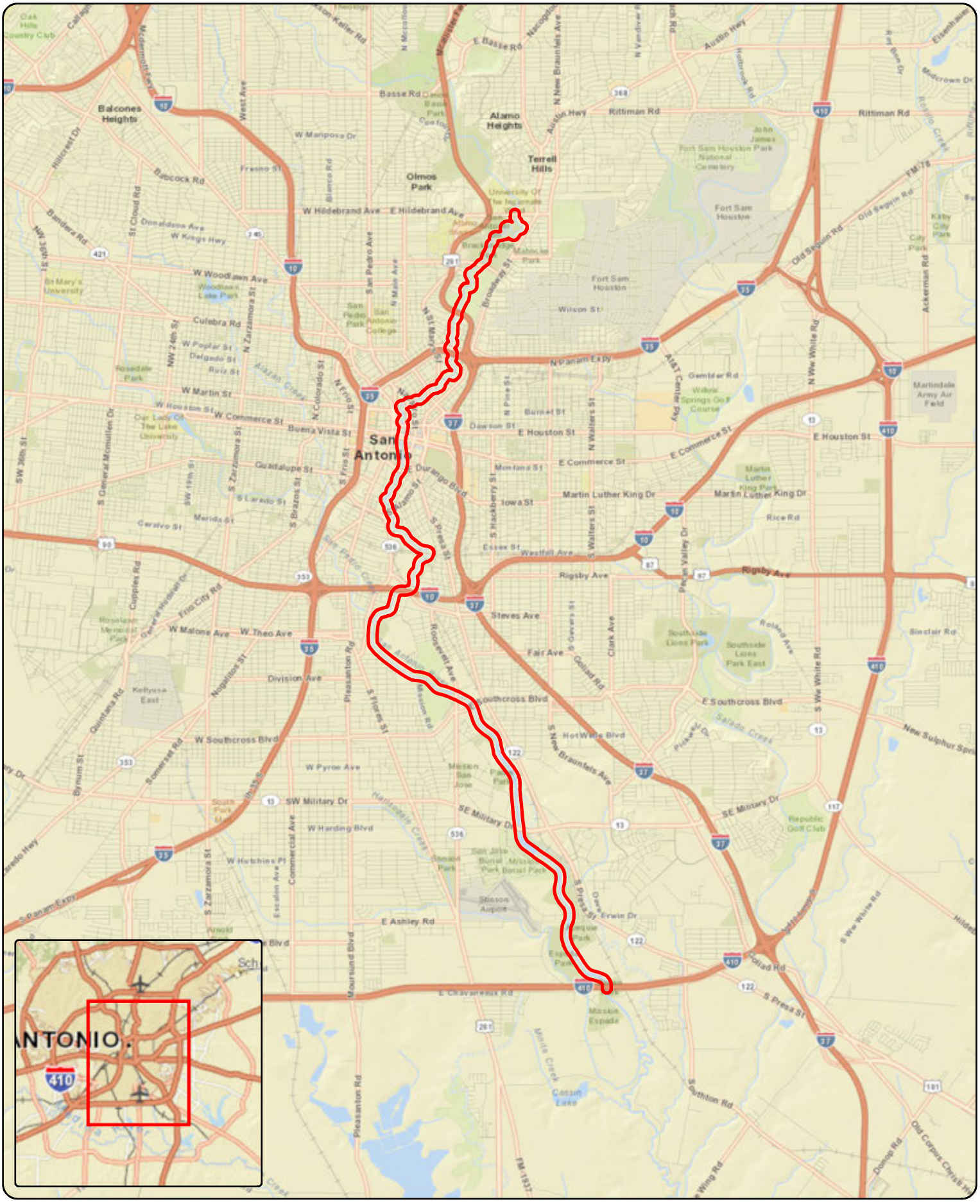




Project Name:
San Antonio River Basin Guadalupe Bass Project

Project Service Area and/or Boundaries

N

0 1 2 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **San Antonio River Basin Guadalupe Bass** **Project #** **00000395**

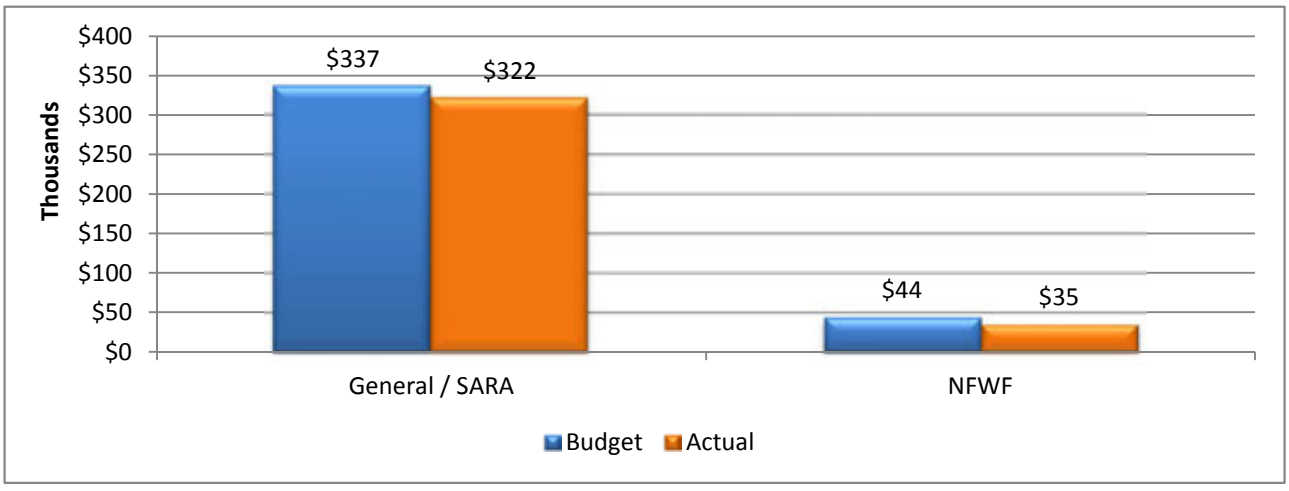
Project Start Date:	07/01/12	Total Project Budget:	$ 381,528
Project Finish Date:	01/31/16	Managing Department:	Environmental Sciences

This project will assess the abundance of Guadalupe Bass Micropterus treculi in the San Antonio River (SAR) watershed and collect, tag and reintroduce the species to a restored reach of the SAR where the species had been extirpated. An assessment of Guadalupe bass in the SAR watershed will be completed to gather genetic and baseline abundance information. Collected adults will be tagged, checked for genetic integrity, and stocked in restored stream reaches. Evaluation of efforts will begin six months after stocking to document movement, reproduction and recruitment. Habitat association data will be collected to help guide future habitat restoration efforts. Overall outcomes expected are including reintroducing the Guadalupe Bass to the Upper SAR, expanding its range and distribution and improving the biotic integrity of the Upper SAR.

In fiscal year 2014/15 this project will establish in-stream habitat structure, map Guadalupe Bass genetic information, collect brood fish, and transplant adult Guadalupe Bass to the restored reach of the Upper SAR.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 116,962	$ 9,832	$ 10,176	$ -	$ 136,970
Commodities	8,945	3,800	-	-	12,745
Contracts	231,813	-	-	-	231,813
Total	$ 357,720	$ 13,632	$ 10,176	$ -	$ 381,528

Budget to Actual by Funding Source as of 7/1/2014:



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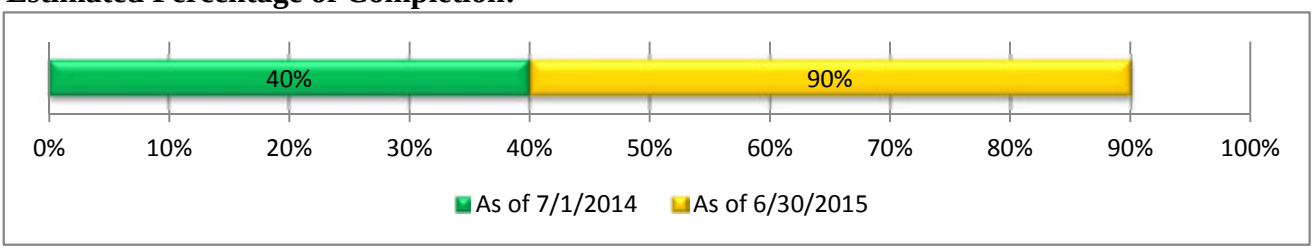
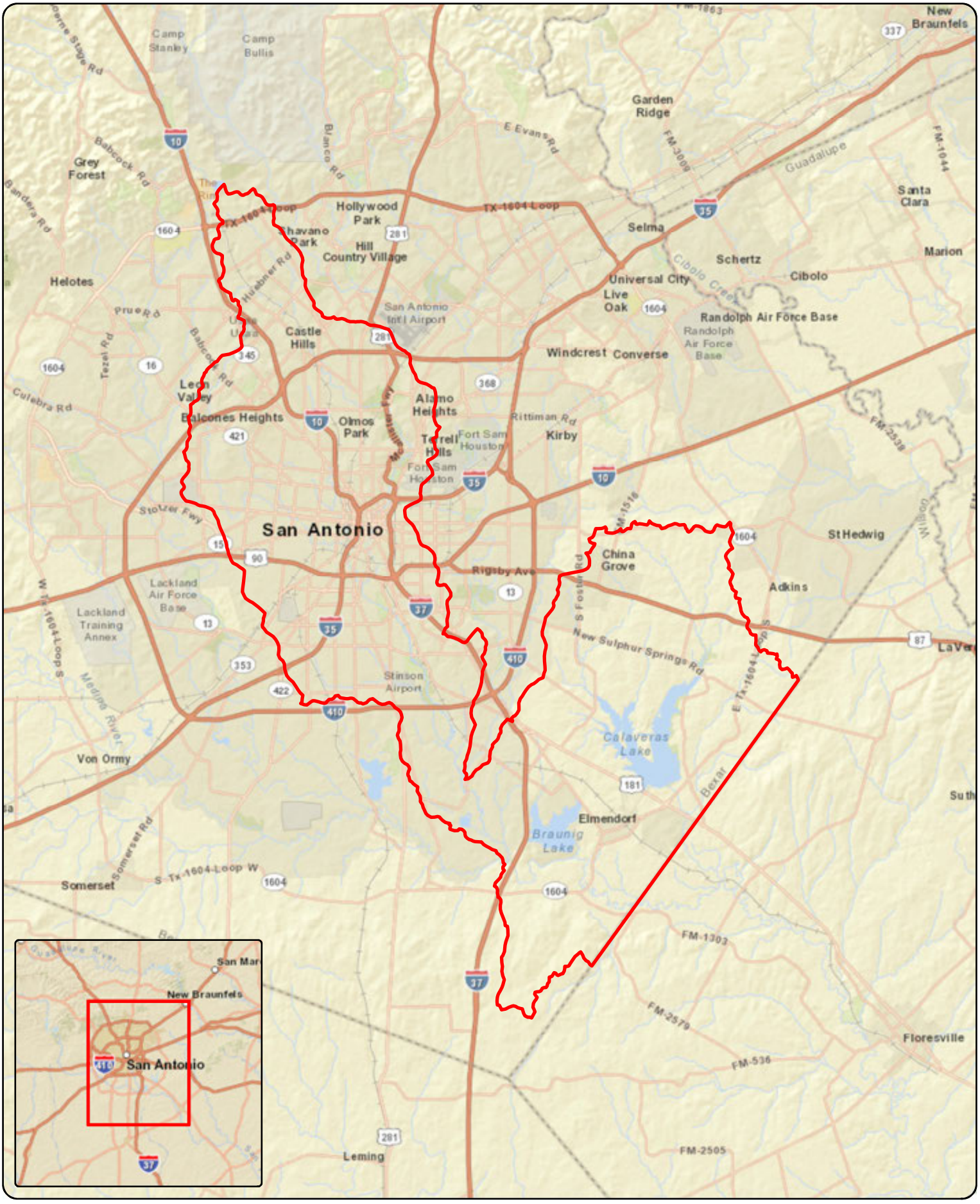




Project Name:
SARA Automated Storm Water Sta.

Project Service Area and/or Boundaries

N

0 3 6 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **SARA Automated Storm Water Project** **Project #** **00000406**

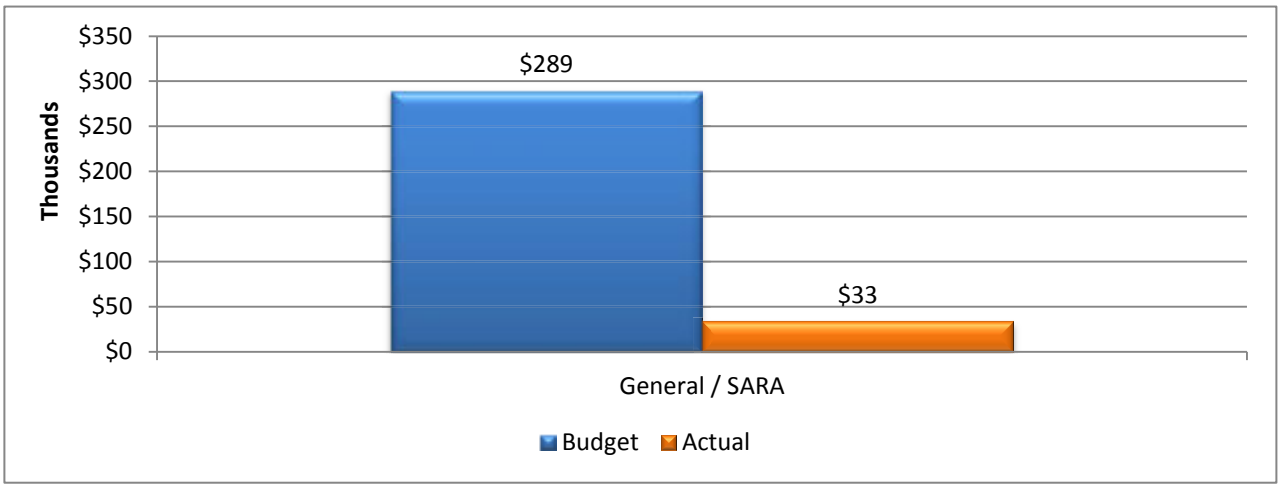
Project Start Date:	07/01/13	Total Project Budget:	$ 289,282
Project Finish Date:	06/30/16	Managing Department:	Environmental Sciences

Streams within the San Antonio River (SAR) watershed are influenced by non-point sources during storm events. The San Antonio River Authority (SARA) is challenged with the task of defining stream water quality within the SAR watershed during storm events. To accomplish this, SARA is incorporating the latest innovative procedures to collect water quality data by implementing permanent long-term automated sampling stations designed to collect water samples under storm water conditions. Automated sampling procedures can collect water quality samples throughout the duration of a storm event, making the collection effort more economically feasible and safer without endangering field personnel during hazardous storm conditions.

In fiscal year 2014/15, SARA will research and construct two permanent long-term automated stream monitoring stations at locations within the SAR watershed. The purpose of these monitoring stations is to collect long-term water quality data under storm water runoff conditions to help characterize stream water quality within the watershed.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 15,673	$ 34,725	$ 35,937	$ -	$ 86,335
Commodities	17,715	89,326	95,906	-	202,947
Contracts	-	-	-	-	-
Total	$ 33,388	$ 124,051	$ 131,843	$ -	$ 289,282

Budget to Actual by Funding Source as of 7/1/2014:



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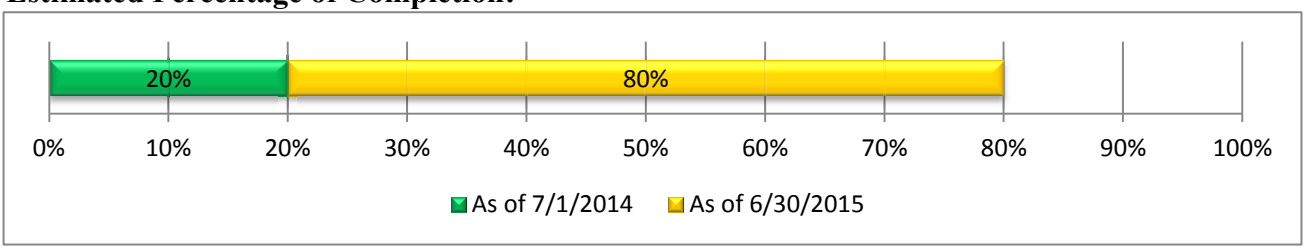
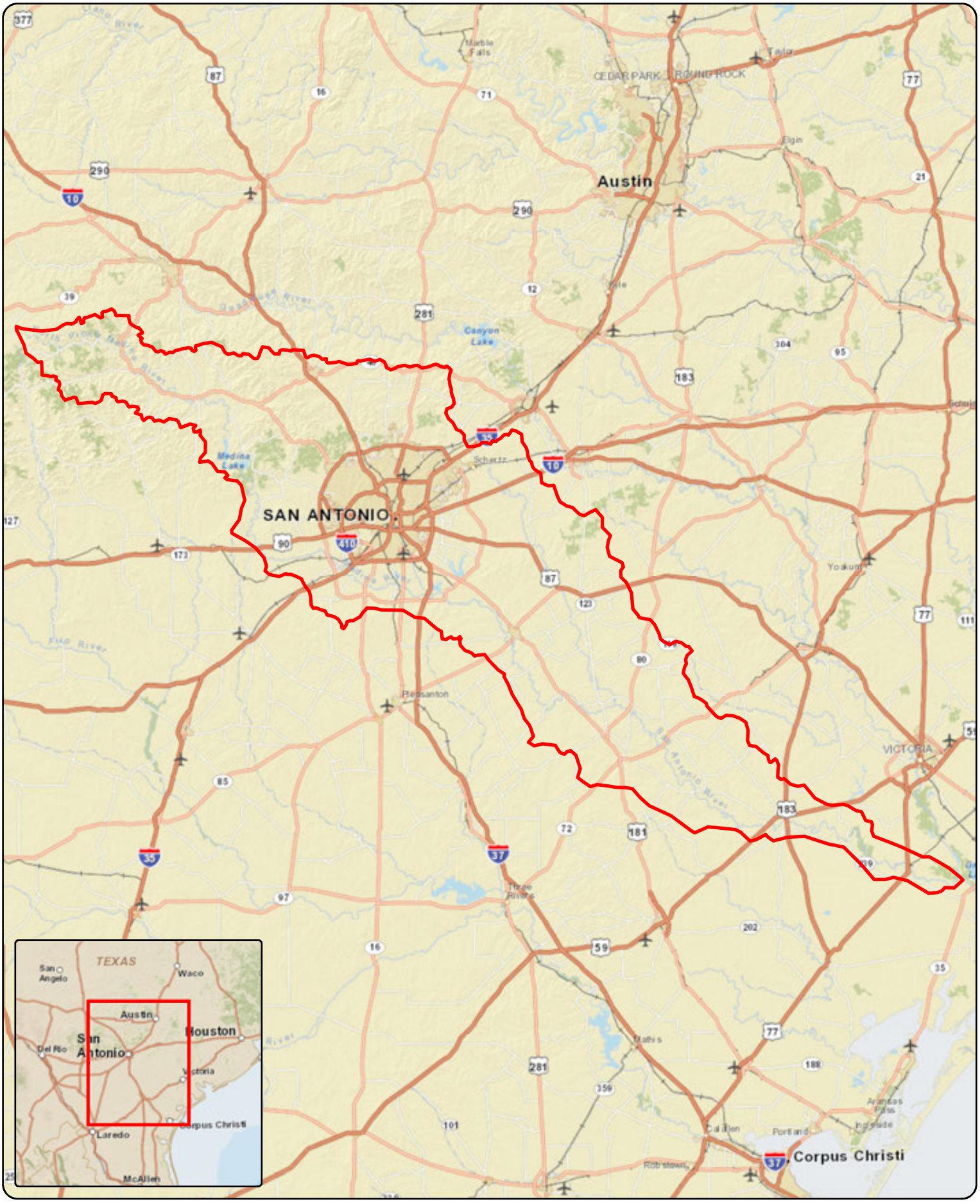




Project Name:
SARA Stream Monitoring FY2014-FY2015

Project Service Area and/or Boundaries

N

0 10 20 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **SARA Stream Monitoring 2014-2015** **Project #** **00000407**

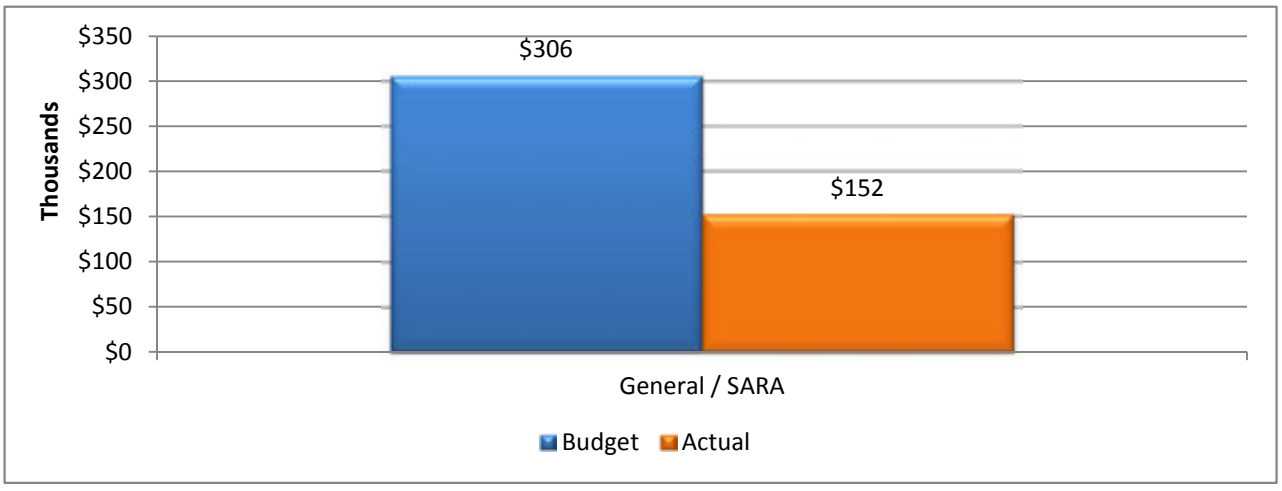
Project Start Date:	07/01/13	Total Project Budget:	$ 305,630
Project Finish Date:	06/30/15	Managing Department:	Environmental Sciences

Water quality monitoring under the Texas Clean Rivers Program (CRP) has decreased as the cost of operating the program has increased. At the same time, actual dollars allocated to the River Authority by the CRP have declined. Because of limited State funding, the current surface water monitoring projects need to be augmented to
meet the increasing demand for stream water quality, ecosystem health and instream flow information. Thus, the River Authority will continue to collect additional data under the SARA Stream Monitoring Project.

For the current fiscal year SARA will be monitoring 26 sites, six times a year for routine water quality. In addition to the routine water quality, five of these sites are monitored on a weekly basis for E. coli bacteria. This data is posted on the River Recreation portion of the SARA website. Funding has been made available for Bacterial Source Tracking; this will be used to identify if bacteria comes from wildlife, livestock, or humans.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 93,134	$ 93,987	$ -	$ -	$ 187,121
Commodities	13,809	14,700	-	-	28,509
Contracts	45,000	45,000	-	-	90,000
Total	$ 151,943	$ 153,687	$ -	$ -	$ 305,630

Budget to Actual by Funding Source as of 7/1/2014:



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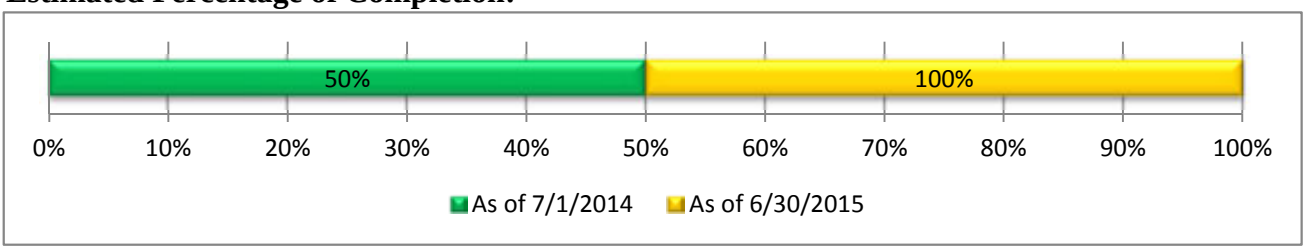
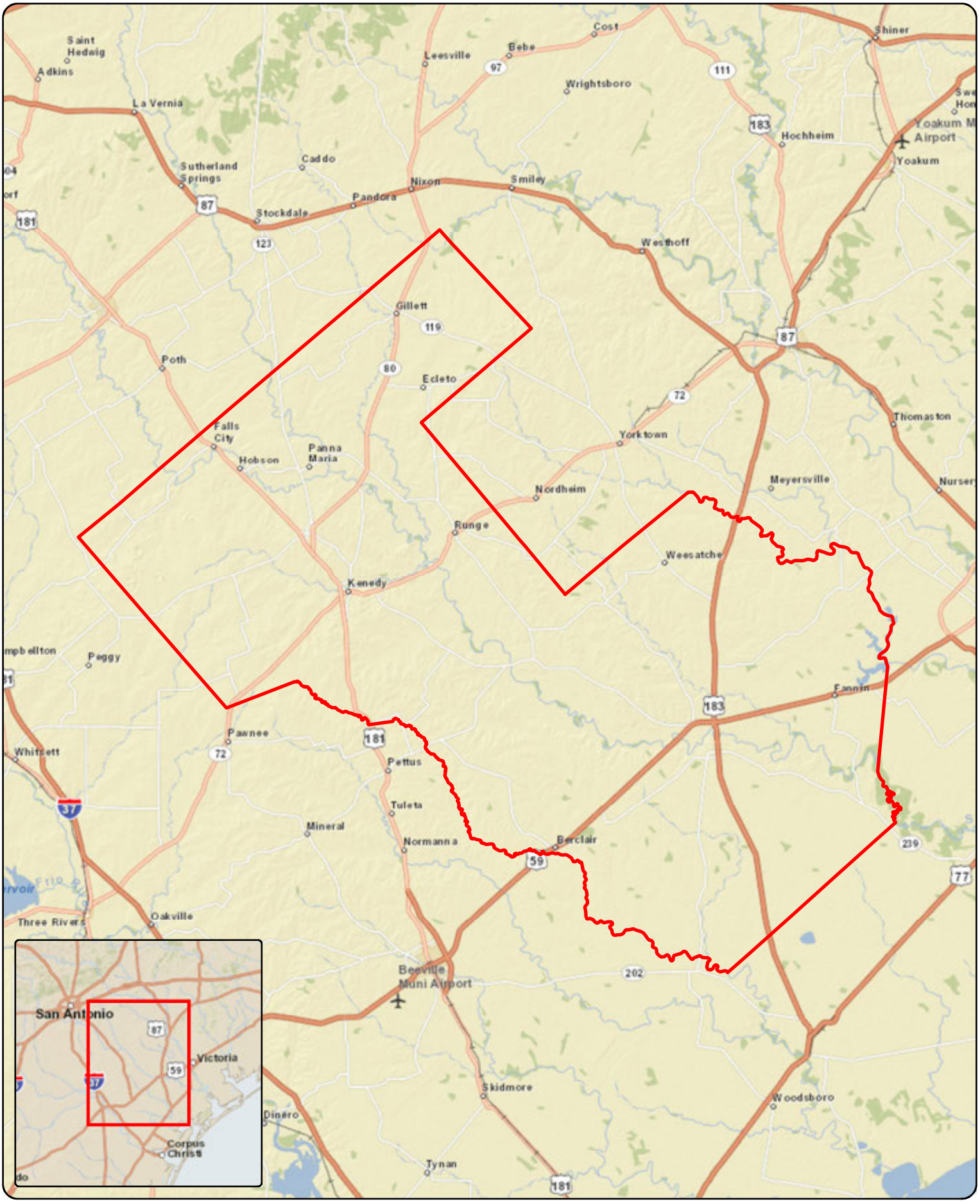




Project Name:
USGS-Huisache Brush Management

Project Service Area and/or Boundaries

N

0 5.5 11 Miles

Project Name: **USGS-Huisache Brush Management** **Project #** **00000454**

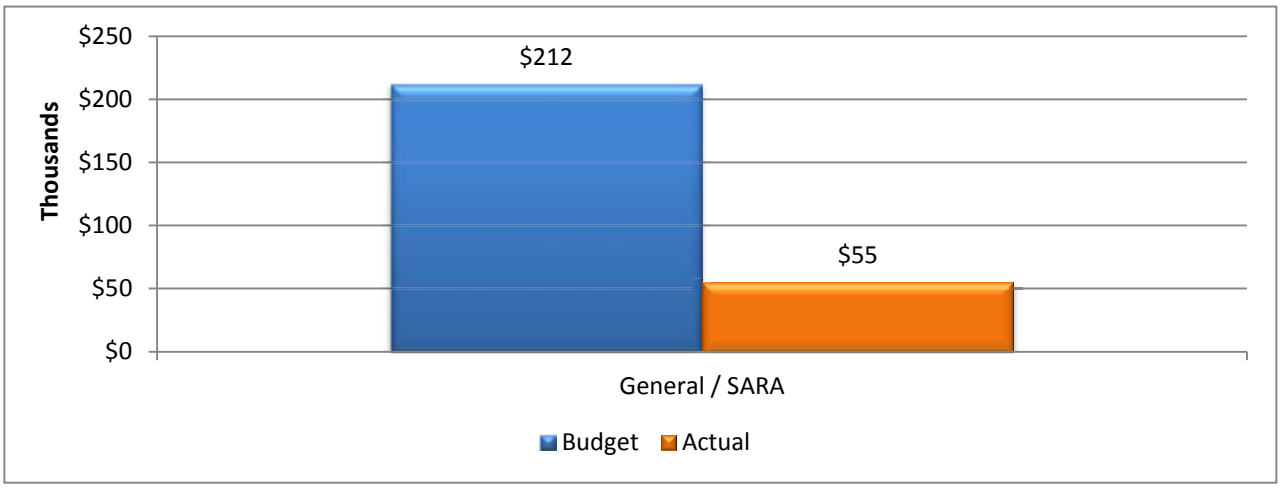
Project Start Date:	03/25/14	Total Project Budget:	$ 212,307
Project Finish Date:	06/08/20	Managing Department:	Watershed Engineering

The southern San Antonio River Basin has experienced woody plant encorachment from Huisache. It is commonly believed that the change in vegetative land cover has affected streamflow and groundwater recharge. This project will evaluate the potential changes in the hydrologic budget as a result of brush management (specifically Huisache management). Meteorological instrumentation will be installed on two adjacent plots of land with managed grassland and Huisache brushland to measure evapotranspiration and rainfall over a range of hydrologic conditions and the data linked with remotely sensed imagery. After two years, brush management will be implemented to indentify the effect on the hydrologic budget.

In fiscal year 2014/15 year, the United States Geological Survey (USGS) will install eddy covariance towers on two plots of land, a managed grassland and a huisache brushland, to collect meteorlogical and rainfall data. In addition, remote sensing imagery will be evaluated for scaling up evapotranspiration estimations to a regional scale. The site specific meteorological measurements, estimation of evapotranspiration, and remote sensing evaluation data will be analyzed in order to advance evaluation of the hydrologic budget. Additional funding partners to be determined.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ 1,969	$ 2,038	$ 7,050	$ 11,057
Commodities	-	-	-	-	-
Contracts	55,000	15,000	30,750	100,500	201,250
Total	$ 55,000	$ 16,969	$ 32,788	$ 107,550	$ 212,307

Budget to Actual by Funding Source as of 7/1/2014:



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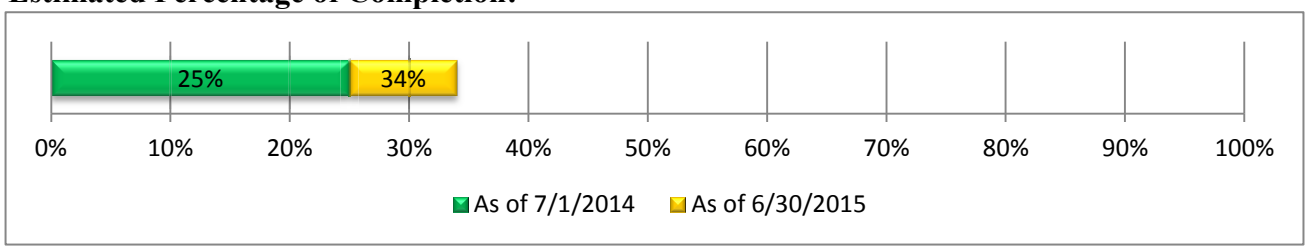
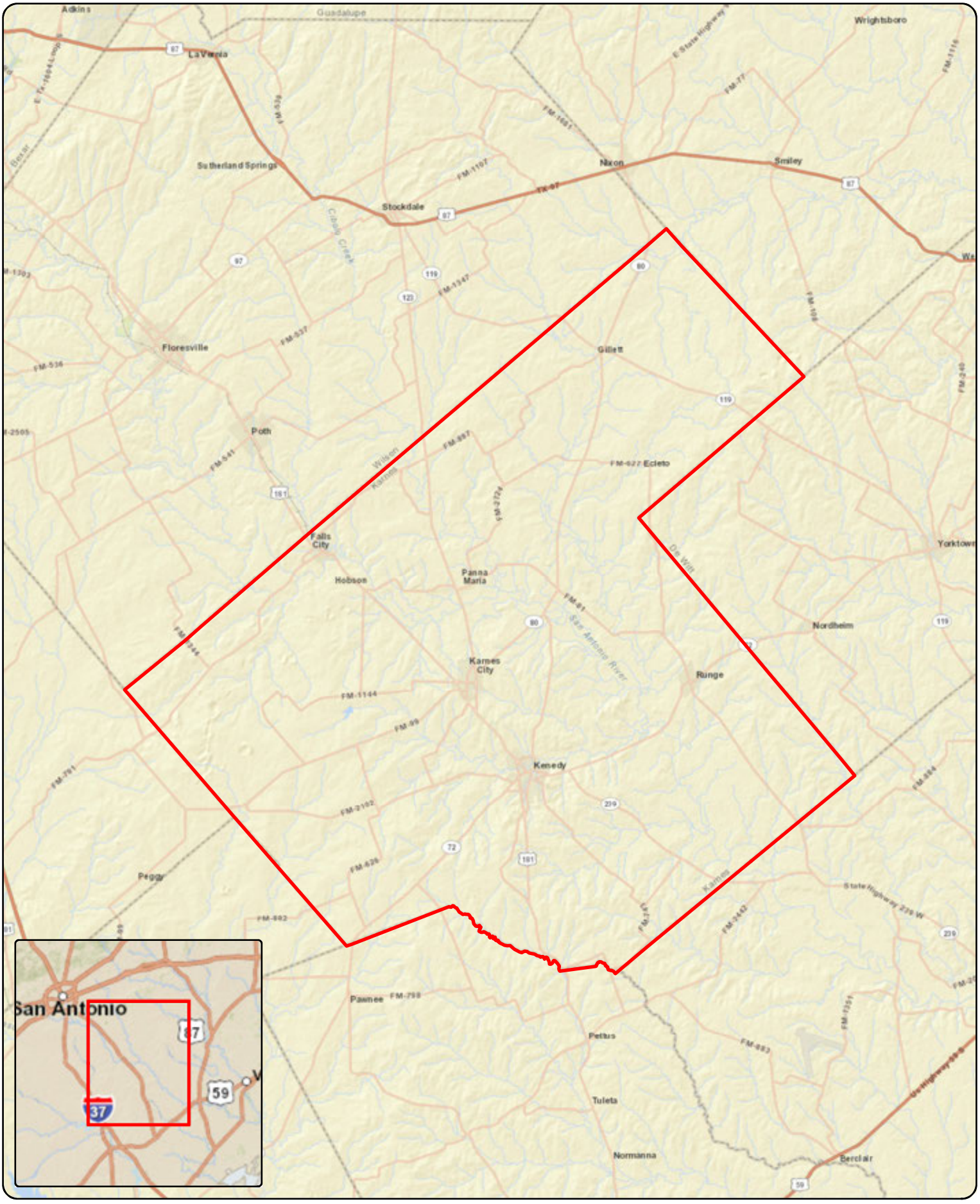




Project Name:
USGS HF Groundwater Sampling

Project Service Area and/or Boundaries

N

0 4 8 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **USGS HF Groundwater Sampling** **Project #** **00000444**

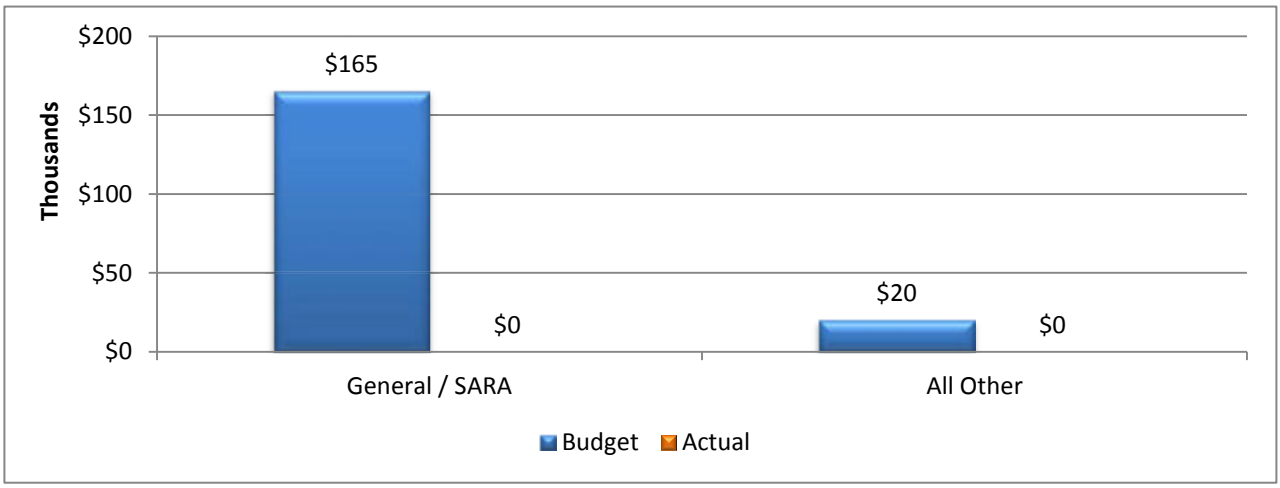
Project Start Date: 10/01/14
Project Finish Date: 05/31/17
Total Project Budget: $ 185,259
Managing Department: Environmental Sciences

This project will allow for comparisons to be made between baseline data collected as part of the Lower San Antonio Surface Water/Groundwater Interaction Study and current conditions. The U.S. Geological Survey (USGS) proposes to collect groundwater samples at 15 wells in the Carrizo-Wilcox and Gulf Coast aquifers, including the nine wells sampled in the 2006-2007 study. Also, synoptic groundwater-level data will be collected at up to 20 wells in order to generally understand the groundwater-flow in the local aquifers. Interpreting the groundwater data in context with a generalized groundwater-flow conceptual model will provide insight into aquifer interaction and groundwater/surface-water interaction between the Lower San Antonio River and the local aquifers.

For fiscal year 2014/15, if funding becomes available, the USGS Hydraulic Fracturing Groundwater Sampling activities include groundwater sampling, collecting groundwater-level data, and initial interpretation and report compilation.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ -	$ 1,251	$ 4,008	$ 5,259
Commodities	-	-	-	-	-
Contracts	-	-	110,000	70,000	180,000
Total	$ -	$ -	$ 111,251	$ 74,008	$ 185,259

Budget to Actual by Funding Source as of 7/1/2014:



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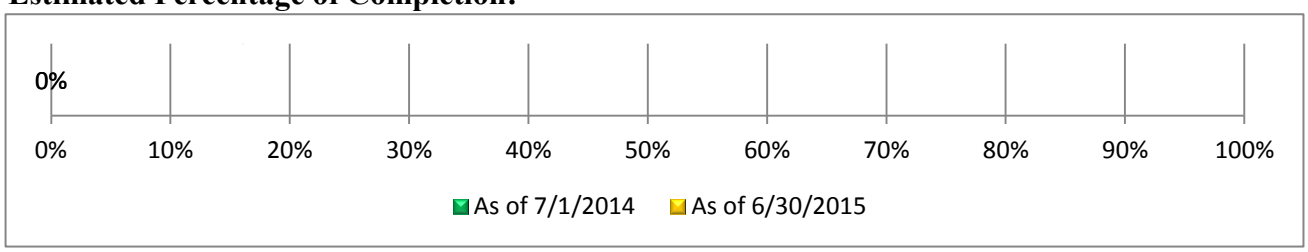
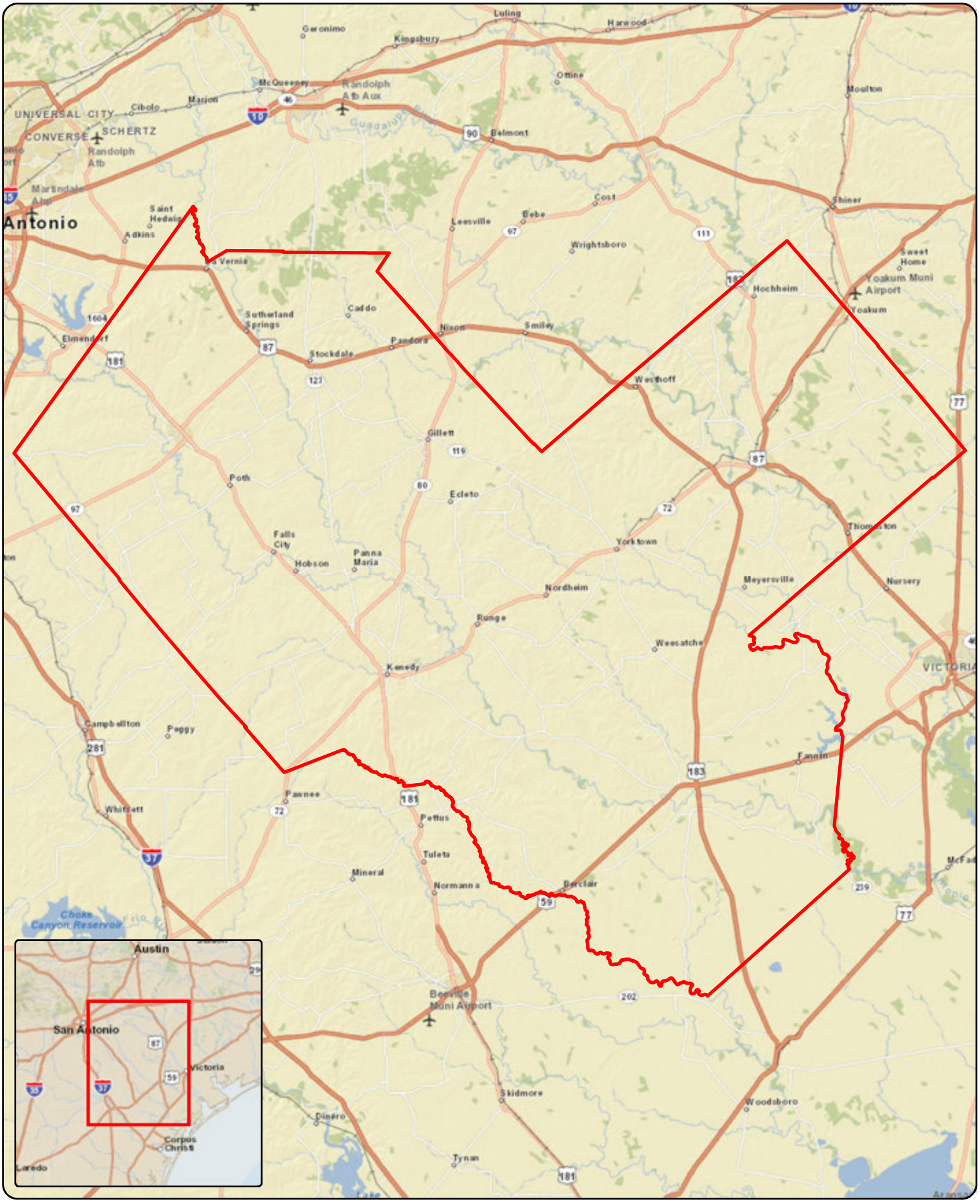




Project Name:
USGS Hydraulic Fracturing Phase II

Project Service Area and/or Boundaries

N

0 7 14 Miles

Project Name: **USGS Hydraulic Fracturing Phase II** **Project #** **00000445**

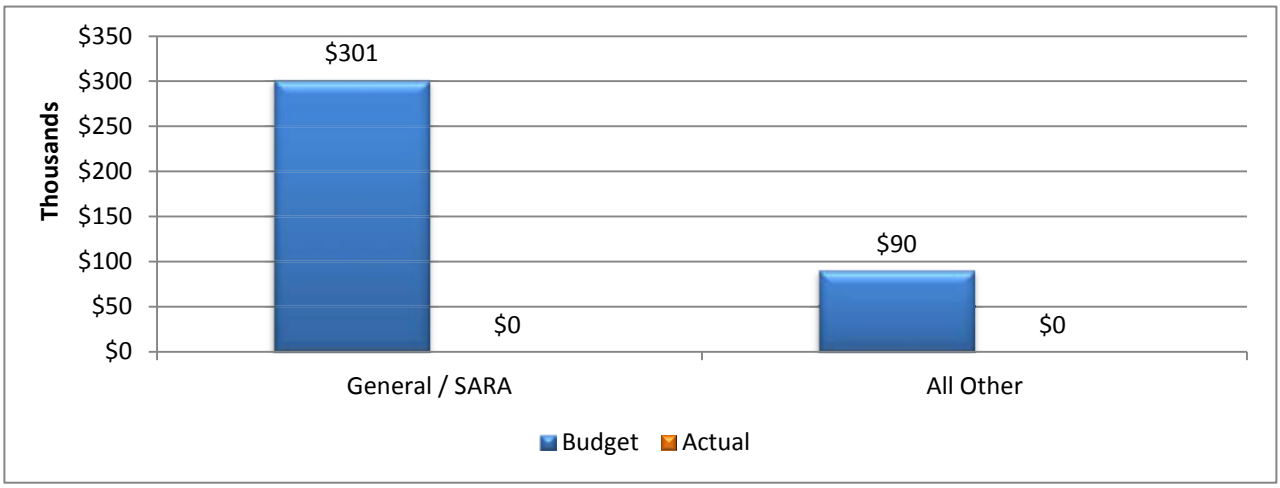
Project Start Date: 10/01/14
Project Finish Date: 05/30/17
Total Project Budget: $ 391,367
Managing Department: Environmental Sciences

In Karnes, DeWitt, and Wilson counties, the number of new oil and gas production wells has increased substantially since the completion of the U.S. Geological Survey (USGS) Hydraulic Fracturing project. Few surface water and sediment samples have been collected in the area. The USGS proposes both continued long-term sampling at a subset of currently-sampled stream sites and new focused sampling of additional stream sites within the Lower San Antonio River (LSAR) where oil and gas production is most active. The study will also estimate the change in land cover in the central portion of the LSAR Basin due to the conversion of rangeland to well pads sites. The Sandies Creek watershed in the Guadalupe River Basin might also be included in Phase II through support from Guadalupe-Blanco River Authority.

For fiscal year 2014/15, the USGS Hydraulic Fracturing Project Phase II activities include surface water sampling, streambed-sediment sampling, and initial land cover analysis in Wilson, Karnes, DeWitt, and Goliad counties.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ 1,208	$ 1,251	$ 4,008	$ 6,467
Commodities	-	-	-	-	-
Contracts	-	136,200	144,600	104,100	384,900
Total	$ -	$ 137,408	$ 145,851	$ 108,108	$ 391,367

Budget to Actual by Funding Source as of 7/1/2014:



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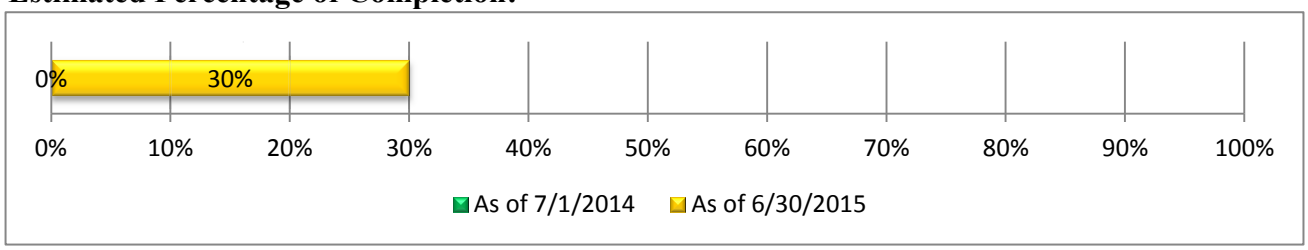

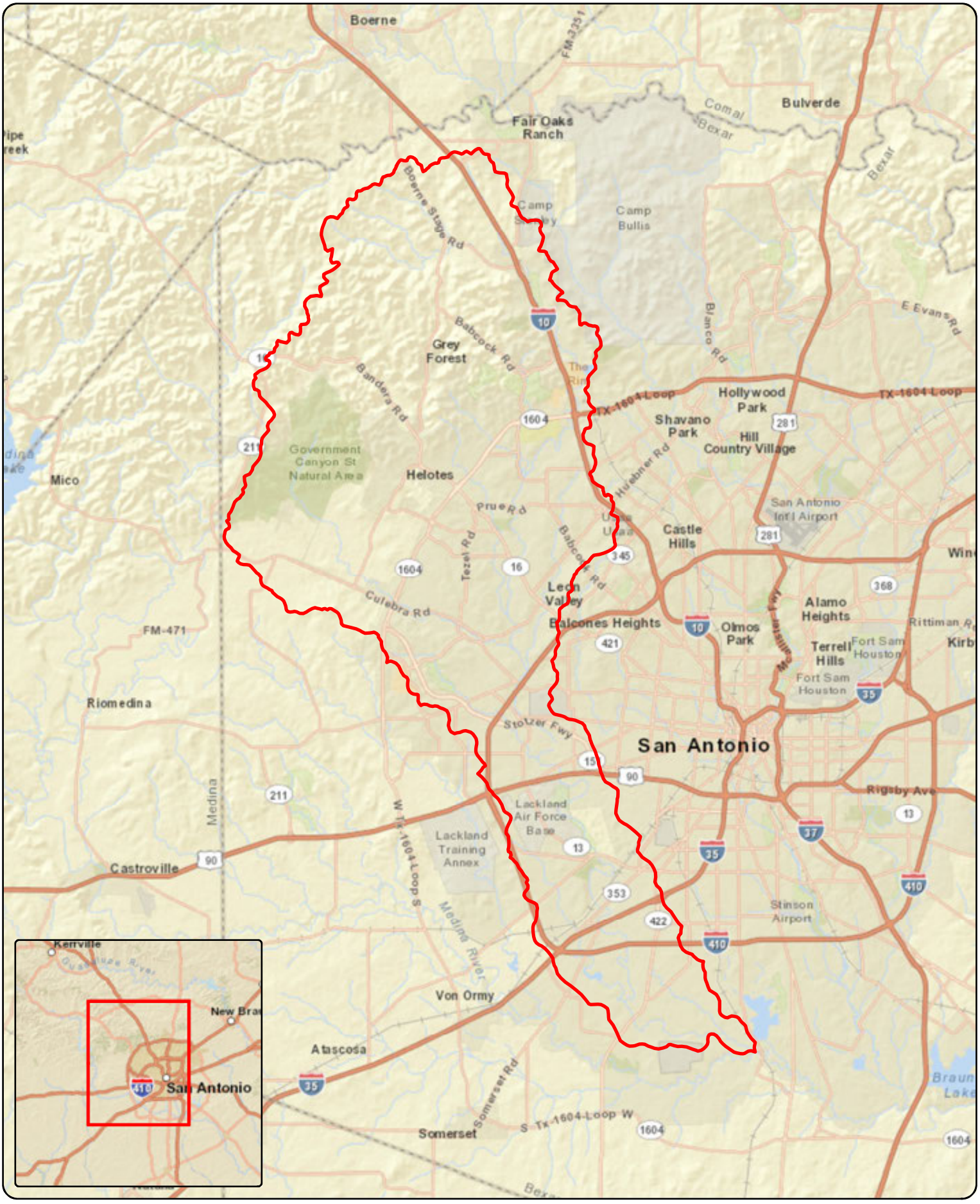

Project Name:
USGS Leon Creek Sediment Analysis

Project Service Area and/or Boundaries

N

0 2.5 5 Miles

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Project Name: **USGS Leon Creek Sediment Analysis** **Project #** **00000353**

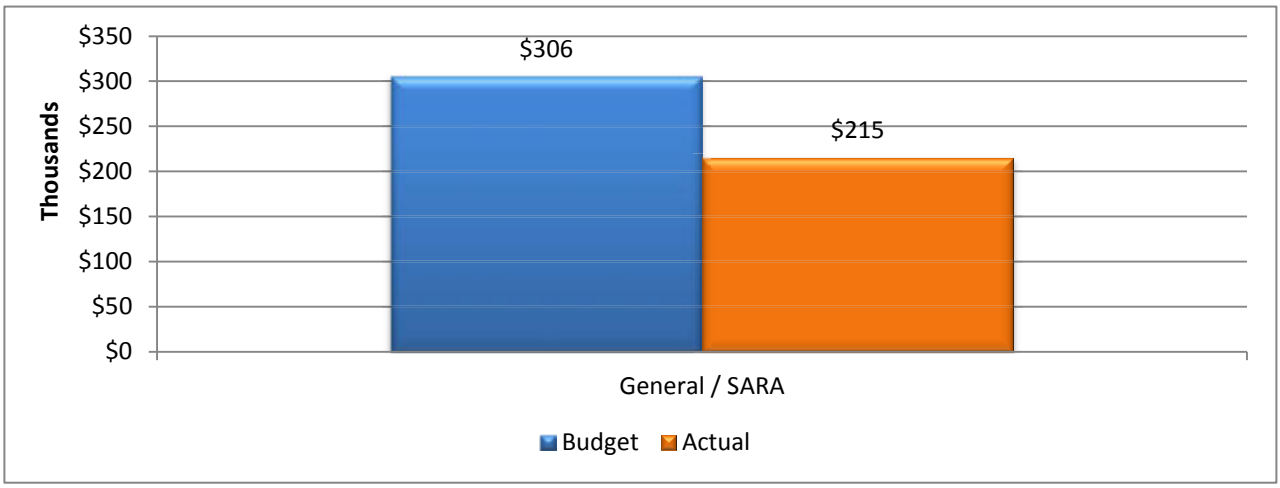
Project Start Date:	01/01/12	Total Project Budget:	$ 305,825
Project Finish Date:	12/31/15	Managing Department:	Environmental Sciences

The Texas Department of Health has issued a fish consumption advisory stating that the consumption of fish from Leon Creek may pose a threat to human health due to polychlorinated biphenyls (PCBs). This advisory extends from Old U.S. Highway 90 Bridge downstream to the Loop 410 bridge in South Bexar County. Previous sediment sampling confirms the presence of trace elements, pesticides and PCBs in Lower Leon Creek at and below the former Kelly Air Force Base (AFB). It is unclear if the contaminants originate from the AFB or from the watershed upstream of the AFB. This project will conduct both streambed and suspended sediment sampling and analysis for contaminants with special focus on PCBs to determine if the PCB source is the former AFB.

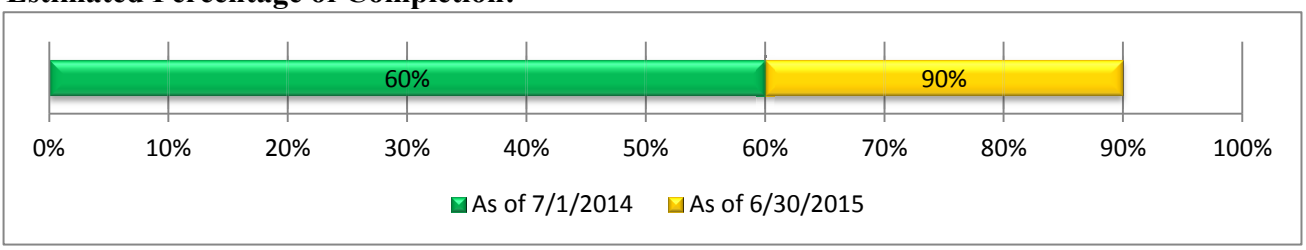
In fiscal year 2014/15, the data will be analyzed and the results interpreted. The United States Geological Survey staff will work on developing a Scientific Investigations Report which should be released by September 2015. The USGS will provide quarterly reports to SARA staff.

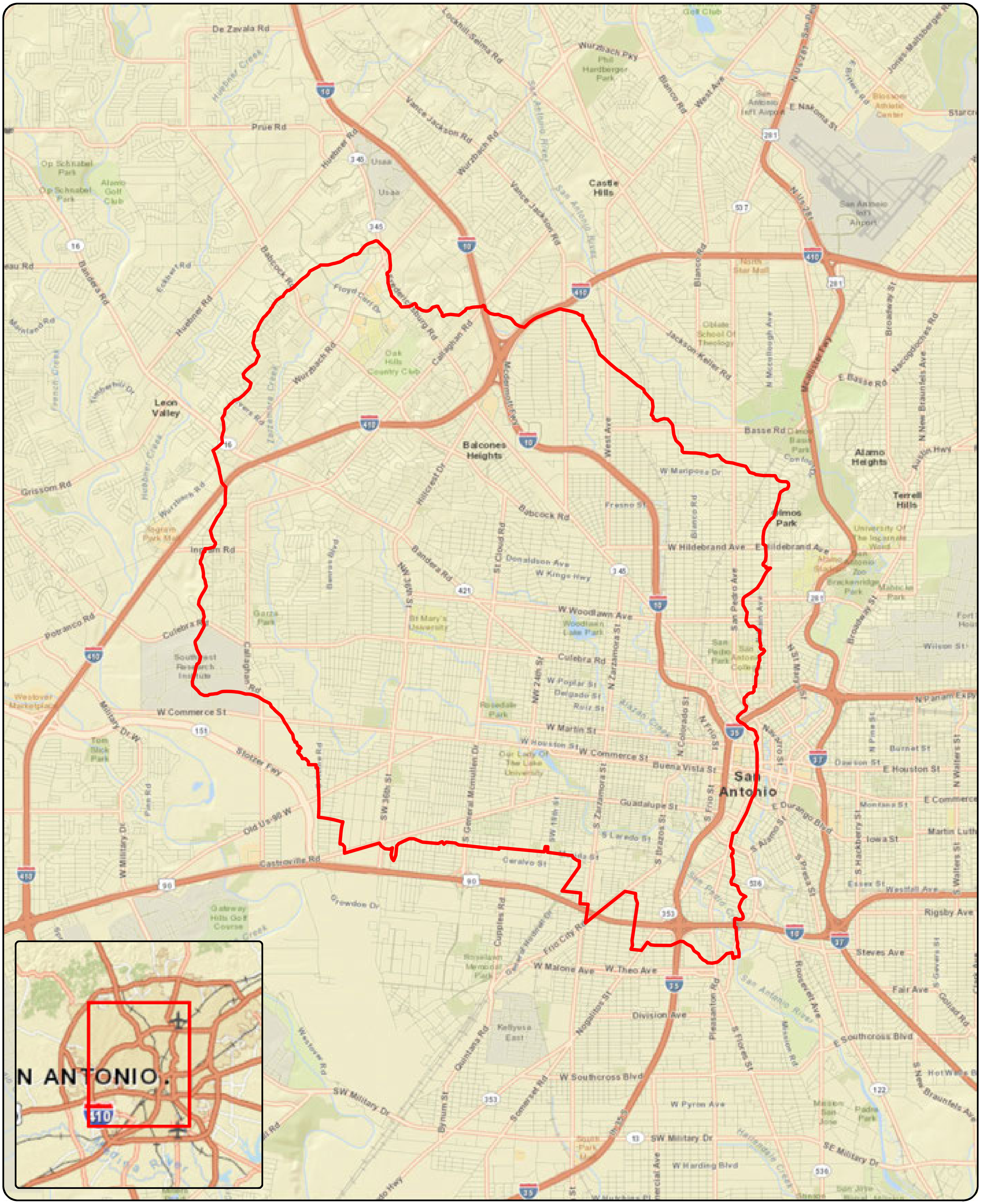
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 1,667	$ 609	$ 549	$ -	$ 2,825
Commodities	-	-	-	-	-
Contracts	213,800	89,200	-	-	303,000
Total	$ 215,467	$ 89,809	$ 549	$ -	$ 305,825

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:

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Lockhill-Selma Rd
Wurzbach Pky
Phil Hardberger Park
Blanco Rd
West Ave
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E Nakoma St
Jones-Maltsberger Rd
Blossom Athletic Center
Prue Rd
Huebner Rd
Vance Jackson Rd
Wurzbach Rd
Castle Hills
Usaa
Op Schnabel Park
Alamo Golf Club
San Antonio Int'l Airport
North Star Mall
Babcock Rd
Bandera Rd
Eckhert Rd
Huebner Rd
Floyd Curl Dr
Fredericksburg Rd
Callaghan Rd
Oblate School Of Theology
Jackson-Keller Rd
Oak Hills Country Club
Leon Valley
Timberhill Dr
E Basse Rd
Nacogdoches Rd
Broadway St
McDermott Fwy
Balcones Heights
West Ave
Basse Rd
Alamo Heights
W Mariposa Dr
Grissom Rd
Hillcrest Dr
Fresno St
Terrell Hills
Olmos Park
Ingram Park Mall
Ingram Rd
W Hildebrand Ave
E Hildebrand Ave
University Of The Incarnate Word
Donaldson Ave
W Kings Hwy
San Antonio Zoo
Brackenridge Park
NW 36th St
St Cloud Rd
W Woodlawn Ave
Woodlawn Lake Park
Garza Park
St Mary's University
Potranco Rd
Culebra Rd
San Pedro Ave
San Pedro Park
San Antonio College
Southwest Research Institute
Culebra Rd
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Delgado St
Ruiz St
Rosedale Park
Callaghan Rd
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W Commerce St
W Martin St
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N Frio St
Military Dr W
W Houston St
W Commerce St
Buena Vista St
Our Lady Of The Lake University
Stotzer Fwy
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S Brazos St
S Frio St
S Zarzamora St
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Ceralvo St
S Alamo St
S Presa St
Essex St
Westfall Ave
Rigsby Ave
Gateway Hills Golf Course
Crewdog Dr
Cupples Rd
Frio City Rd
W Malone Ave
W Theo Ave
Steves Ave
Roosevelt Ave
Fair Ave
Kellyusa East
Division Ave
Pleasanton Rd
S Flores St
E Southcross Blvd
W Southcross Blvd
Quintana Rd
Somerset Rd
Nogalitos St
Westover Rd
SW Military Dr
Bynum St
W Pyron Ave
SW Military Dr
SE Military Dr
W Harding Blvd
Mission San Jose
Padre Park
S New Braunfels Ave
N ANTONIO

Project Name:
USGS Westside Creek Sediment Study

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Service Area and/or Boundaries

N

0 1 2 Miles

Project Name: **USGS Westside Creek Sediment Study** **Project #** **00000409**

Project Start Date: 10/01/13
Project Finish Date: 09/30/15

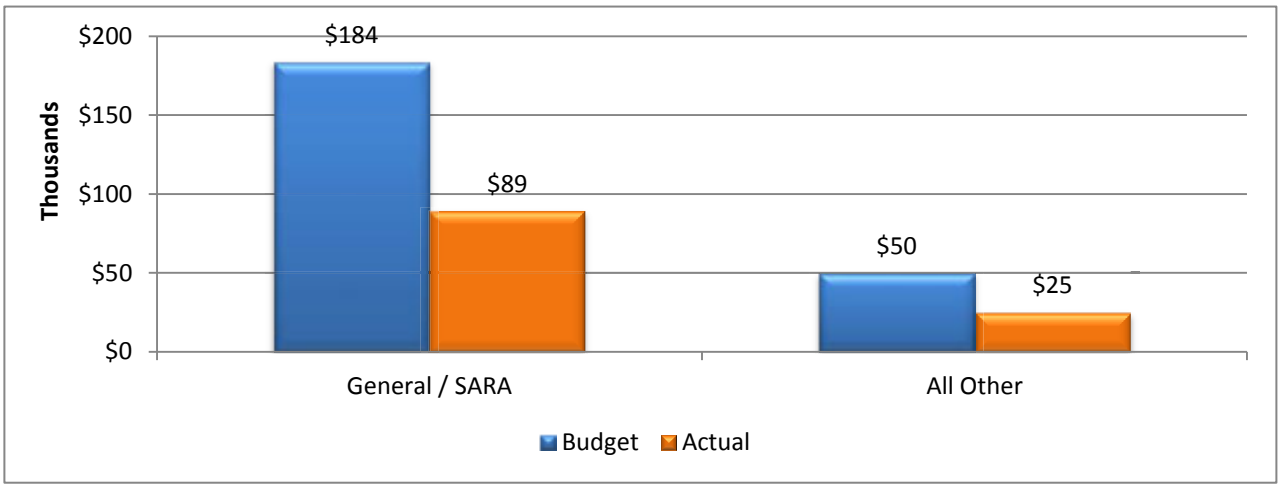
Total Project Budget: $ 233,662
Managing Department: Environmental Sciences

The Westside Creeks are a cluster of tributaries to the San Antonio River that flow through some of San Antonio's oldest Westside neighborhoods – a community with a rich historical and cultural background. A feasibility study is currently being developed by the U.S. Army Corps of Engineers and San Antonio River Authority, for the ecological restoration of the Westside Creeks. However, the current sediment and water quality conditions are unknown. The data collected from this project will provide information about the current creek conditions and help to determine if there are concerns about disturbing the stream-bed during potential restoration activities.

For fiscal year 2014/15 activities will consist of completion of the sample collection activities and the analysis of the samples. The data interpretation and reporting activities will begin as the data becomes available.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 979	$ 1,735	$ 2,948	$ -	$ 5,662
Commodities	-	-	-	-	-
Contracts	113,000	66,500	48,500	-	228,000
Total	$ 113,979	$ 68,235	$ 51,448	$ -	$ 233,662

Budget to Actual by Funding Source as of 7/1/2014:



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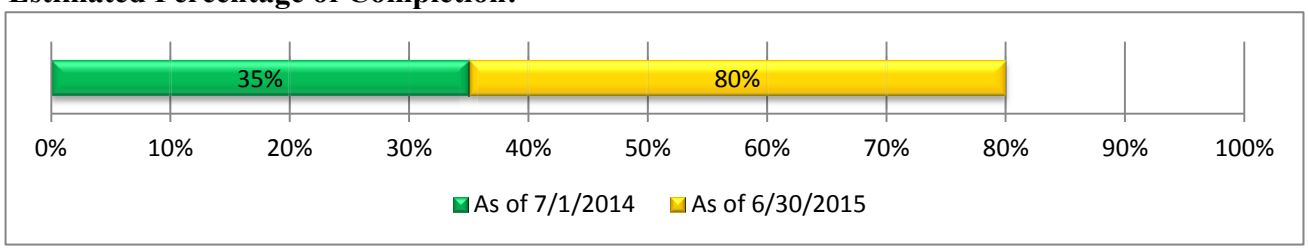
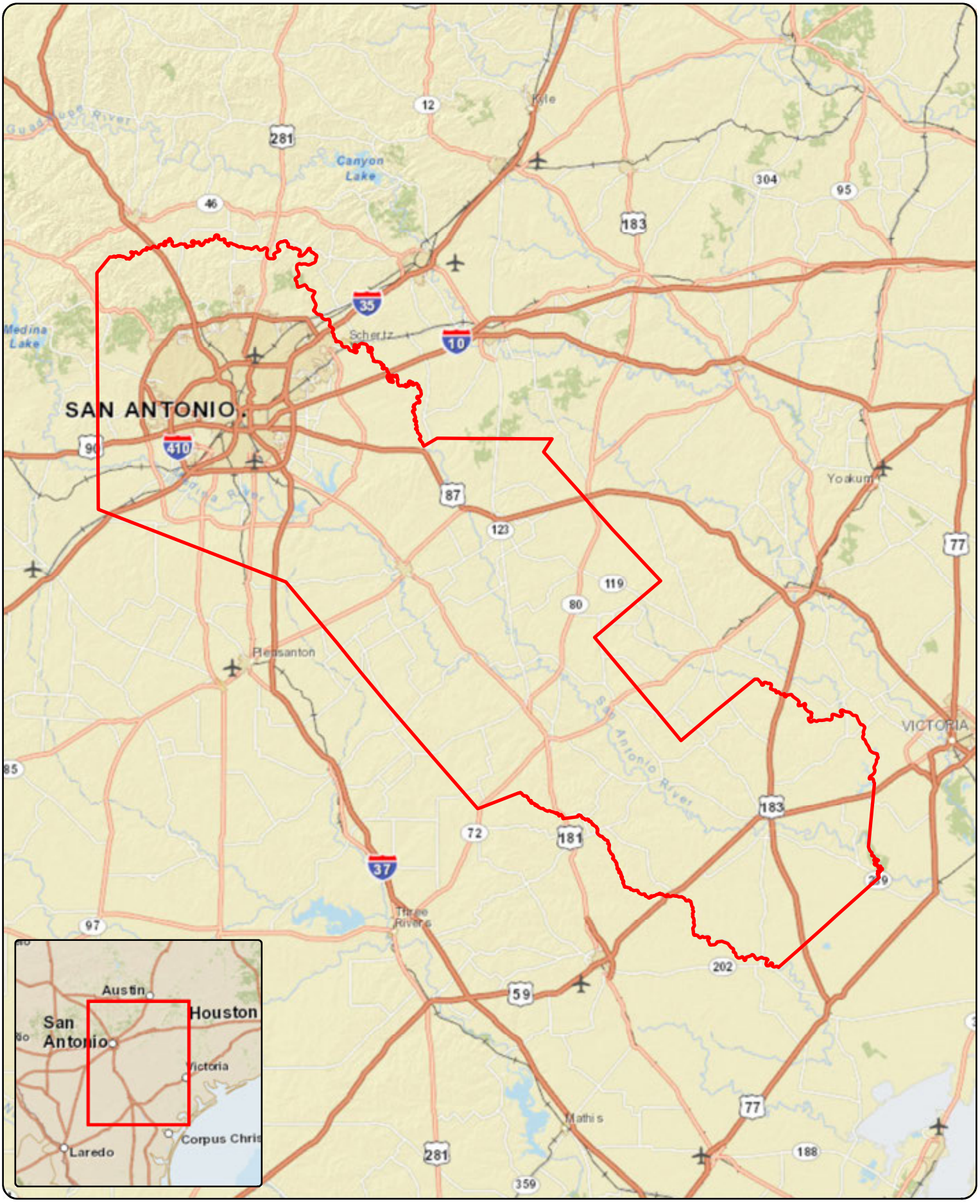




SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Water Quality Data Analytics Tool

Project Service Area and/or Boundaries

N

0 10 20 Miles

Project Name: **Water Quality Data Analytics Tool** **Project #** **00000460**

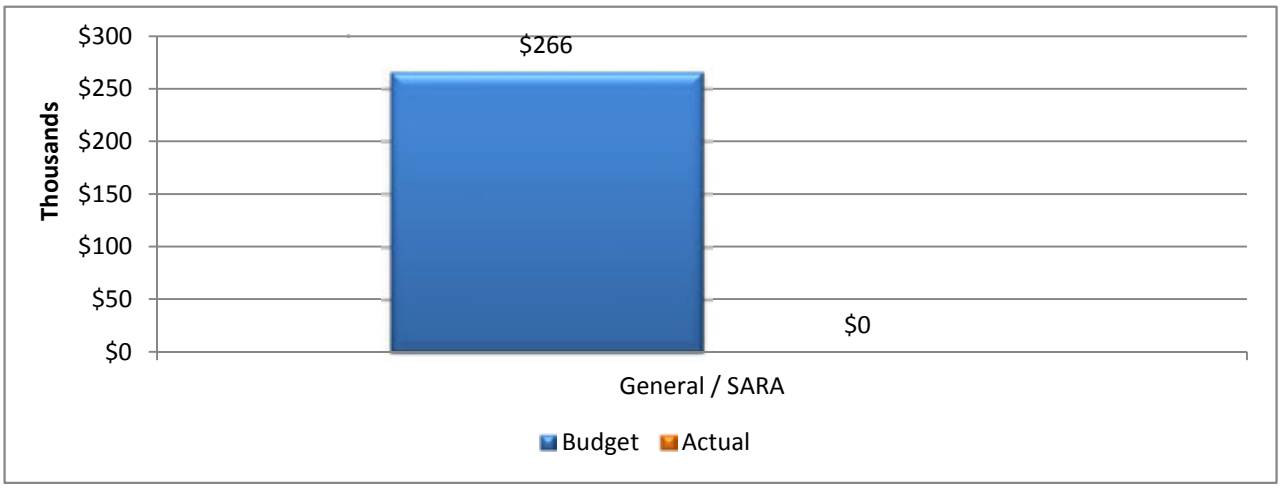
Project Start Date:	07/01/14	Total Project Budget:	$ 266,205
Project Finish Date:	12/31/15	Managing Department:	Watershed Engineering

While the San Antonio River Authority (SARA), collects extensive water quality and biological data, the technical analysis of the data in order to draw conclusions is an intensive process. This project will develop a tool that will facilitate the process of exploring environmental data. By being able to efficienty assess the data, scientists and engineers will be able to draw conclusions that will assess the condition of the watershed, develop reccommendations for addressing SARA watershed concerns and impairments and improving future sampling plans.

This year, SARA will scope, develop and begin testing a data analysis tool for rapid statistical analysis of our water quality and environmental data. Relevant stakeholders will collaborate to design the tool interface and technical structure. Analyses that are commonly required for reporting, project support or public inquiry will be identified and built into the tool development.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ 6,735	$ 6,970	$ -	$ 13,705
Commodities	-	-	2,500	-	2,500
Contracts	-	125,000	125,000	-	250,000
Total	$ -	$ 131,735	$ 134,470	$ -	$ 266,205

Budget to Actual by Funding Source as of 7/1/2014:



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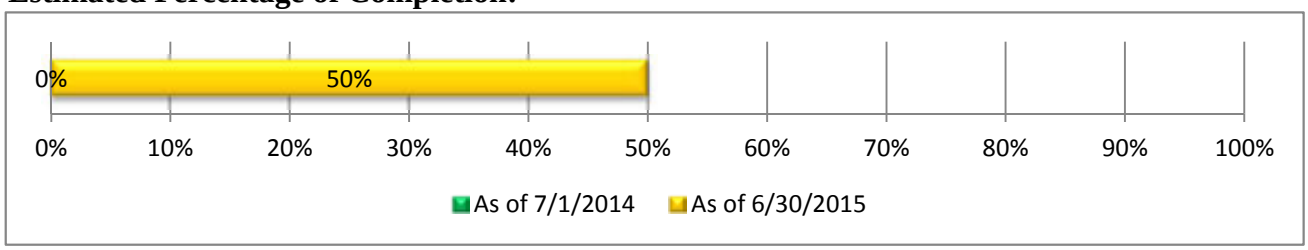


Natural Resource Protection Program

- **Estuary Response**
  The Estuary Response effort will help determine freshwater inflow needs of the San Antonio Bay, as well as of the basins of the Guadalupe and San Antonio rivers, and the effects these inflows have on their ecology.

- **Instream Flows Planning**
  This collaborative effort supports the Texas Instream Flows Program. Staff supports Texas Parks and Wildlife (TPWD), Texas Water Development Board and the Texas Commission on Environmental Quality (TCEQ) in conducting studies, coordinating efforts, reporting, and working with stakeholders for the Lower San Antonio River and Lower Cibolo Creek.

- **National Park Service (NPS) Monitoring**
  This effort monitors water quality, instream and riparian habitat conditions, and the fish community in the San Antonio Missions National Historical Park to provide data to the National Park Service National Inventory.

- **Texas Department of Transportation (TxDOT) Stormwater Monitoring**
  ESD maintains and operates the Texas Department of Transportation (TxDOT) remote automated sampler located at the intersection of Highway 151 and Ingram Road. Stormwater samples collected at this site are delivered to the River Authority ESD laboratory for analysis. The raw data is made available to TxDOT, which is invoiced monthly for the service.

- **USGS Upper and Lower Surface Water Stations**
  The River Authority administers this effort to enhance its understanding of the San Antonio River Watershed as it relates to a multitude of investigative needs. There are ten Upper San Antonio River stream gauges and six Lower San Antonio River stream gauges that make up a watershed-wide network. In addition to the upper and lower stations, rain gauges at all locations assist the River Authority in calibrating its models. These stream gauges provide critical data for the understanding of how urban sprawl, land use, reduced runoff, growth, and other considerations impact these resources and can affect water use, availability, and quality.

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Branch Property Site Development

Project Service Area and/or Boundaries

N

0 0.025 0.05 Miles

Project Name: **Branch Property Site Development** **Project #** **00000089**

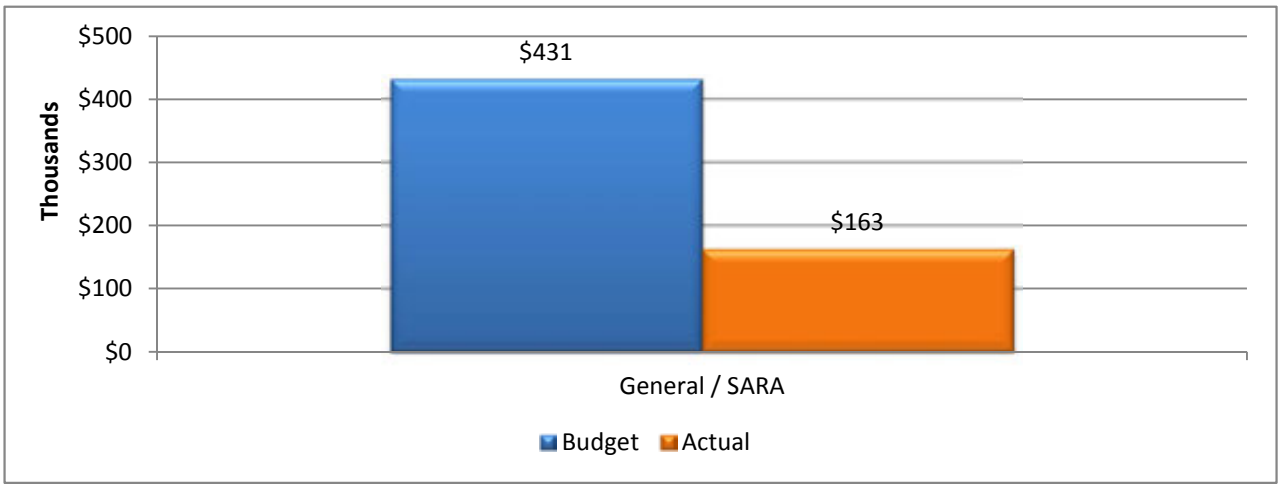
Project Start Date:	04/06/09	Total Project Budget:	$ 430,677
Project Finish Date:	06/30/16	Managing Department:	Watershed Parks Ops

The project will include conceptual design services, site maintenance, and improvements to create a day-use outdoor recreational site and explore development of the San Antonio River Authority's facilities in Goliad, Texas. The Branch site's proximity to the Ferry Street Crossing Paddling Trail, Angel of Goliad Nature Trail, Boy Scout Hall and Town Square will help connect the public to the river and its natural surroundings. This site will benefit the City and County of Goliad, other surrounding communities, service organizations as well as the general public.

During the fiscal year 2014/15 SARA will construct an earthen amphitheater using the natural topography of the area. Hard costs include equipment rental and hauling of materials to the site. Work will be done internally by Watershed Parks Operations staff. SARA will also construct a permanant restroom.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 7,876	$ 16,915	$ 20,209	$ -	$ 45,000
Commodities	108,827	43,000	187,800	-	339,627
Contracts	46,050	-	-	-	46,050
Total	$ 162,753	$ 59,915	$ 208,009	$ -	$ 430,677

Budget to Actual by Funding Source as of 7/1/2014:



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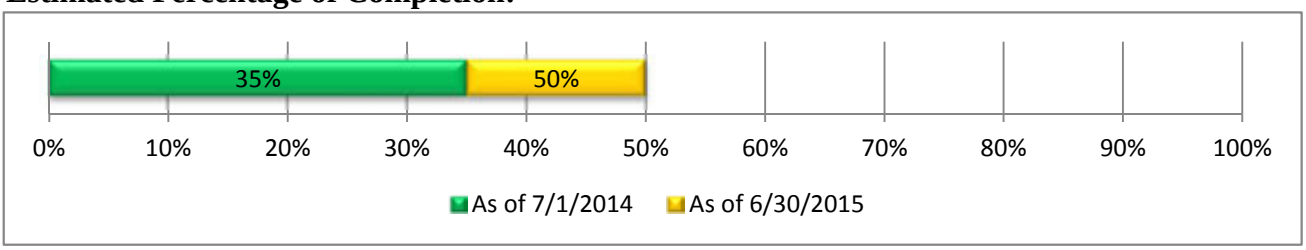
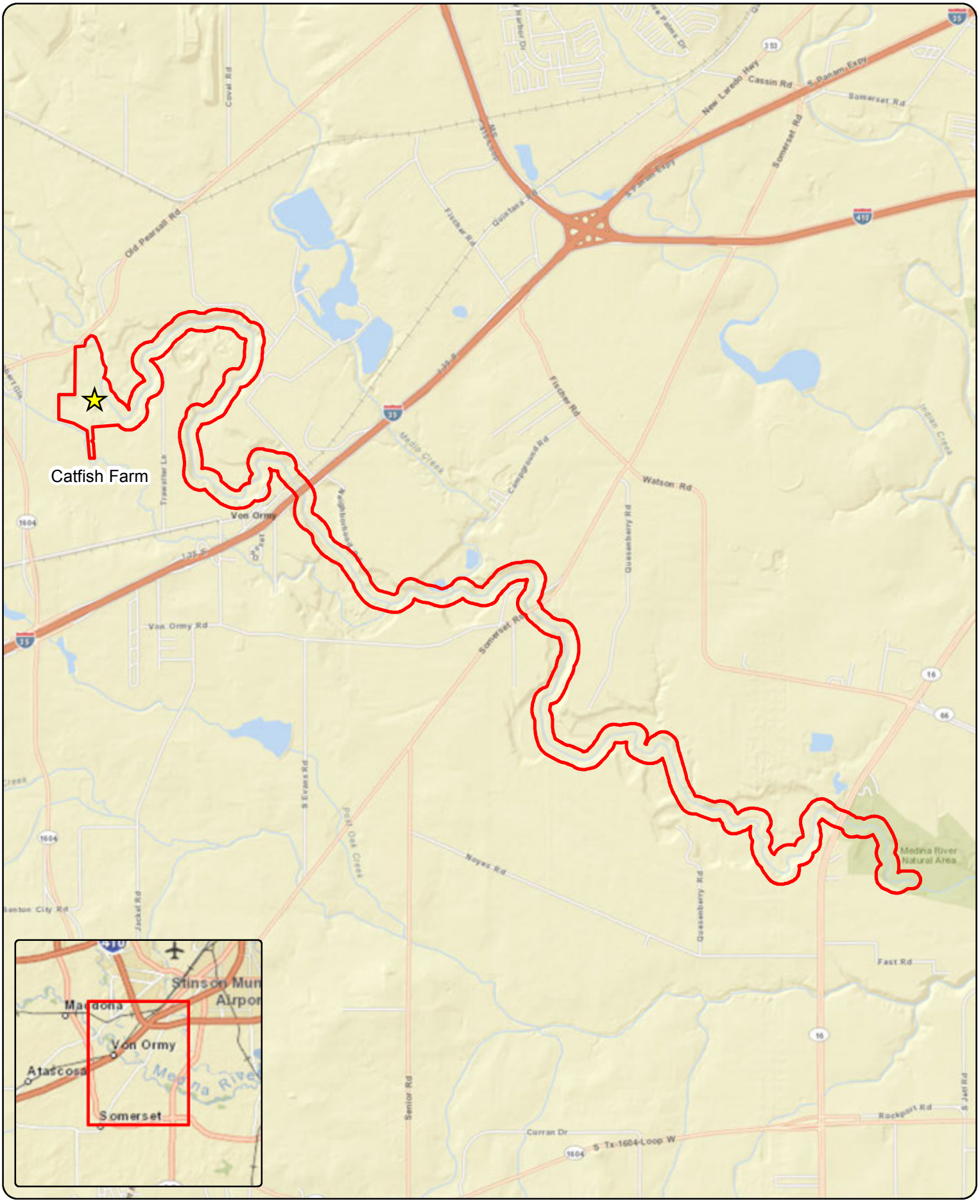




Project Name:
Catfish Farm/Medina Paddling Trail

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Service Area and/or Boundaries

N

0 0.45 0.9 Miles

Project Name: **Catfish Farm/Medina Paddling Trail** **Project #** **00000410**

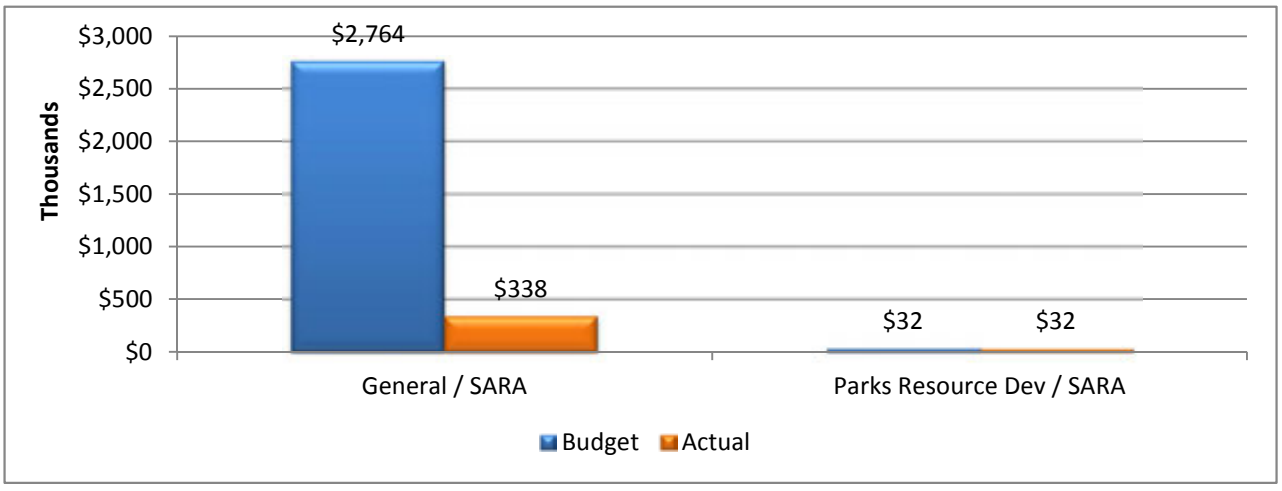
Project Start Date:	07/01/13	Total Project Budget:	$ 2,796,156
Project Finish Date:	06/30/18	Managing Department:	Watershed Parks Ops

The long-term vision for the property is to develop recreational enhancements while preserving the natural beauty and character of the property adjoining the Medina River. Additionally this site will provide an access point along the Medina River for a paddling trail that will need to be coordinated with other resources along the Medina River including City of San Antonio Parks Department, Land Heritage Institute as well as other public and private partners.

For fiscal year 2014/15 the Catfish Farm will undergo site improvements to allow it to be opened for limited public use. This includes upgrading the road, developing and installing signage, adding fencing to exclude the public from catfish tanks or demolishing tanks, adding picnic amentities and developing paddling access.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 935	$ 18,807	$ 19,463	$ 16,526	$ 55,731
Commodities	369,425	20,000	251,000	2,100,000	2,740,425
Contracts	-	-	-	-	-
Total	$ 370,360	$ 38,807	$ 270,463	$ 2,116,526	$ 2,796,156

Budget to Actual by Funding Source as of 7/1/2014:



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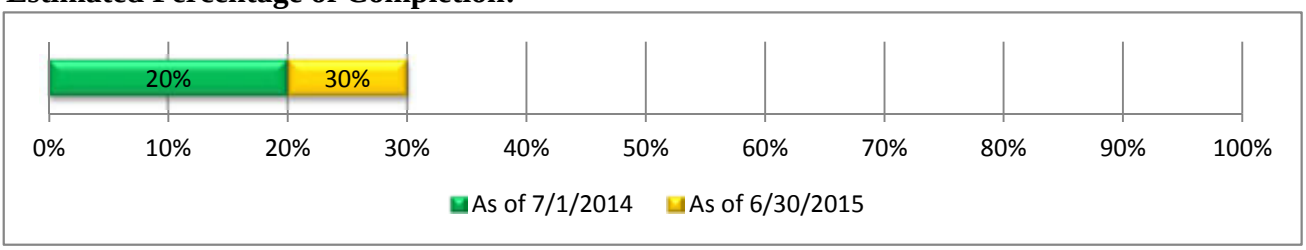
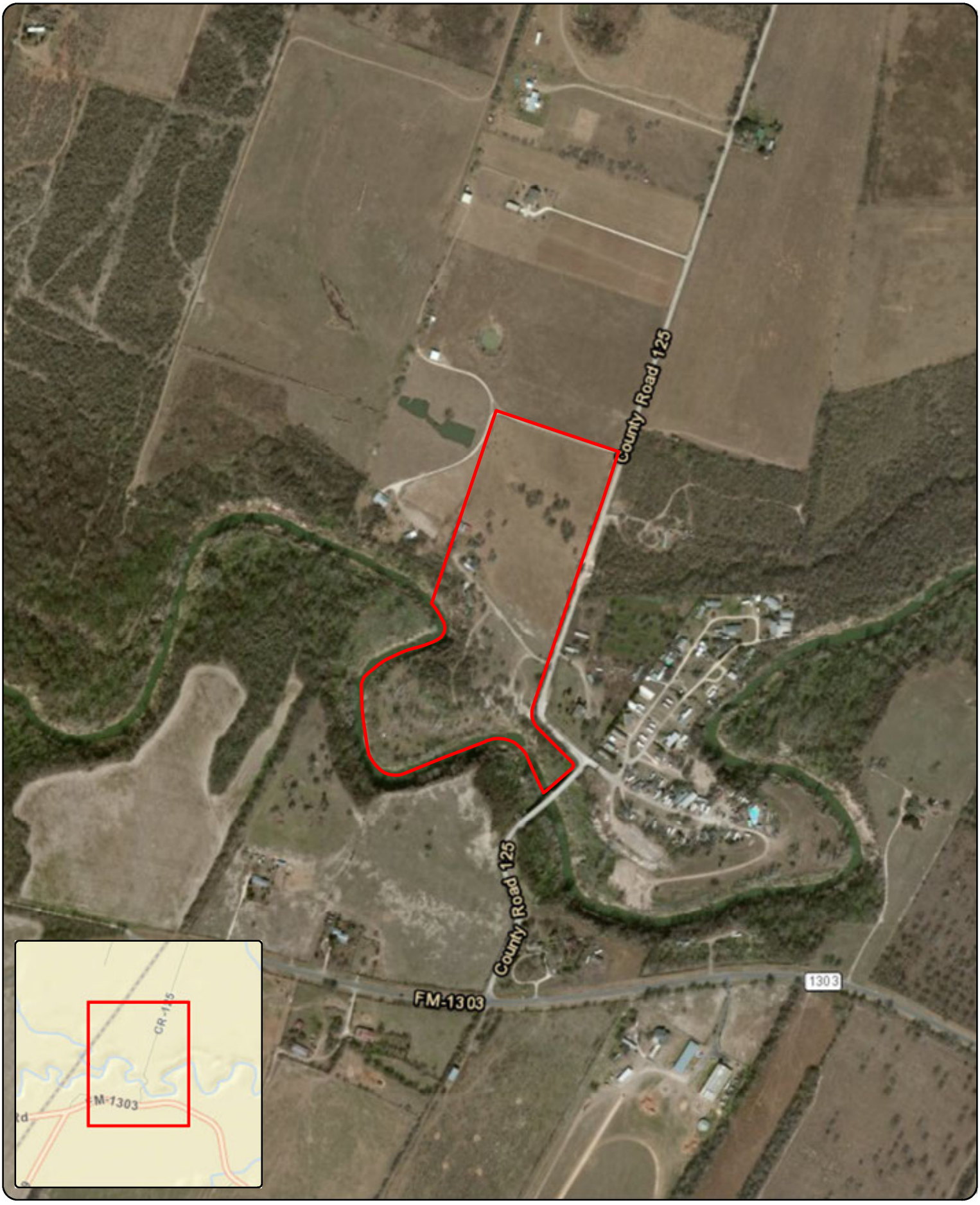




SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
County Road (CR) 125 Site Development (River Access)

Project Service Area and/or Boundaries

N

0 0.065 0.13 Miles

Project Name: **County Road (CR) 125 Site Development** **Project #** **00000298**

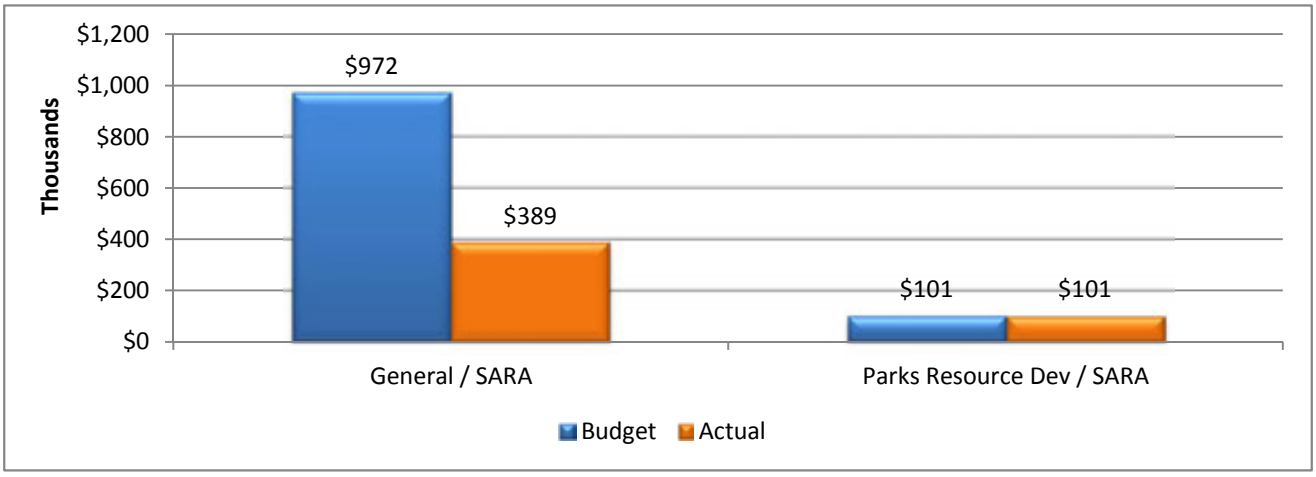
Project Start Date:	02/01/11	Total Project Budget:	$ 1,072,595
Project Finish Date:	06/30/16	Managing Department:	Watershed Parks Ops

This project funded the purchase of approximately 22-acres of land situated midway between the Loop 1604 river access site and Helton San Antonio River Nature Park which will be used as an alternative put-in and take-out for the SASPAMCO paddling trail located near SASPAMCO, Texas. This location will also provide an additional area for day use recreational park activities, such as picnic pads and walking trail.

In fiscal year 2014/15 SARA will install a septic system to support additional usage of the facility. SARA will also develop a fishing pond in the current agricultural lease area that is within the 100 year floodplain. Additional expenses will include a road, park amenities and improvements to support use of the fishing pond.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 75,551	$ 11,987	$ 55,790	$ -	$ 143,328
Commodities	327,698	-	-	-	327,698
Contracts	86,569	15,000	500,000	-	601,569
Total	$ 489,818	$ 26,987	$ 555,790	$ -	$ 1,072,595

Budget to Actual by Funding Source as of 7/1/2014:



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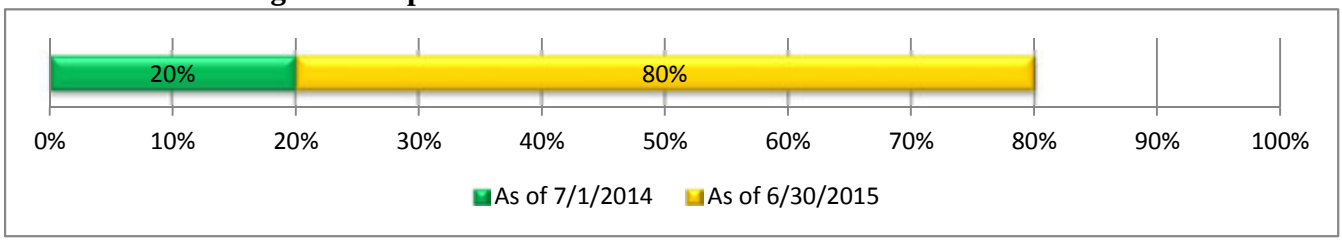
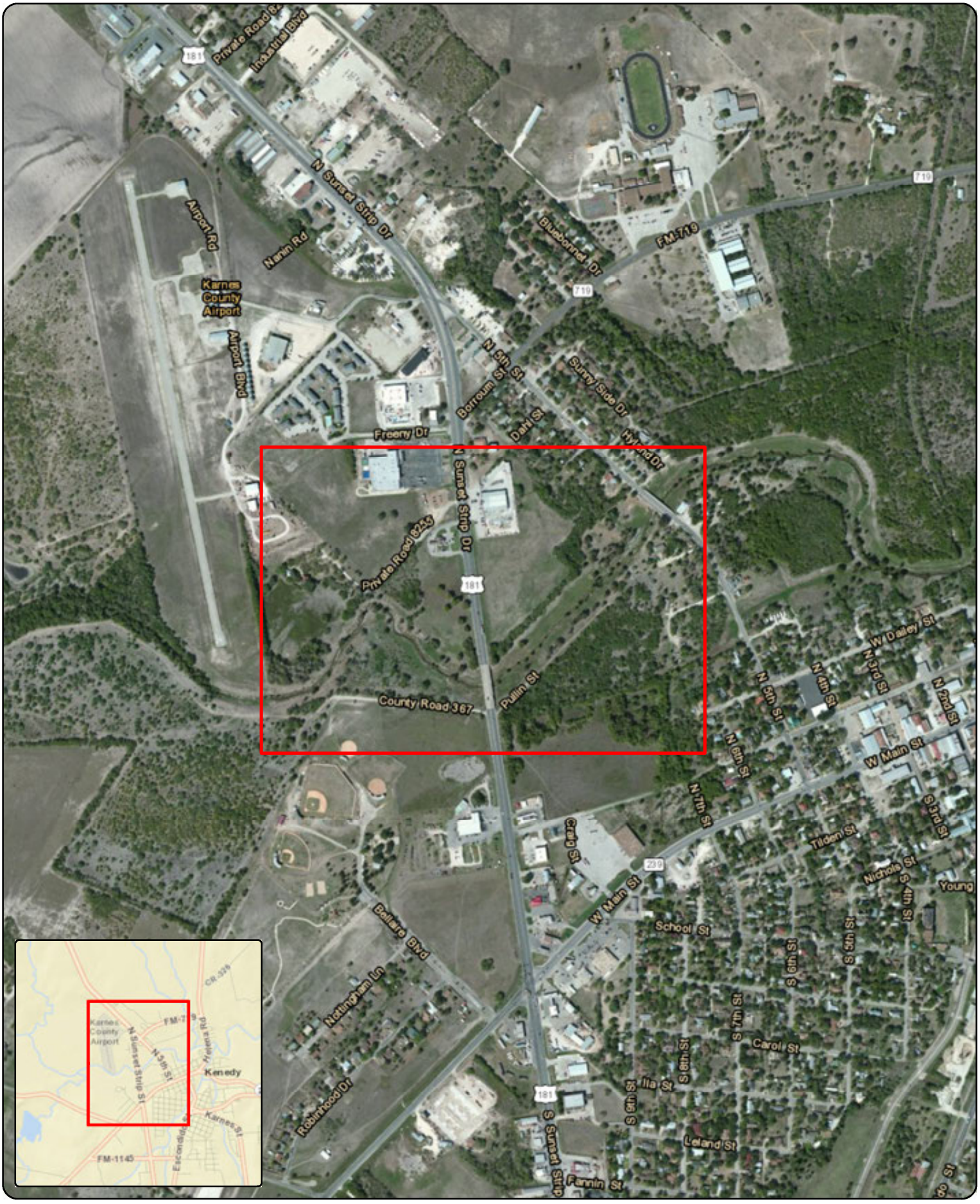




Project Name:
Escondido Creek Parkway

Project Service Area and/or Boundaries

N

0 0.095 0.19 Miles

Project Name: **Escondido Creek Parkway** **Project #** **00000397**

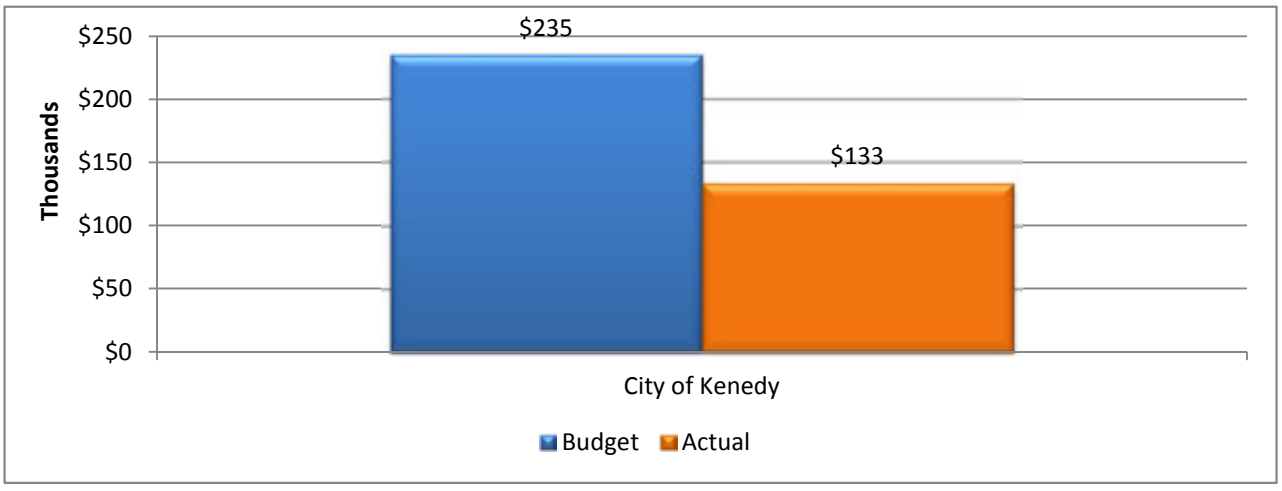
Project Start Date:	07/01/12	Total Project Budget:	$ 235,322
Project Finish Date:	06/30/15	Managing Department:	Watershed Parks Ops

Escondido Creek meanders between Kenedy's Joe Gulley Park on the west and downtown Kenedy on the east. This 1.25 mile stretch is currently maintained by the San Antonio River Authority for drainage and flood control. SARA is expanding its vision for this area, and is working with the local community to develop the Escondido Creek Parkway. The initial development will extend between Joe Gulley Park north to North 5th Street/Business 181, with potential future phases extending east to the old Southern Pacific Railroad right-of-way, and south to a downtown trailhead.

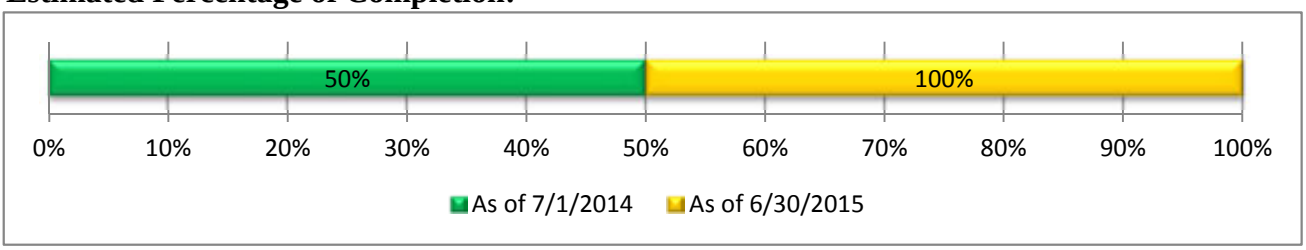
SARA will finish acquiring the needed real estate for the planned parkway and will contract for master plan development and design of the park.

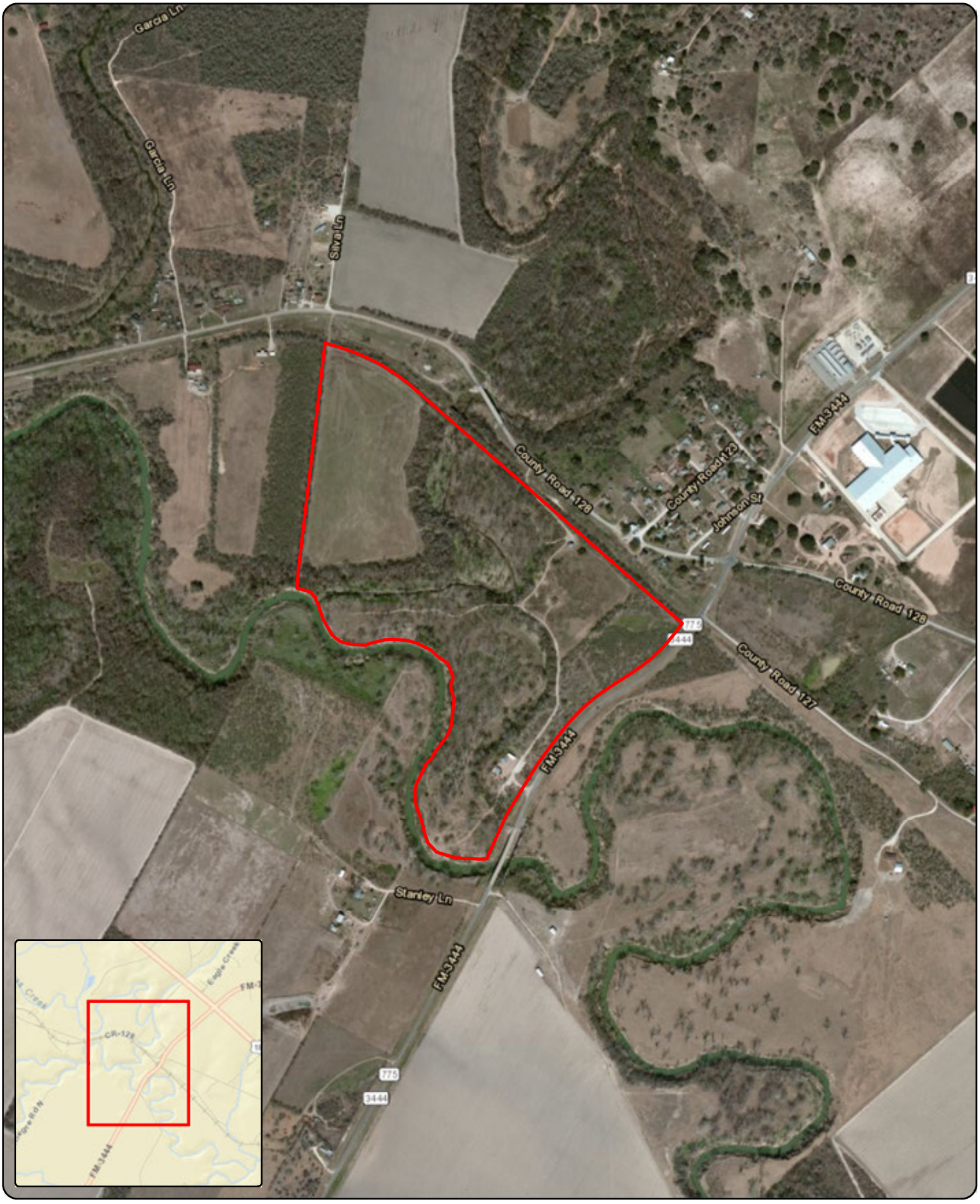
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 42,724	$ 1,132	$ -	$ -	$ 43,856
Commodities	40,487	48,920	-	-	89,407
Contracts	50,251	51,807	-	-	102,058
Total	$ 133,463	$ 101,859	$ -	$ -	$ 235,322

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Helton San Antonio River Nature Park

Project Service Area and/or Boundaries

N

0 0.095 0.19 Miles

Project Name: **Helton SA River Nature Park** **Project #** **00000067**

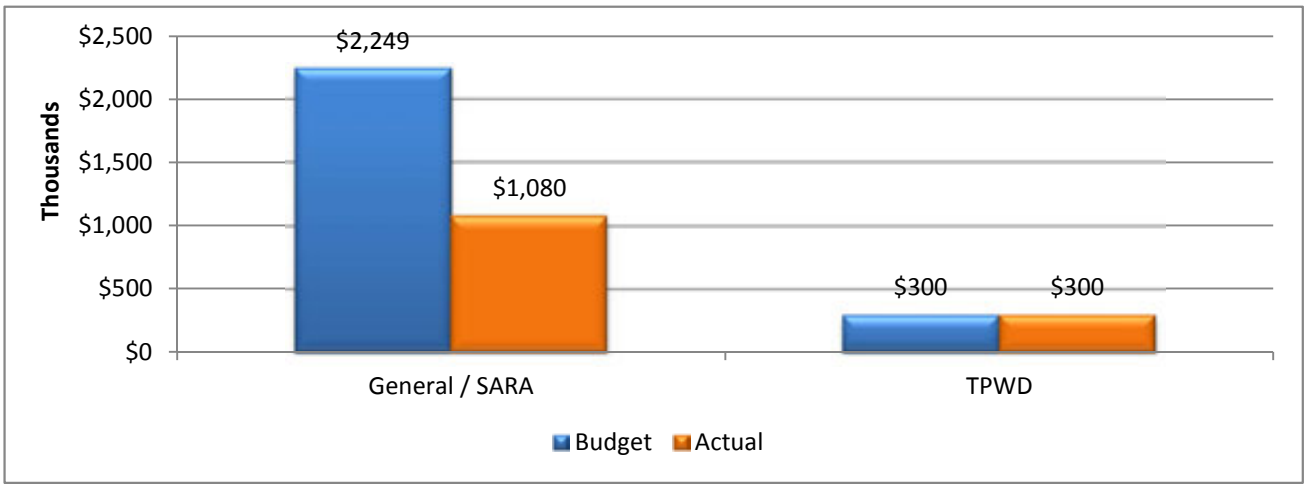
Project Start Date:	07/01/07	Total Project Budget:	$ 2,549,408
Project Finish Date:	06/30/16	Managing Department:	Watershed Parks Ops

This project will fund design services, land acquisition, construction of park entrance, site improvements, utilities, road, parking, a multi-use pavilion, park toilet pads, picnic units, signage, educational panels, paddling trail access, and a riparian land management demonstration area at the Helton San Antonio River Nature Park. The entire region will benefit from the riparian land management demonstration area and also from the paddling trail access. Bexar, Wilson, and other counties' students and the general public will benefit from the educational panels/signage and potential classes and camps.

In fiscal year 2014/15 SARA will connect to the municipal water system to better support increased park usage above the capacity of the current well, construct the main road from the entrance to the Heritage house and improve the crossing at Calaveras Creek. SARA will also bid out the construction of a large pavilion that can be rented for large events and will support SARA's park programming.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 45,377	$ 16,254	$ 16,824	$ -	$ 78,455
Commodities	1,045,149	225,000	911,500	-	2,181,649
Contracts	289,304	-	-	-	289,304
Total	$ 1,379,830	$ 241,254	$ 928,324	$ -	$ 2,549,408

Budget to Actual by Funding Source as of 7/1/2014:



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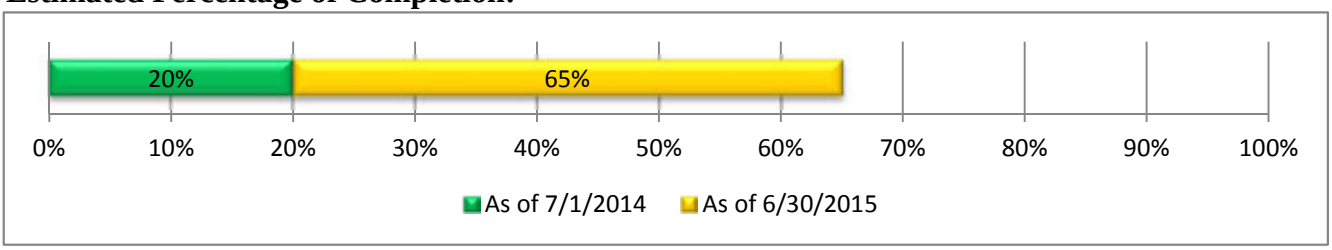


SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Otilla Access Site

Project Service Area and/or Boundaries

N

0 0.075 0.15 Miles

Project Name: **Otilla Access Site** **Project #** **00000435**

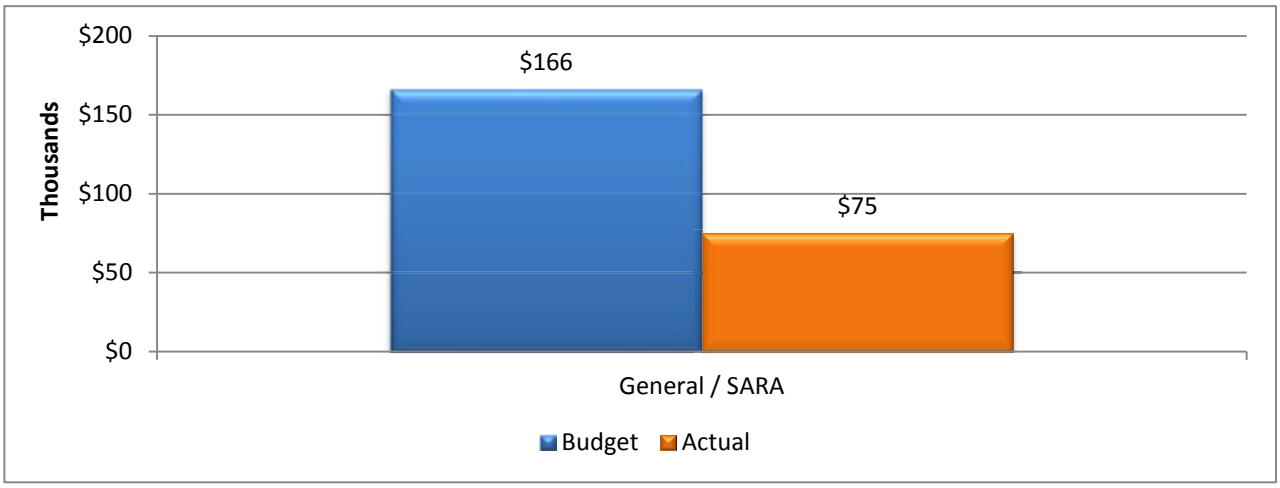
Project Start Date: 04/15/14 Total Project Budget: $ 166,255
Project Finish Date: 06/30/16 Managing Department: Watershed Park Operations

The Otilla property is located on the San Antonio River off Blue Wing Road in southern Bexar County. The purpose of acquiring this property is to improve and expand the San Antonio River Authority parks and paddling trail opportunities. This property will serve as an access point for paddling as well as a portage point around the Otilla Dam. Developing this site will link the Mission Reach paddling trail and the SASPAMCO paddling trail in Wilson County. Additionally, there will be a road built and parking available for the community.

During fiscal year 2014/15 this project will fund fencing, access and safety components.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 2,682	$ 3,309	$ 10,264	$ -	$ 16,255
Commodities	72,000	10,000	68,000	-	150,000
Contracts	-	-	-	-	-
Total	$ 74,682	$ 13,309	$ 78,264	$ -	$ 166,255

Budget to Actual by Funding Source as of 7/1/2014:



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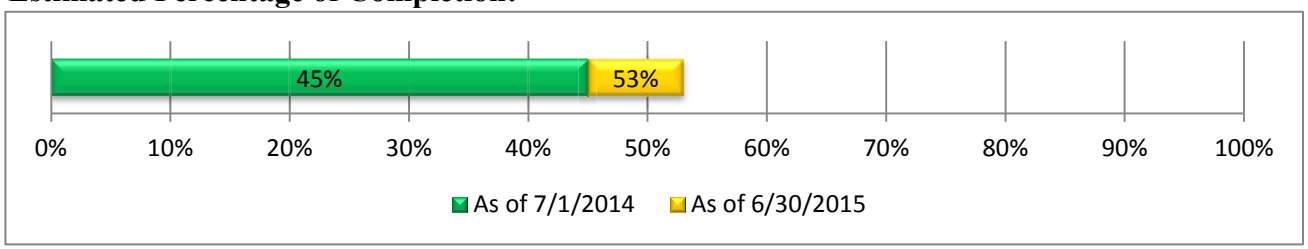


SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Trueheart Park

Project Service Area and/or Boundaries

N

0 0.095 0.19 Miles

Project Name: **Trueheart Park** **Project #** **00000436**

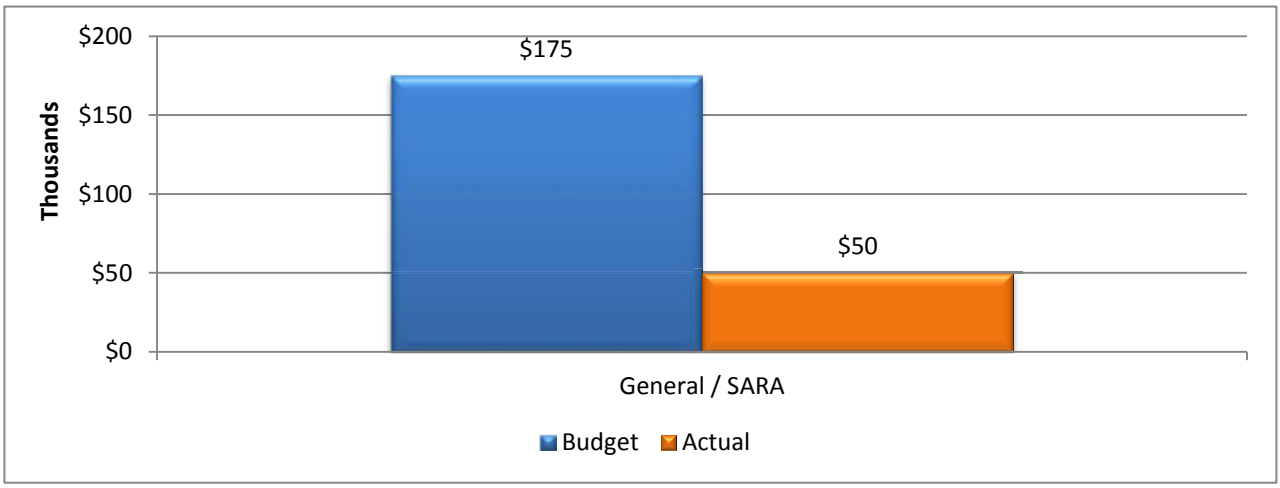
Project Start Date:	07/01/14	Total Project Budget:	$ 175,000
Project Finish Date:	06/30/17	Managing Department:	Watershed Parks Ops

Trueheart Ranch is located in southern Bexar County off Blue Wing Road. The San Antonio River Authority is acquiring the property to improve and expand SARA parks and paddling trail opportunities as identified in the Nature Based Park Resources Plan Update. This 300 plus acreage park property will allow SARA to offer more monthly park programs and activities for the community. The overall master plan for this park is expected to be completed and may include sports fields, nature trails, hike and bike trails, camping, paddling access, playgrounds and parking for the community.

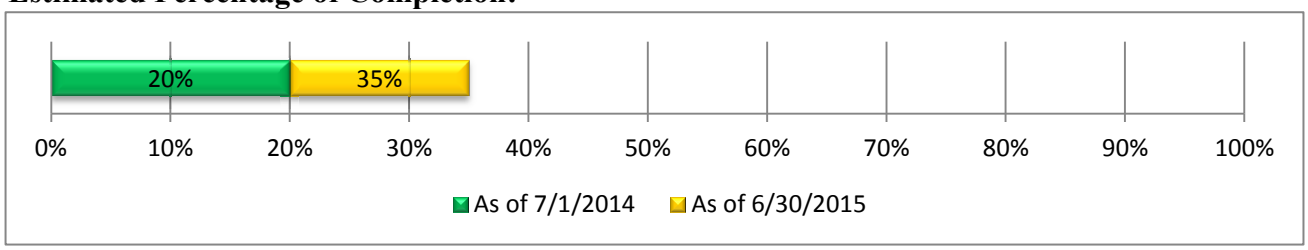
During the fiscal year 2014/15, SARA will acquire the land and a master plan will be developed.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ -	$ -	$ -	$ -
Commodities	-	10,000	75,000	15,000	100,000
Contracts	50,000	-	-	25,000	75,000
Total	$ 50,000	$ 10,000	$ 75,000	$ 40,000	$ 175,000

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:



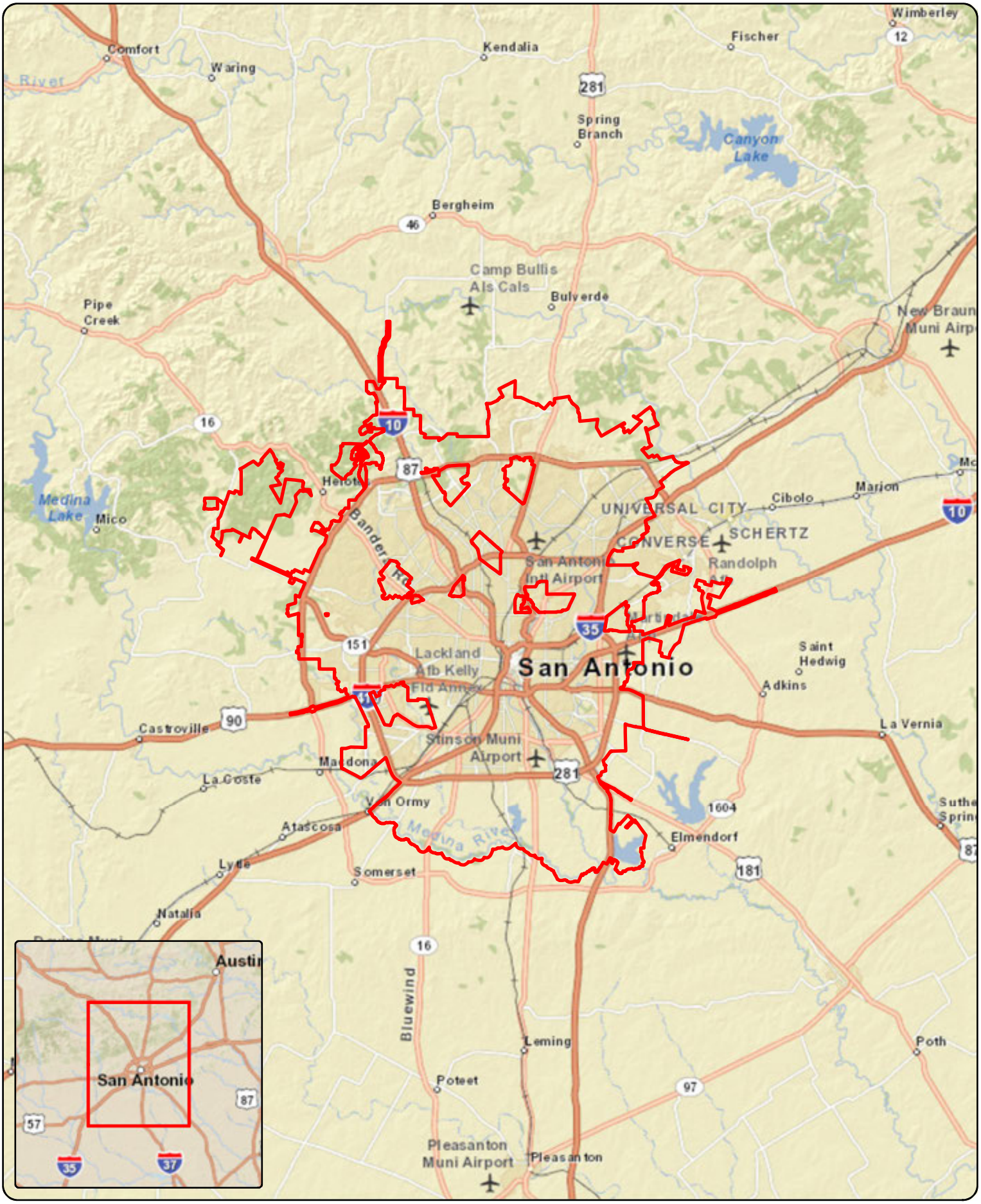
Nature Based Park Program

- **Educational Field Trips**
  Watershed and Park Operations staff, in conjunction with outside partners such as Texas Parks and Wildlife Department and the Audubon Society, will create and host eight educational field trips per year. Two will take place in Branch River Park and serve the Goliad school district. Additionally, six will take place at the Helton San Antonio River Nature Park and will serve Floresville North and South Elementary schools. These school children will learn about water quality, GPS units, and how what they do every day affects the watershed.

- **Monthly Park Program**
  This effort includes hosting twenty four programs and/or special events throughout the fiscal year at a SARA owned or operated park. Examples of events include archery, fishing, guided bird tours, and other nature-based experiences. Programs will be coordinated through the Watershed and Park Operations staff and promoted in collaboration with the Intergovernmental and Community Relations Department.

- **Outdoor Education Programs**
  This effort includes all of the River Authority's outdoor education programming at SARA nature parks. These programs include, but are not limited to, nature hikes at Jackson and Helton Nature Parks, park programming at Branch Nature Park, marketing and promoting field trips for k-12 students at SARA Nature Parks, hosting field trips on the Mission and Museum reaches upon request, developing relationships and programming in conjunction with the San Antonio River Foundation for Confluence Park, bat talks in July and August, Mission Reach tours coordinated with the Alamo Area Master Naturalists, Museum Reach tours upon request, Mission Reach tours upon request; facilitating Project WILD workshops for educators, and other tailored outdoor programming upon request.

- **Regional Park Coordinating Council (RPCC)**
  The Regional Park Coordinating Council (RPCC) is comprised of twelve member organizations—three each from Bexar, Wilson, Karnes, and Goliad counties—that designate a representative to provide input as stakeholders to the River Authority's park plans and projects, and to network regarding their organization's park projects and programs. The RPCC meets quarterly and as needed.



SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
2015 UDC Amendments / SW BMPs

Project Service Area and/or Boundaries

N

0 4.5 9 Miles

Project Name: **2015 UDC Amendments / SW BMPs** **Project #** **00000455**

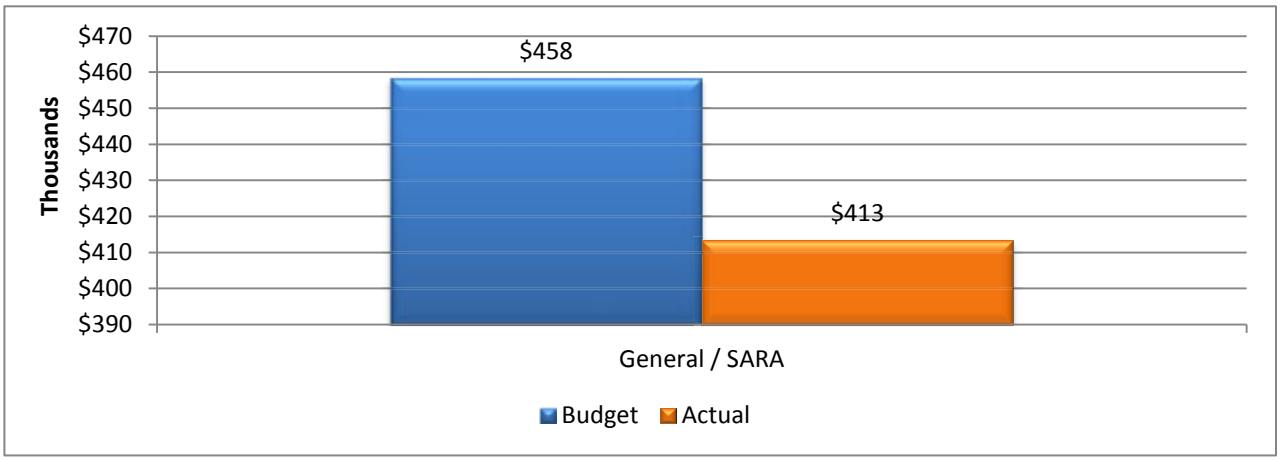
Project Start Date:	02/03/14	Total Project Budget:	$ 458,271
Project Finish Date:	08/24/17	Managing Department:	Program Support

In 2012, a San Antonio River Authority (SARA)-funded Low Impact Development (LID) Implementation Plan recommended that the community 1) create a technical LID design manual and 2) identify and eliminate barriers to LID design found in the Unified Development Code (UDC). The manual was completed in the fall of 2013. Immediately thereafter, SARA began coordinating with the City of San Antonio on interim and long-term steps to remove barriers to LID found in the current UDC, one step being creation of a voluntary LID development track within the UDC. During discussions, City staff requested that SARA also research the potential of LID to serve as an incentive for greater Conservation Subdivision Code use.

In 2015, the City of San Antonio will receive applications for UDC amendments. Recommended amendments must be submitted early in calendar year 2015 and will be acted upon by City Council in the November/December 2015 period. To maximize potential for Council approval, amendments must be vetted by stakeholder groups prior to application. The current year's funding will support this public input process as well as LID incentives to increase Conservation Subdivision Code use and the incorporation of Natural Channel Design as a voluntary, barrier-free option within the Code.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 3,270	$ 44,001	$ -	$ -	$ 47,271
Commodities	-	-	-	-	-
Contracts	410,000	1,000	-	-	411,000
Total	$ 413,270	$ 45,001	$ -	$ -	$ 458,271

Budget to Actual by Funding Source as of 7/1/2014:



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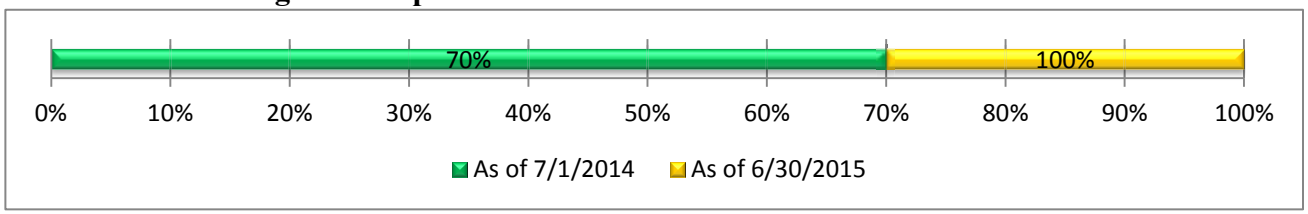
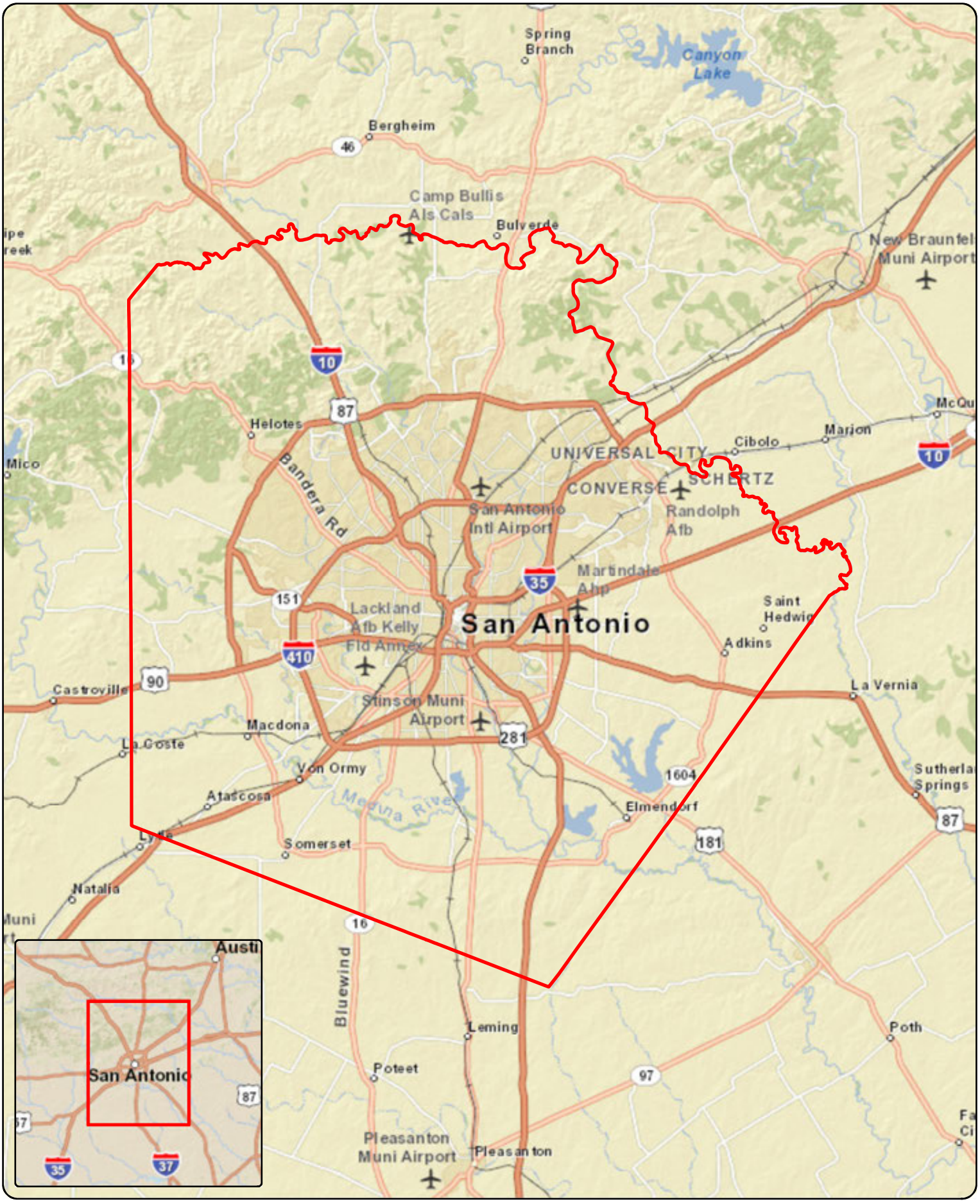




SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
BRWM Mitigation Bank

Project Service Area and/or Boundaries

N

0 4.5 9 Miles

Project Name: **BRWM Stream Mitigation Bank** **Project #** **00000466**

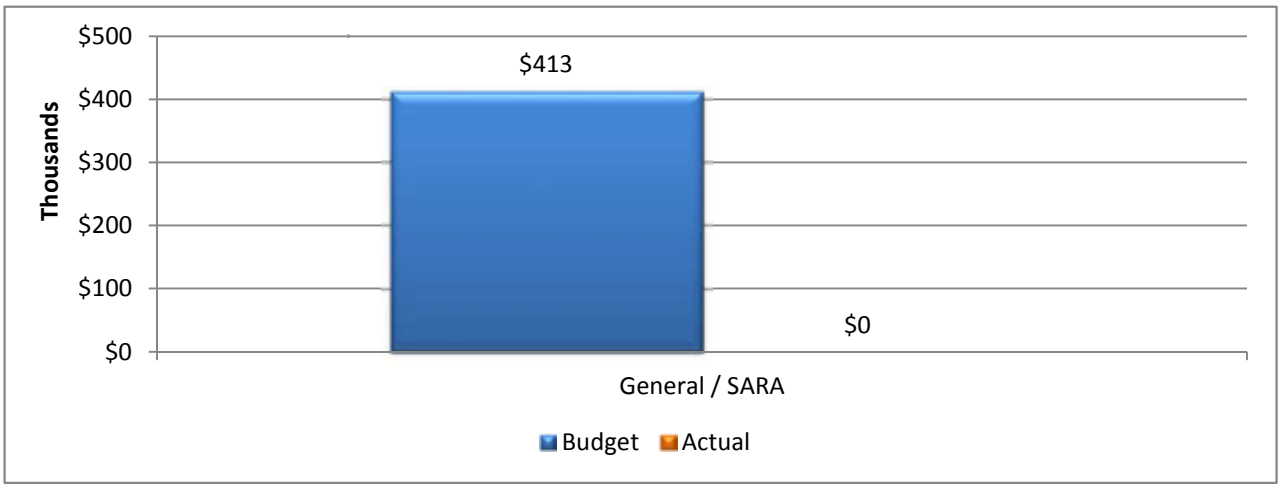
Project Start Date:	07/01/14	Total Project Budget:	$ 412,553
Project Finish Date:	06/30/16	Managing Department:	Watershed Engineering

A 2008 U.S. Environmental Protection Agency (EPA)/U.S. Army Corps of Engineers (USACE) rule established mitigation banking as the preferred method of mitigating stream impacts. A stream mitigation bank is a stream that has been restored and then set aside to compensate for future stream impacts. In fiscal year (FY) 2013/14, the Bexar Regional Watershed Management (BRWM) funded a study to evaluate developing an urban stream mitigation bank within Bexar County. Based on the recommendations of the study, in FY 2014/15 the BRWM will move forward with a prospectus and a Mitigation Banking Instrument (MBI).

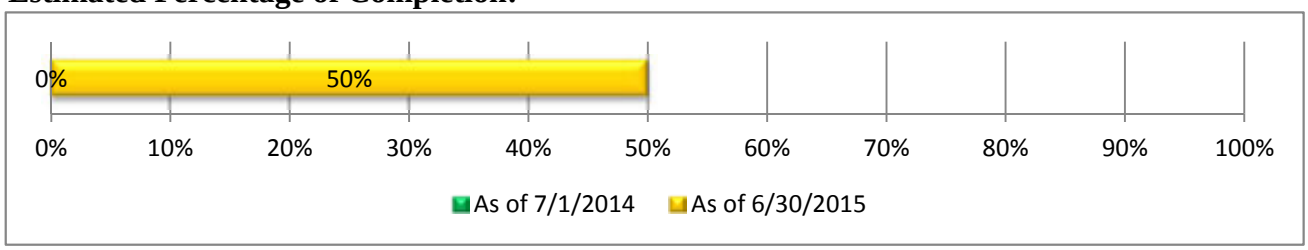
In FY 2014/15, the prospectus and MBI will be developed and submitted to the USACE. Due to the review timeline, the MBI will likely be approved in FY 2015/16. The prospectus will provide an overview of the proposed mitigation bank with sufficient detail to support public and initial USACE review. The prospectus describes general information about the bank such as how the bank will be operated, protected and the ecological suitability/sustainability. The MBI is documentation that includes design plans and establishes guidelines for the establishment, operation, and maintenance of the proposed mitigation bank.

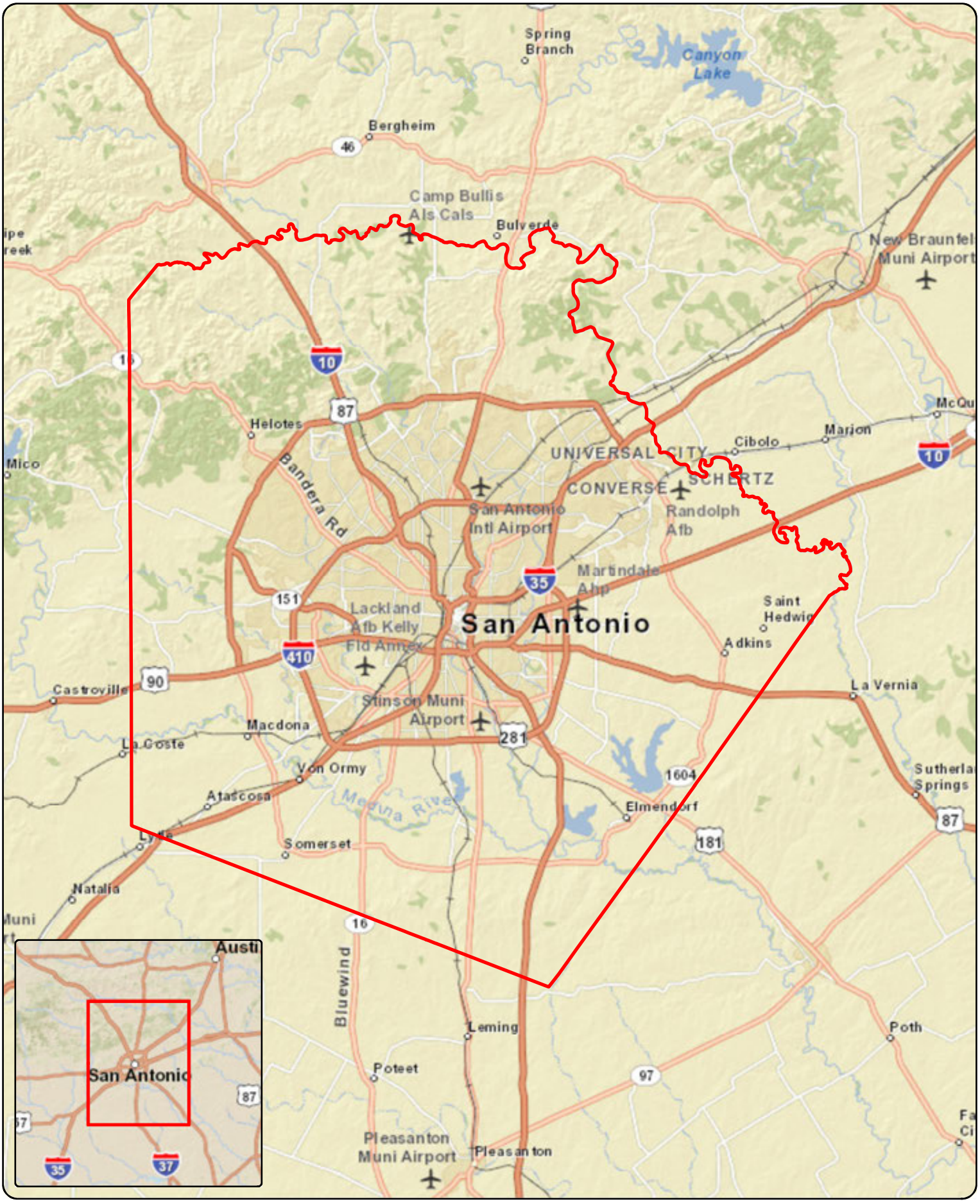
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ 19,503	$ 16,050	$ -	$ 35,553
Commodities	-	200,000	177,000	-	377,000
Contracts	-	-	-	-	-
Total	$ -	$ 219,503	$ 193,050	$ -	$ 412,553

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
Guenther/Euclid Stormwater Retrofit

Project Service Area and/or Boundaries

N

0 4.5 9 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Guenther/Euclid Stormwater Retrofit** **Project #** **00000358**

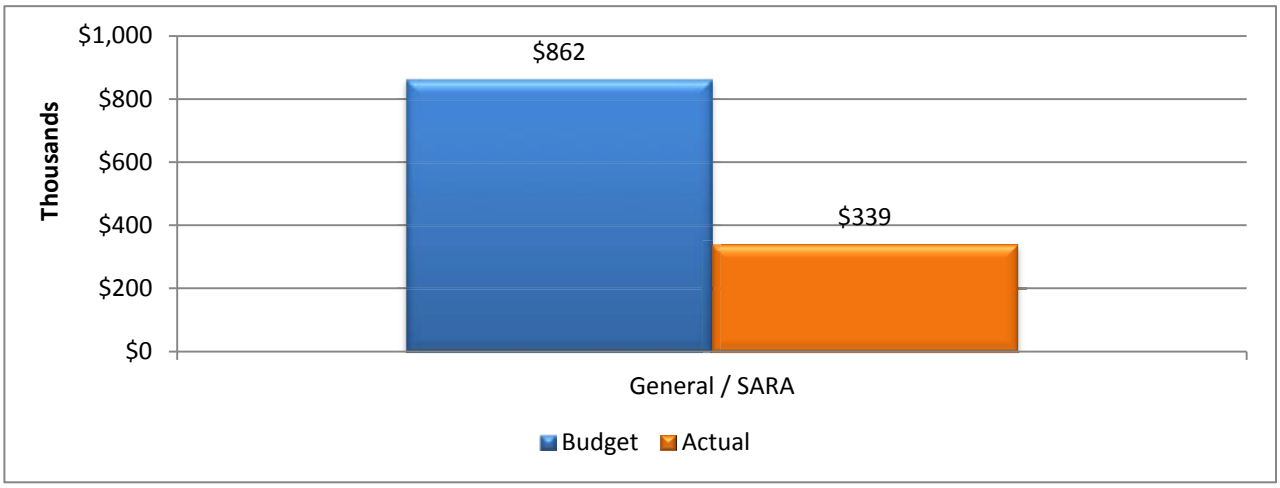
Project Start Date:	06/18/12	Total Project Budget:	$ 862,167
Project Finish Date:	06/29/16	Managing Department:	Facilities

The Guenther, Euclid, and Martinez administrative buildings were constructed before Low Impact Development (LID) and other sustainable stormwater technologies were available to this area. The Euclid building's stormwater runoff is causing erosion on River Authority property, and the Guenther stormwater runoff drains into the Eagleland reach of the San Antonio River Improvements Project. The purpose of this project is to retrofit the facilities' stormwater infrastructure utilizing LID design and construction to improve runoff water quality, to capture all first-flush pollutants, and to increase on-site infiltration before the runoff reaches the San Antonio River and/or its tributaries.

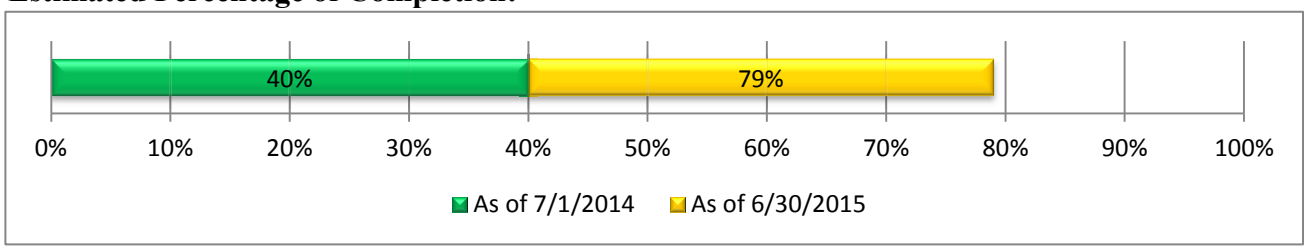
During the current fiscal year, this project will design LID features at the Euclid and Guenther facilities. Construction of elements that meet the Triple Bottom Line (TBL) will be conducted in the next fiscal year. It will fund staff time to obtain design approval by the City of San Antonio and other regulatory entities. Funding will also allow River Authority staff to gain experience in the fields of LID design and stormwater best management practices monitoring.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 59,685	$ 80,882	$ 75,632	$ -	$ 216,199
Commodities	18,527	-	5,400	-	23,927
Contracts	260,497	250,000	111,544	-	622,041
Total	$ 338,709	$ 330,882	$ 192,576	$ -	$ 862,167

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:



Project Name: **NCD Competition** **Project #** **00000448**

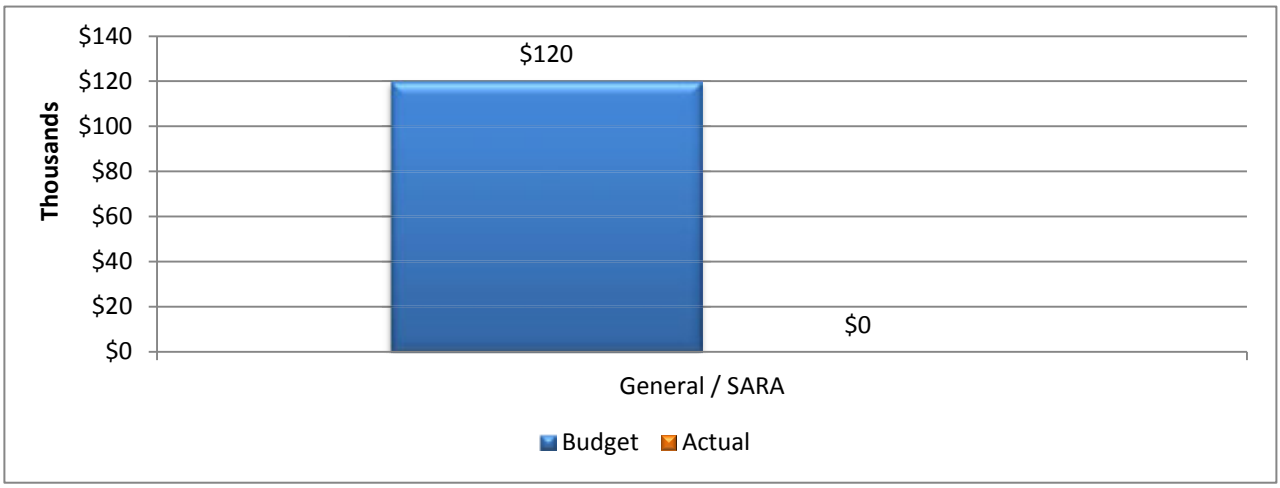
Project Start Date:	07/01/14	Total Project Budget:	$ 120,062
Project Finish Date:	09/30/15	Managing Department:	Watershed Engineering

The River Authority is promoting the use of Natural Channel Design (NCD) as a sustainable practice to improve natural stream functions, including stability and habitat, for use in flood control projects, development, and mitigation banking. The NCD Competition will serve as way to promote these methods and demonstrate how this approach can reduce project impacts while reducing cost with permitting, construction and long term maintenance. Training will assist staff, government agencies, and the private design and development community to better apply NCD to projects that impact the health of and quality of life within the basin.

Within the first year, this project will fund the planning and organization of the NCD Competition. Expanded into a second year, this project will fund continued planning, advertising and conducting the competition.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ 22,399	$ 22,663	$ -	$ 45,062
Commodities	-	500	74,500	-	75,000
Contracts	-	-	-	-	-
Total	$ -	$ 22,899	$ 97,163	$ -	$ 120,062

Budget to Actual by Funding Source as of 7/1/2014:



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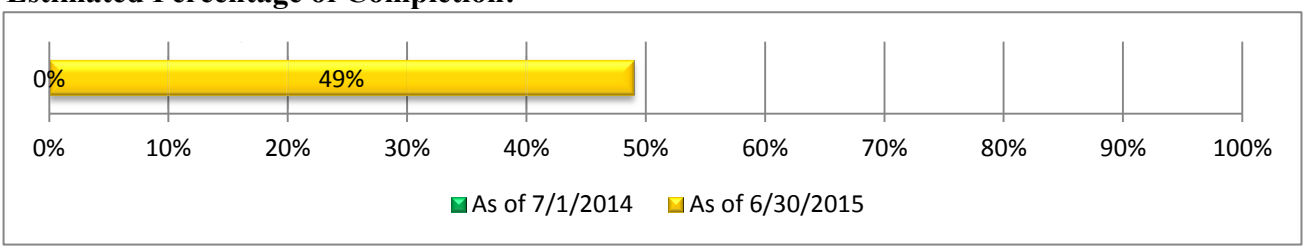
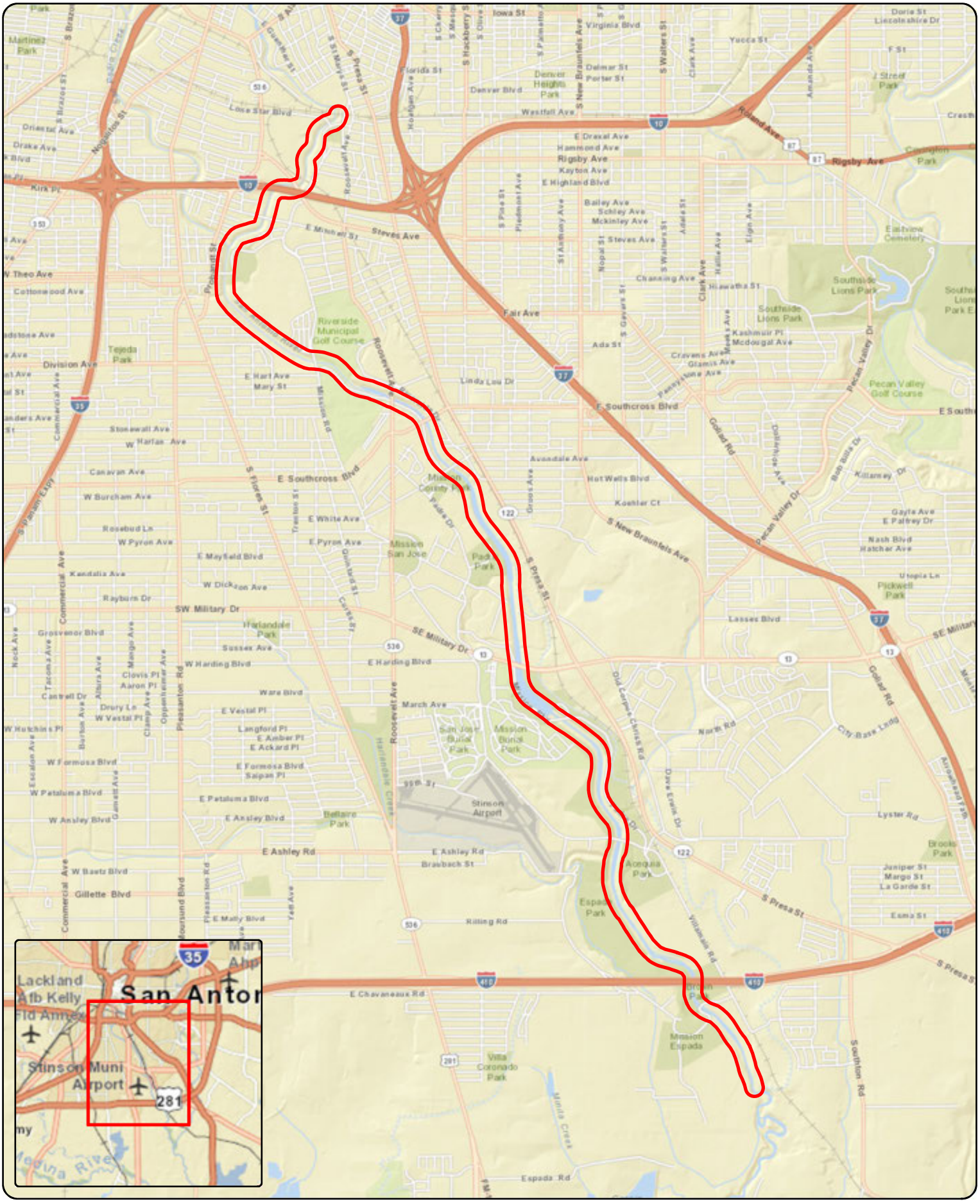




SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
SARIP Outfalls Assessment

Project Service Area and/or Boundaries

N

0 0.45 0.9 Miles

Project Name: **SARIP Outfalls Assessment** **Project #** **00000302**

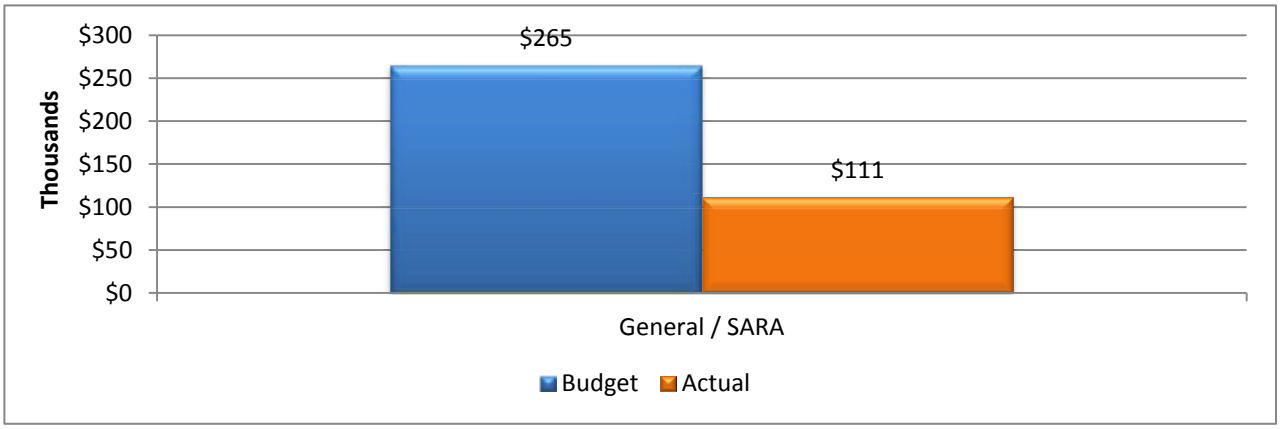
Project Start Date: 07/01/11
Project Finish Date: 06/30/16
Total Project Budget: $ 264,926
Managing Department: Watershed Engineering

This project will use in-house expertise to assess the stormwater inlets and outfalls, delineate and map storm sewer systems and their catchment areas, and develop stormwater best management practices (BMPs) for the storm sewer systems that outfall directly to the San Antonio River Improvements Project (SARIP). The information will be used to prepare a BMP master plan that will identify sustainable BMP alternatives that can be implemented to improve water quality in the River. This project will involve delineation of the catchment areas and mapping of the storm sewer systems discharging directly to the San Antonio River, and will focus on collection, assembly of data, and BMP recommendation development. A report will be published with recommendations.

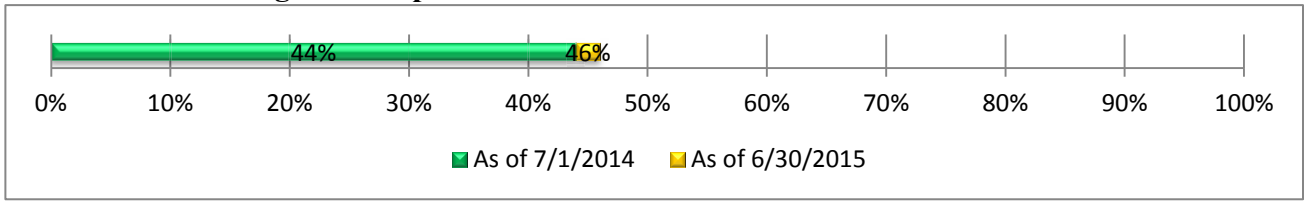
During the 2014/15 fiscal year, analysis will be the focus. Staff will assess the storm sewer system data currently collected - which extends one mile on both sides beyond the river within the SARIP area. The result will be a report reflecting BMPs for improving the quality of stormwater reaching the river.

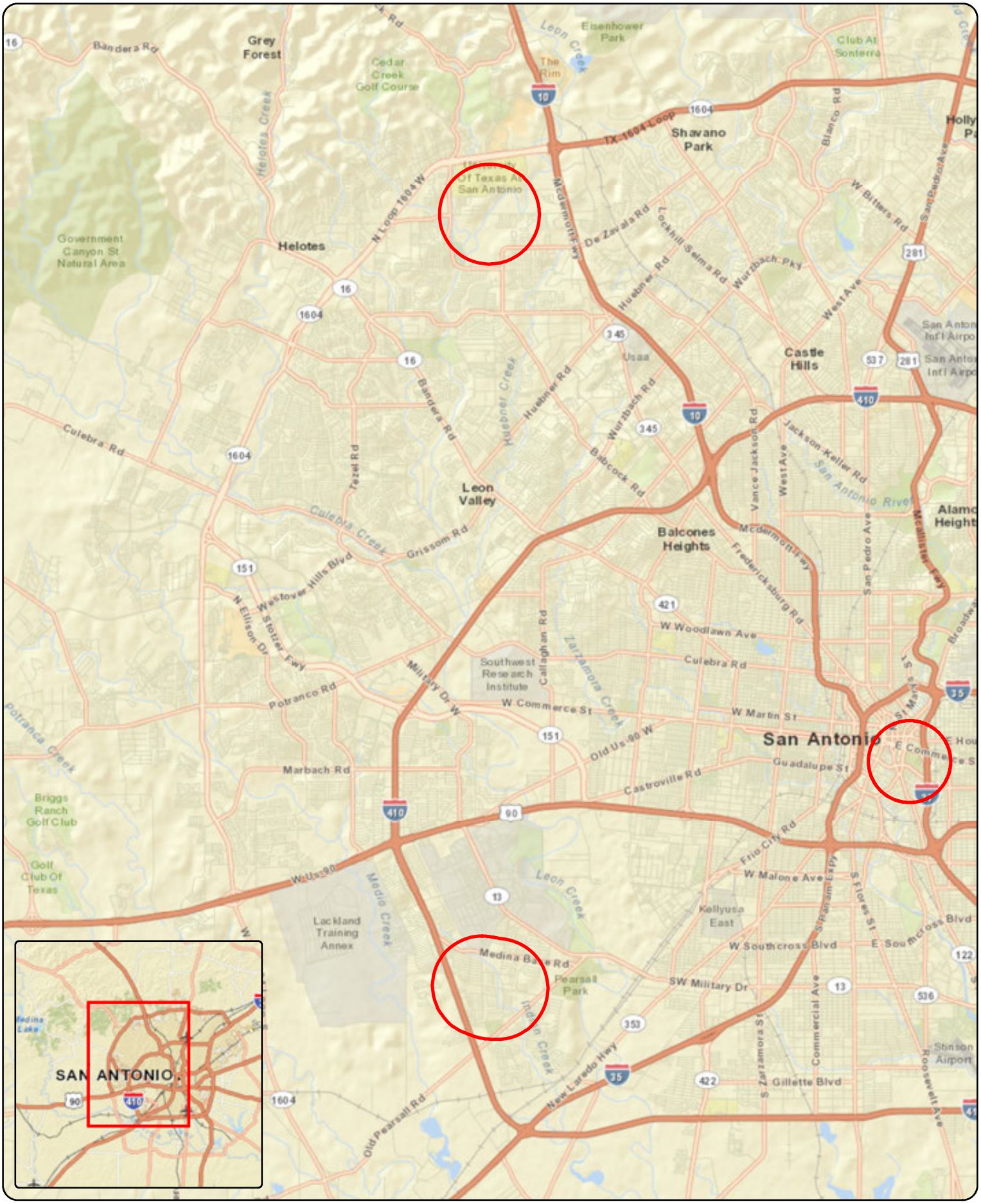
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 107,959	$ 11,771	$ 11,831	$ -	$ 131,561
Commodities	3,365	-	130,000	-	133,365
Contracts	-	-	-	-	-
Total	$ 111,324	$ 11,771	$ 141,831	$ -	$ 264,926

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
Stormwater Monitoring - COSA Pilots

Project Service Area and/or Boundaries

N

0 1.5 3 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Stormwater Monitoring COSA Pilots** **Project #** **00000400**

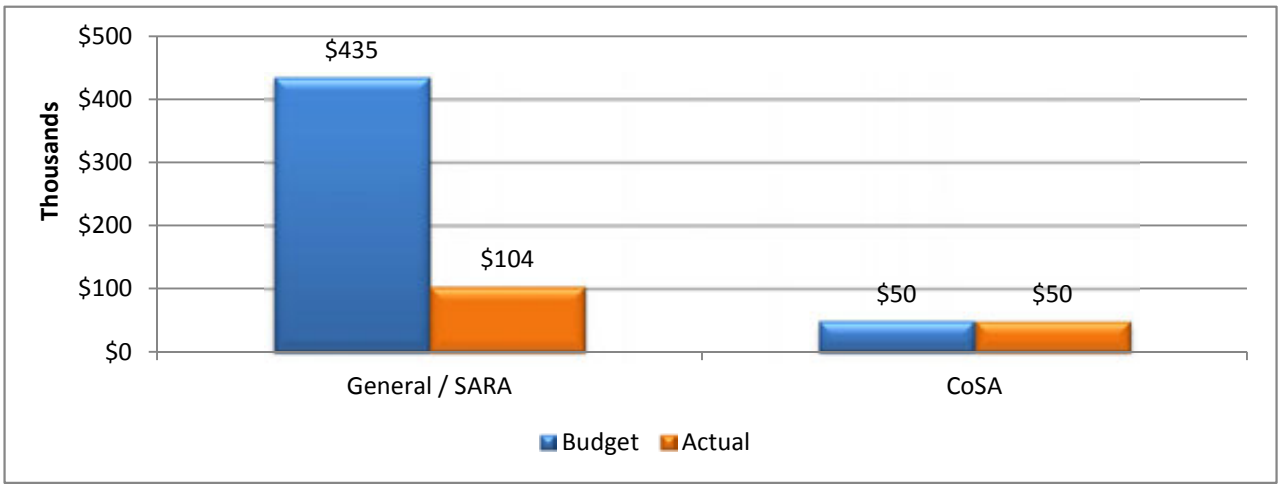
Project Start Date: 07/01/13 Total Project Budget: $ 485,138
Project Finish Date: 06/30/17 Managing Department: Environmental Sciences

In accordance with an interlocal agreement with the City of San Antonio, the San Antonio River Authority (SARA) will collect data on three bond project sites prior to stormwater control measure best management practice (SCM-BMP) installation with the intent of documenting the preconstruction water quality of the runoff. On the three bond projects, four locations will be sampled for a suite of parameters, the data complied, and the approach documented. Where accompanying runoff flow rate data is not feasibly measured, the site will be modeled and the flow rate simulated. COSA will reimburse SARA $49,500 for these services.

Water quality data will be collected during five storm events for three projects: Hemisfair Park, Hausmann Road, and Ray Ellison Drive.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 65,688	$ 54,229	$ 56,129	$ 58,092	$ 234,138
Commodities	38,000	5,000	5,000	5,000	53,000
Contracts	49,500	49,500	49,500	49,500	198,000
Total	$ 153,188	$ 108,729	$ 110,629	$ 112,592	$ 485,138

Budget to Actual by Funding Source as of 7/1/2014:



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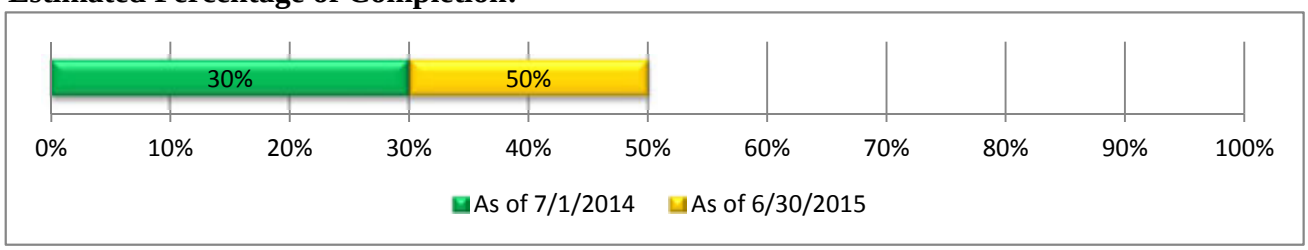


Project Name: **Sustainability Tools** **Project #** **00000359**

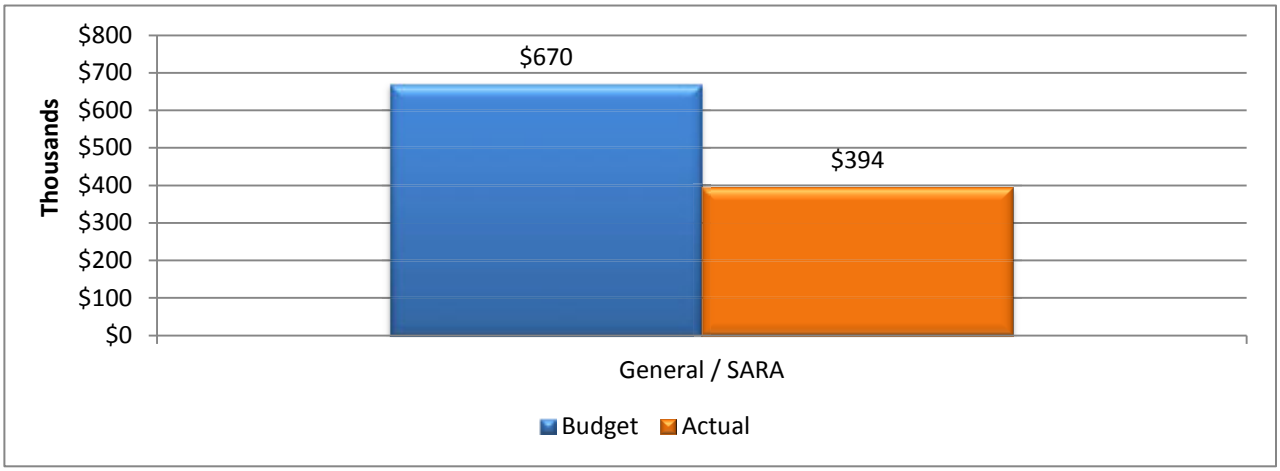
Project Start Date:	07/01/12	Total Project Budget:	$ 669,965
Project Finish Date:	08/31/17	Managing Department:	Program Support

Increasingly, projects deemed sustainable take into account not only immediate project costs, but also life cycle costs, impacts on or benefits to the environment, and quality of life benefits. Called Triple Bottom Line (TBL), this kind of assessment also accounts for long-term operations and maintenance costs. The San Antonio River Authority (SARA) will develop a tool under this project for the comparison of traditional and low impact development.

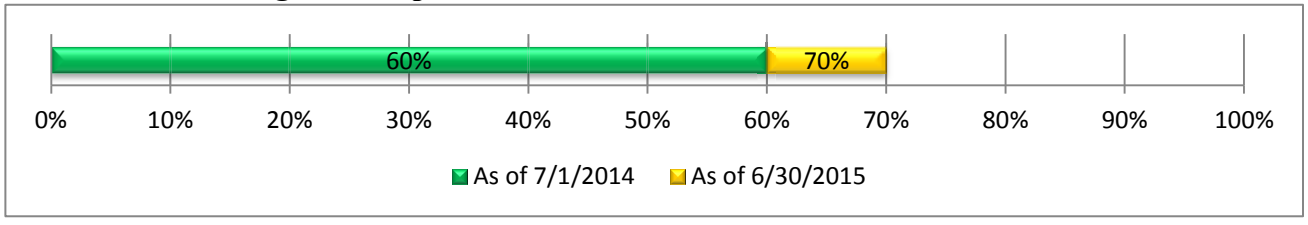
Funding for the current year will support development of tools to improve evaluation of sustainable development according to Triple Bottom Line principles. The tool to be developed will be a low impact development (LID) cost estimation application to provide developers and other implementors comparisons of the cost of LID construction and traditional construction.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 53,654	$ 11,410	$ 9,240	$ 4,847	$ 79,151
Commodities	105	-	-	-	105
Contracts	340,709	50,000	200,000	-	590,709
Total	$ 394,468	$ 61,410	$ 209,240	$ 4,847	$ 669,965

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:



Project Name: **Sustainability Training** **Project #** **00000357**

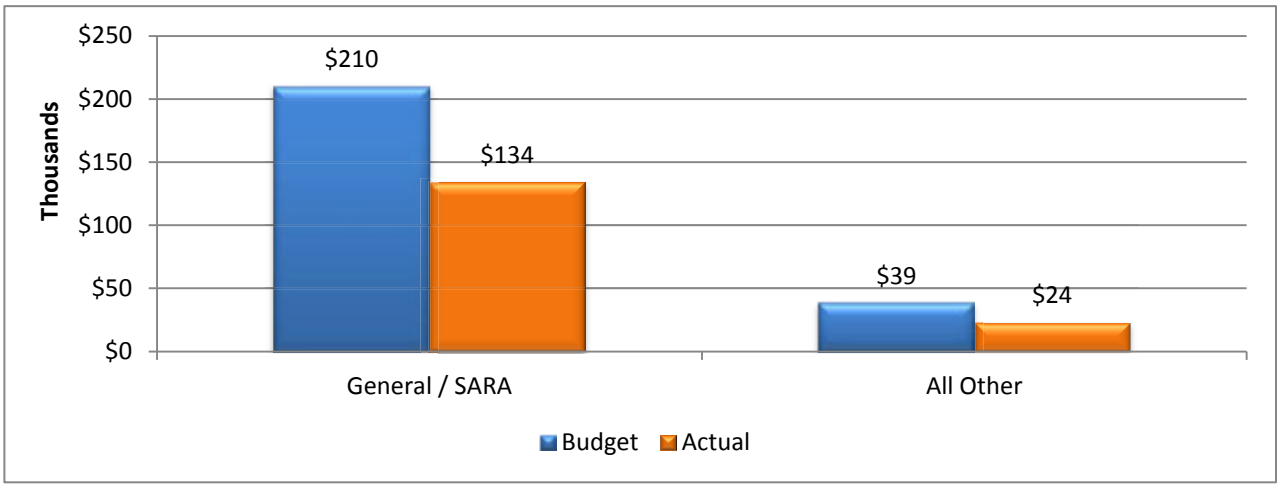
Project Start Date:	07/01/12	Total Project Budget:	$ 249,025
Project Finish Date:	06/30/16	Managing Department:	Program Support

The River Authority is promoting the use of low impact development (LID) stormwater best management practices (BMPs) and the application of Triple Bottom Line (TBL) assessment, respectively, to improve stormwater runoff management and to ensure that environmental, quality of life, and economic components are factored into project planning and decision making. Training will assist staff, government agencies, and the private design and development community to better apply LID, sustainable stormwater BMPs, and TBL to projects that impact the health of and quality of life within the basin.

Expanded into a third year, this project will fund watershed sustainability training for SARA staff, government agencies, and the private design and development community through one or more of the following means: 1) contracting for tailored training for developers; 2) field trips for governmental partners; and/or 3) providing BMP design training to the private design community.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 34,403	$ 5,236	$ 16,365	$ -	$ 56,004
Commodities	31,342	7,000	18,000	-	56,342
Contracts	91,679	11,000	34,000	-	136,679
Total	$ 157,424	$ 23,236	$ 68,365	$ -	$ 249,025

Budget to Actual by Funding Source as of 7/1/2014:



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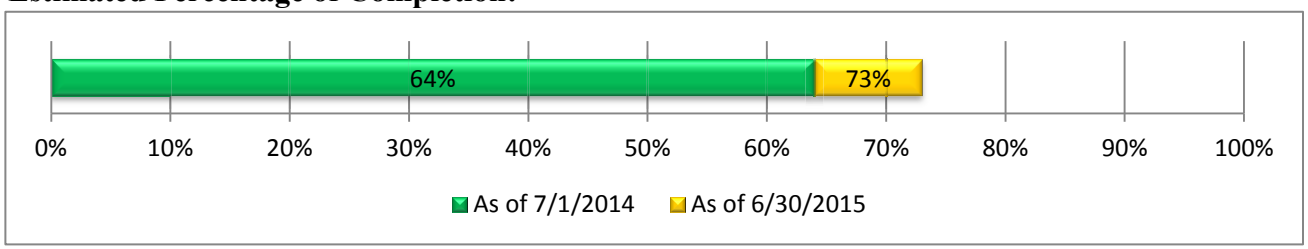


Sustainable Watersheds Implementation Program

- **Development of Big Green Map**
  The goal of this effort is to track Low Impact Development (LID) Best Management Practices (BMPs) within the San Antonio region. The San Antonio River Authority (SARA) coordinates information sharing between multiple public entities. This effort produces geospatial data that are utilized by multiple partners to evaluate the progress of stormwater management via LID techniques; in effect it provides mapping of currently installed BMPs which allows for the assessment of current treatment provided by BMPs, identification of critical areas with inadequate treatment features, and other evaluation and planning activities for efficient resource management. In the current year, the project produces static maps, regularly updated, in multiple formats as needed by partner agencies.

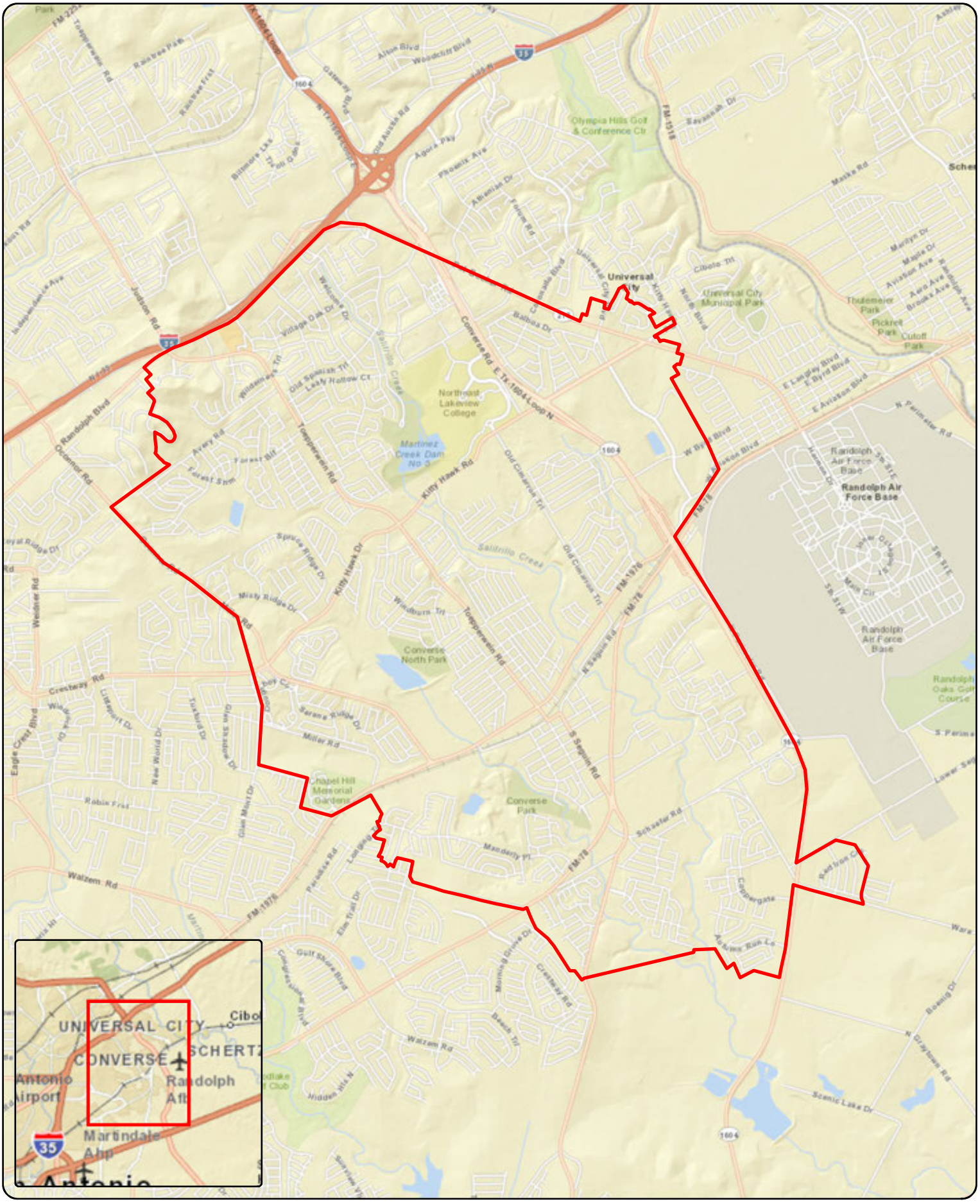
- **Green Initiative**
  The Green Initiative is an employee-driven effort established in response to River Authority staff who have voiced a desire for the River Authority to consider the environmental impact of all River Authority operations and to provide River Authority staff at all levels an opportunity to play an active role in making green recommendations, minimizing our impact on natural resources, minimizing waste, and enhancing recycling. This effort supports the River Authority's mission to protect and preserve the water resources within the San Antonio River Watershed, and its environmental mission to be the watershed-wide leader in developing and maintaining a healthy and sustainable watershed.

- **LID Design Review**
  This effort is an initiative to provide technical assistance to San Antonio River Authority (SARA) governmental partners for technical design reviews of Low Impact Development (LID) and Best Management Practices (BMPs). In this effort SARA provides technical comments and assistance to engineers, architects, and landscape architects who are submitting development projects for approval. Then SARA submits a technical assessment of the development project to the reviewing authority to provide best technical information for the goals of the improvement of stormwater management.

- **Olmos Basin Alliance**
  The Olmos Basin Alliance (OBA) is an advisory committee created by the San Antonio River Authority during fiscal year 2010/11. SARA coordinated the activities of OBA as a project during fiscal years 2011/12 and 2012/13 to increase awareness of trash and floatables entering Olmos Basin and to develop educational messages to mitigate the pollution at its sources. During the project phase, OBA provided input into SARA's development of a series of award-winning educational videos, two of which are posted on

the Environmental Protection Agency's non-point source pollution website. In the current year, the OBA will serve in an advisory capacity on the Olmos Basin Trash System Project's study component.

- **Stream Restoration Support**
  The goal of this effort is to produce sustainable stream restoration projects of value for the citizens within the San Antonio River Watershed and use these examples to promote and educate the public on the advantages of natural resource management solutions to maintaining creeks and rivers. The project uses a multi-disciplinary team approach to assess, design, construct, and monitor stream bank restoration projects. The scope of work also includes watershed-based inventory and assessments; coordination and review of existing projects with partner agencies; workshops and certification of staff, consultants, and contractors; and public education and outreach. Technical design goals are to stabilize stream channel morphology, restore native habitat, and promote BMPs to improve water quality.



SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
City Metering for Salatrillo Wastewater Treatment Plant (WWTP)

Project Service Area and/or Boundaries

N

0 0.45 0.9 Miles

Project Name: **City Metering for Salatrillo WWTP** **Project #** **00000251**

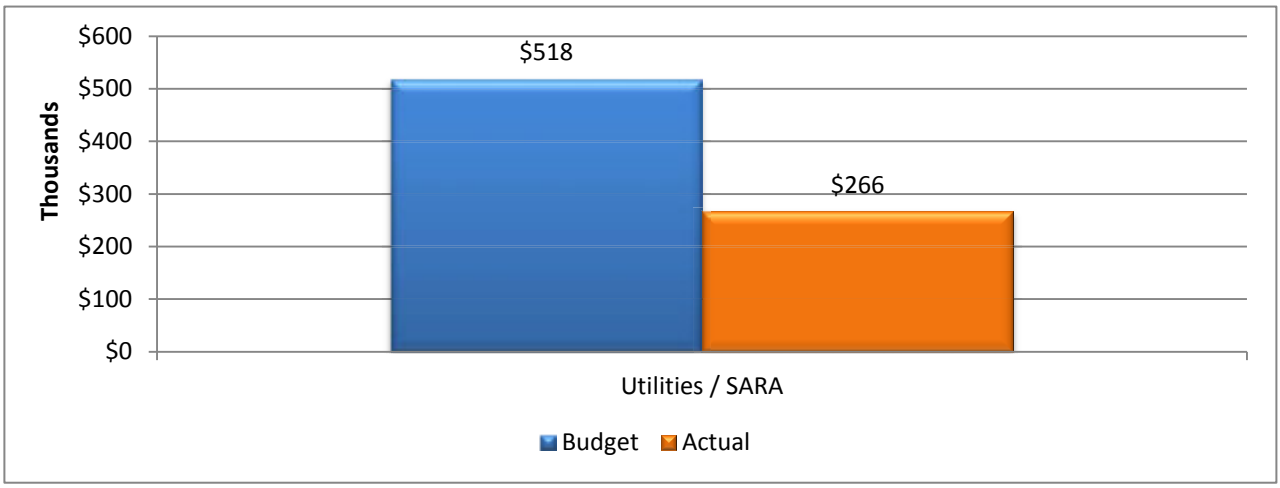
Project Start Date:	11/01/10	Total Project Budget:	$ 517,970
Project Finish Date:	06/30/17	Managing Department:	Utilities

This project will meter actual flows coming from each of the cities of Universal City, Live Oak and Converse that San Antonio River Authority (SARA) serves including the SARA facilities and provide accurate billings. The project has placed the meters in agreed upon locations that will show not only flow rates but also any inflow or infiltration problems coming from the cities of Universal City, Live Oak and Converse and SARA facilities.

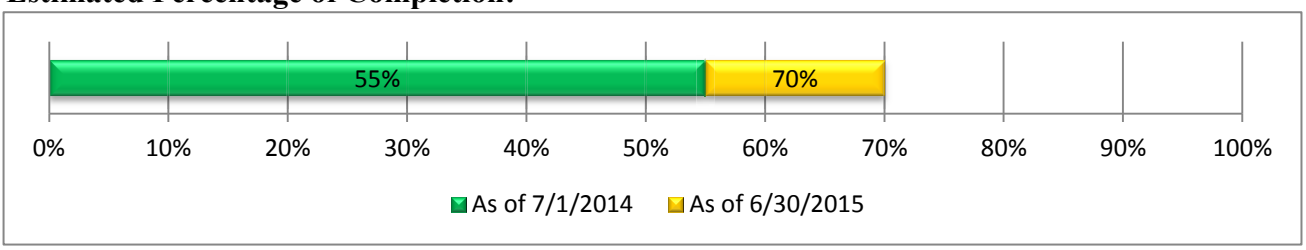
During the current and next three fiscal years SARA will continue to monitor meters to show any inflow or infiltration problems coming from these cities and SARA facilities.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 59,448	$ 20,589	$ 21,309	$ 22,054	$ 123,400
Commodities	-	-	-	-	-
Contracts	206,720	70,980	70,980	45,890	394,570
Total	$ 266,168	$ 91,569	$ 92,289	$ 67,944	$ 517,970

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:



SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Graytown Road Wastewater System Development

Project Service Area and/or Boundaries

N

0 0.075 0.15 Miles

Project Name: **Graytown Road Wastewater System** **Project #** **00000107**

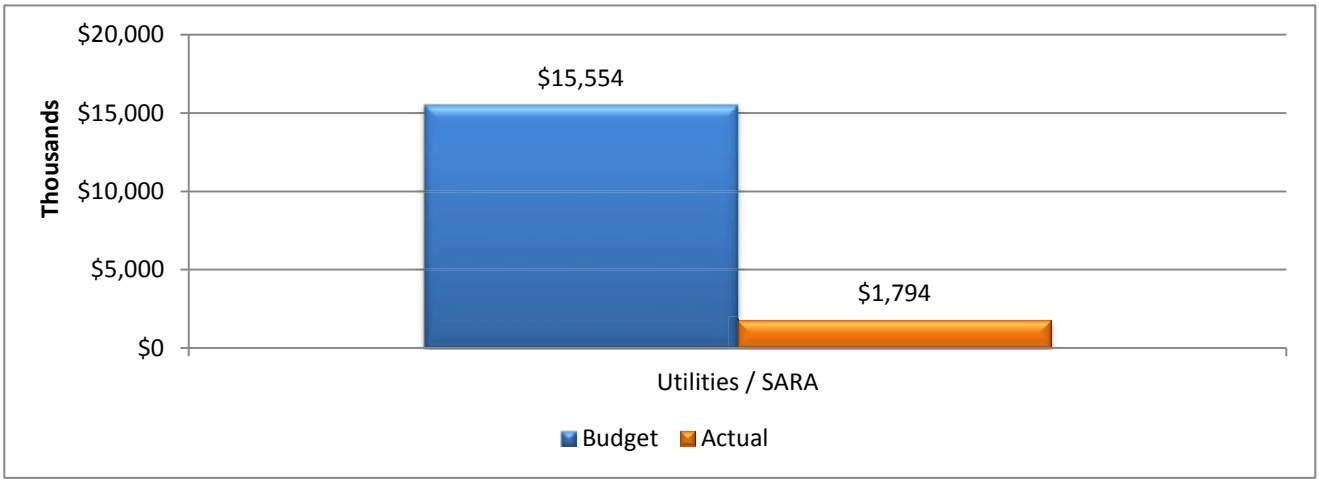
Project Start Date:	11/16/06	Total Project Budget:	$ 15,553,806
Project Finish Date:	06/30/20	Managing Department:	Utilties

As development in Bexar County expands east, the San Antonio River Authority continues to receive requests for sewer service in the Martinez III and Graytown Road service areas. The demand has now reached a point where it is advantageous to build a regional treatment plant in the area. With the construction of the Graytown Road Wastewater Treatment Plant, the River Authority has constructed segments 1-6 of the Wastewater Collection system. Segments 11-12 (or Phase III) were constructed in the 2013-2014 fiscal year. This project was completed through a design/build agreement between the River Authority and M4 LTD. The Martinez III Wastewater Treatment Plant is now operational and serves development in Segments 1, 2, 11, and 12.

For the fiscal year 2014/15, Watershed Engineering staff will evaluate alternatives for treating wastewater generated in Segments 3-6 of the system, as this area of the system is now in the early stages of development. These segments are currently not served by a treatment plant; therefore, alternatives will be considered to serve this area.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 683,627	$ 36,313	$ -	$ 84,539	$ 804,479
Commodities	93,759	500	-	-	94,259
Contracts	1,016,854	10,000	-	13,628,214	14,655,068
Total	$ 1,794,240	$ 46,813	$ -	$ 13,712,753	$ 15,553,806

Budget to Actual by Funding Source as of 7/1/2014:



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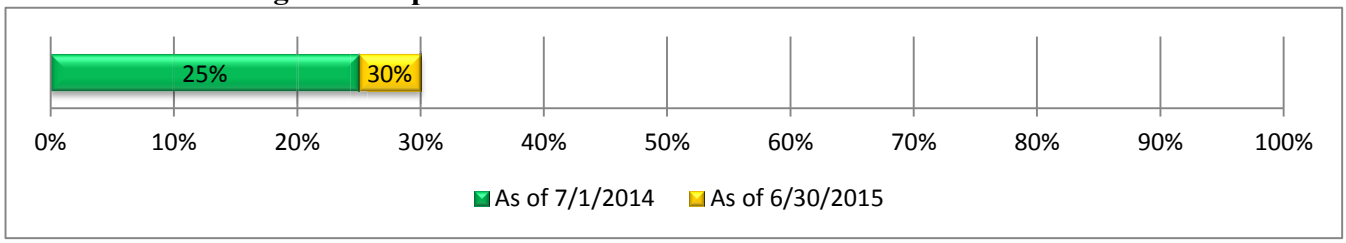


Project Name: **Joint Base SA Utility Privatization** **Project #** **00000257**

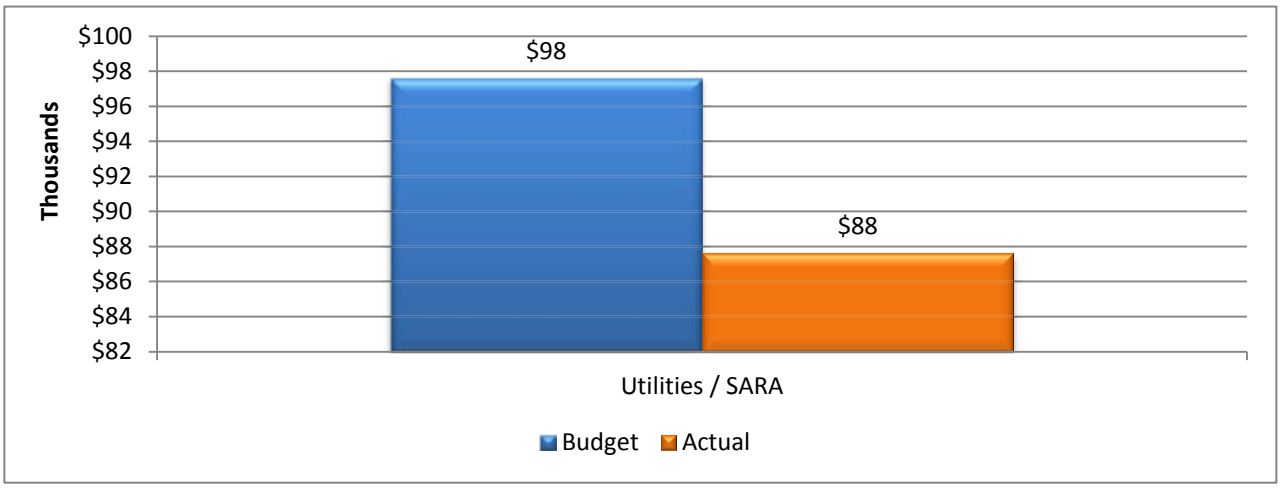
Project Start Date:	07/01/10	Total Project Budget:	$ 97,615
Project Finish Date:	06/30/16	Managing Department:	Utilities

This project consists of submitting a proposal to purchase the waste water systems from the Federal Government. Prior to the proposal the Utilities Department will assess the Joint Base San Antonio systems to prioritize the work that will need to be done. If the San Antonio River Authority (SARA) has the successful proposal, SARA will set up a 50 year plan for rehabilitation of the system.

An assessment has been done and the proposal has been submitted. During the current fiscal year the award of the contract is not expected to be finalized. The work will be on hold until a decision is made by the government.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 18,189	$ -	$ -	$ -	$ 18,189
Commodities	30	-	-	-	30
Contracts	69,396	10,000	-	-	79,396
Total	$ 87,615	$ 10,000	$ -	$ -	$ 97,615

Budget to Actual by Funding Source as of 7/1/2014:



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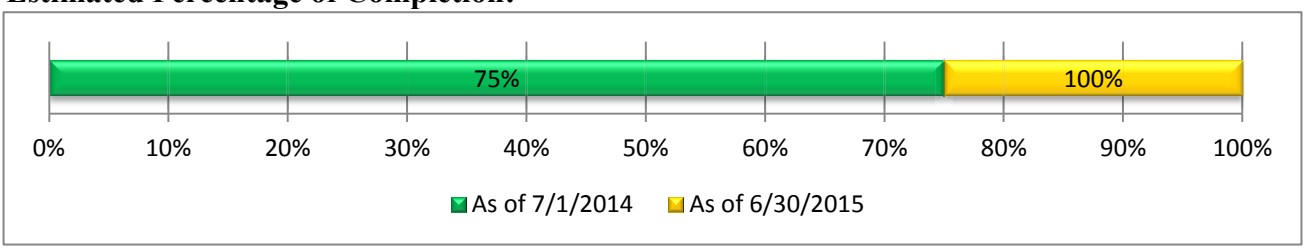


SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Martinez II Recycling Facility

Project Service Area and/or Boundaries

N

0 0.045 0.09 Miles

Project Name: **Martinez II Recycling Facility** **Project #** **00000365**

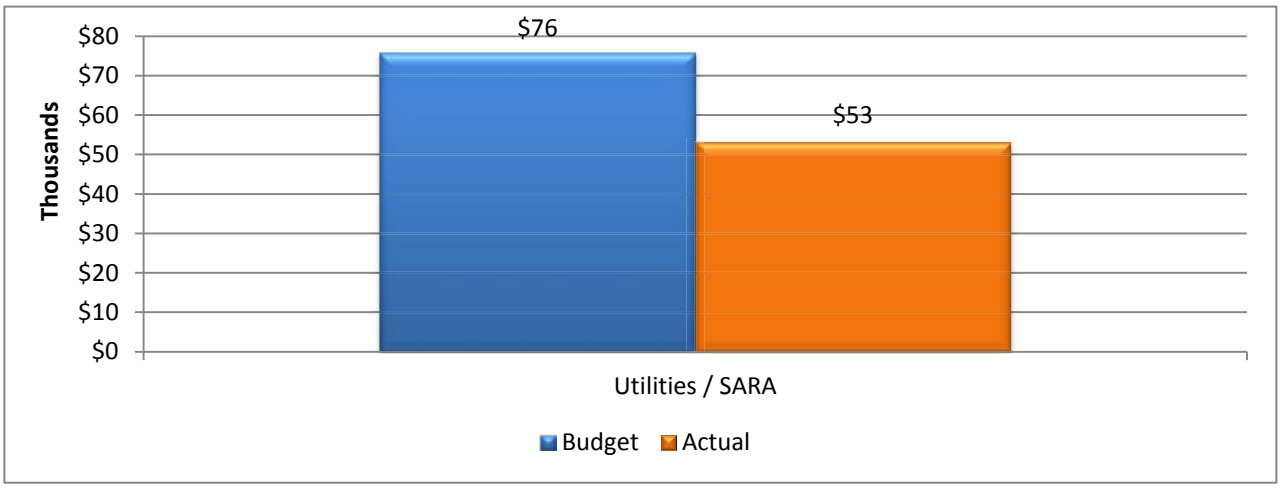
Project Start Date:	09/19/13	Total Project Budget:	$ 75,784
Project Finish Date:	12/31/14	Managing Department:	Utilities

This project will establish a long-term lease agreement to design, construct and operate a comprehensive recycling facility located at the Martinez II Wastewater Treatment Plant. Materials to be recycled include but are not limited to biosolids and organic material, by means of a composting operation; construction and demolition debris; and transfer of traditional recyclables such as glass, plastics and metals to a materials recycling facility located off site. The facility will also include a wholesale and retail outlet for processed materials, including compost, mulch, organic soils, and other garden supplies.

During the fiscal year (FY) 2013/14, it is anticipated that an agreement will be finalized, regulatory approvals will be complete and design/construction will be underway. During FY14/15 the facility is expected to be operational and producing finished products and revenue.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 42,230	$ 18,674	$ -	$ -	$ 60,904
Commodities	828	-	-	-	828
Contracts	10,052	4,000	-	-	14,052
Total	$ 53,110	$ 22,674	$ -	$ -	$ 75,784

Budget to Actual by Funding Source as of 7/1/2014:



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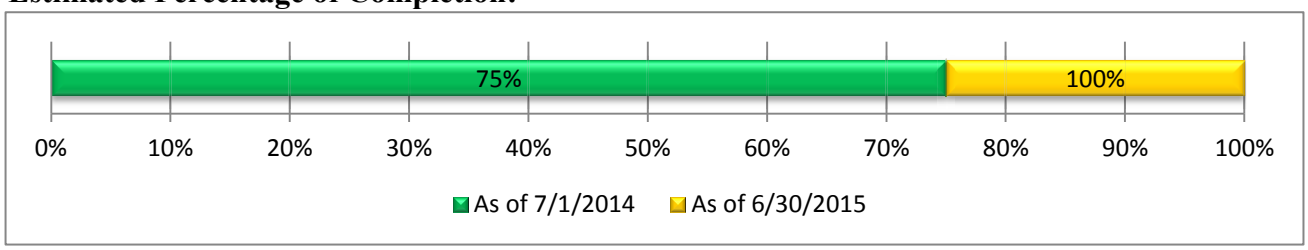
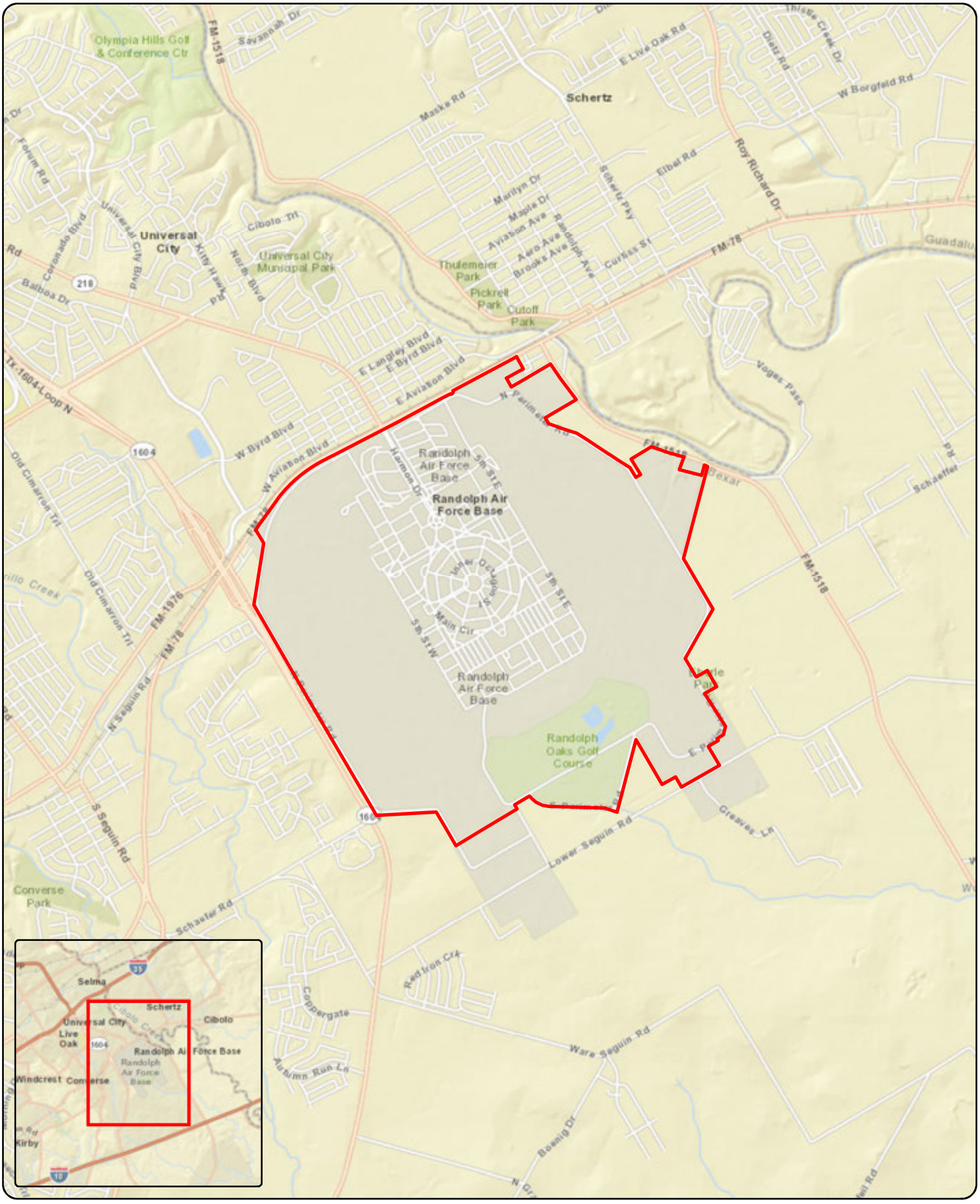




SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Randolph Air Force Base Year 11 (2014)

Project Name: **Randolph Air Force Base Year 11 (2014)** **Project #** **00000417**

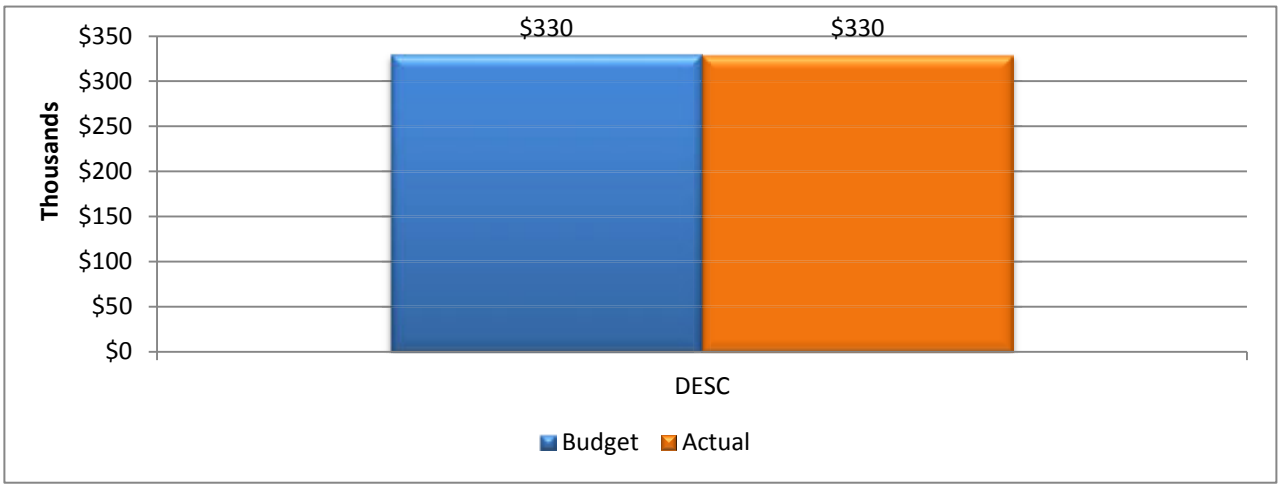
Project Start Date:	07/01/13	Total Project Budget:	$ 329,627
Project Finish Date:	10/01/14	Managing Department:	Utilities

This project consists of rehabilitating portions of the Randolph Air Force Base (RAFB) collection system that are in great need of rehabilitation based on a 50 year plan. The project will involve the River Authority hiring a sub contractor to re-assess the sewer line by Closed Circuit Television (CCTV)to determine any possible lateral locations which are in poor condition, as well as determine the best type of rehabilitation. Capital improvement is anticipated for this particular line, and the manholes involved will be coated.

The current years project consists of rehabilitating portions of the RAFB sanitary sewer collection system. The project will be finalized with the sub contractor rehabilitating sewer lines and coating manholes on this project.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 1,960	$ -	$ -	$ -	$ 1,960
Commodities	-	-	-	-	-
Contracts	327,667	-	-	-	327,667
Total	$ 329,627	$ -	$ -	$ -	$ 329,627

Budget to Actual by Funding Source as of 7/1/2014:



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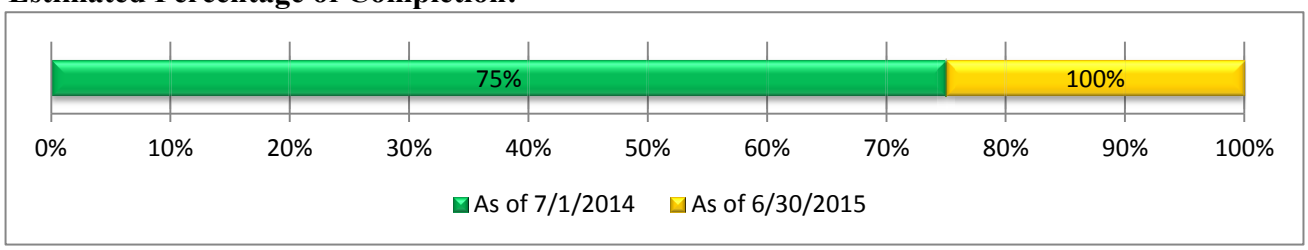
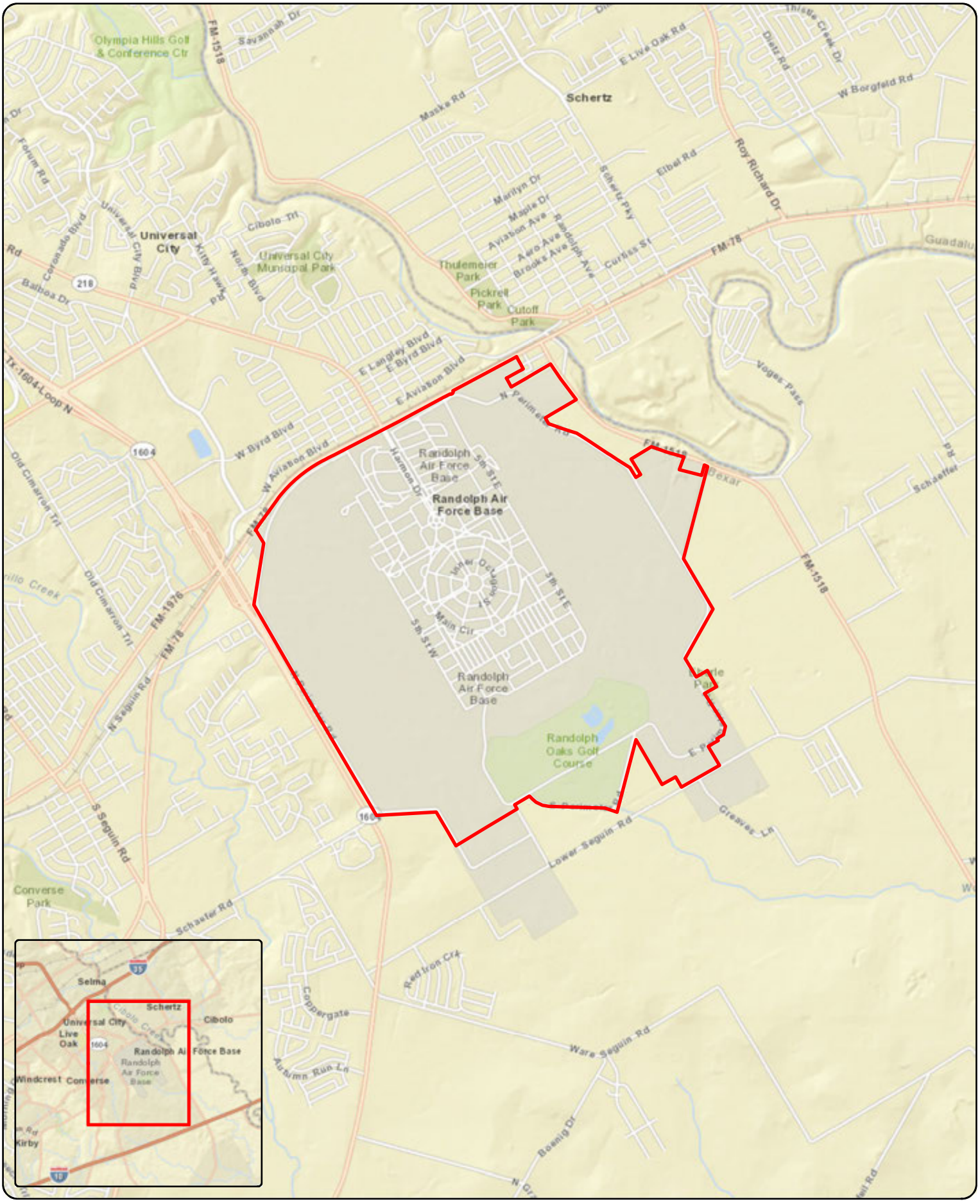




SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Randolph Air Force Base Year 12 (2015)

Project Name: **Randolph Air Force Base Year 12 (2015)** **Project #** **00000440**

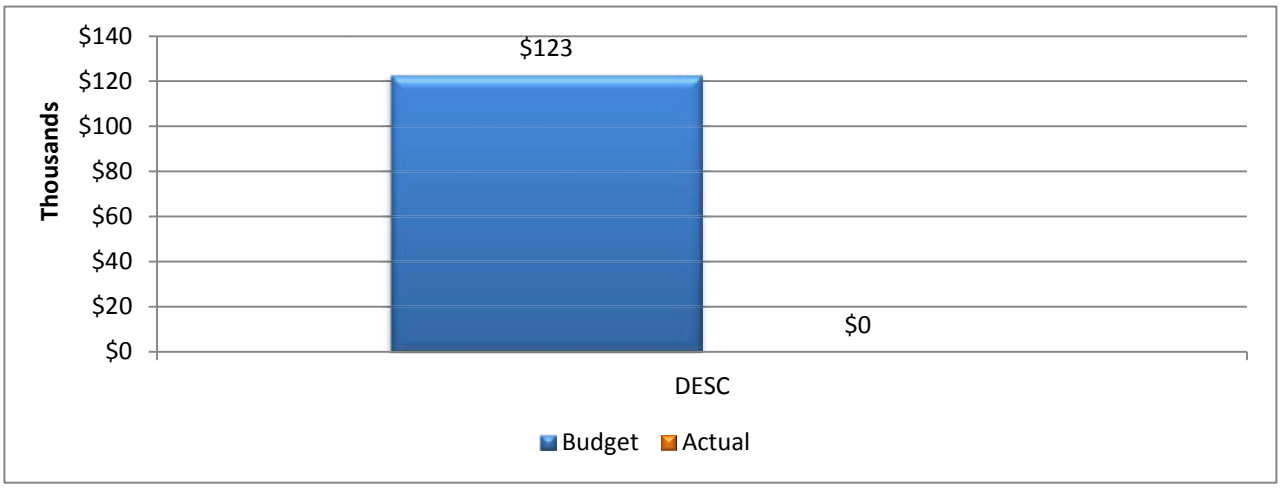
Project Start Date:	07/01/14	Total Project Budget:	$ 122,698
Project Finish Date:	06/30/15	Managing Department:	Utilities

This project consists of rehabilitating portions of the Randolph Air Force Base (RAFB) collection system that are in great need of rehabilitation based on a 50 - year plan. The project will involve the San Antonio River Authority hiring a sub contractor to re-assess the sewer line by Closed Circuit Television (CCTV) to determine any possible lateral locations which are in poor condition, as well as determining the best type of rehabilitation. Capital improvement is anticipated for this particular line, and the manholes involved will be coated.

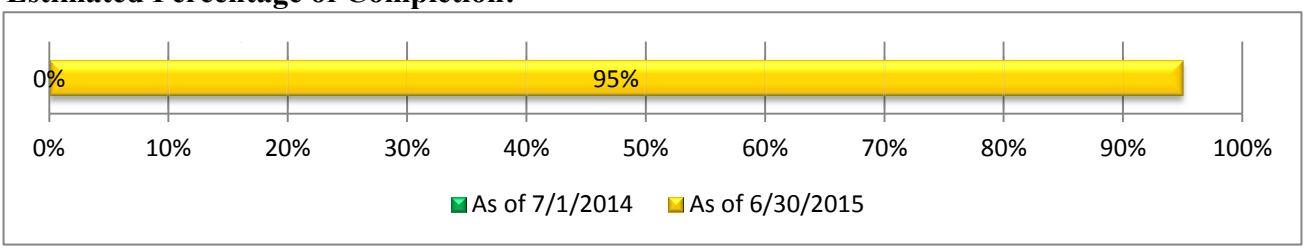
In fiscal year 2014/15, the project consists of rehabilitating portions of the RAFB sanitary sewer collection system. The project will involve the SARA hiring a sub contractor to reassess the sewer line to determine any possible lateral lines and the best type of rehabilitation for this years scope of work. Also the manholes on this project will be coated.

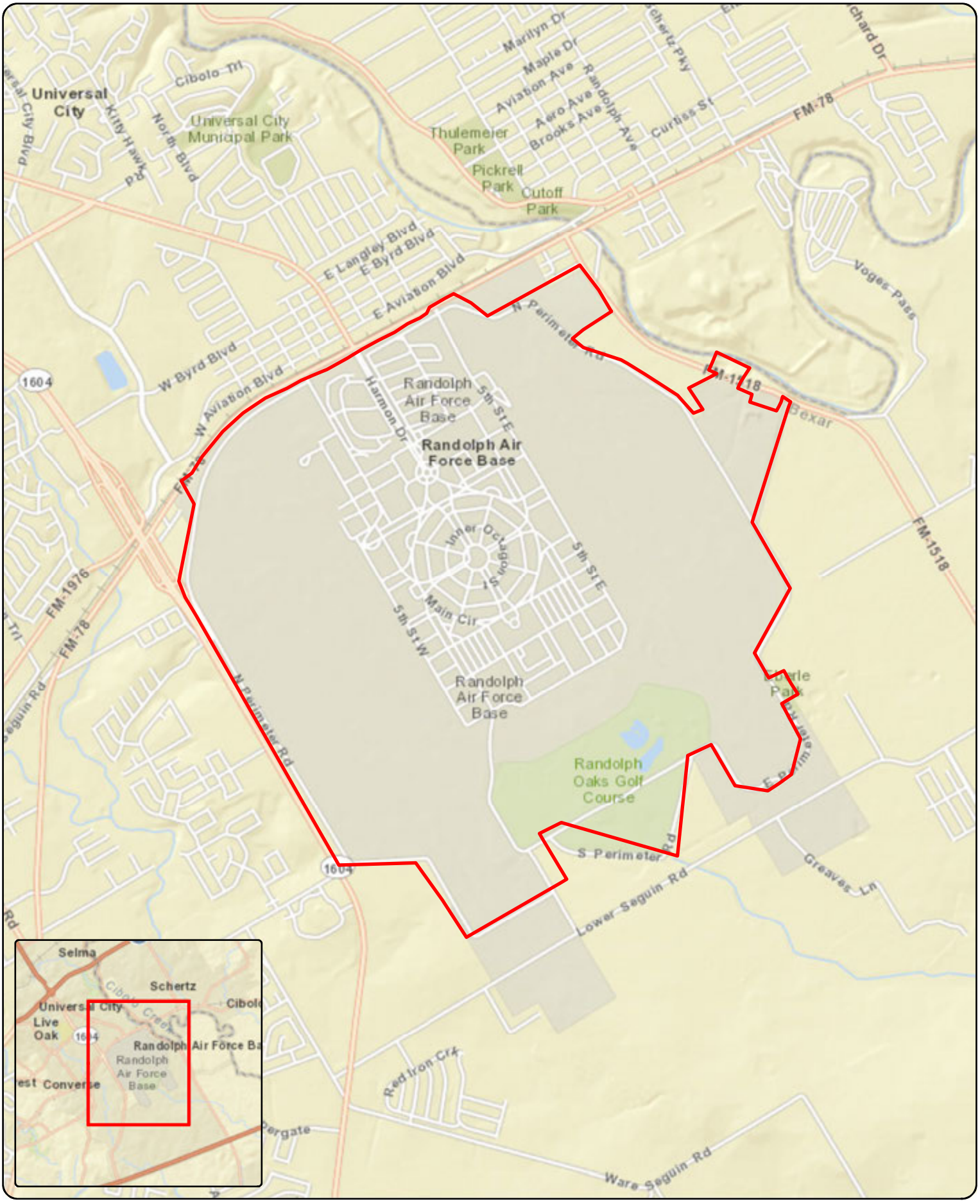
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ 3,804	$ 789	$ -	$ 4,593
Commodities	-	-	-	-	-
Contracts	-	118,105	-	-	118,105
Total	$ -	$ 121,909	$ 789	$ -	$ 122,698

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Randolph Air Force Base Years 13 - 50

Project Service Area and/or Boundaries

N

0 0.25 0.5 Miles

Project Name: **Randolph Air Force Base Years 13 - 50** **Project #** **00009998**

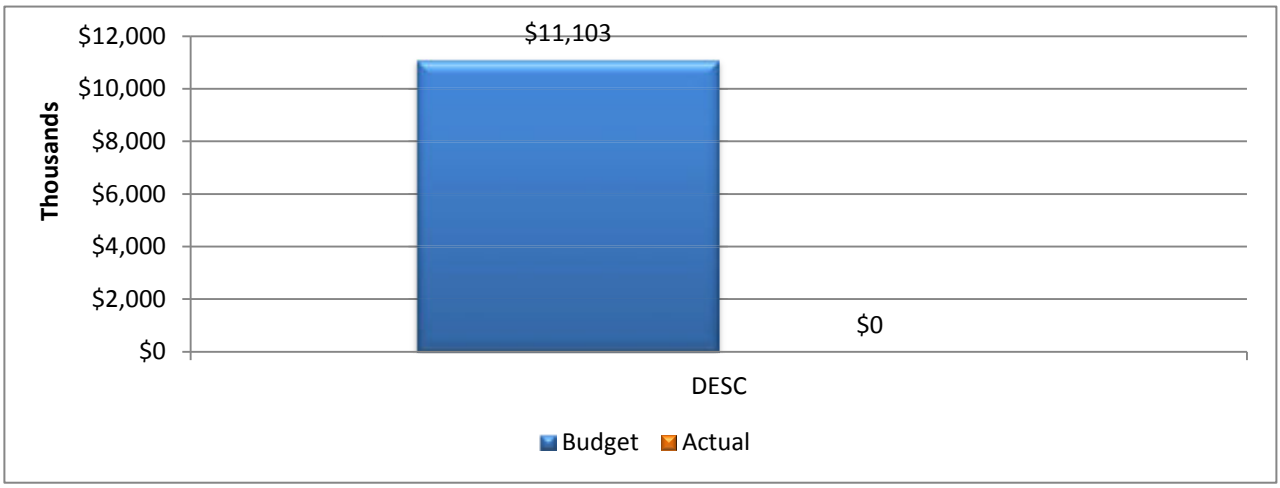
Project Start Date:	07/01/15	Total Project Budget:	$ 11,103,238
Project Finish Date:	07/01/52	Managing Department:	Utilities

This project consists of rehabilitating portions of the Randolph Air Force Base (RAFB) collection system that are in great need of rehabilitation based on a 50 - year plan. The project will involve the San Antonio River Authority (SARA) hiring a sub contractor to reassess the sewer line by Closed Circuit Television (CCTV) to determine any possible lateral locations which are in poor condition, as well as determine the best type of rehabilitation. Capital improvement is anticipated for this particular line, and the manholes involved will be coated.

In fiscal year 2014/2015, the project consists of rehabilitating portions of the RAFB sanitary sewer collection system. The project will involve SARA to hire a sub contractor to reassess the sewer line to determine the best type of rehabilitation for this year's scope of work. This will also involve coating the manholes on this project.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ -	$ -	$ -	$ -
Commodities	-	-	-	-	-
Contracts	-	-	271,515	10,831,723	11,103,238
Total	$ -	$ -	$ 271,515	$ 10,831,723	$ 11,103,238

Budget to Actual by Funding Source as of 7/1/2014:



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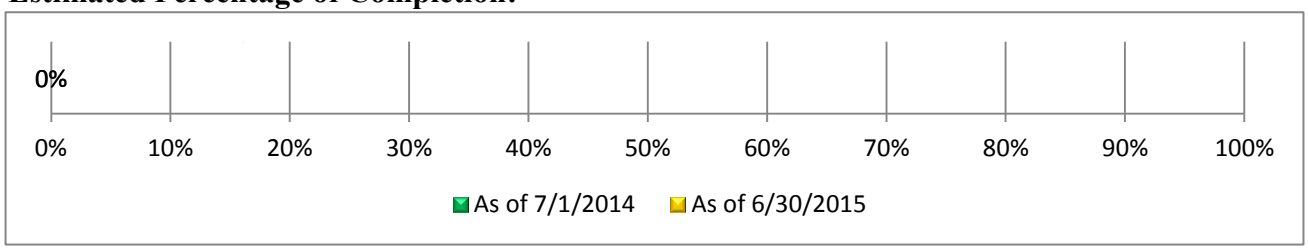
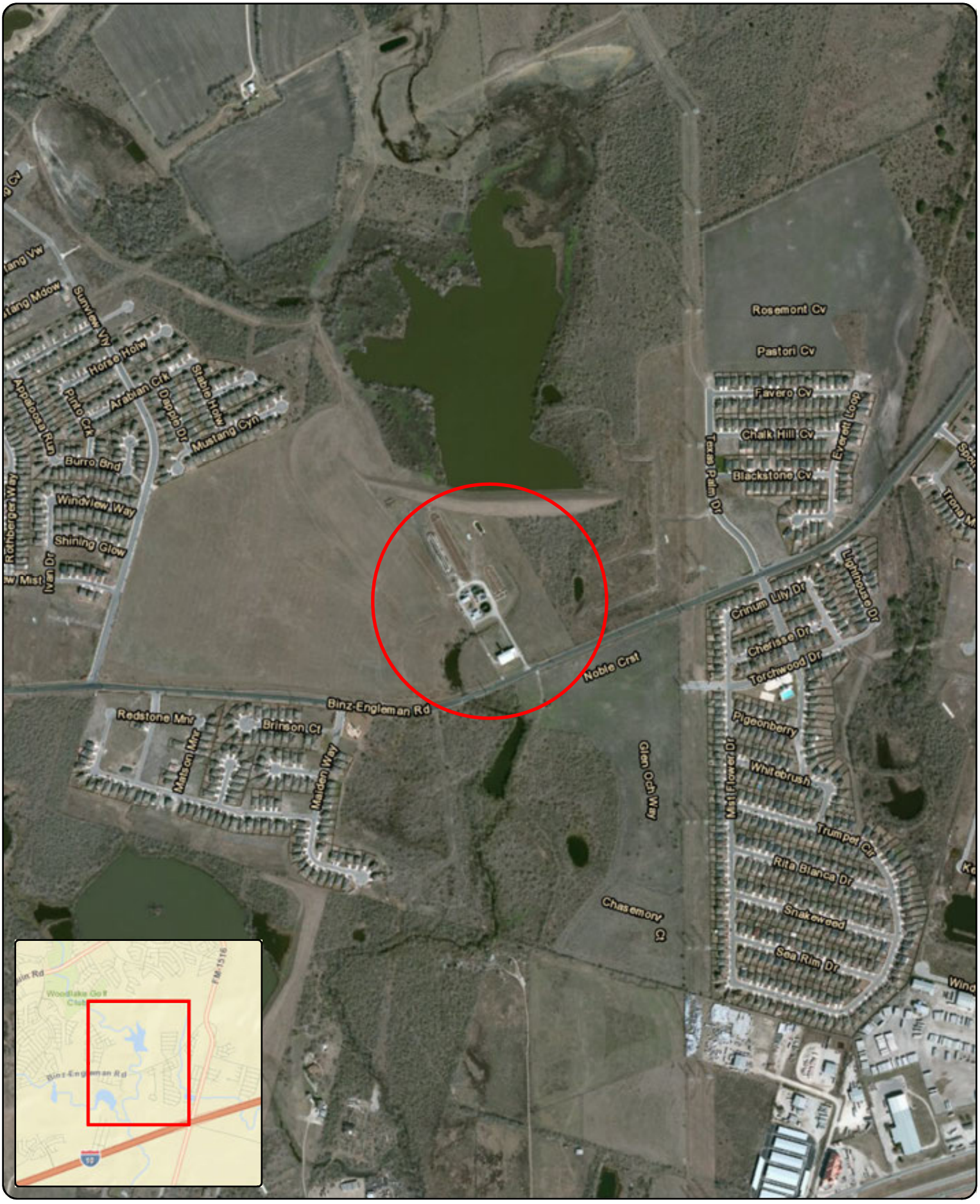




SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Rehab Upper Martinez Clarifier

Project Service Area and/or Boundaries

N

0 0.095 0.19 Miles

Project Name: **Rehab Upper Martinez Clarifier** **Project #** **00000363**

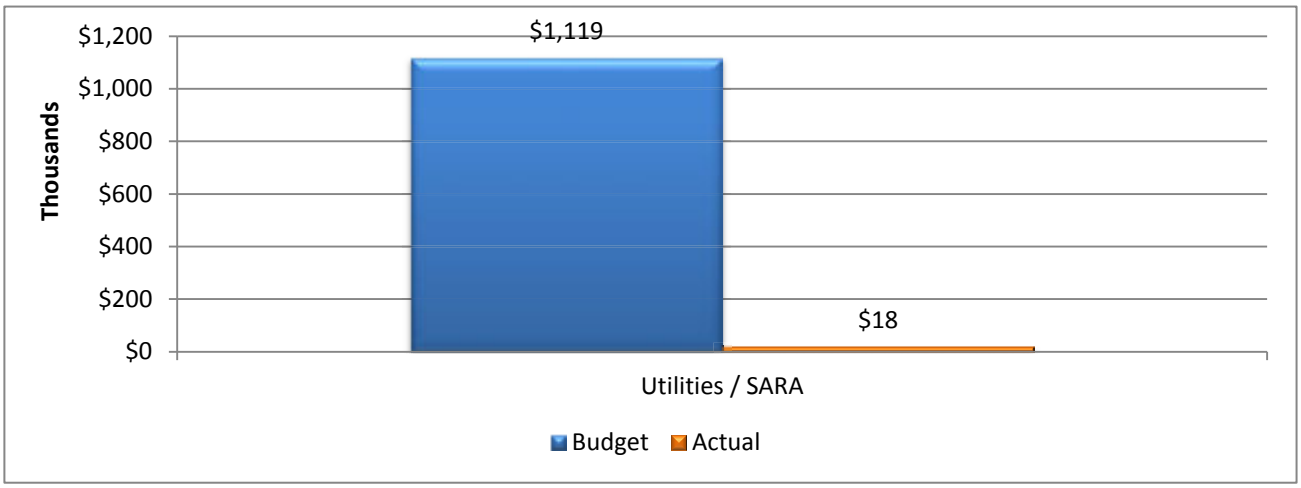
Project Start Date:	10/09/13	Total Project Budget:	$ 1,118,500
Project Finish Date:	12/27/17	Managing Department:	Utilities

This project will evaluate treatment technologies, select an appropriate engineered solution, design modifications for project integration, procure new equipment, direct and manage the construction at the plant site and finally provide training for San Antonio River Authority staff to efficiently operate the equipment.

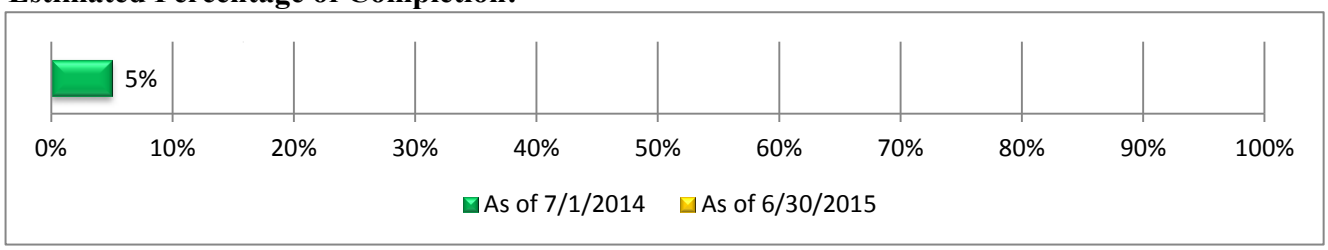
One of the clarifiers at Upper Martinez WWTP is in need of replacement due to its age; therefore, replacement and/or addition of tertiary filters will be needed. This project will compare new filtering technologies as compared to the repair or replacement of the clarifier to improve the efficiency of plant operations and reduce the maintenance load caused by the aging process equipment. Evaluations started in fiscal year 2013/2014 and will continue in fiscal year 2014/2015. The recommended repairs based on the evaluation will be made in fiscal year 2015/2016.

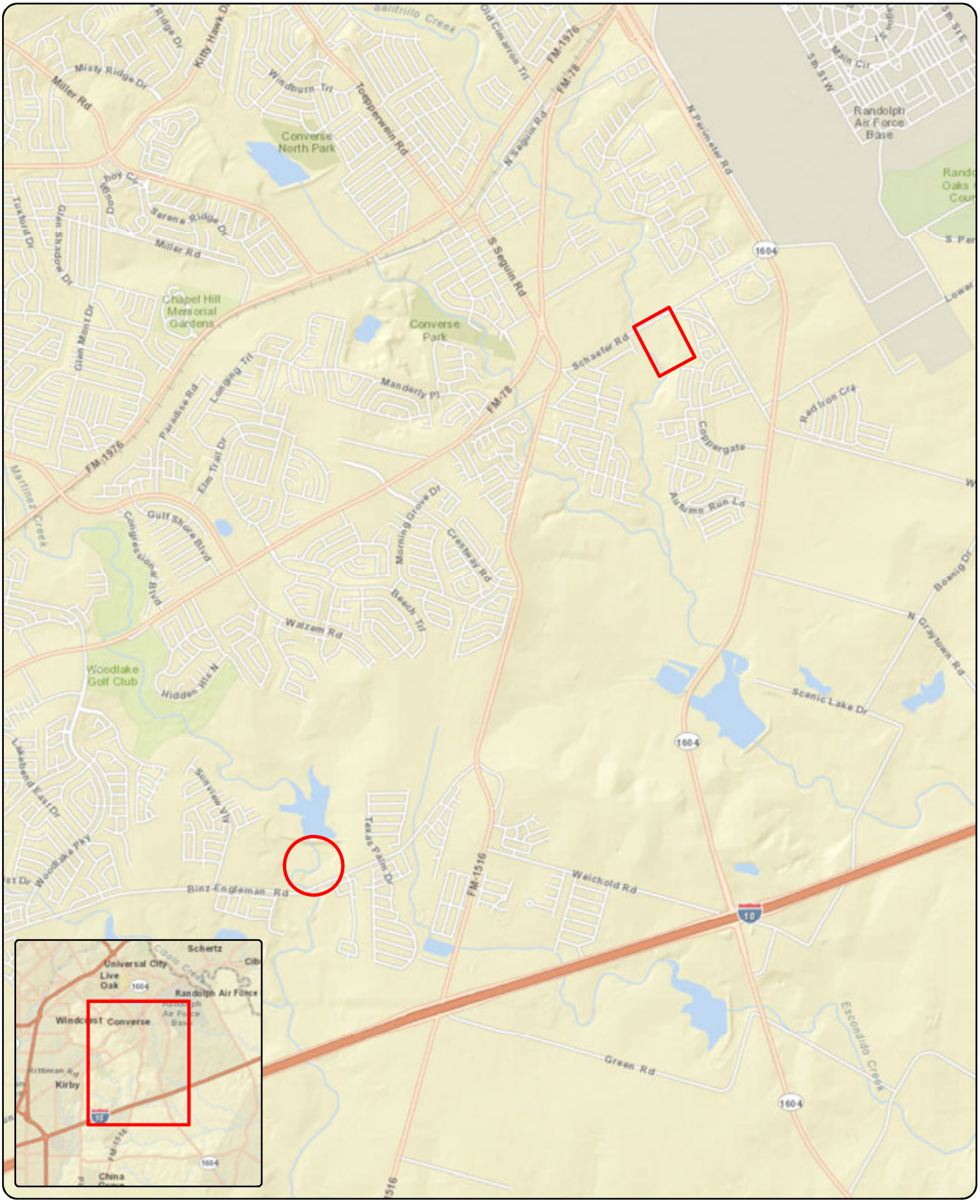
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 15,411	$ 15,025	$ 45,064	$ -	$ 75,500
Commodities	-	-	-	-	-
Contracts	3,000	-	1,040,000	-	1,043,000
Total	$ 18,411	$ 15,025	$ 1,085,064	$ -	$ 1,118,500

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
Replace Bar Screen at WWTPs

Project Service Area and/or Boundaries

N

0 0.35 0.7 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Replace Bar Screen at WWTPs** **Project #** **00000364**

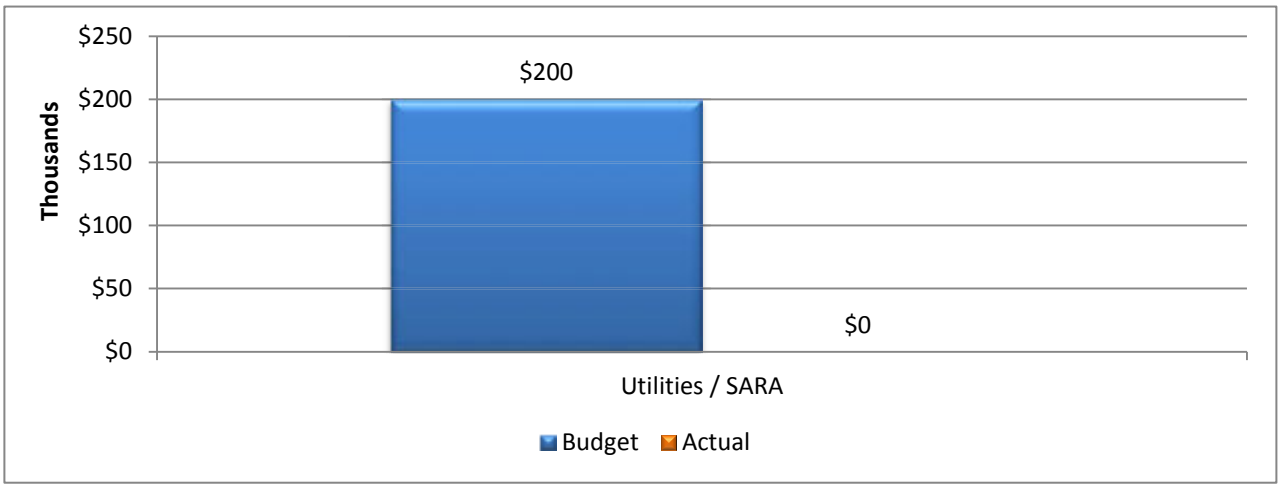
Project Start Date:	07/01/16	Total Project Budget:	$ 200,000
Project Finish Date:	06/30/17	Managing Department:	Utilities

The bar screen replacement project will include the purchase and installation of new bar screens to replace the existing aged bar screens at Upper Martinez and Salatrilllo. The existing bar screens were installed in 2005 and will be over 10 years old at the time of replacement in FY18

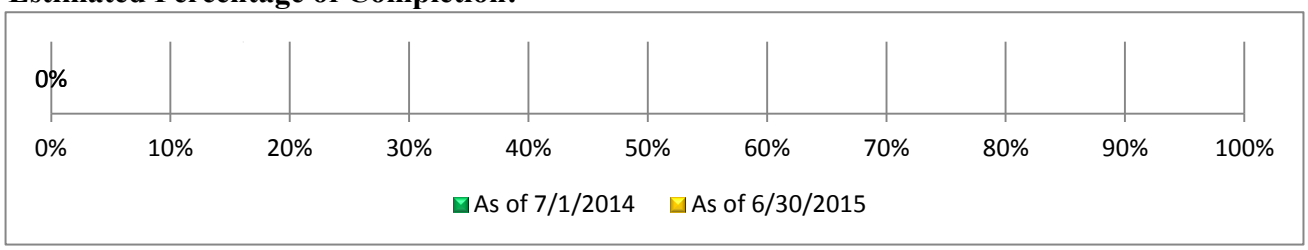
The bar screen replacement project will take place in FY18 and will include purchasing two new bar screens to replace the existing aged equipment at the Upper Martinez Wastewater Treatment Plant and Salatrillo Wastewater Treatment Plant. The removal of existing equipment and installation of new equipment will be contracted out.

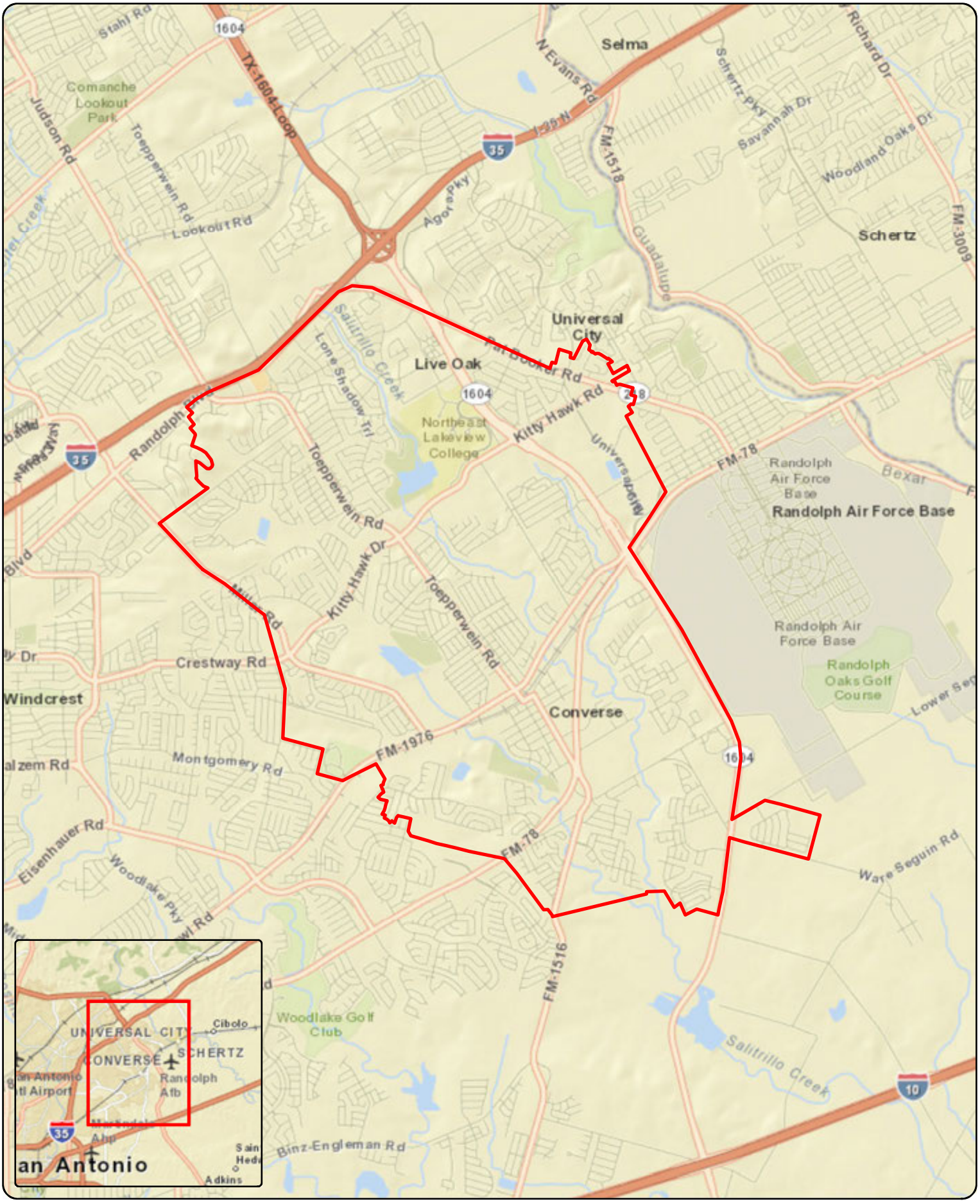
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ -	$ -	$ -	$ -
Commodities	-	-	-	-	-
Contracts	-	-	-	200,000	200,000
Total	$ -	$ -	$ -	$ 200,000	$ 200,000

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
Salatrillo Collection Wholesale System Inflow and Infiltration

Project Service Area and/or Boundaries

N

0 0.55 1.1 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Salatrillo Collection Wholesale System I and I** **Project #** **00000314**

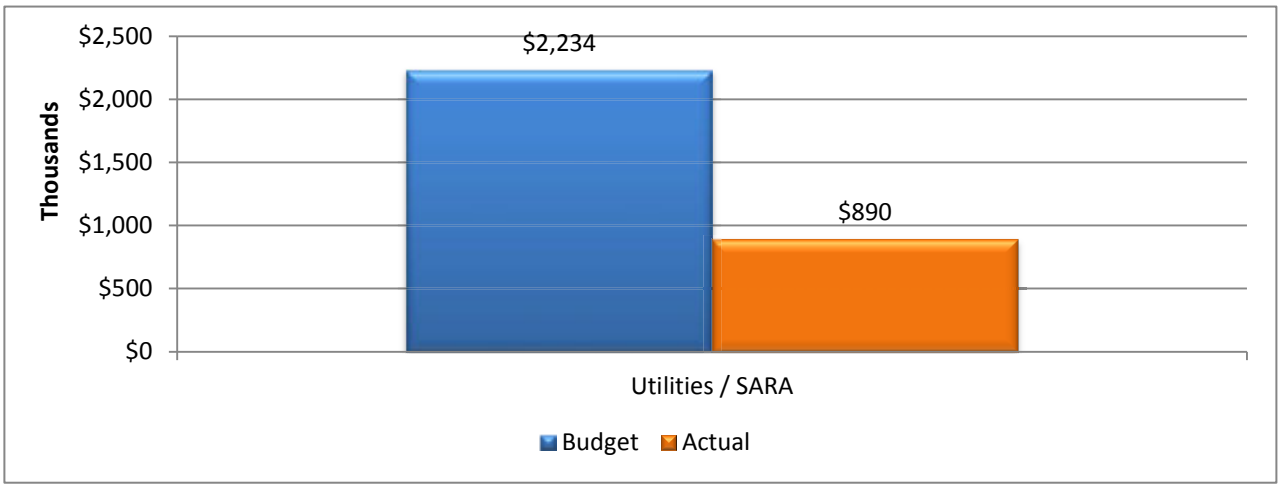
Project Start Date:	05/04/11	Total Project Budget:	$ 2,234,325
Project Finish Date:	06/30/21	Managing Department:	Utilities

The project will repair defective manholes and defective lines in the Salatrillo Wholesale System according to a 1 to 5 rating, with 5 being in the worst condition. Correction of 5-rated lines and manholes will reduce inflow and system infiltration (I/I) in identified areas of the system to help reduce or eliminate sanitary sewer overflows. Repairs throughout the whole system will be done over a 10 year period based on an Infra Matrix assessment of the system.

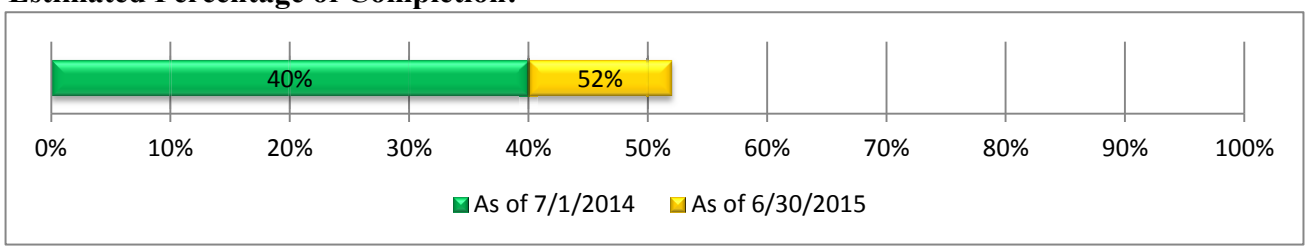
This year's project funds will repair 10 percent of the defective lines and manholes, which are all 4 - rated.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 7,855	$ 3,551	$ 3,676	$ 7,740	$ 22,822
Commodities	-	-	-	-	-
Contracts	882,608	262,965	262,965	802,965	2,211,503
Total	$ 890,463	$ 266,516	$ 266,641	$ 810,705	$ 2,234,325

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:



SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Salatrillo Wastewater Treatment Plant Expansion

Project Service Area and/or Boundaries

N

0 0.045 0.09 Miles

Project Name: **Salatrillo WWTP Expansion** **Project #** **00000116**

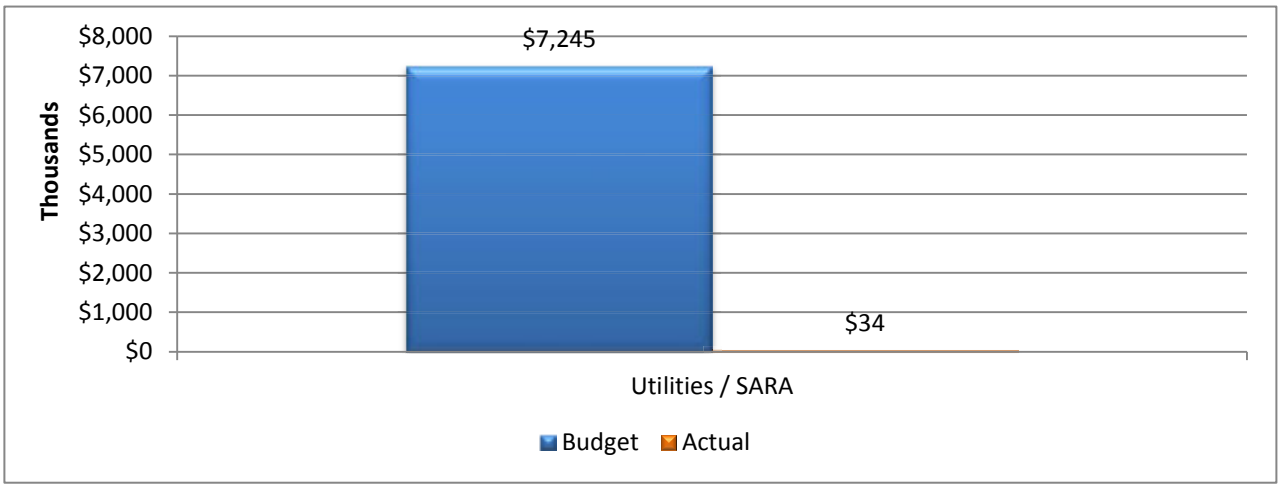
Project Start Date:	07/01/08	Total Project Budget:	$ 7,245,167
Project Finish Date:	06/30/20	Managing Department:	Utilities

The Salatrillo Wastewater Treatment Plant (WWTP) Expansion project will include an upgrade of the existing facility to accommodate future growth in the Salatrillo Wastewater Treatment Plant service area. In 2007, plant flow exceeded the TCEQ threshold of 75% for initiating the plant expansion design process. Recent surges in growth rates have been evaluated to determine the sizing of the design. Preparation of the permit amendment and conceptual design of the expansion were completed in fiscal year 2009/10. In 2011, the San Antonio River Authority (SARA) submitted a Sanitary Sewer Overflow Initiative plan to the Texas Commission on Environmental Quality to address inflow/infiltration issues in the wastewater collection system. The 1.5 million gallons per day expansion is expected to be completed in the FY 2020.

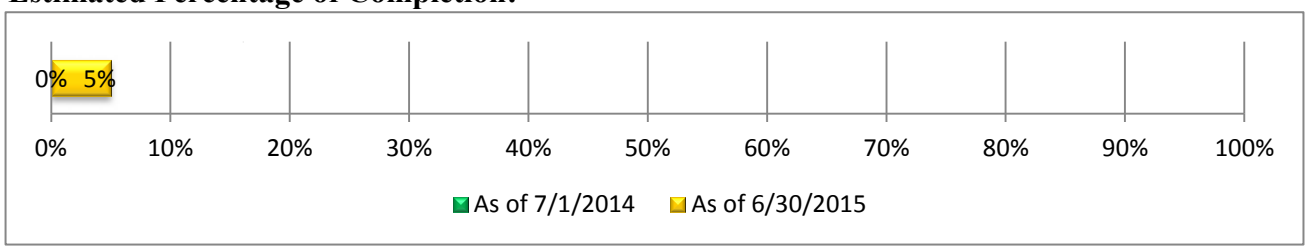
For the fiscal year 2014/15, SARA does not anticipate any expansion activities to this treatment facility, as our resources continue to be directed towards improving the wastewater collection system to reduce stormwater flows to the plant. Also, SARA will complete the preliminary engineering report for the 1.5 million gallons per day expansion so it will be available when the improvements become necessary.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 34,348	$ 10,819	$ -	$ -	$ 45,167
Commodities	-	-	-	-	-
Contracts	-	-	-	7,200,000	7,200,000
Total	$ 34,348	$ 10,819	$ -	$ 7,200,000	$ 7,245,167

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:



SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
SalatrilloWWTPScrewPumpRplmt

Project Service Area and/or Boundaries

N

0 0.045 0.09 Miles

Project Name: **Salatrillo WWTP Screw Pump** **Project #** **00000441**

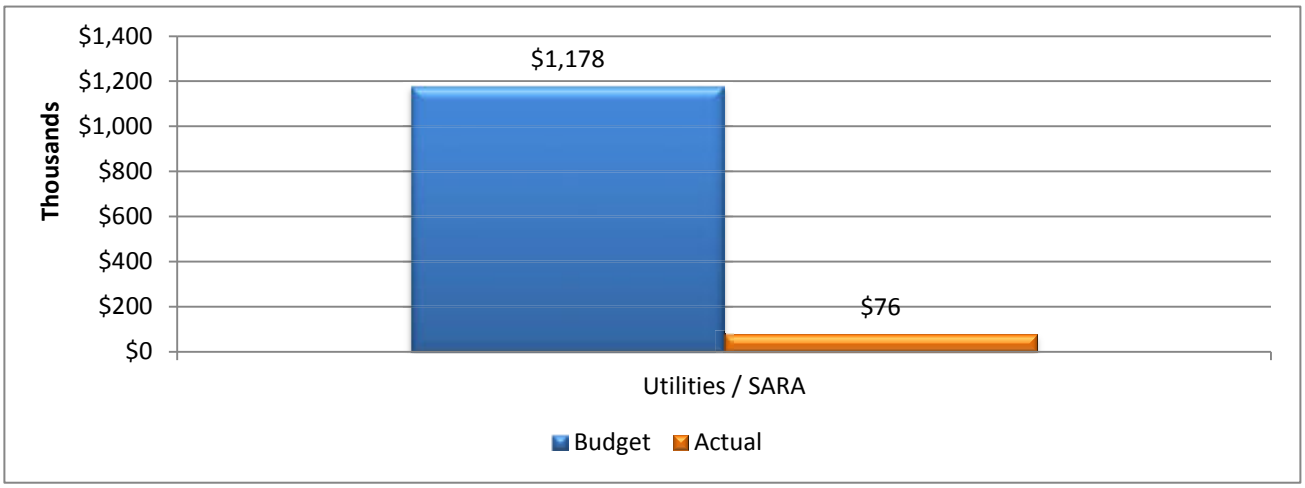
Project Start Date:	01/14/14	Total Project Budget:	$ 1,178,473
Project Finish Date:	04/14/15	Managing Department:	Utilities

The purpose of this project is to replace an existing, failing screw pump and add an additional screw pump at the Salatrillo Wastewater Treatment Plant. This project involves removal of a 54-inch existing screw pump and addition of a new 54-inch screw pump which will involve structural, electrical and instrumentation and control modifications. This is an emergency project that will require an immediate start due to one existing pump that has failed. Currently, the WWTP is operating on one functional screw pump and rented backup pumps.

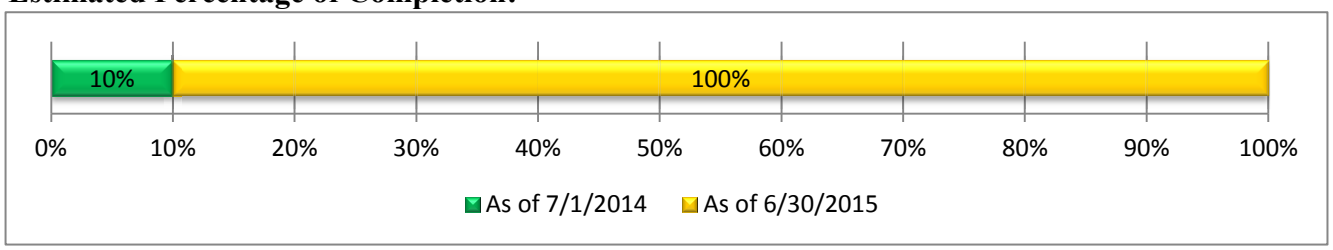
Design and bidding will take place during fiscal year 2013/2014. During fiscal year 2014/2015 the construction of one replacement and one new screw pump at the Salatrillo Wastewater Treatment Plant are funded.

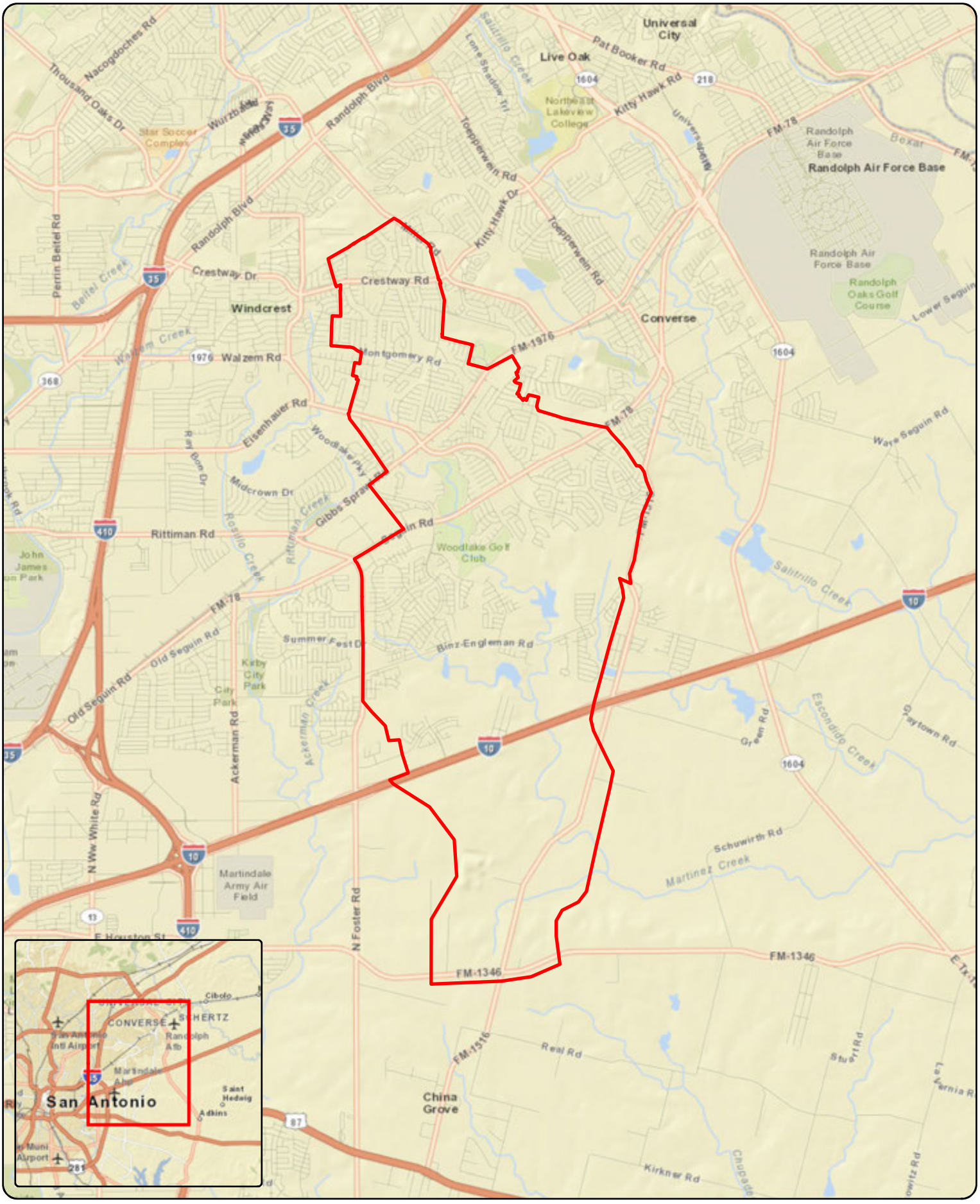
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 46,039	$ 32,434	$ -	$ -	$ 78,473
Commodities	-	-	-	-	-
Contracts	30,000	1,070,000	-	-	1,100,000
Total	$ 76,039	$ 1,102,434	$ -	$ -	$ 1,178,473

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
SARA Wastewater Collection System Inflow and Infiltration

Project Service Area and/or Boundaries

N

0 0.75 1.5 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **SARA Wastewater Collection System I and I** **Project #** **00000315**

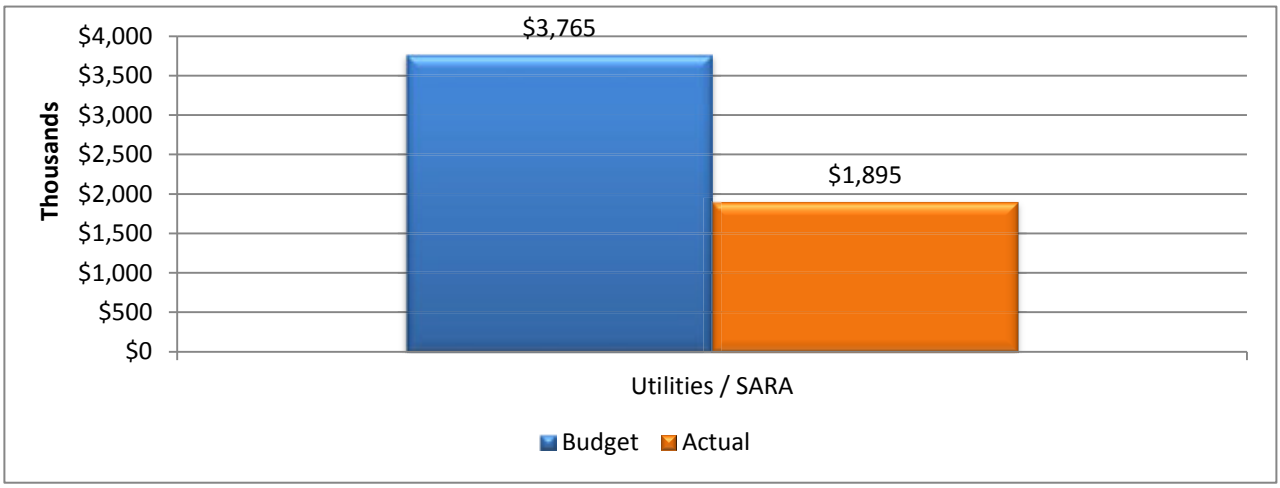
Project Start Date:	05/04/11	Total Project Budget:	$ 3,764,740
Project Finish Date:	06/30/21	Managing Department:	Utilities

The project will repair defective manholes and defective lines in the San Antonio River Authority (SARA) Wastewater System according to a 1 to 5 rating, with 5 being in the worst condition. Correction of 5 - rated lines and manholes will reduce inflow and infiltration (I/I) in identified areas of the system to help reduce or eliminate sanitary sewer overflows. Repairs throughout the whole system will be done over a 10-year period based on an Infra Matrix report on the assessment of the system.

During the fiscal year 2014/2015, the project funds will repair 33 percent of the lines and manholes, which are all rated number 5's.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 18,025	$ 6,345	$ 5,882	$ 24,990	$ 55,242
Commodities	-	-	-	-	-
Contracts	1,877,316	557,182	250,000	1,025,000	3,709,498
Total	$ 1,895,341	$ 563,527	$ 255,882	$ 1,049,990	$ 3,764,740

Budget to Actual by Funding Source as of 7/1/2014:



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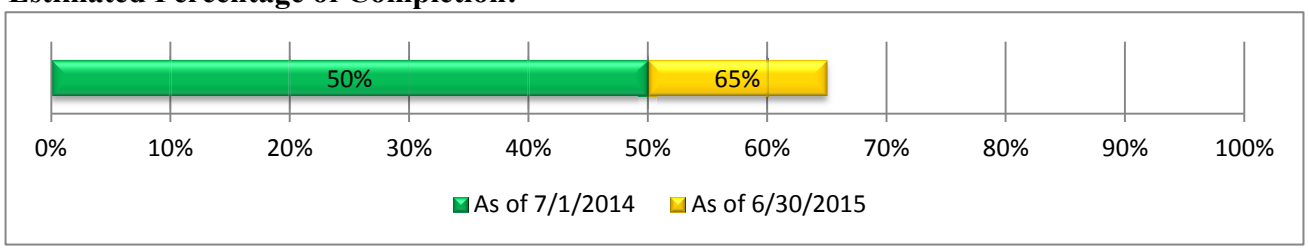
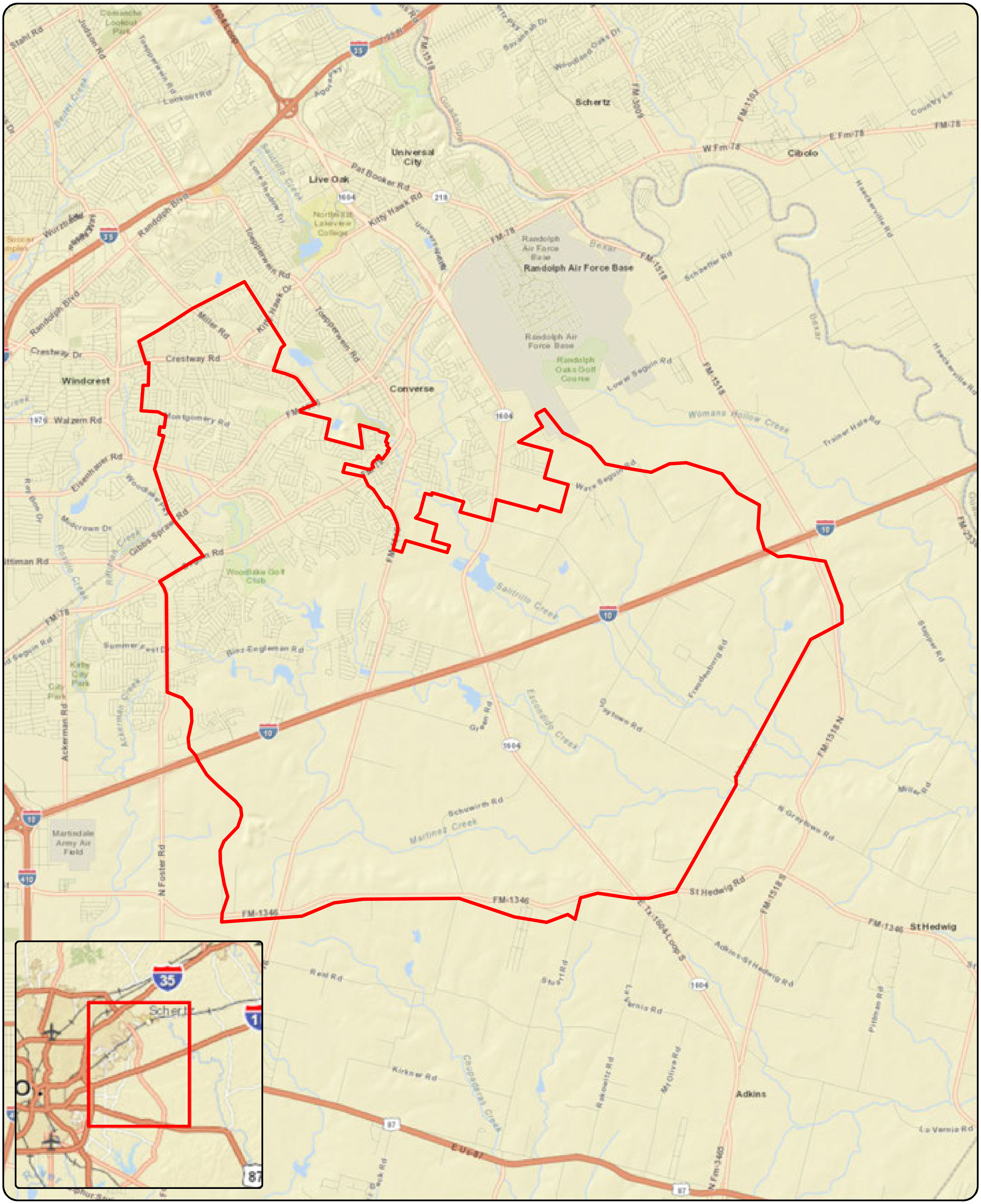



Schertz
Universal City
Live Oak
Cibolo
Converse
Windcrest
Randolph Air Force Base
Randolph Oaks Golf Course
Northeast Lakeview College
Woodlake Golf Club
Martindale Army Air Field
Kirby City Park
St Hedwig
Adkins
Pat Booker Rd
Kitty Hawk Rd
Randolph Blvd
Crestway Rd
Crestway Dr
Miller Rd
Walzem Rd
Montgomery Rd
Eisenhauer Rd
Woodlake Pkwy
Gibbs Sprawl Rd
Binz-Engleman Rd
Ackerman Rd
N Foster Rd
FM-1346
FM-78
FM-1518
FM-3009
FM-1103
W Fm-78
E Fm-78
Lower Seguin Rd
Ware Seguin Rd
Salitrillo Creek
Escondido Creek
Martinez Creek
Woman Hollow Creek
Graytown Rd
N Graytown Rd
Schuwirth Rd
Green Rd
Real Rd
Stuart Rd
La Vernia Rd
Kirkner Rd
St Hedwig Rd
Adkins-St Hedwig Rd
Trainer Hale Rd
Haeckerville Rd
Schaefer Rd
Stoepper Rd
Pittman Rd
E Us-87
FM-1518 N
Toepperwein Rd
Cibolo Creek

Project Name:
Utilities Supervisory Control Data Acquisition (SCADA) System

Project Service Area and/or Boundaries

N

0 1 2 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Utilities SCADA System** **Project #** **00000101**

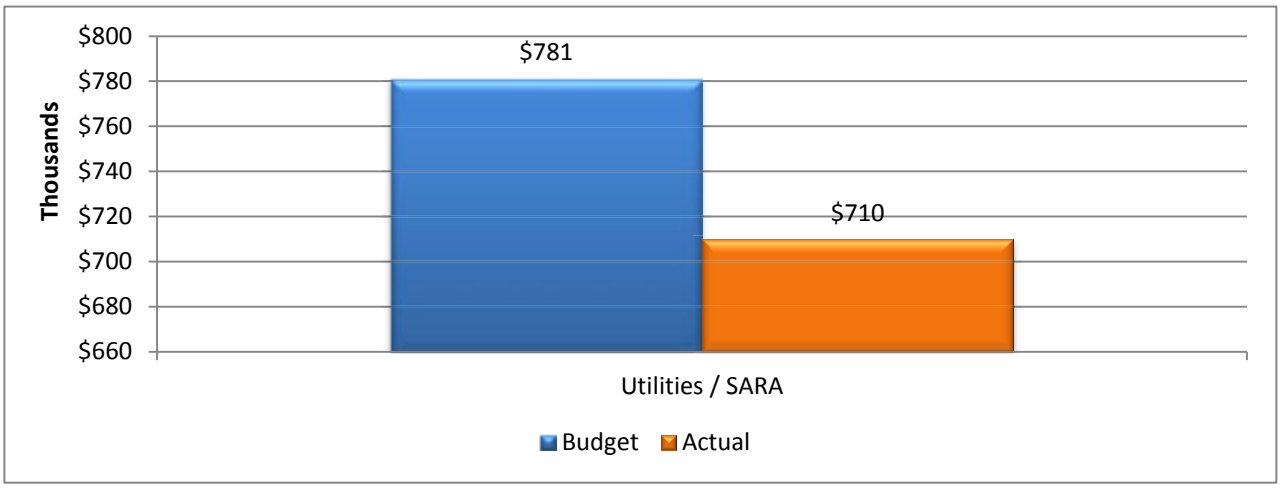
Project Start Date:	04/02/07	Total Project Budget:	$ 781,073
Project Finish Date:	06/30/15	Managing Department:	Utilities

The Supervisory Control and Data Acquisition (SCADA) program will provide communications and controls for the River Authority wastewater and water systems from one central computer system. Currently, the River Authority does not have a centralized communication and security control application. This application will help to comply with homeland security within the region; it will also provide a real time monitoring and control system to improve efficiency. The Utilities program will eventually share data through the SCADA system with Watershed and Park Operations, Watershed Management, and Environmental Sciences departments.

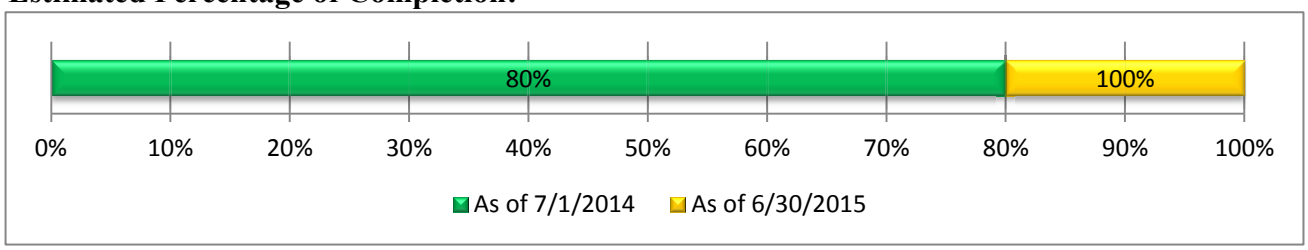
For the 2014/15 fiscal year, all major treatment plant SCADA systems will have been installed and functional, and SCADA systems will be designed and installed on the remaining operational package wastewater treatment plants and lift stations. These operations include the Martinez III and Alamo Community College District (ACCD) FRA WWTPs as well as two lift stations. These systems will provide Utilities staff better control over these units, and this is expected to be done through a design-build project delivery method.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 79,174	$ 11,336	$ -	$ -	$ 90,510
Commodities	211,822	-	-	-	211,822
Contracts	418,741	60,000	-	-	478,741
Total	$ 709,737	$ 71,336	$ -	$ -	$ 781,073

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:



Utilities Program

- **Alamo Community College District (ACCD) Wastewater Treatment Plant**
  The River Authority is contracted to operate and maintain the ACCD wastewater treatment plant (WWTP).

- **First Responders Academy**
  The River Authority is contracted to operate and maintain the First Responders Campus of Alamo Community College District (ACCD).

- **Goliad Water Supply Corporation Operations and Maintenance**
  The River Authority is contracted to operate and maintain the water systems for the cities of Fannin and Berclair in Goliad County.

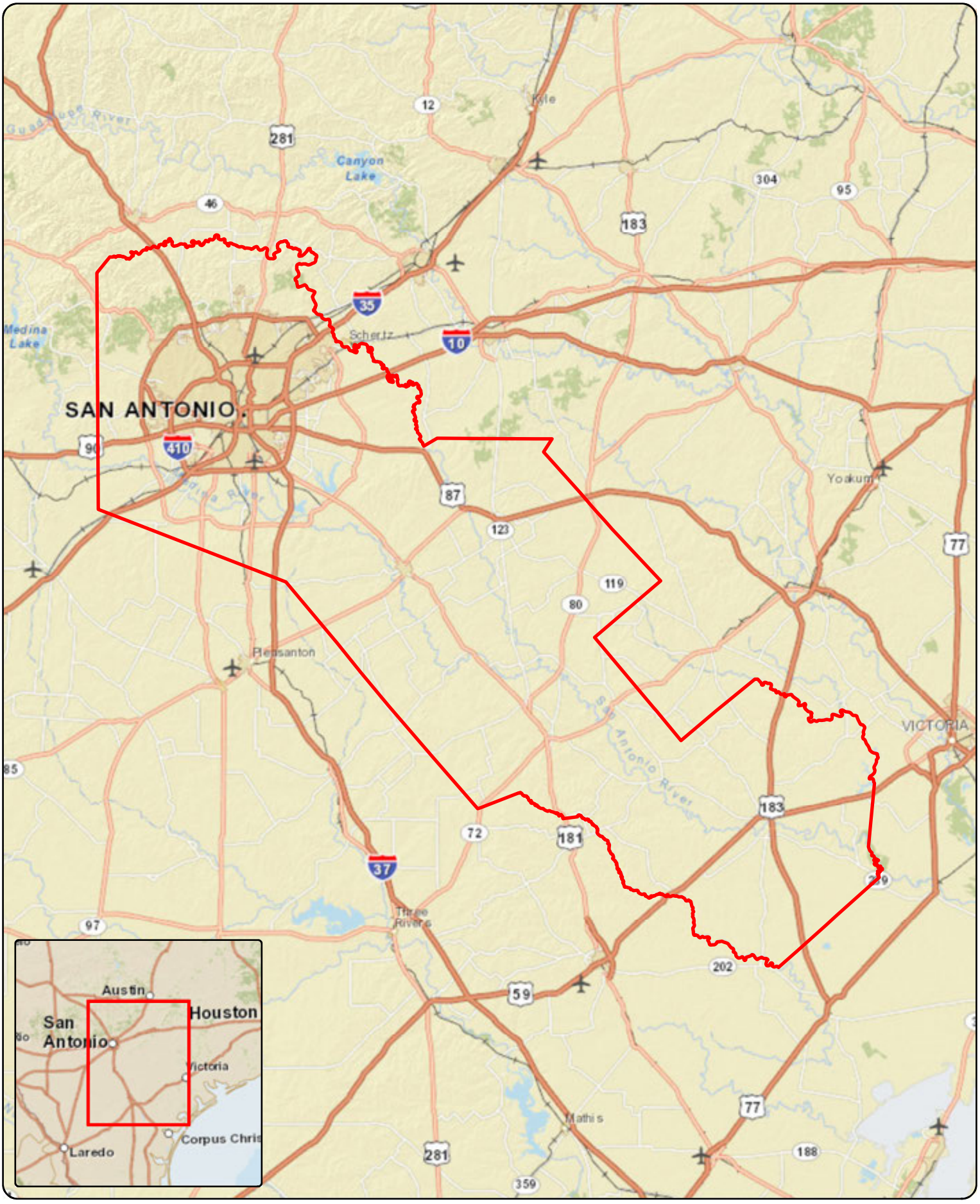
- **Joint Base San Antonio Cross Training**
  Through the collaboration of the operations, collections and maintenance personnel this effort will provide training to the River Authority Utilities Department personnel.

- **Salatrillo Wastewater System New Development**
  Once plans have been approved and constructed the River Authority provides wastewater services to new developments within the River Authority's wastewater service area.

- **San Antonio River Authority (SARA) Wastewater Line Rehabilitation – Metropolitan Planning Organization**
  The River Authority upgrades and/or repairs outdated collection system lines in coordination with the Bexar County Metropolitan Planning Organization and TxDOT on street improvement projects.

- **SARA Wastewater Reuse**
  The River Authority is coordinating with other entities to supply reuse water and alleviate the use of Edwards Aquifer water. The River Authority currently works with the Woodlake Golf Course, the Alamo Community College District, and Universal City to supply reuse water from the Martinez I and Salatrillo systems. As more entities show an interest in using reuse water, the River Authority will ensure there are adequate flows in the streams before agreeing to supply reuse water.

- **SARA Wastewater System New Development**
  Once plans have been approved and constructed the River Authority provides wastewater services to new developments within the River Authority's wastewater service area.



Project Name:
Basin Future Land Use

Project Service Area and/or Boundaries

N

0 10 20 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Basin Future Land Use** **Project #** **00000461**

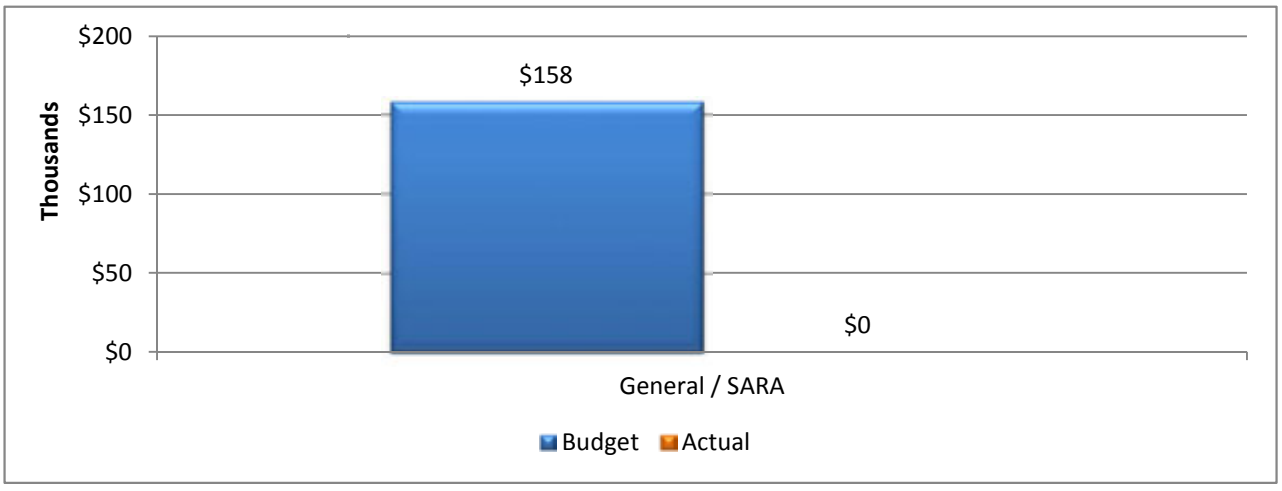
Project Start Date:	07/01/15	Total Project Budget:	$ 158,339
Project Finish Date:	06/30/16	Managing Department:	Watershed Engineering

Development of science-based recommendations for master planning efforts through hydrologic and water quality modeling requires an estimate of the future land use and cover conditions of the watershed. Currently there is not a cohesive predictive dataset for the San Antonio River Basin. This project will address the need for realistic future land use through identification of the most likely land development trends, incorporation of population and employment statistics by regional and state planning, and local and regional assessment of policy influencing development.

This project will develop geospatial data describing likely land use changes for the future of the San Antonio River Basin. It will provide predictive land use categorizations for mutliple time horizons based on interpratations of short and long term trends in land development, population growth, and economic development. A standardized approach will used for the full extent of the San Antonio River Basin. This will allow multiple San Antonio River Authority watershed master planning and other projects dependent on modeling to use a standard dataset, facilitating these projects.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ -	$ 5,839	$ -	$ 5,839
Commodities	-	-	2,500	-	2,500
Contracts	-	-	150,000	-	150,000
Total	$ -	$ -	$ 158,339	$ -	$ 158,339

Budget to Actual by Funding Source as of 7/1/2014:



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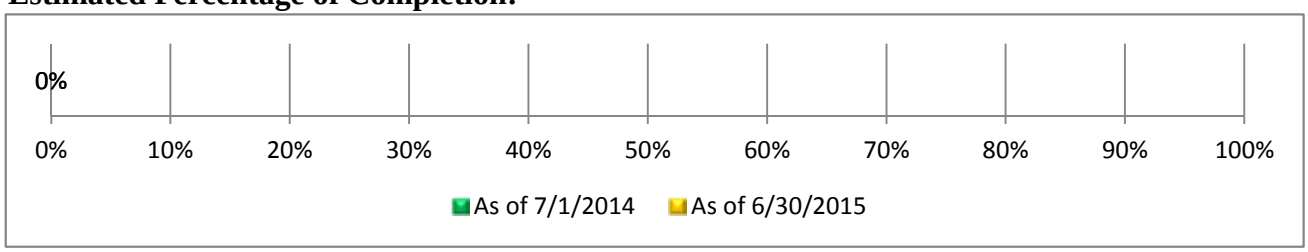
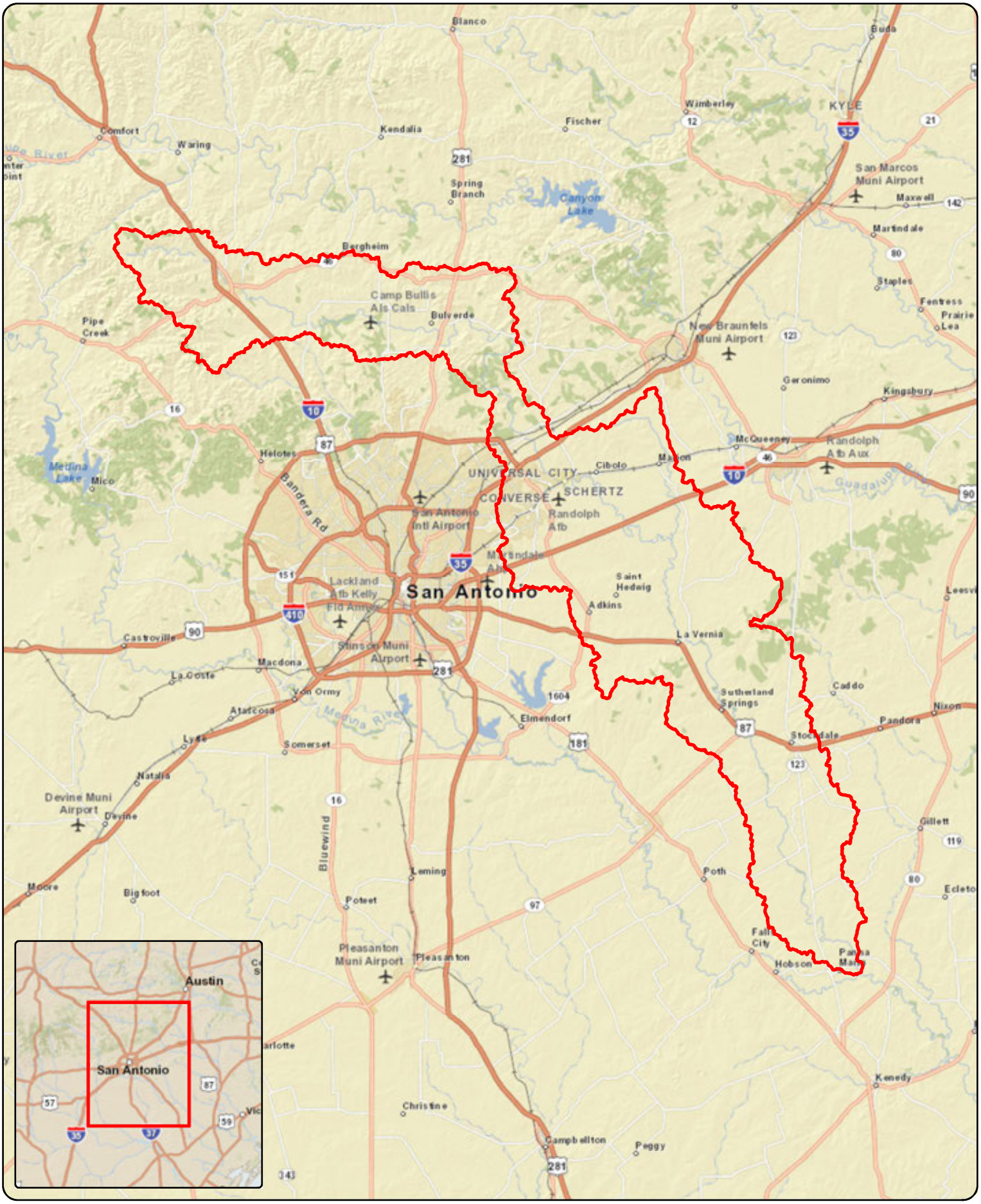




Project Name:
Cibolo Creek Holistic Watershed Master Plan

Project Service Area and/or Boundaries

N

0 6 12 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Cibolo Creek Holistic Watershed Master Plan** **Project #** **00000305**

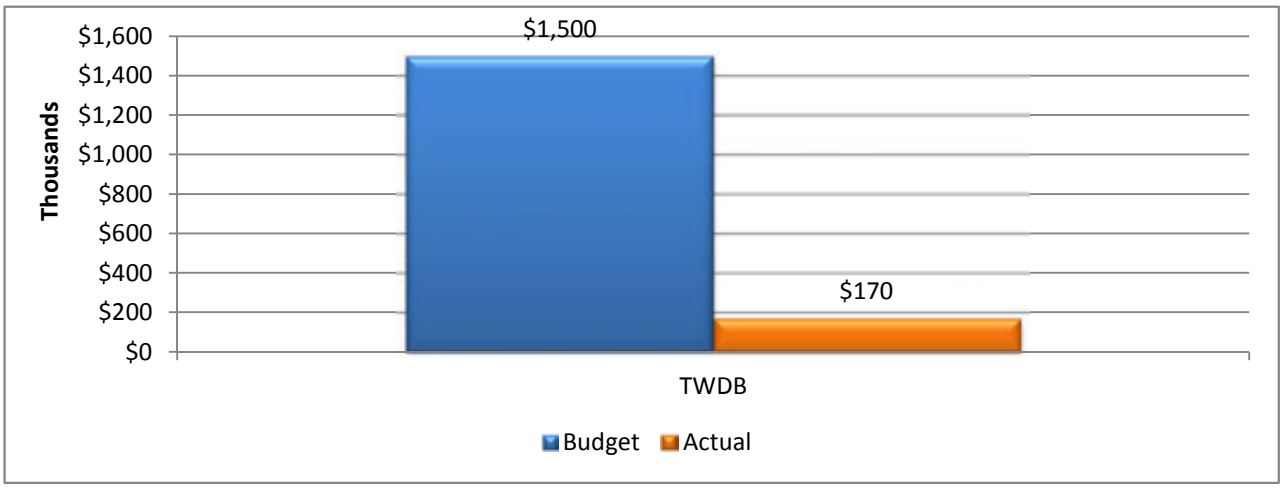
Project Start Date:	07/01/13	Total Project Budget:	$ 1,500,000
Project Finish Date:	06/30/16	Managing Department:	Watershed Engineering

A holistic Watershed Master Plan (WSMP) will be developed for the Cibolo Creek Watershed. The plan will focus on flood issues (hydrologic and hydraulic analysis), stream restoration, water quality modeling, water quality best management practices, (GIS)/mapping/remote sensing, low impact development, MS4 permitting, conservation easements, mitigation banking, and nature-based park planning. The activities of this project include identification of major flooding reaches, stream characterization and identification of the restoration potential, point and non-point pollutant sources that impact water quality, and development of holistic solutions to address identified risk centers and to meet multiple objects and goals.

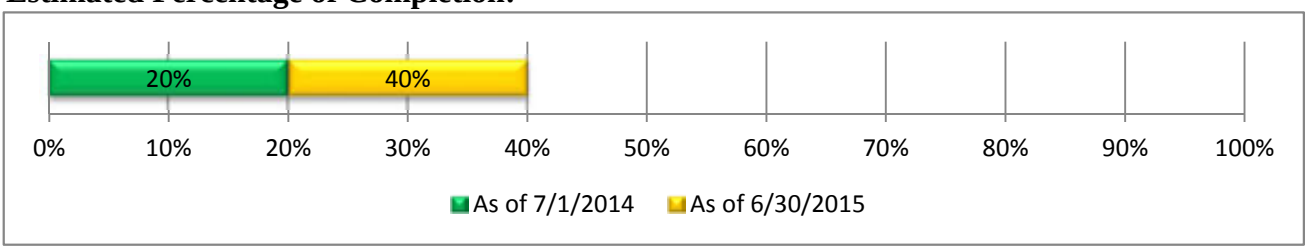
The project funding for fiscal year 2014/15 will support data collection, identifying key stakeholders, adjusting project scope to address justified requirements, preliminary flood modeling, assessing restoration potential and water quality modeling.

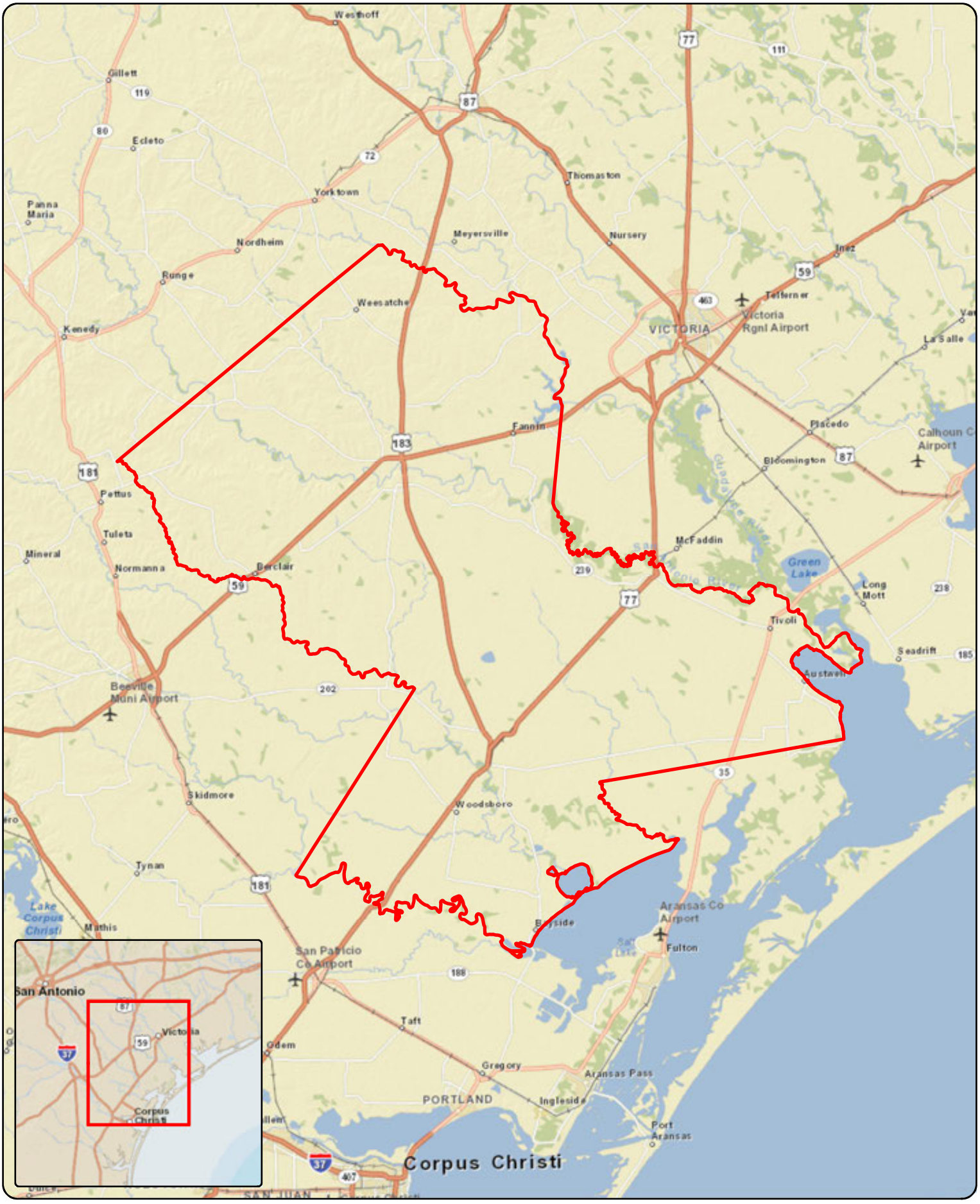
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 58,136	$ 40,583	$ 21,215	$ -	$ 119,934
Commodities	414	400	400	-	1,214
Contracts	111,531	860,112	407,209	-	1,378,852
Total	$ 170,081	$ 901,095	$ 428,824	$ -	$ 1,500,000

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
EDYS - Goliad and Refugio County

Project Service Area and/or Boundaries

N

0 6 12 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **EDYS-Goliad and Refugio** **Project #** **00000412**

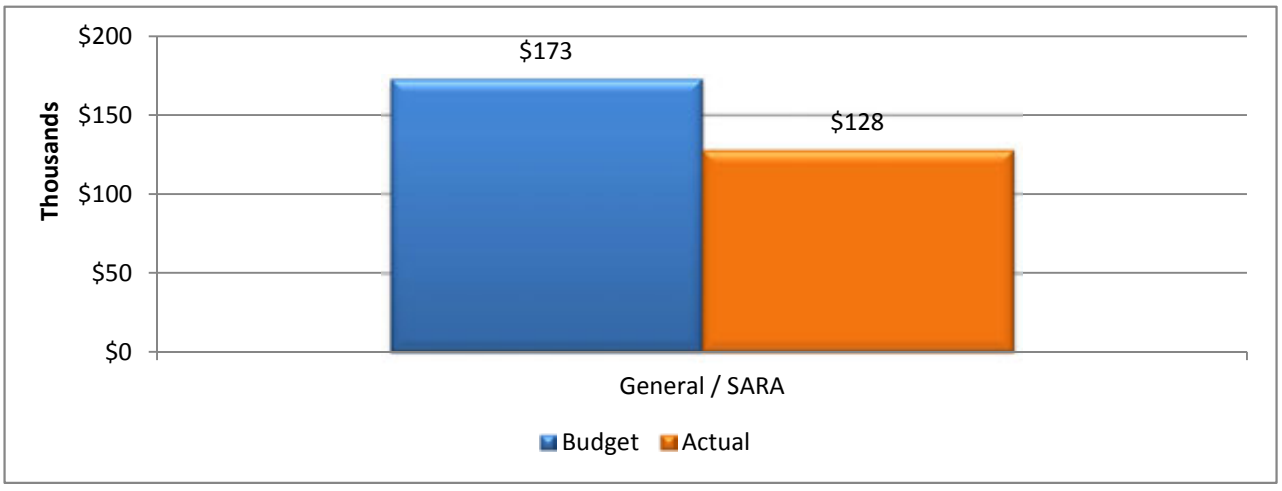
Project Start Date:	09/10/13	Total Project Budget:	$ 173,202
Project Finish Date:	06/29/16	Managing Department:	Watershed Engineering

Ecosystem Dynamic Simulation (EDYS) is a tool that has been used to evaluate complex direct and indirect interactions of both natural and anthropogenic factors on water quality and quantity at numerous sites and under a very wide range of environmental conditions. This project will fund useful tools to simulate rural impacts on water quality and management options such as livestock, grazing, brush management, urbanization, road construction, cultivation, confined animal operations and mineral development. Currently this project is partially funded by the Texas State Soil and Water Conservation Board (TSSWCB).

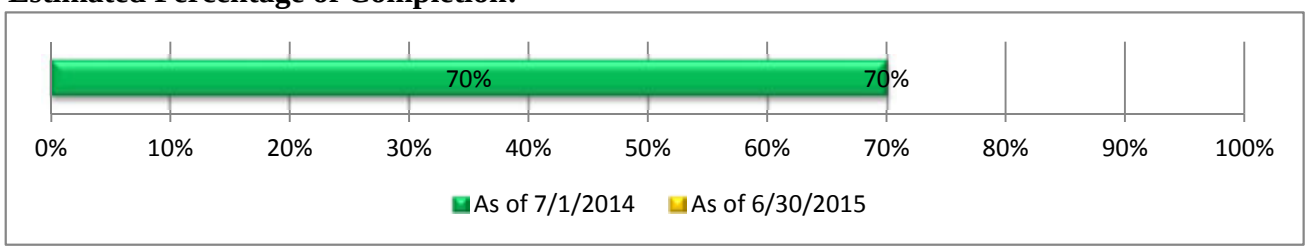
In fiscal year 2014/15, EDYS models devleloped for Goliad, Refugio and Victoria counties will be further refined to include vegetation and monitoring data.

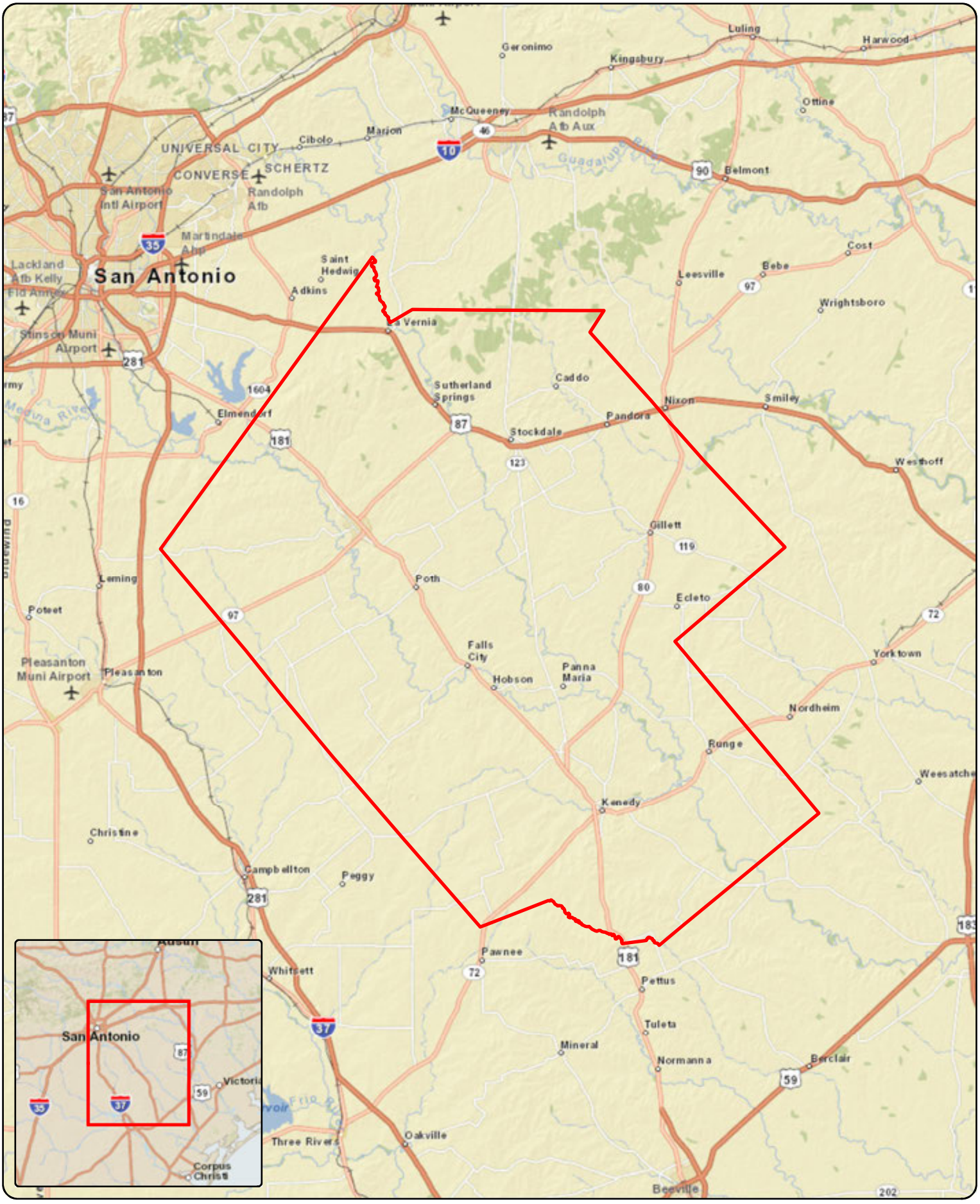
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 3,175	$ -	$ 9,387	$ -	$ 12,562
Commodities	-	-	-	-	-
Contracts	125,000	-	35,640	-	160,640
Total	$ 128,175	$ -	$ 45,027	$ -	$ 173,202

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
EDYS - Karnes and Wilson County

Project Service Area and/or Boundaries

N

0 5.5 11 Miles

Project Name: **EDYS-Karnes and Wilson County** **Project #** **00000370**

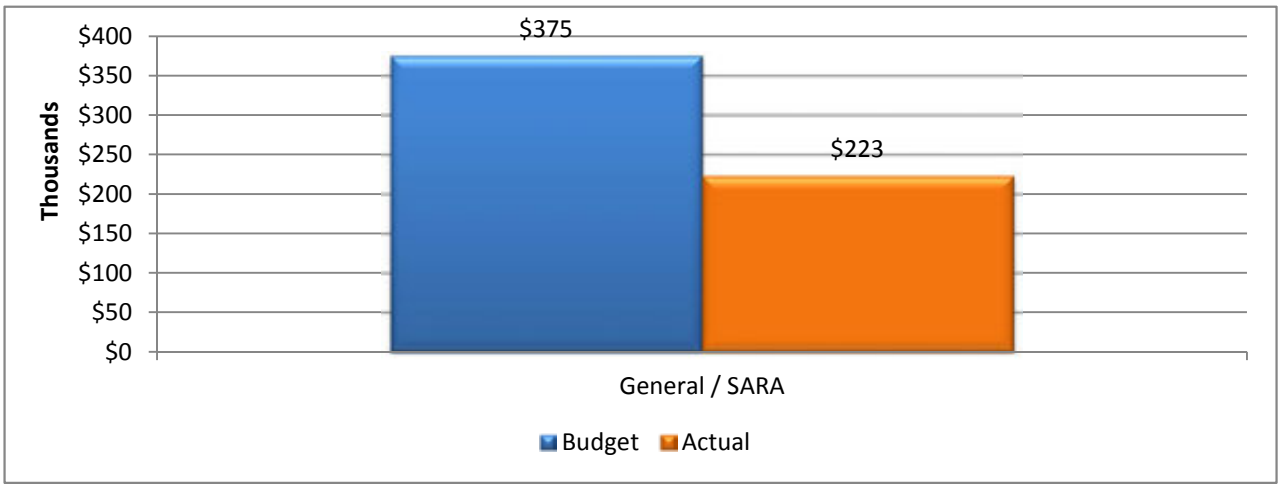
Project Start Date:	07/01/12	Total Project Budget:	$ 375,462
Project Finish Date:	06/30/16	Managing Department:	Watershed Engineering

Ecosystem Dynamic Simulation (EDYS) models will be developed for the San Antonio River Basin. These models will serve as useful tools to simulate rural impacts on water quality and management options such as livestock, grazing, brush management, urbanization, road construction, cultivation, confined animal operations and mineral development.

In fiscal year 2014/15, EDYS models devleloped for Karnes and Wilson counties will be further refined to include vegetation and monitoring data. In addition, there will also be an evaluation of potential linkage of EDYS to other SARA models.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 3,737	$ -	$ 10,718	$ -	$ 14,455
Commodities	-	-	-	-	-
Contracts	219,541	-	141,466	-	361,007
Total	$ 223,278	$ -	$ 152,184	$ -	$ 375,462

Budget to Actual by Funding Source as of 7/1/2014:



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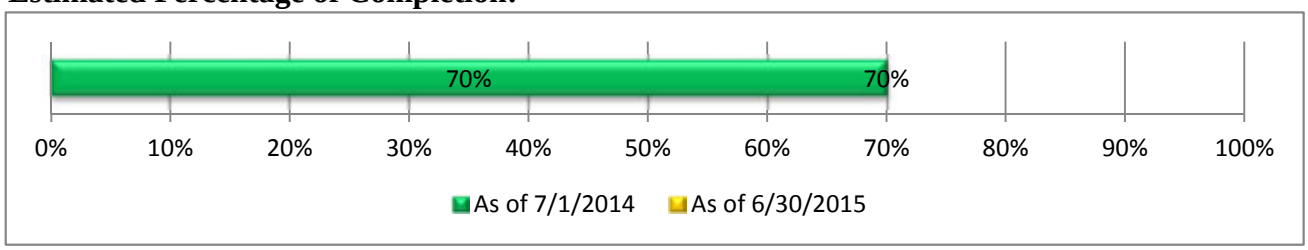
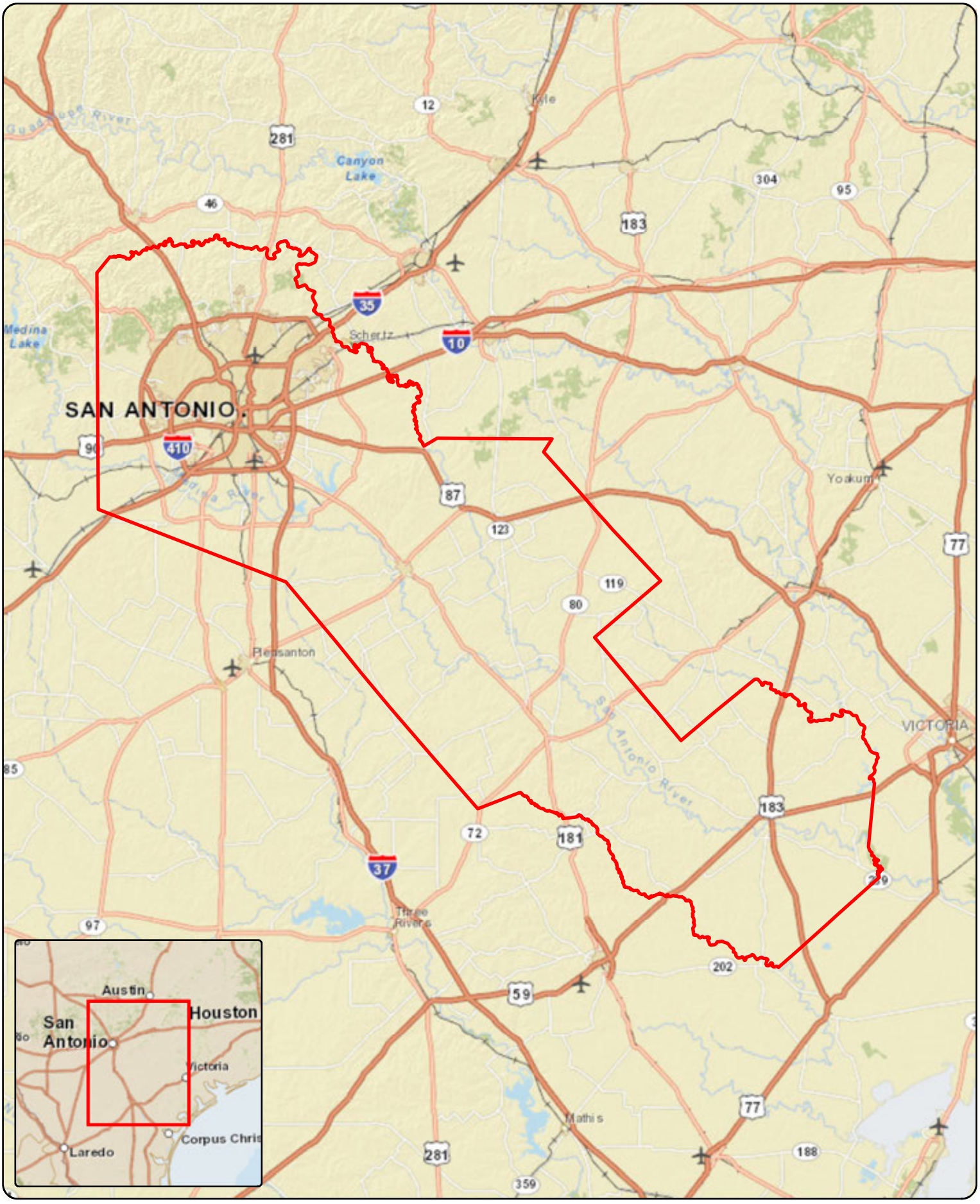




SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Environmental Monitoring System

Project Service Area and/or Boundaries

N

0 10 20 Miles

Project Name: **Environmental Monitoring System** **Project #** **00000073**

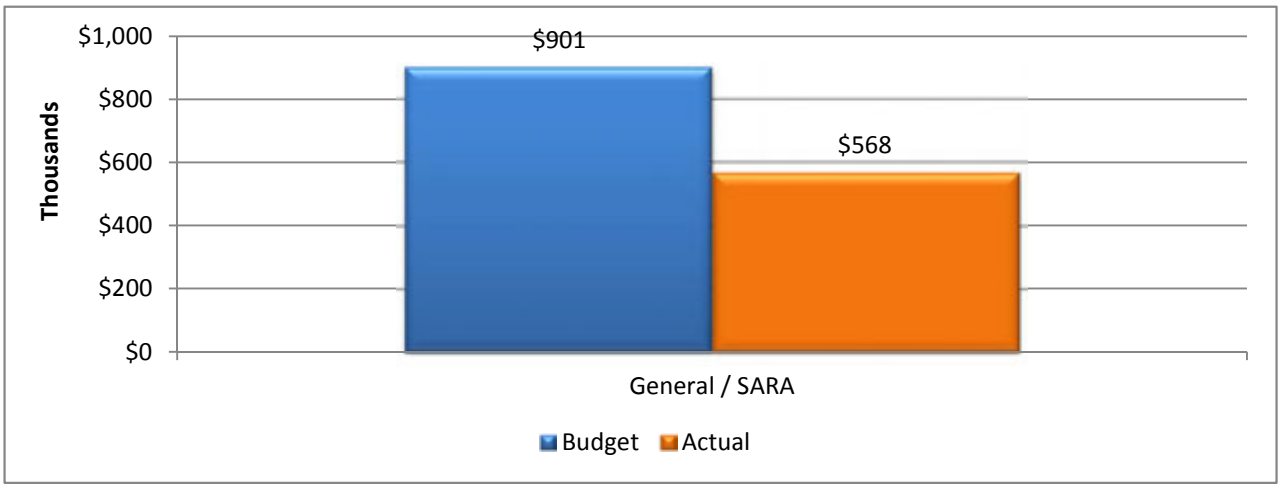
Project Start Date:	03/18/08	Total Project Budget:	$ 901,422
Project Finish Date:	11/02/18	Managing Department:	Watershed Engineering

This project is building a rain gauge network that monitors rainfall and stream depth to support the Bexar County Flood Warning Project and provide water level data at all 41 San Antonio River Authority (SARA) dams. Coordination between existing rainfall monitoring systems of the City of San Antonio and the Edwards Aquifer Authority (EAA) will be conducted to maximize data collection in Bexar County. Future expansion into Wilson, Karnes, and Goliad counties is planned. Installation of equipment in Bexar County is a cooperative effort between SARA and EAA.

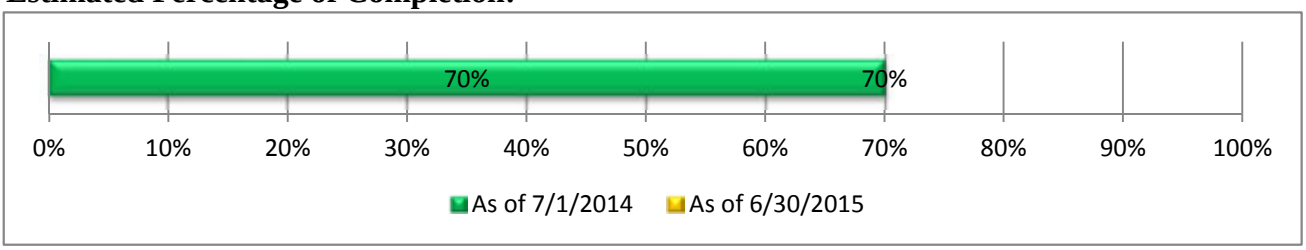
For the 2015 fiscal year, the project will complete any work needed to get Karnes County data back to SARA and expand the Bexar County network along selected sites along Salado Creek.

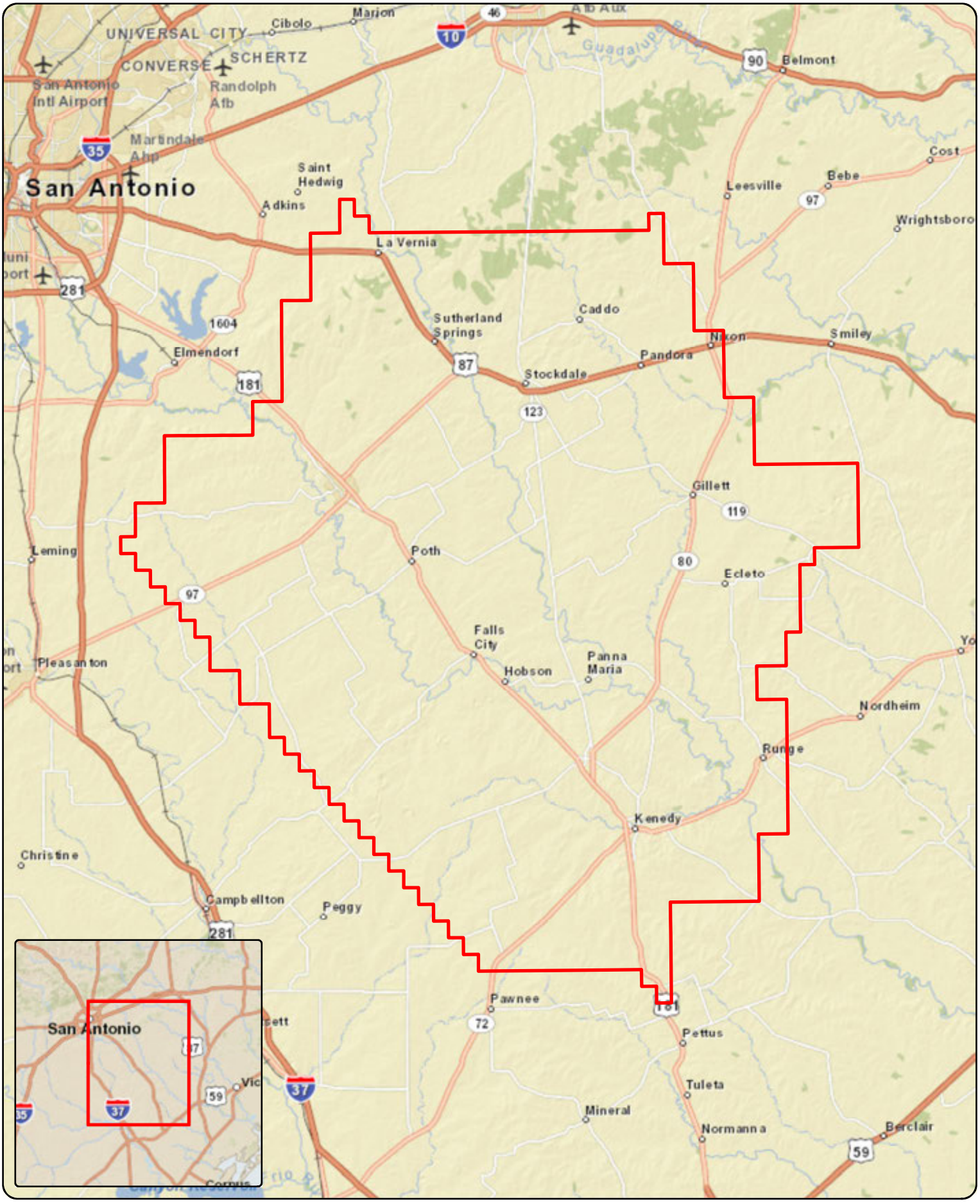
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 108,056	$ -	$ 36,866	$ 38,826	$ 183,748
Commodities	437,071	-	228,806	29,000	694,877
Contracts	22,797	-	-	-	22,797
Total	$ 567,924	$ -	$ 265,672	$ 67,826	$ 901,422

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
LiDAR Enhancement Project

Project Service Area and/or Boundaries

N

0 4.5 9 Miles

Project Name: **LiDAR Enhancement Project** **Project #** **00000449**

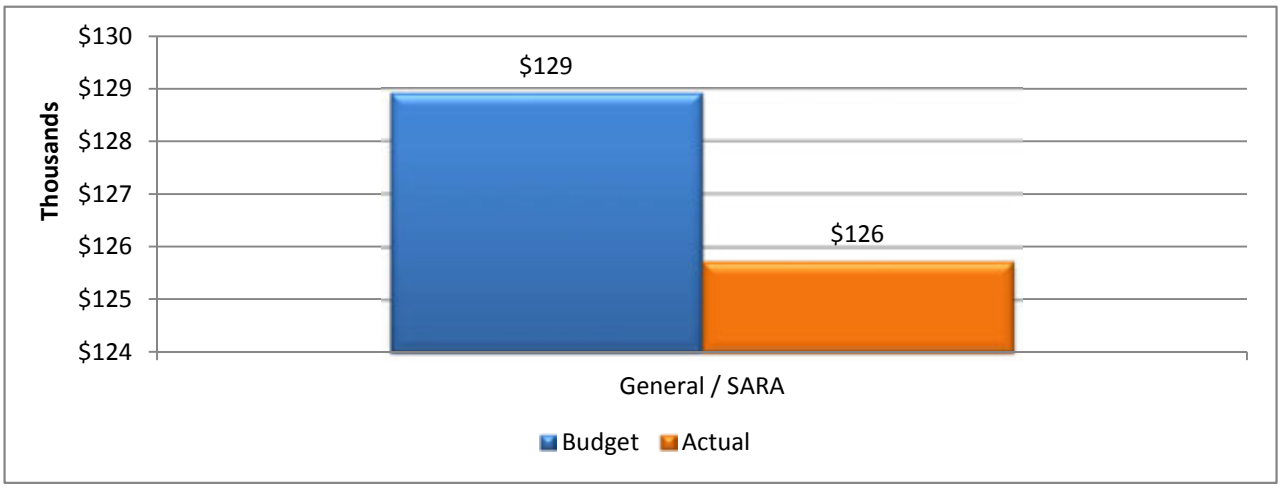
Project Start Date:	07/01/14	Total Project Budget:	$ 128,916
Project Finish Date:	06/30/15	Managing Department:	Watershed Engineering

The objective of this project is to further exploit the Light Detection and Ranging (LiDAR) data acquired in Wilson, Karnes, and Goliad Counties by developing updated topographic contours. This project will assess the data previously collected and determine whether the underlying information will support one-foot or two-foot contours development.

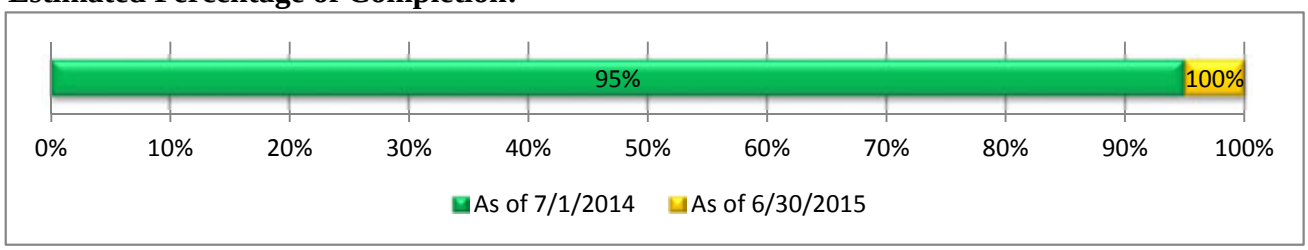
In fiscal year 2015 this project will use the existing LiDAR data to derive two-foot contours (one-foot if assessed data will support) in compliance with Federal Emergency Management Agency (FEMA) "Procedure Memorandum No. 61 – Standards for LiDAR and Other High Quality Digital Topography." These data will be produced for each downstream county; adjacent data will be edged-matched with existing contours. The deliverables for this project will consist of an initial data assessment memorandum, contours in GIS format, and a technical memo of procedures and methodologies used to develop the topographic data.

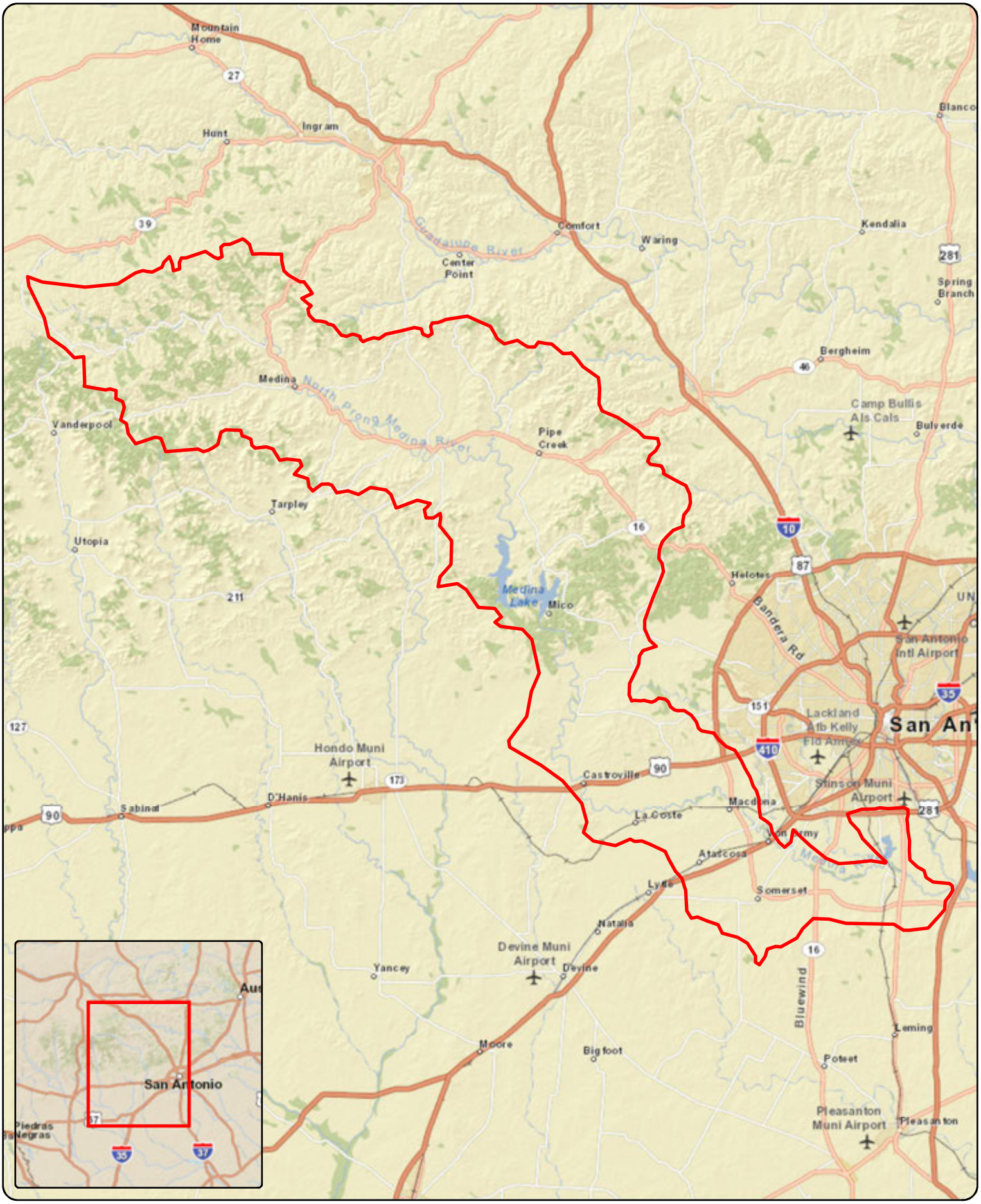
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 729	$ 3,187	$ -	$ -	$ 3,916
Commodities	-	-	-	-	-
Contracts	125,000	-	-	-	125,000
Total	$ 125,729	$ 3,187	$ -	$ -	$ 128,916

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Medina River Holistic Watershed Master Plan

Project Service Area and/or Boundaries

N

0 5.5 11 Miles

Project Name: **Medina River Holistic Watershed Master Plan** **Project #** **00000286**

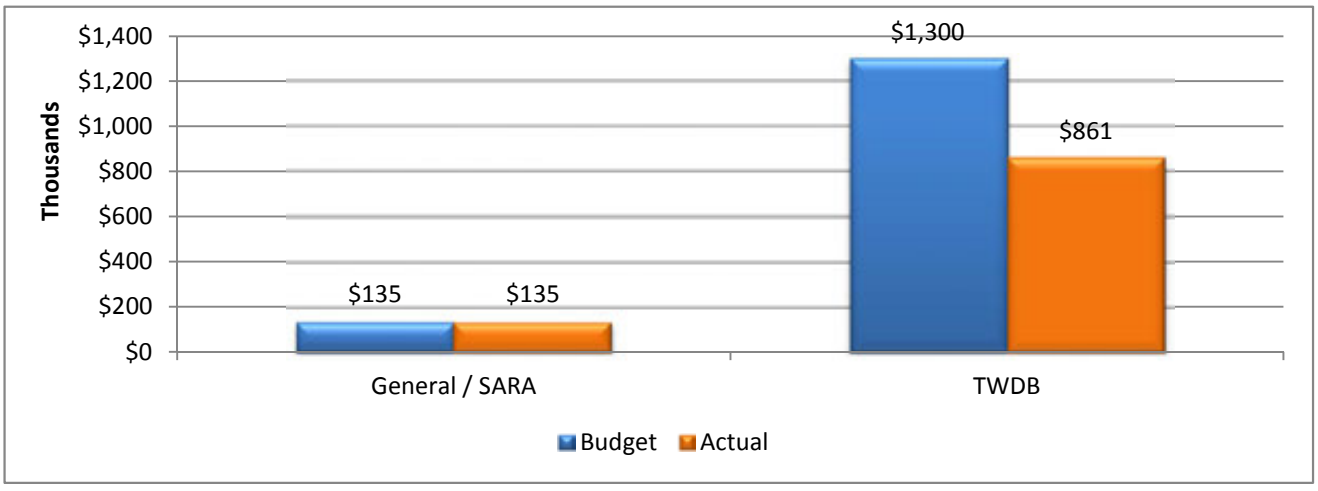
Project Start Date:	05/01/11	Total Project Budget:	$ 1,435,000
Project Finish Date:	06/30/16	Managing Department:	Watershed Engineering

This project will develop a comprehensive watershed master plan for the Medina River Watershed, one of the major watersheds in Bexar County. This project will identify major flooding reaches and damage centers (areas of numerous structures in the floodplain). Potential mitigation solutions such as detention, channelization, low impact development and/or buyouts for select sites will be investigated. The project will seek to maximize San Antonio River Authority's sustainability program efforts, identify preliminary locations for regional storm water facilities, and outline a plan of implementation. The project will increase the library of watershed master plans in Bexar County.

This project is entering into its final Phase. This year's scope includes services for project management, data collection/analysis, review of water quality/pollutant sources, water quality model development and calibration, hydrologic and hydraulic analysis, water quality modeling, stormwater/MS4 permitting, review of best management practices opportunities, implementation planning, and a final report.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 118,096	$ 29,246	$ 10,154	$ -	$ 157,496
Commodities	15	-	-	-	15
Contracts	877,489	400,000	-	-	1,277,489
Total	$ 995,600	$ 429,246	$ 10,154	$ -	$ 1,435,000

Budget to Actual by Funding Source as of 7/1/2014:



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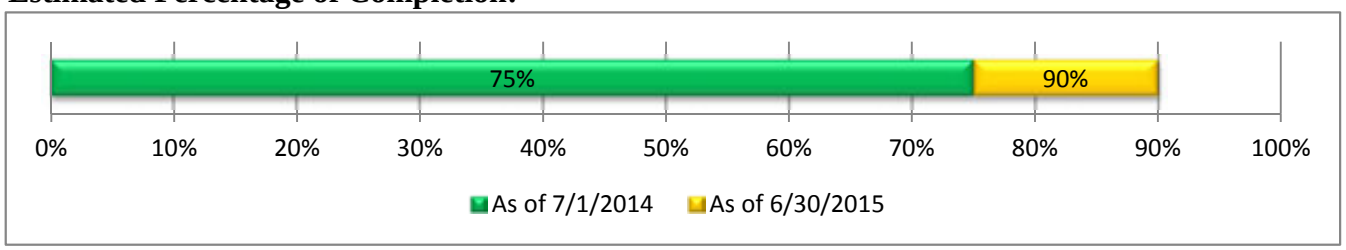
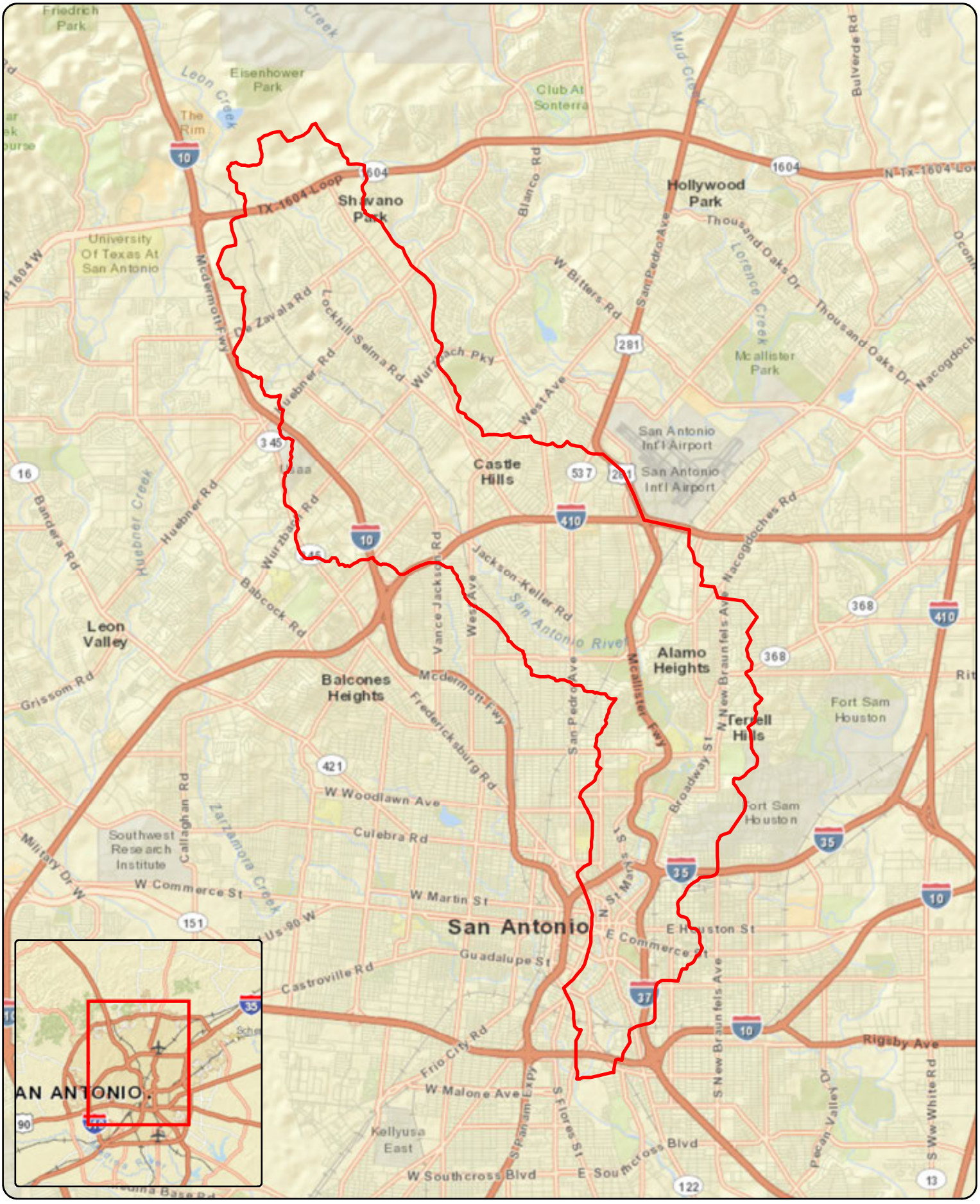




Project Name:
Olmos Basin Trash System

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Olmos Basin Trash System** **Project #** **00000452**

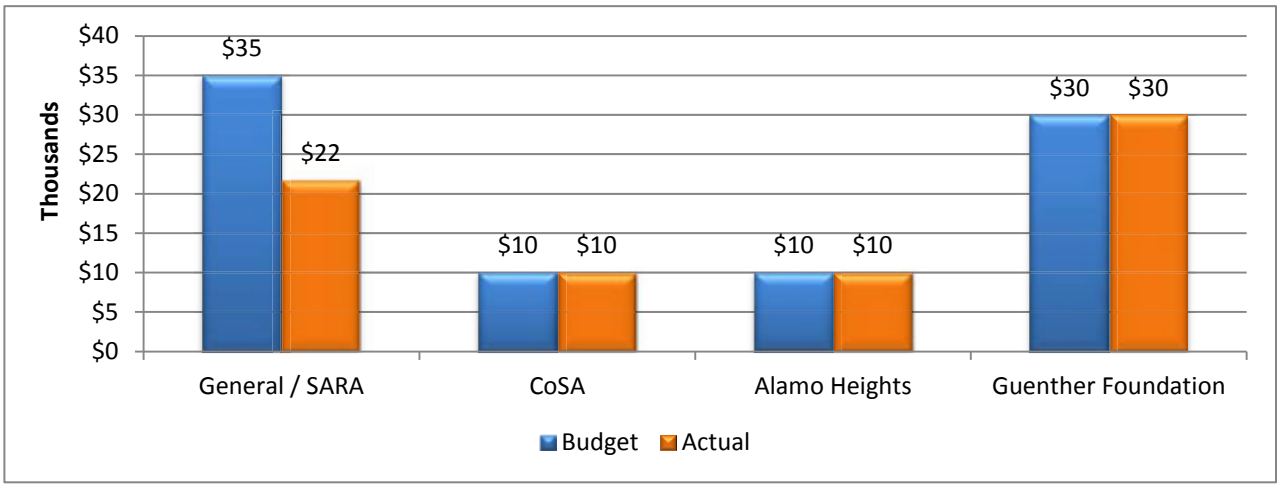
Project Start Date:	03/17/14	Total Project Budget:	$ 85,042
Project Finish Date:	06/30/15	Managing Department:	Program Support

During the spring of 2014, the San Antonio River Authority (SARA) secured a $30,000 challenge grant from The Jack and Valerie Guenther Foundation matched by $10,000 from the City of Alamo Heights and the City of San Antonio, respectively, and $10,280 from SARA to fund the consultant component of a study of trash and floatable collection systems appropriate for Olmos Creek and up to three of its tributaries to mitigate trash and floatables entering the basin between US Highway 410 and the Olmos Dam, thereby reducing impacts on the Upper San Antonio River and its headwaters. The study will determine optimal locations for system installation, either in-channel or within available rights of way, and will include a public input component additionally funded by SARA.

Once the study is completed in fall 2014, this project will move into a capital improvement project (CIP) planning phase. The fiscal year 2014/15 scope will focus on assessing the study results and securing funding and interagency contracts for installation of the first trash and floatable collection system CIP, either in-channel or within available public rights of way.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 1,700	$ 7,342	$ -	$ -	$ 9,042
Commodities	-	6,000	-	-	6,000
Contracts	70,000	-	-	-	70,000
Total	$ 71,700	$ 13,342	$ -	$ -	$ 85,042

Budget to Actual by Funding Source as of 7/1/2014:



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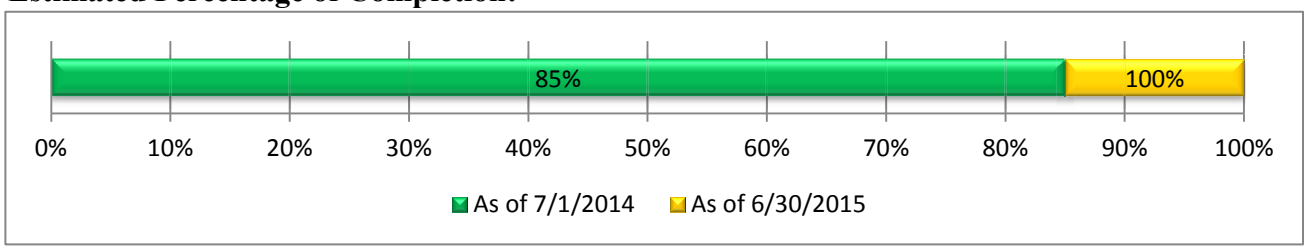
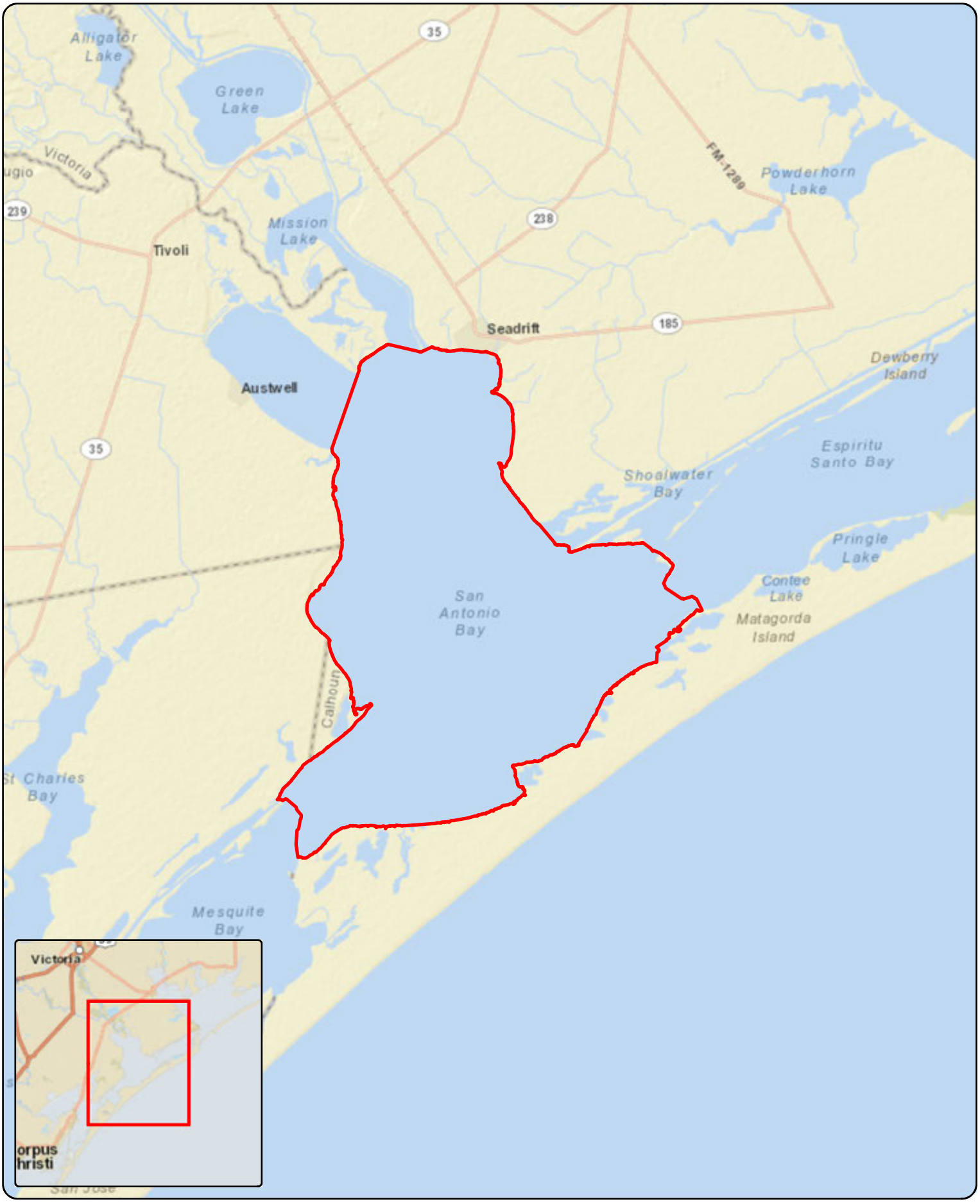




Project Name:
San Antonio Bay EDYS Model Development

Project Service Area and/or Boundaries

N

0 2.5 5 Miles

Project Name: **San Antonio Bay EDYS Model** **Project #** **00000296**

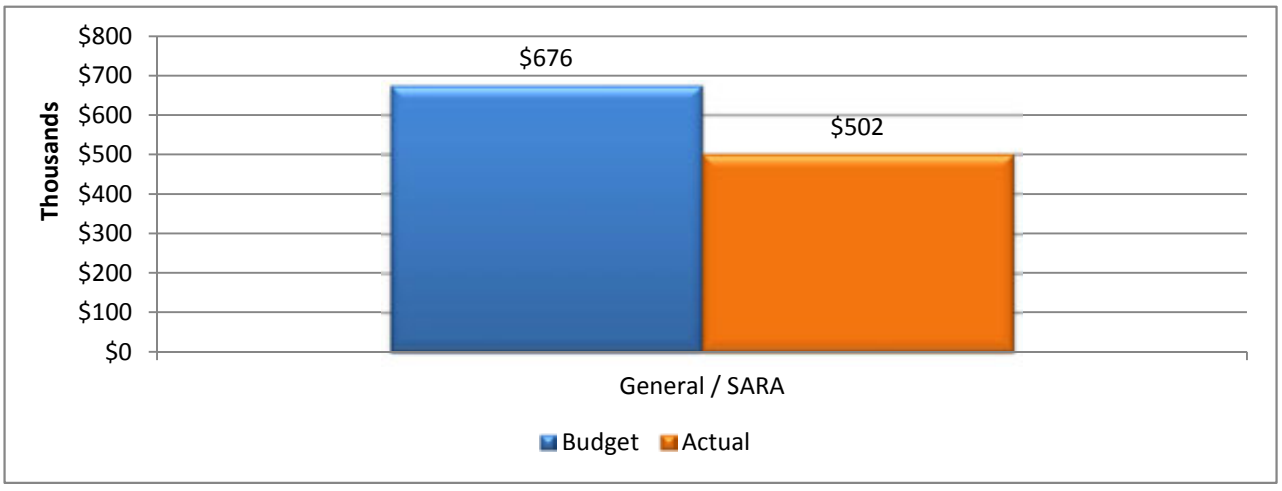
Project Start Date:	03/31/11	Total Project Budget:	$ 675,756
Project Finish Date:	06/30/15	Managing Department:	Watershed Engineering

The purpose of this Ecological Dynamic Simulation (EDYS) application is to develop Phase 1 and Phase 2 of an integrated model for San Antonio Bay. The Phase 1 model will combine multiple parameters and simulate salinity and sediment gradient dynamics resulting from outflows of freshwater from the river and tidal inputs of brackish water from the bay and the effects of these gradients on the marsh vegetation, primarily cordgrass species. Phase 2 will refine Phase 1 and add some specific animal species.

In fiscal year 2014/15, EDYS models developed for the San Antonio Bay will be further refined to include additional components such as vegetation, animal and monitoring data.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 9,918	$ 6,824	$ -	$ -	$ 16,742
Commodities	-	-	-	-	-
Contracts	491,858	167,156	-	-	659,014
Total	$ 501,776	$ 173,980	$ -	$ -	$ 675,756

Budget to Actual by Funding Source as of 7/1/2014:



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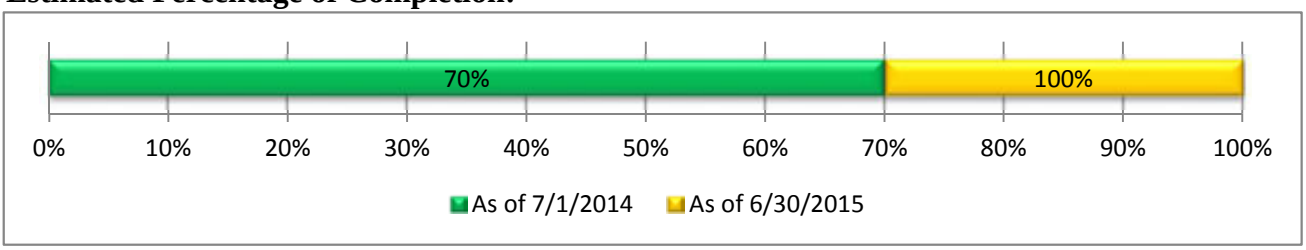
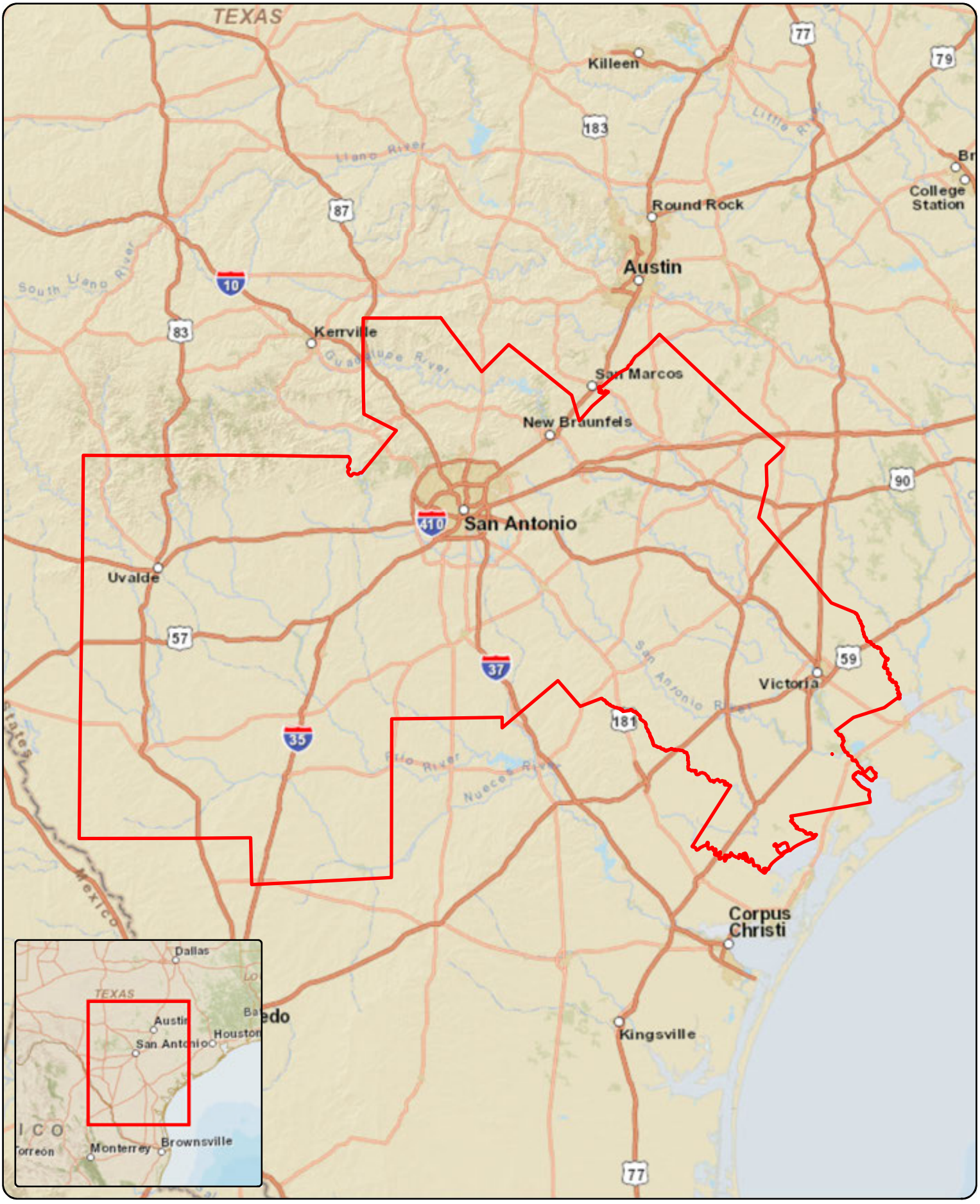




SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
SCTRWPG 2016 RWP TWDB Fourth Cycle

Project Service Area and/or Boundaries

N

0 10 20 Miles

Project Name: **SCTRWPG 2016 RWP Fourth Cycle** **Project #** **00000291**

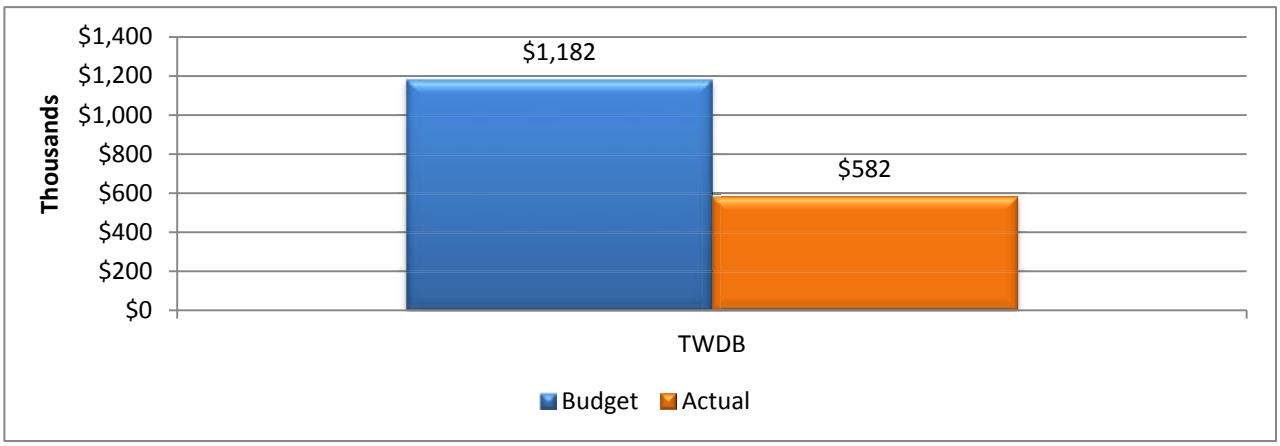
Project Start Date:	08/01/11	Total Project Budget:	$ 1,181,509
Project Finish Date:	05/31/16	Managing Department:	IGCR-Water Resources

The South Central Texas Regional Water Planning Group (SCTRWPG) is in its fourth cycle of regional water planning. Funding from the Texas Water Development Board will be used for development of the 2016 Regional Water Plan (RWP), which includes evaluation of population and population-related water demand projections through 2070; evaluation of non-population related water demand projections including irrigation, livestock, mining, steam electric, and manufacturing through 2070; assessment of existing water supplies for water user groups (WUGs) and wholesalers including impacts of recently established Managed Available Groundwater numbers; identification of water needs of WUGs and wholesale suppliers; identification of potentially feasible water management strategies for evaluation; preparation and submittal of a Technical Memorandum summarizing activities and data; and, subject to findings in the Technical Memorandum, evaluation of potential water management strategies to meet identified water needs.

The 2016 Regional Water Plan for the South Central Texas Regional Water Planning Group, Region L, will be incorporated into the 2017 State Water Plan.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ -	$ -	$ -	$ -
Commodities	-	-	-	-	-
Contracts	581,894	383,207	216,408	-	1,181,509
Total	$ 581,894	$ 383,207	$ 216,408	$ -	$ 1,181,509

Budget to Actual by Funding Source as of 7/1/2014:



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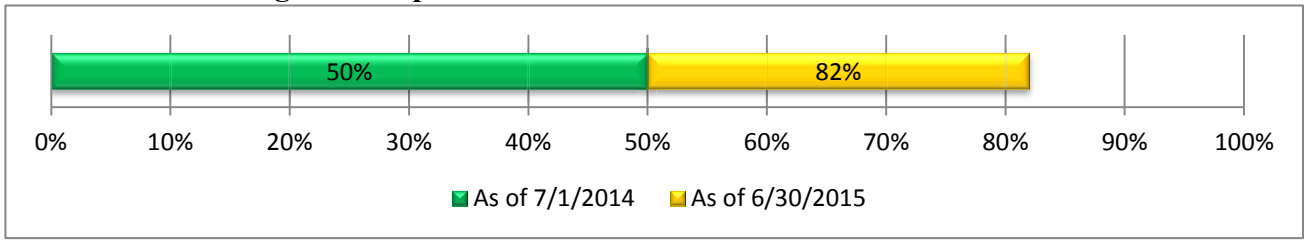
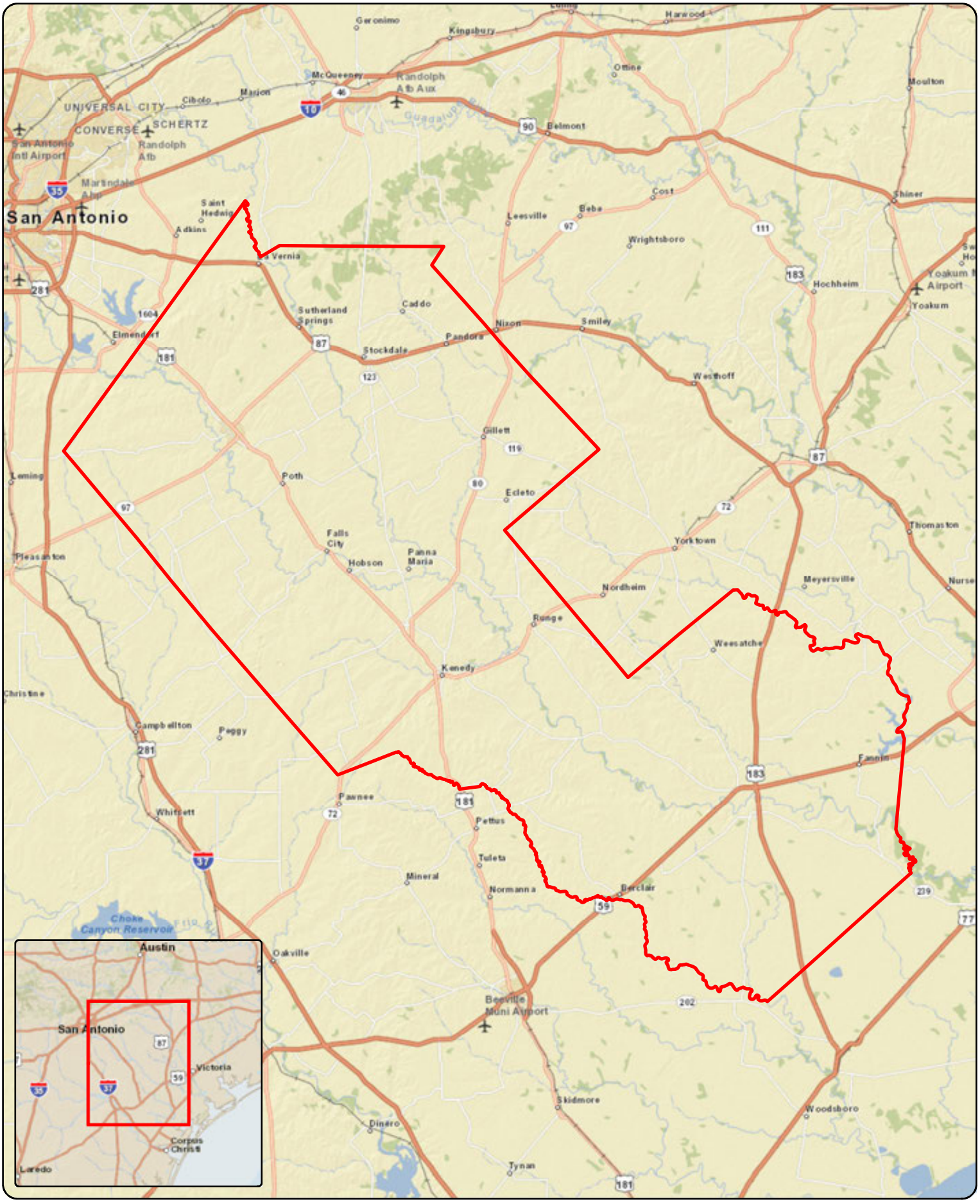




Project Name:
USGS-LSAR Groundwater Surface Water Interaction Modeling

Project Service Area and/or Boundaries

N

0 6.5 13 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **USGS-LSAR Water Interaction Modeling** **Project #** **00000411**

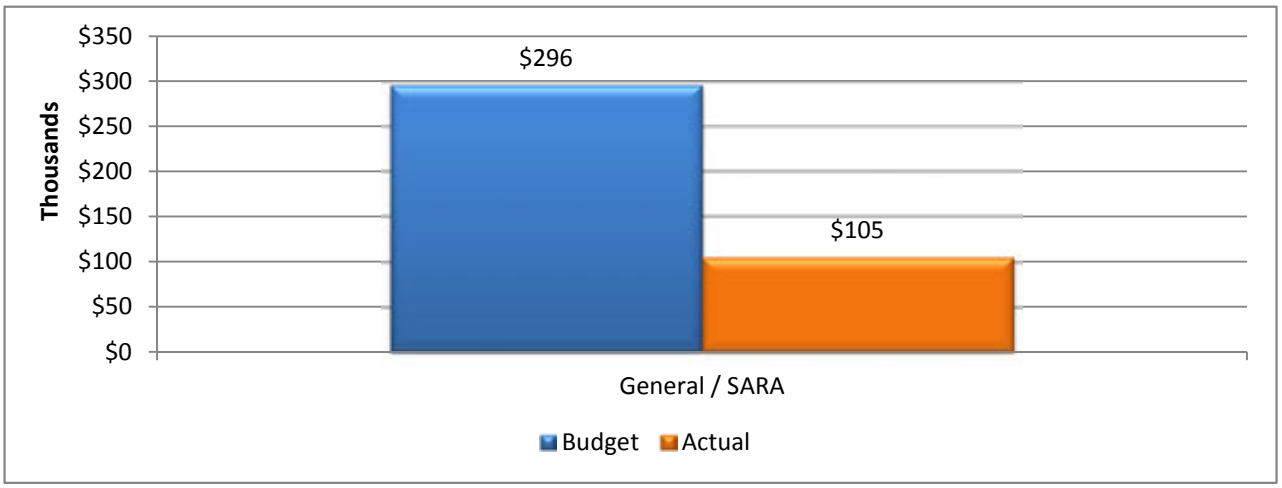
Project Start Date:	07/01/14	Total Project Budget:	$ 296,185
Project Finish Date:	11/30/16	Managing Department:	Watershed Engineering

This project will address the impact of groundwater exploitation for hydraulic fracturing by compiling appropriate datasets and if sufficient data are available developing a groundwater model to simulate streamaquifer interactions and potential contaminant pathways to surface waters. The project will be conducted in cooperation with the U.S. Geologic Survey (USGS) and will produce an analysis of various scenarios that can be used for both planning and assessment purposes.

This fiscal year the project will finish development of the groundwater model using MODFLOW software to simulate groundwater interaction with surface water. Using previously collected datasets, the model will be calibrated and multiple scenarios representing both changes in recharge and increases groundwater exploitation will be simulated. The simulations will be analyzed in order to identify the potential impacts on the lower basin streams and rivers.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 3,295	$ 1,728	$ 2,162	$ -	$ 7,185
Commodities	-	-	-	-	-
Contracts	102,000	100,000	87,000	-	289,000
Total	$ 105,295	$ 101,728	$ 89,162	$ -	$ 296,185

Budget to Actual by Funding Source as of 7/1/2014:



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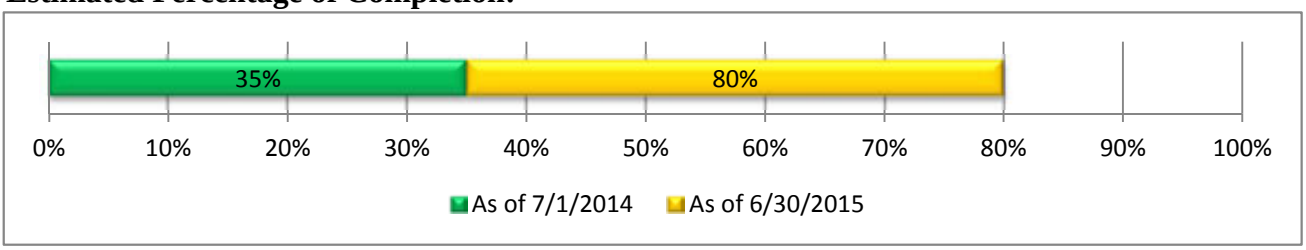
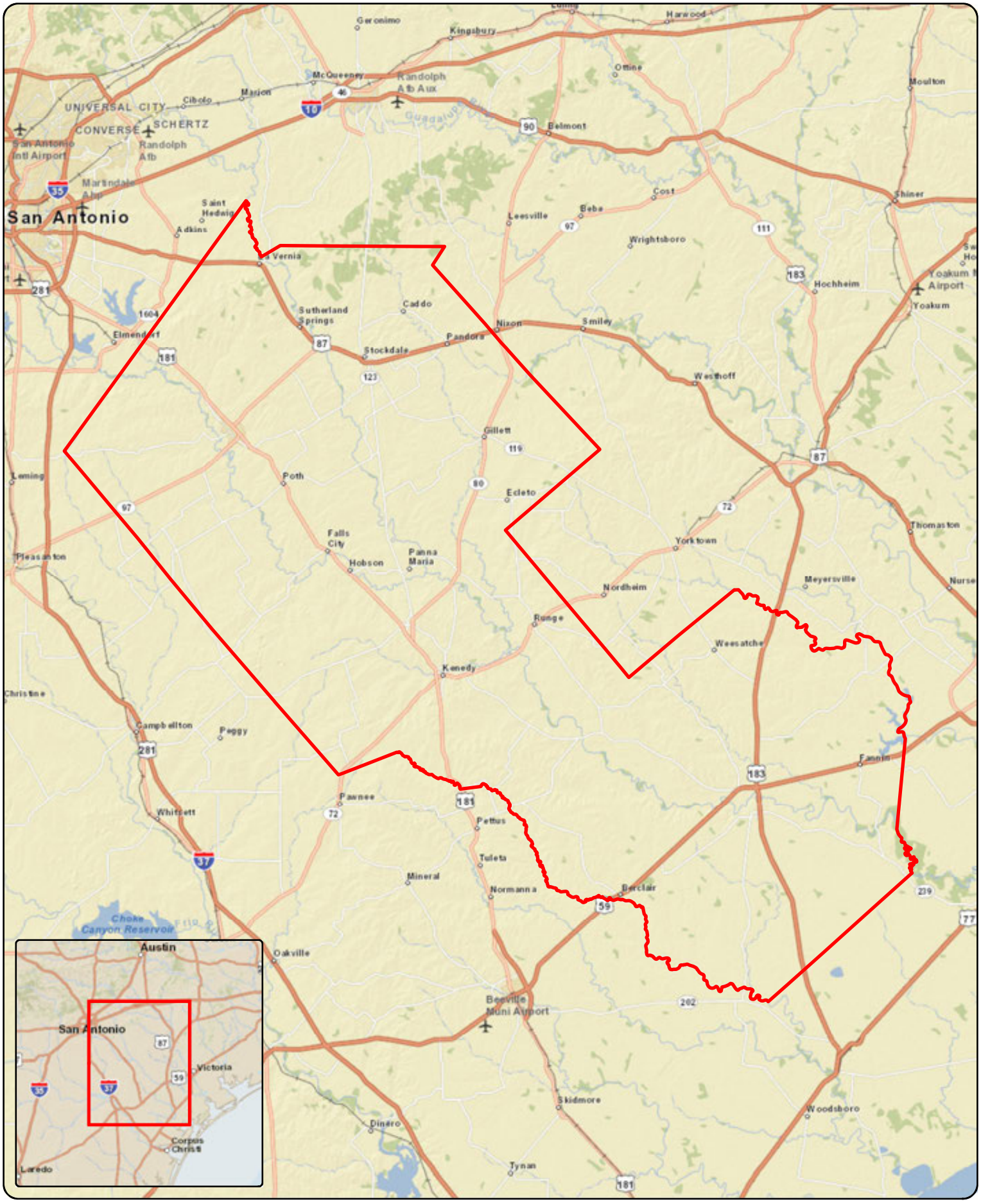




Project Name:
USGS Viral Source Tracking

Project Service Area and/or Boundaries

N

0 6.5 13 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **USGS Viral Source Tracking** **Project #** **00000453**

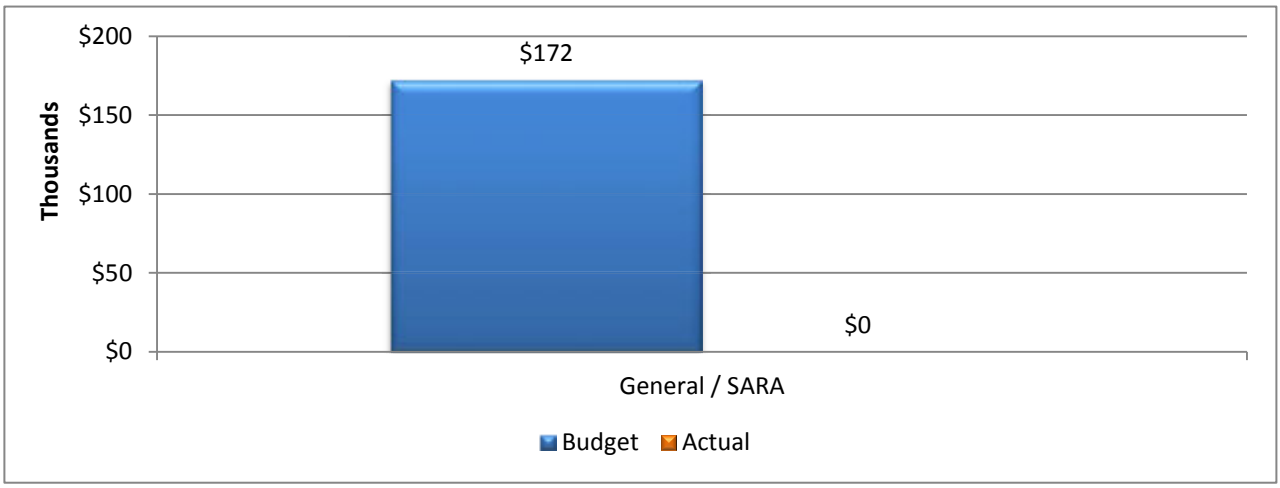
Project Start Date:	10/01/14	Total Project Budget:	$ 172,136
Project Finish Date:	12/31/17	Managing Department:	Watershed Engineering

Multiple stream segments in the San Antonio River Basin are impaired because of the presence of an indicator of fecal waste with its associated bacterial and viral pathogens. This project will use viral source tracking to quantify the viral abundance of specific viral species and distinguish between primary sources of viri within the San Antonio River Basin, thus overcoming many of the limitations of the current indicator. Stream samples will be collected under both baseflow and stormwater flow conditions from multiple urban and rural segments. This is a two year cooperative project with the USGS which will use both United States Geological Survey (USGS) and the San Antonio River Authority (SARA) facilities and expertise.

Within the first year of study, sample collection locations will be selected based on previous emerging contaminant research. Approximately 20-30 samples will be collected under both baseflow and stormwater flow conditions. Genetic assays will be used to identify target viral species. Markers for human, pig, and cattle sources will be exploited to determine the relative porportion of viruses from these sources. There will be opportunities for SARA staff to work with USGS staff in order to gain technical expertise in these emerging techniques.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ -	$ 4,280	$ 4,756	$ 9,036
Commodities	-	-	-	-	-
Contracts	-	-	71,400	91,700	163,100
Total	$ -	$ -	$ 75,680	$ 96,456	$ 172,136

Budget to Actual by Funding Source as of 7/1/2014:



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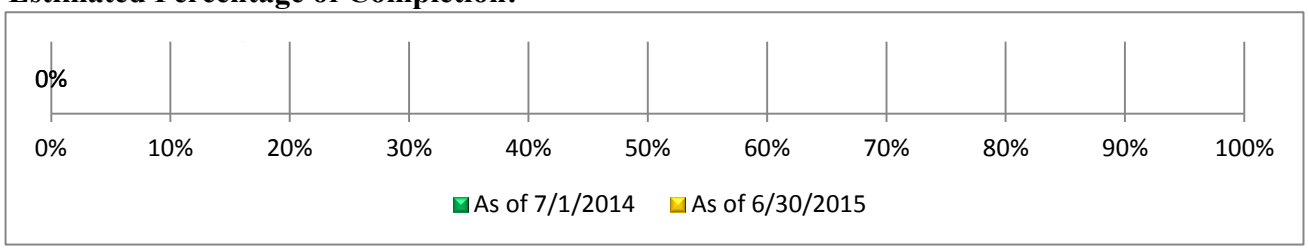
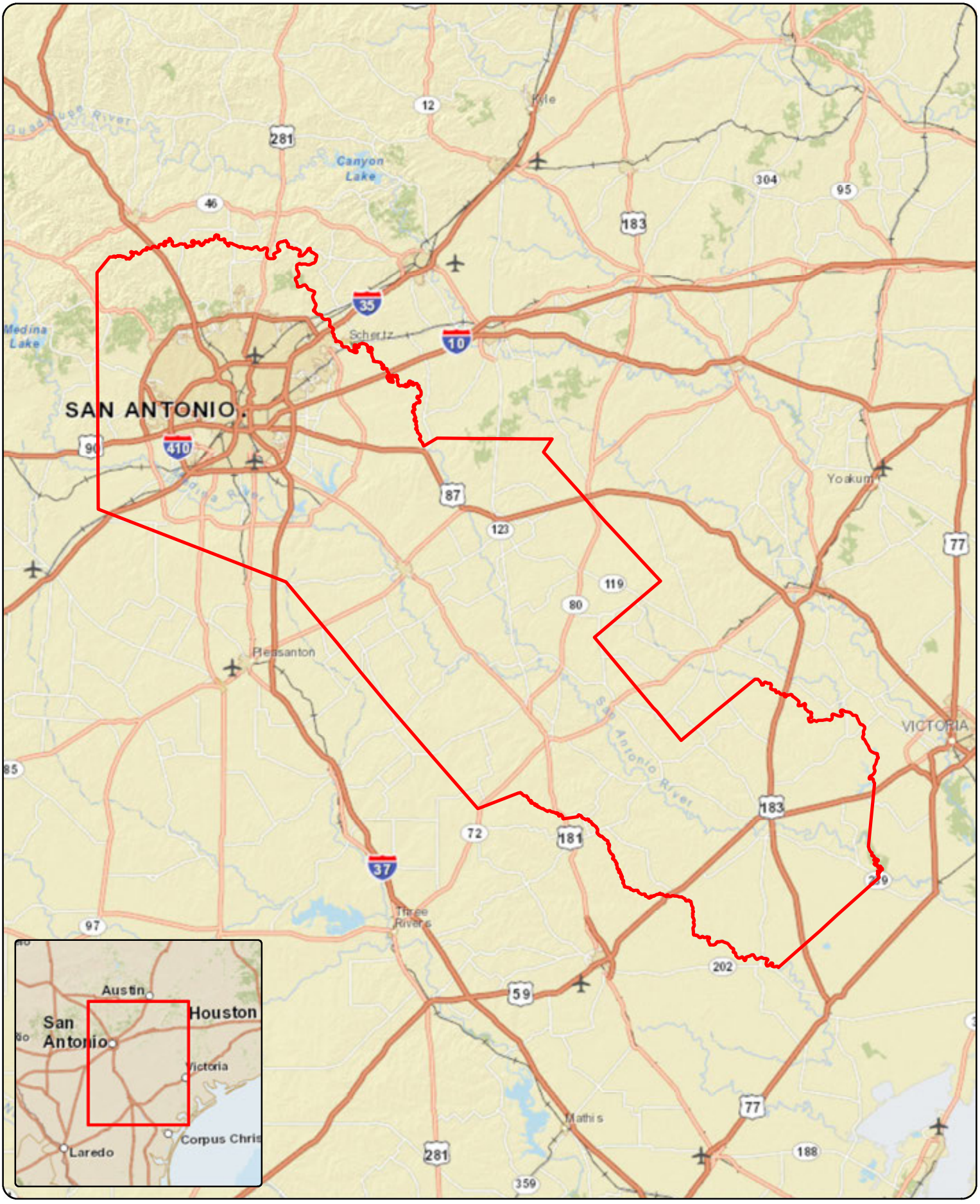




SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Water Quality Modeling Tool

Project Service Area and/or Boundaries

N

0 10 20 Miles

Project Name: **Water Quality Modeling Tools** **Project #** **00000467**

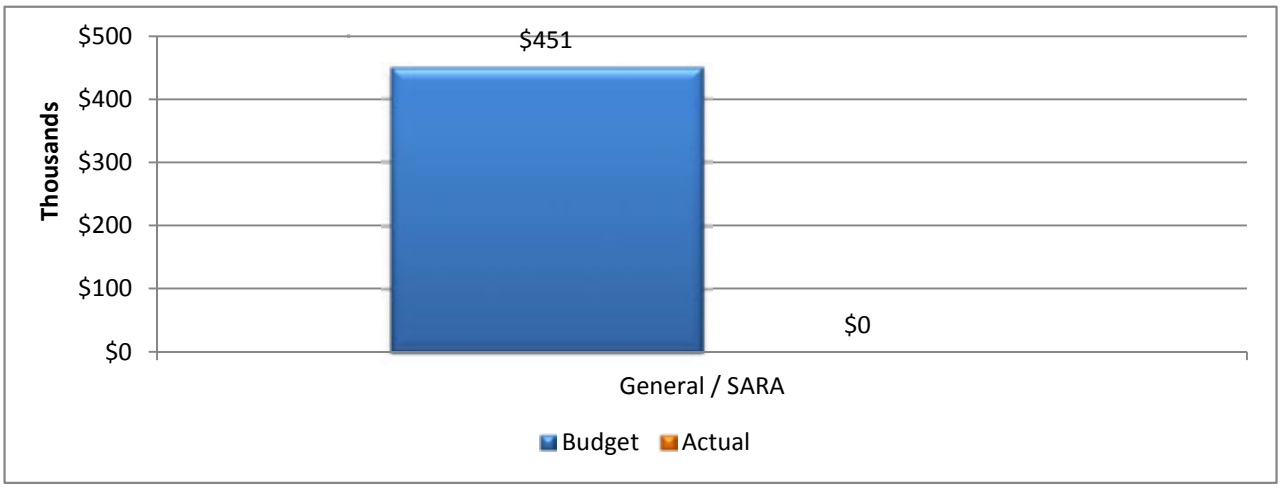
Project Start Date:	07/01/14	Total Project Budget:	$ 450,695
Project Finish Date:	06/29/16	Managing Department:	Watershed Engineering

The Water Quality Modeling Tools Project entails several major tasks that include, but are not limited to, enhancement of codes of comprehensive and dynamic water quality models, model linkages to fully coupled data transfer between watershed, riverine and site scale models, and development of features for dynamic land use changes for long term simulations. The main purpose of these tasks is to add more details into the representation of watershed baseline conditions as well as model the dynamic interaction between watersheds at multiple scales. In addition, these efforts will improve the capability to analyze future scenarios for more realistic sustainable solutions. The deliverables of this project will help support the River Health Index (RHI) and develop technical expertise.

For fiscal year 2014/15, the tasks include software code enhancement for user-defined land use changes and development of platform for transferring data among multiple models.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ 16,494	$ 34,201	$ -	$ 50,695
Commodities	-	-	-	-	-
Contracts	-	100,000	300,000	-	400,000
Total	$ -	$ 116,494	$ 334,201	$ -	$ 450,695

Budget to Actual by Funding Source as of 7/1/2014:



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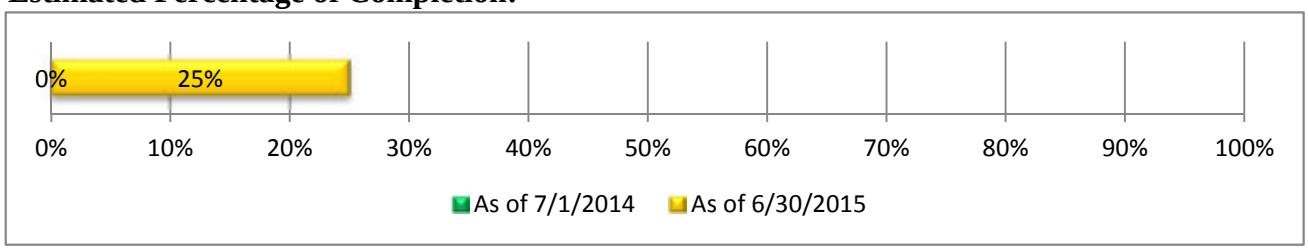
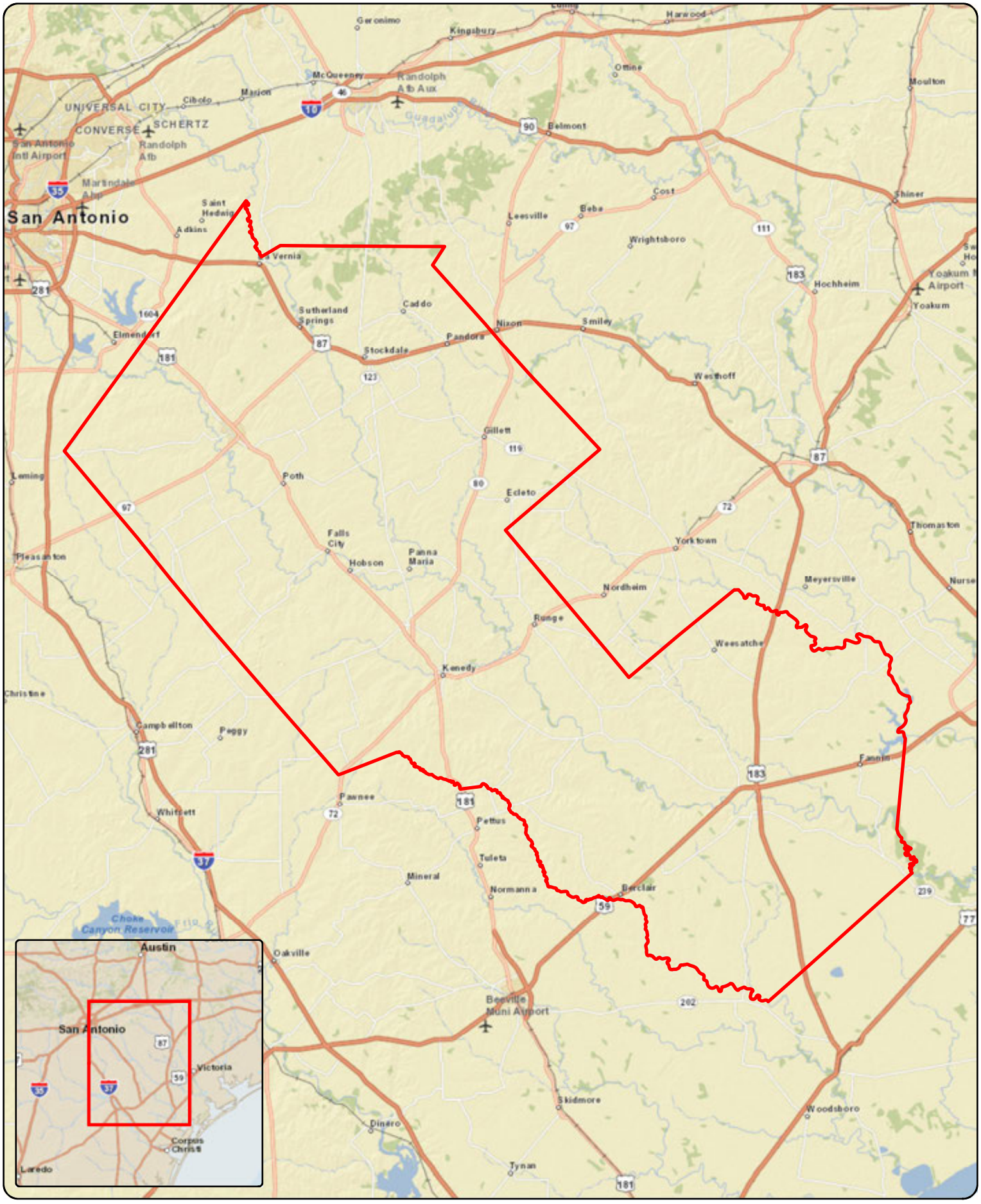




SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Wilson, Karnes, Goliad Holistic Watershed Master Plans

Project Service Area and/or Boundaries

N

0 6.5 13 Miles

Project Name: **Wilson, Karnes, Goliad WSMP** **Project #** **00000076**

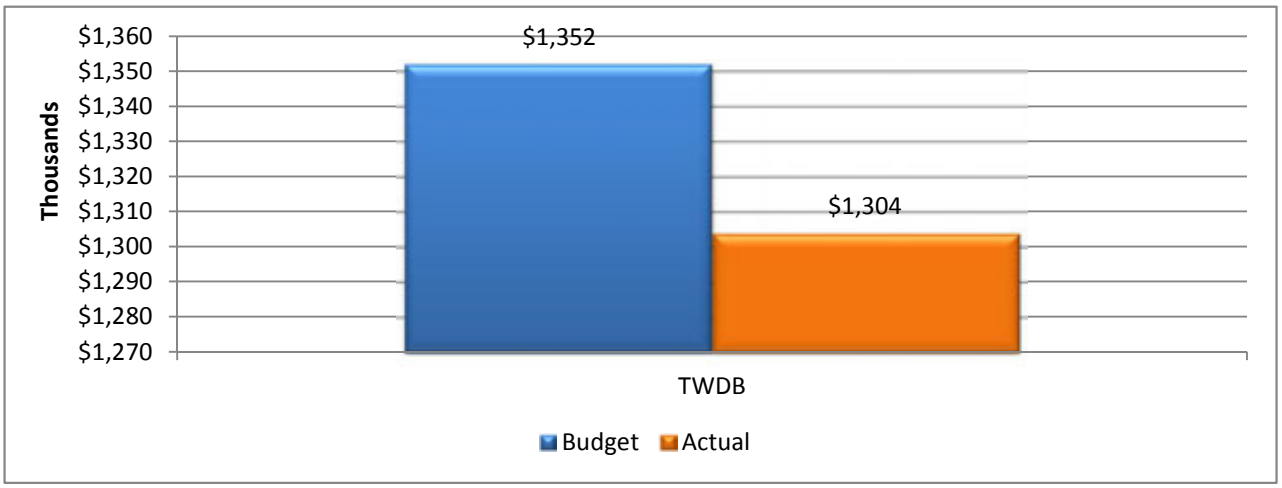
Project Start Date:	07/01/08	Total Project Budget:	$ 1,352,031
Project Finish Date:	06/30/15	Managing Department:	Watershed Engineering

A Holistic Watershed Master Plan (WSMP) will be developed for Wilson, Karnes, and Goliad counties. The plan will focus on flood issues (hydraulic and hydrologic analysis), stream restoration, water quality modeling, water quality best management practices, GIS/mapping/remote sensing, low impact development, MS4 permitting, conservation easements, mitigation banking, and nature-based park planning. The activities of this project include identification of major flooding reaches and potential flood control capital improvement projects. The project will also identify opportunities for non-structural flood control strategies such as property buyouts, riparian buffers, land use and development recommendations, and low impact development.

This year, the project will link the Medina Watershed Models with the Lower San Antonio Models. This work will include linking the water quality models and the hydraulic and hydrologic models developed for the lower San Antonio River as part of the Wilson, Karnes, and Goliad WSMP to the models developed for the Medina River WSMP.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 88,549	$ 8,188	$ -	$ -	$ 96,737
Commodities	2,034	-	-	-	2,034
Contracts	1,213,260	40,000	-	-	1,253,260
Total	$ 1,303,843	$ 48,188	$ -	$ -	$ 1,352,031

Budget to Actual by Funding Source as of 7/1/2014:



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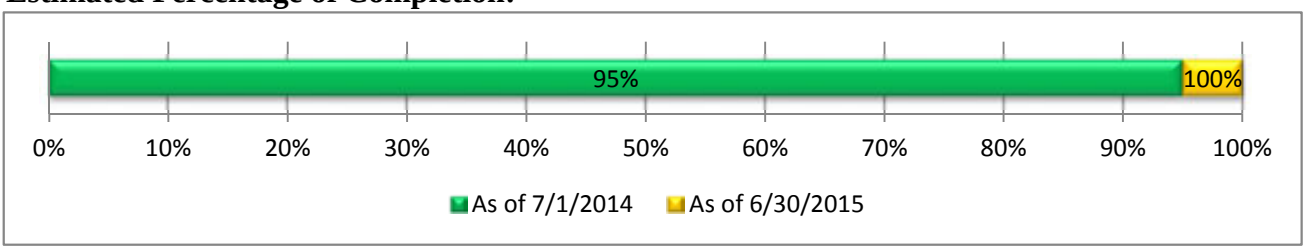


Watershed Modeling, Studies, and Planning Program

- **Aquifer Storage and Recovery (ASR) Leasing Program**
  The San Antonio River Authority (SARA) has been tasked with assisting the Edwards Aquifer Authority (EAA) in acquiring groundwater leases under the ASR Leasing program. The EAA is in the process of implementing a regional Habitat Conservation Plan (HCP) designed to protect springflows in the Edwards Aquifer Region during a repeat of the drought of record.

- **Bexar Regional Watershed Management (BRWM)**
  This effort includes any technical assistance needed by the cities and the county involved in the Bexar Regional Watershed Management program's ILA. Work may include analysis, recommendation, and review of capital improvement program projects; flood issues; and mitigation solutions.

- **Contour Production for Bexar County**
  This effort will purchase, review and provide a quality assurance/quality control (QA/QC) updated contours dataset for Bexar County.

- **Imagery Acquisition for Bexar County**
  This effort will fund River Authority participation in the imagery data acquisition in partnership with Bexar Metro 911, Bexar Appraisal District and the City of San Antonio.

- **Regional Water Alliance**
  Twenty-one local water purveyors and regional water entities work together to promote and facilitate the sharing of ideas, knowledge, experience and resources with the goal of developing collaborative water projects. The purpose of the Regional Water Alliance is to assist participating entities in assessing and developing water supply options to meet the needs of one or more of the participating entities, to promote regional conservation, and to encourage entities to work together to realize region-wide efficiencies and economies of scale in the development, distribution, and operation of water projects for the mutual benefit of a diverse customer base.

- **Regional Water Resources Development Group**
  This effort is for the administrative services provided by the River Authority to assist in a cooperative purchasing program for acquisition of Edwards Aquifer groundwater withdrawal rights.

- **San Antonio River Basin Monitoring Network – Stream Gauges**
  The River Authority administers this effort to monitor normal conditions of receiving streams and collect data to document long term trends in water quality. The goal is to develop a real-time monitoring (RTM) system that traces the continuity of water quality from ground water through spring emergencies, through the San Antonio metropolitan area, and includes tributaries that contribute flow to the San Antonio River as it flows to the coast. Possible future site locations for RTM stations include Salado Creek, Leon Creek, the San Antonio River, and possibly San Antonio Bay.

- **South Central Texas Regional Water Planning Group/Region L**
  The River Authority serves as administrator for the South Central Texas Regional Water Planning Group (Region L). The planning group is working towards developing the 2016 Regional Water Plan. The development of the 2016 Regional Water Plan includes studies, decisions, and recommendations regarding water supply needs, potential water supply options, and strategies throughout the planning area. This effort is funded through an interlocal agreement. Participants are the River Authority, San Antonio Water System, Guadalupe-Blanco River Authority, Bexar Met, Edwards Aquifer Authority and the Nueces River Authority.

- **Surface Water Rights Acquisition**
  This effort pursues the acquisition of surface water rights for the benefit of the River Authority and its constituents within its jurisdictional boundaries.

- **Tributary Modeling**
  The Digital Flood Insurance Rate Map (DFIRM) effort in Bexar, Wilson, Karnes, and Goliad counties generated detailed computer models of the primary and some secondary streams within the San Antonio River Watershed. The models were used to estimate and map the 1% annual chance flood event, commonly referred to as the 100-year flood. Although over 1,000 stream miles were modeled under that effort, many streams were not modeled and do not have FEMA DFIRM floodplains developed. The purpose of this effort is to create limited detail floodplain models for the unstudied streams to serve as base models for developing Zone A floodplain boundaries for the unmapped areas and to serve as the basis for more detailed studies as needed. These new models will also be integrated into the River Authority's flood monitoring and response efforts as they become available.

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name:
Calaveras 5 Dam Repair

Project Service Area and/or Boundaries

N

0 0.095 0.19 Miles

Project Name: **Calaveras 5 Dam Repair** **Project #** **00000464**

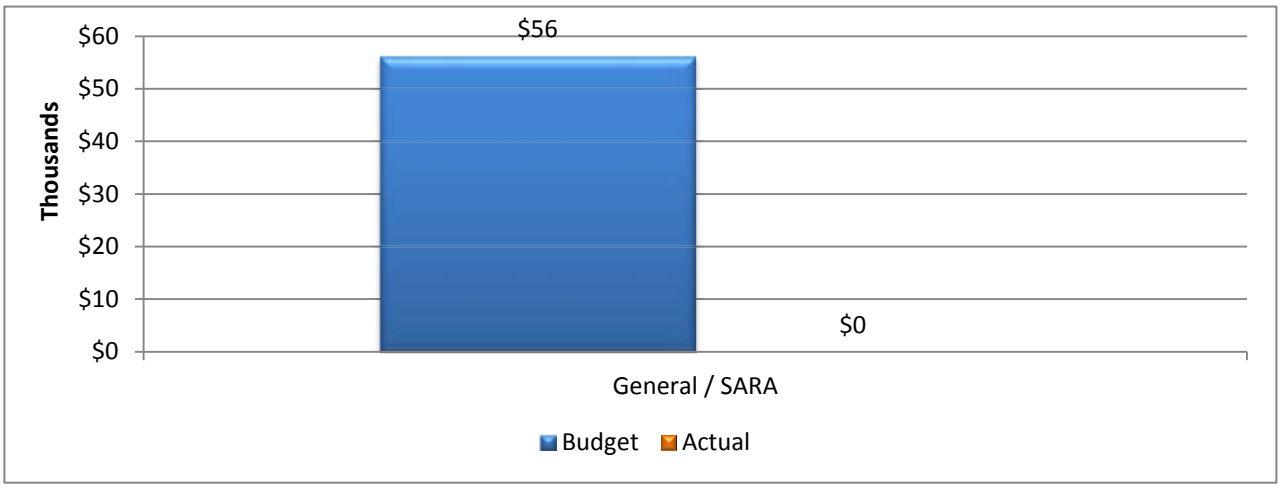
Project Start Date:	07/01/14	Total Project Budget:	$ 56,177
Project Finish Date:	06/30/15	Managing Department:	Watershed Engineering

The principal spillway pipe is leaking and is in need of repair. Initial review with a consultant and NRCS team found cracks in the pipe and recommended for cured in place pipe (CIPP) to seal any cracks and/or leaks at the joints. The work will involve slip lining approximately 160 feet of the principle spillway pipe.

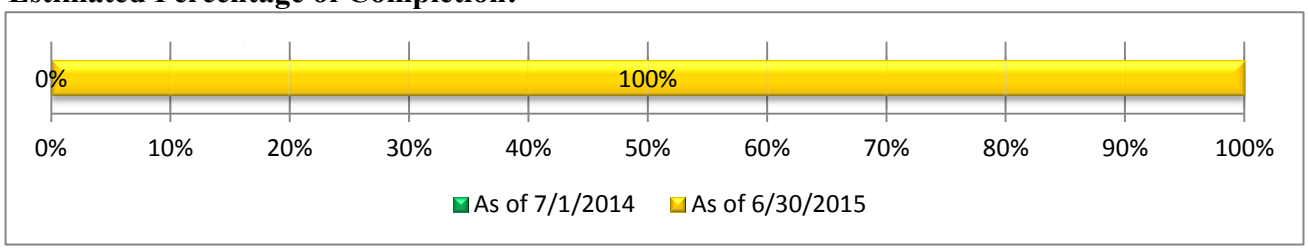
In the current fiscal year, NRCS will conduct geological study on the possible damage. This study should reveal the soil saturation and the extent of the problem.

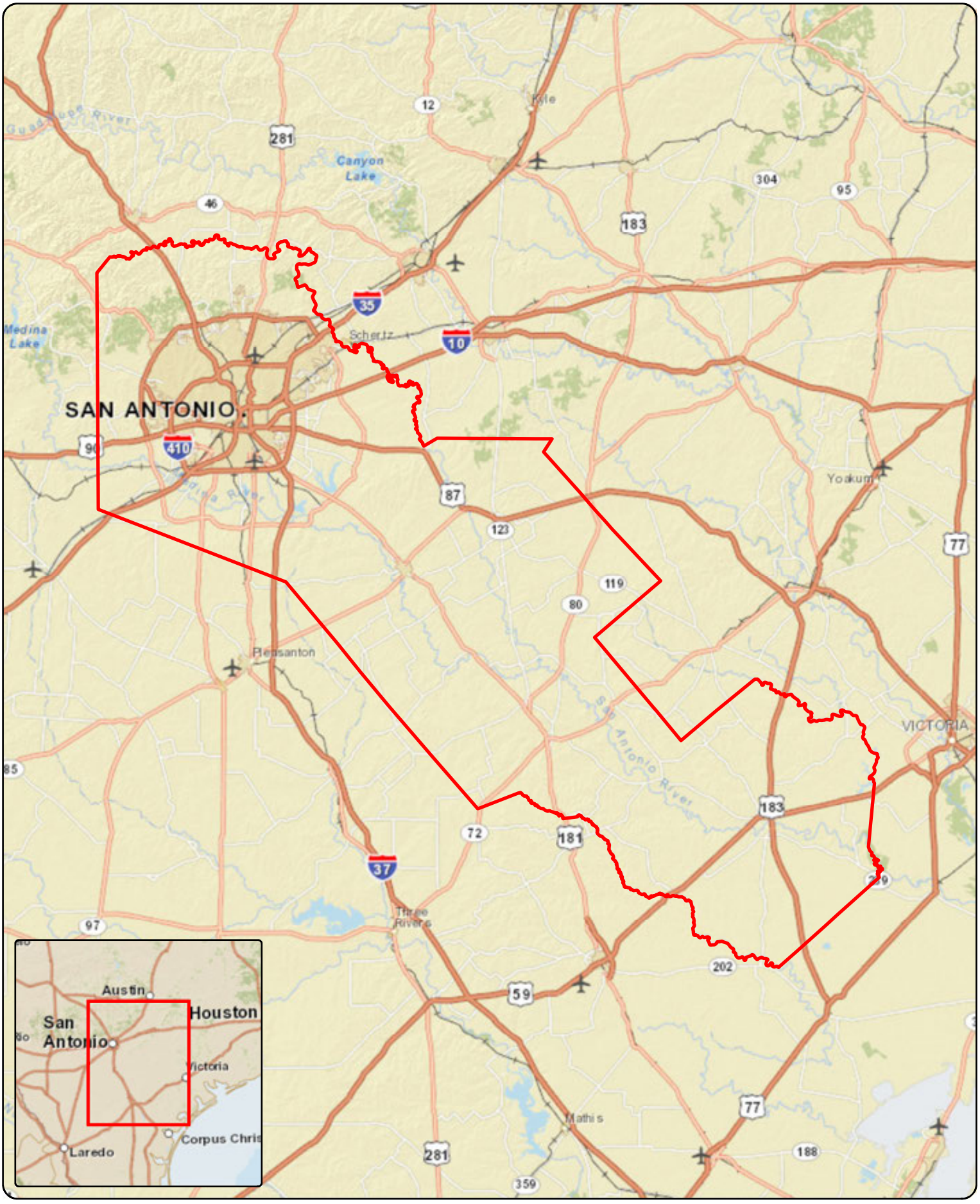
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ -	$ 6,177	$ -	$ -	$ 6,177
Commodities	-	-	-	-	-
Contracts	-	50,000	-	-	50,000
Total	$ -	$ 56,177	$ -	$ -	$ 56,177

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
Cooperating Technical Partners (CTP) Development

Project Service Area and/or Boundaries

N

0 10 20 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **Cooperating Technical Partners (CTP)** **Project #** **00000092**

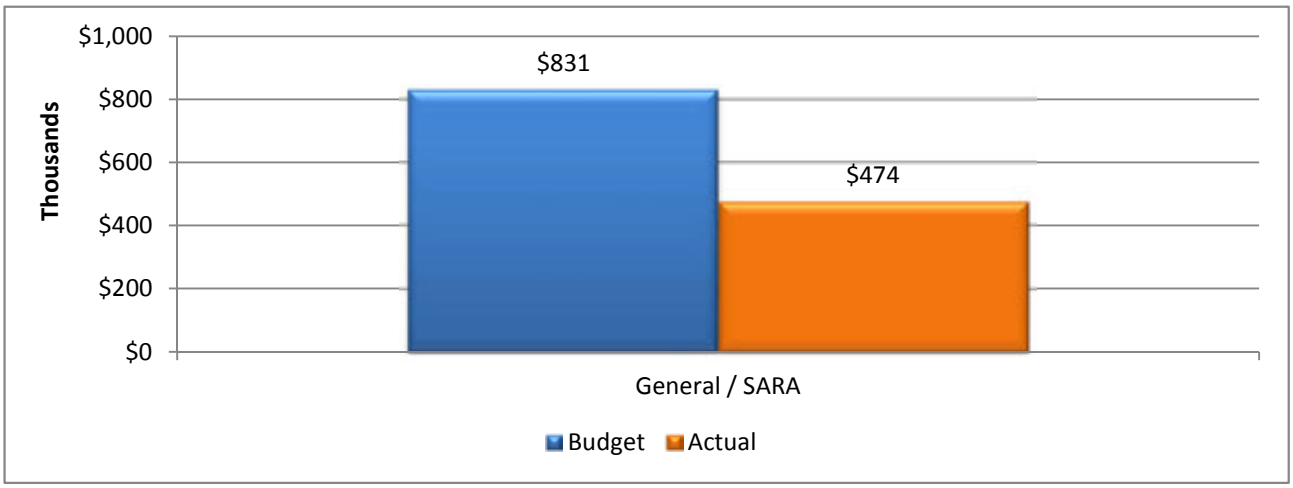
Project Start Date:	07/01/09	Total Project Budget:	$ 830,998
Project Finish Date:	07/03/17	Managing Department:	Watershed Engineering

This project will support the San Antonio River Authority (SARA) Letter of Map Revision (LOMR) and Conditional Letter of Map Revision (CLOMR) Delegation. The proposed grant will delegate to the River Authority the responsibility of reviewing all the LOMR and CLOMR submittals to the Federal Emergency Management Agency (FEMA). The technical review of these studies will be done by the River Authority Watershed Engineering staff. This project will secure the Digital Flood Insurance Rate Maps (DFIRM) investment by developing a way to keep the new flood map information up to date and interactive. The project will retain a consultant on an Indefinite Deliverable Indefinite Quantity (IDIQ) basis to help perform Quality Assurance Quality Control (QA/QC) on SARA's LOMR delegation reviews, which require independent review.

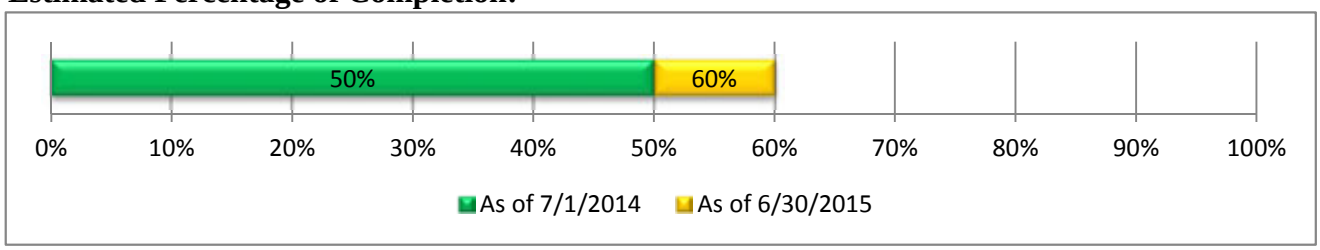
In fiscal year 2014/15, SARA will continue the role of FEMA LOMR Delegation partner. SARA will continue reviewing on behalf of FEMA all MT 2 Letter of Map Change (LOMC) submittals within the Bexar, Wilson, Karnes and Goliad counties.

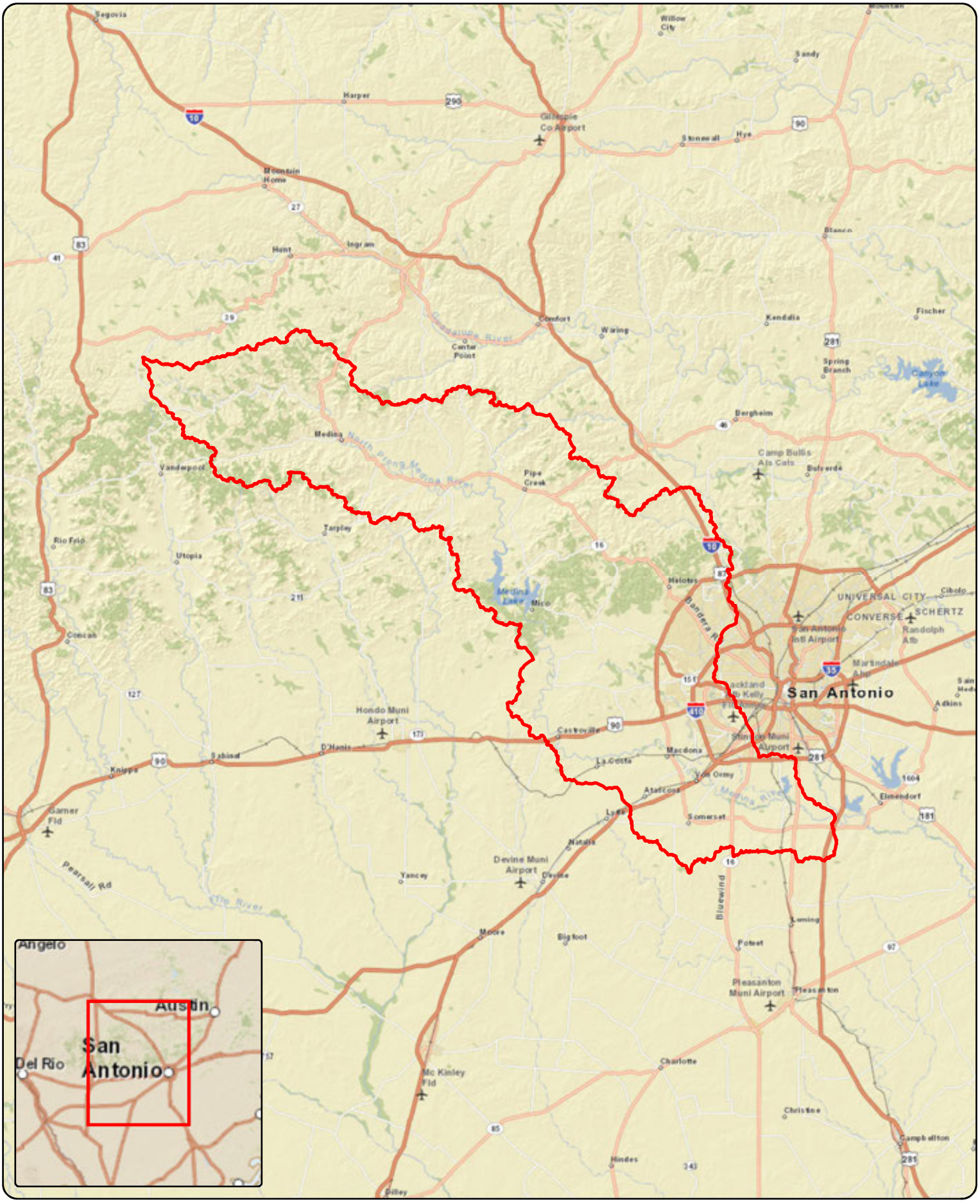
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 68,287	$ 36,107	$ 37,371	$ 78,711	$ 220,476
Commodities	4,967	-	5,000	-	9,967
Contracts	400,555	50,000	50,000	100,000	600,555
Total	$ 473,809	$ 86,107	$ 92,371	$ 178,711	$ 830,998

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
Cooperating Technical Partners (CTP) Risk Map Medina

Project Service Area and/or Boundaries

N

0 7.5 15 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **CTP Risk Map Medina River** **Project #** **00000439**

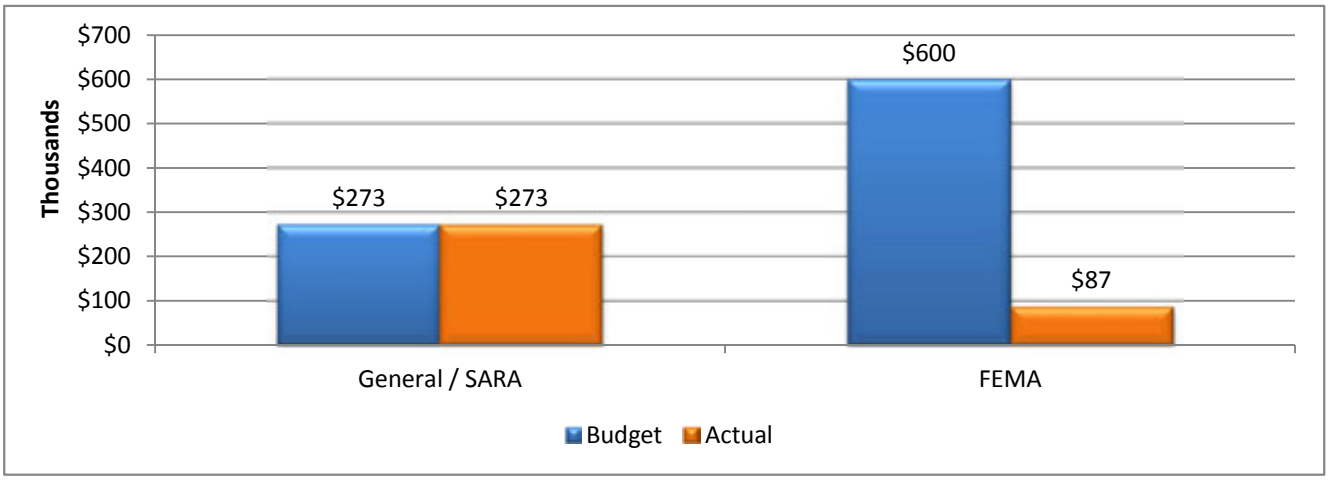
Project Start Date:	01/01/14	Total Project Budget:	$ 872,862
Project Finish Date:	10/31/15	Managing Department:	Watershed Engineering

The FEMA Risk Mapping, Assessment and Planning (Risk MAP) program will assist communities nationwide, assess flood risks, and encourage mitigation planning to avoid or minimize damage in the face of future disasters. Through more precise flood maps, risk assessment tools and outreach support, Risk MAP strengthens local ability to make informed decisions about reducing risk. This project will utilize the previously developed data to develop new non-regulatory flood risk products, catalog areas of mitigation interest and success, and produce additional Risk MAP products to increase community awareness about flooding risks and support local actions to mitigate those risks. The project will consist of two phases with the first being Discovery and the second Risk Identification and Assessment.

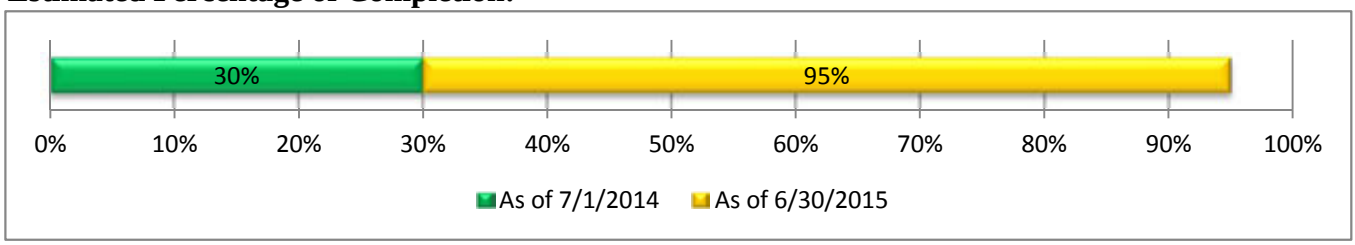
For fiscal year 2014/15, this project will focus on Phase I: Discovery and Phase II: Risk Identification and Assessment in the Medina River Watershed. Phase I will focus on data gathering and needs identification; Phase II will focus on developing additional FEMA non-regulatory flood risk GIS data. A map, report, and database will be produced for each phase of this project.

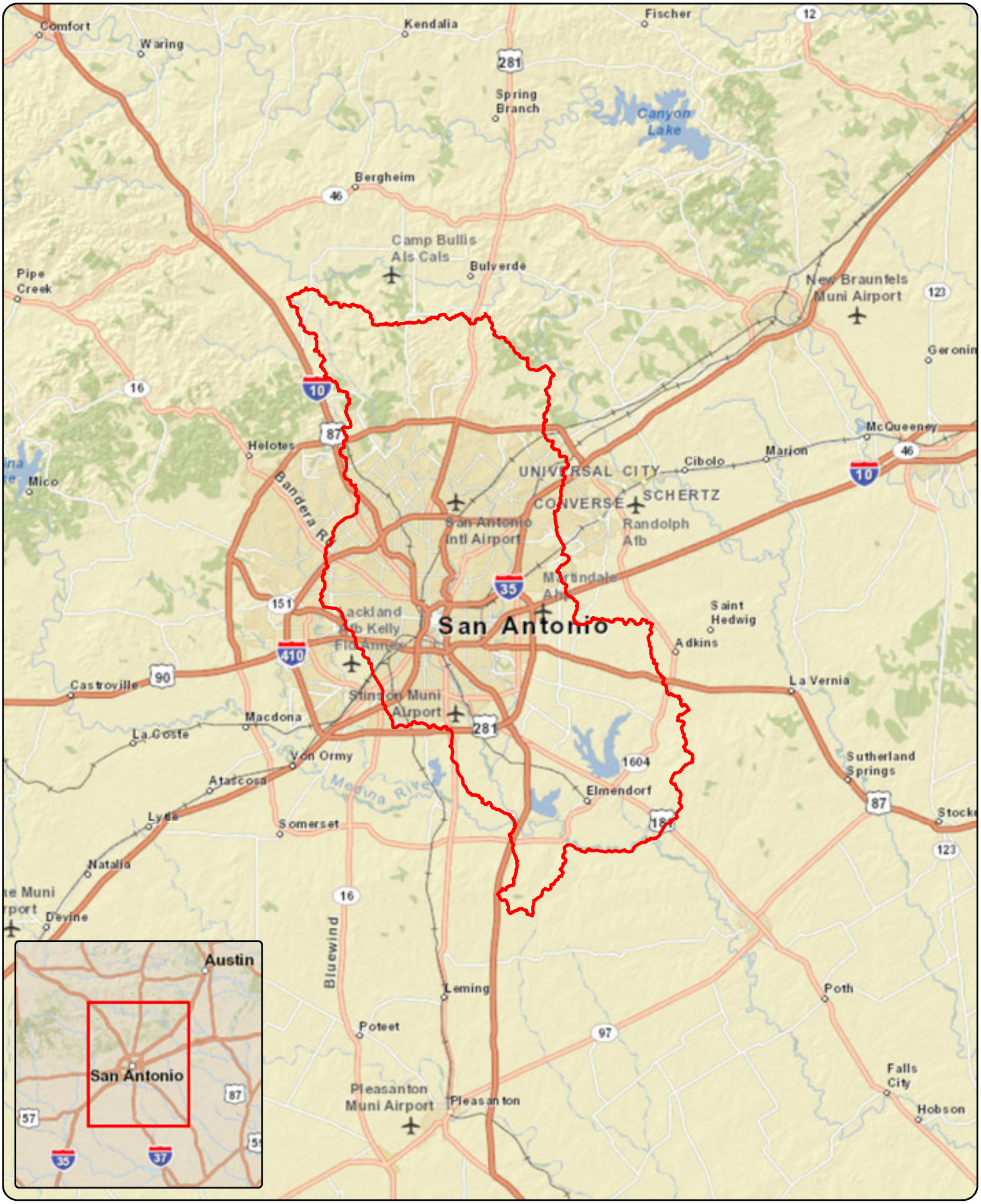
Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 22,747	$ 165,725	$ 3,332	$ -	$ 191,804
Commodities	-	5,000	-	-	5,000
Contracts	336,782	339,277	-	-	676,058
Total	$ 359,529	$ 510,001	$ 3,332	$ -	$ 872,862

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:





Project Name:
Cooperating Technical Partners (CTP) Risk Map Upper SA River

Project Service Area and/or Boundaries

N

0 4.5 9 Miles

SAN ANTONIO RIVER AUTHORITY
Leaders in Watershed Solutions

Project Name: **CTP Risk Map Upper San Antonio River** **Project #** **00000438**

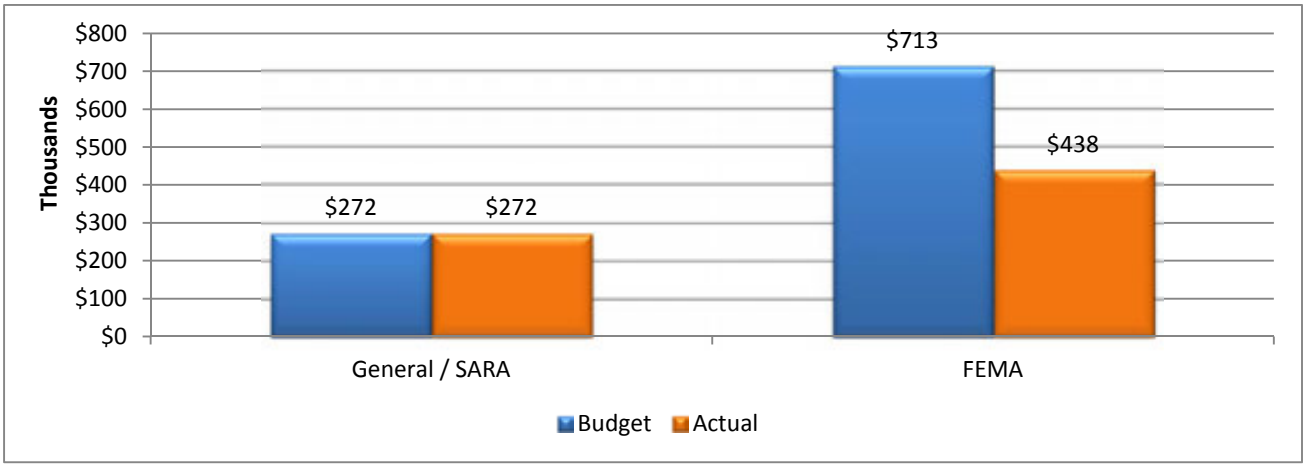
Project Start Date:	11/01/12	Total Project Budget:	$ 984,984
Project Finish Date:	06/30/15	Managing Department:	Watershed Engineering

The Federal Emergency Management Agency (FEMA) Risk Mapping, Assessment and Planning (Risk MAP) program will assist communities nationwide, assess flood risks, and encourage mitigation planning to avoid or minimize damage in the face of future disasters. Through more precise flood maps, risk assessment tools and outreach support, Risk MAP strengthens local ability to make informed decisions about reducing risk. This project will utilize the previously developed data to develop new non-regulatory flood risk products, catalog areas of mitigation interest and success, and produce additional Risk MAP products to increase community awareness about flooding risks and support local actions to mitigate those risks. The project will consist of two phases with the first being Discovery and the second being Risk Identification and Assessment.

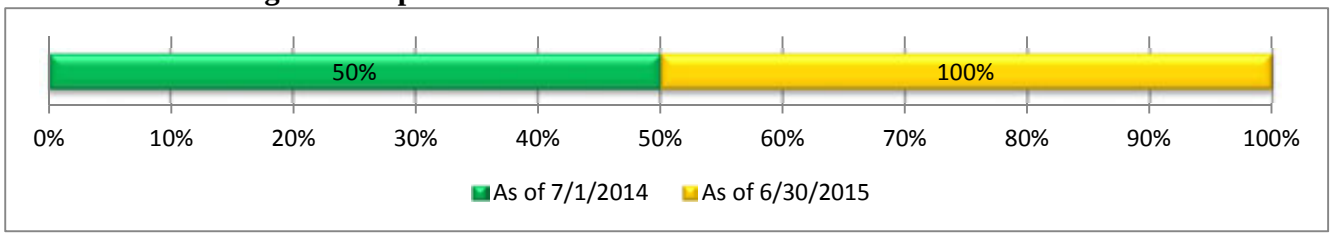
For fiscal year 2014/15, this project will focus on completing Phase II: Risk Identification & Assessment in the Upper San Antonio River Watershed. Phase II will focus on developing FEMA non-regulatory flood risk GIS data. A Flood Risk map, report, and database will be produced for this final phase of the project.

Expenditures	Estimate as of 2013/14	2014/15	2015/16	Succeeding from 2016/17	Total
Personnel	$ 288,479	$ 3,822	$ -	$ -	$ 292,301
Commodities	16,369	6,100	-	-	22,469
Contracts	405,802	264,412	-	-	670,214
Total	$ 710,650	$ 274,334	$ -	$ -	$ 984,984

Budget to Actual by Funding Source as of 7/1/2014:



Estimated Percentage of Completion:



Watershed Safety and Response Program

- **Baseline Terrain Data of Dams**
  This effort compares existing light detection and ranging (LIDAR) data generated for Bexar and Karnes counties to the latest as-built data of the 41 dams owned by SARA and identifies the major terrain diversions. If major diversions are identified, survey crews will be dispatched to obtain detailed data. If diversions are confirmed that impact the safety of the dam, recommendations will be made to remedy this. All other data will be used as baselines. This work was initiated as a project. To date, Bexar County dams have been completed. During the current fiscal year, the effort will work on Karnes County dams as the LIDAR field scanning and data cleanup are completed and delivered to SARA during the current fiscal year.

- **Calaveras 7 Dam Repair**
  Inspections revealed that the outside control section of the emergency spillway is not high enough to sustain flood elevations greater than 1.5 feet. Flows higher than 1.5 feet may leave the spillway. The emergency spillway last flowed in October 1998, with a maximum depth of about 1 foot. The effort will raise the banks of the control section of the emergency spillway so the structure is hydraulically adequate if the emergency spillway is in use. The work will include re-engineering the berm. Since the completion of the effort will require capital expense, staff will seek local partners during the current fiscal year.

- **Dam Inspection**
  This effort includes annual inspections by Watershed Engineering Department and Watershed Operations Department personnel to adhere to state and federal dam safety guidelines, mandates, and reporting requirements. On-the-ground visits are made to inspect structural integrity, verify the presence of adequate vegetative cover, and ensure that overall maintenance is meeting regulatory requirements.

- **Dam Inundation Zone Study**
  This study will help determine the feasibility for the River Authority to purchase low-population breach inundation zones for each River Authority-owned dam. The current fiscal year will build upon work completed last fiscal year. The detailed breach analyses done for Escondido 1, 4 and 12 will be used by the Real Estate Department to analyze the properties impacted by a flood. In the second half of the fiscal year, the project team will review and evaluate other dams and decide if they should be added to the project analysis.

- **Dam Monumentation and Signage**
  This effort involves identification of property boundaries and corners at River Authority dam sites in an attempt to limit unauthorized encroachment onto River Authority flood detention easements. Many of these easements are located near developing areas and fall prey to unlawful activities such as dumping.

- **Downstream Flood Warning and Response System**
  This effort will maintain and update the Army Corps of Engineers Hydrologic Engineering Center - Flood Warning and Response System (HEC-FWRS).

- **Escondido Creek Maintenance**
  This effort consists of maintaining vegetation to maximize flood water conveyance and to encourage a stable aquatic habitat. The River Authority partners with the City of Kenedy on this effort, which complements other flood conveyance activities within the Escondido Creek Watershed.

- **Integrity Pipeline Crossing**
  This effort will develop and implement a plan for evaluating pipeline integrity on river crossings within the San Antonio River Authority district in the Eagle Ford Shale region. This year, staff will identify key stakeholders to develop best management practices to properly install, operate, and maintain pipelines in the region. Staff will also update the River Authority geographic information systems (GIS) maps of pipeline crossings in coordination with the GLO and RRC. The River Authority will host table top exercises with stakeholders identified and downstream emergency responders on potential O&G spills, incidents, or accidents.

- **Flood Debris Clean-up**
  This effort includes citizen and private property owner involvement in a systematic approach to locate, assess, and prioritize for removal flood debris from selected critical areas along regional waterways within the River Authority's four-county jurisdiction. This waterway cleanup effort has resulted in five to eight miles of waterway conveyance enhancements and three to five tons of man-made debris removal annually.

- **Flood Alert Maintenance and Emergency Operations Center Coordination**
  This effort will be focused on maintaining the Bexar County flood warning system and supporting the San Antonio Office of Emergency Management as end-user of the system.

- **Karnes County Dam Maintenance**
  These earthen flood-water detention structures are highly dependent on a vigorous, dense vegetative cover for slope stability and the prevention of erosion damage. Many are

located on private land under easement. A cooperative program with the landowners has been established for fertilization, weed and brush control, and hay harvesting. Partners include the Escondido Watershed District (funding partner) and the Karnes County Soil and Water Conservation District.

- **Nichols Creek Maintenance**
  The Nichols Creek Channel Project was completed in 1979 in cooperation with the Natural Resources Conservation Service (NRCS). Current activities consist of maintaining the structural integrity of the concrete riprap-lined channel and beautification amenities. The effort has a funding partnership with the City of Kenedy.

- **San Antonio Channel Improvement Project (SACIP) Boundary Monumentation**
  This effort will provide boundary corners to publicly identify the River Authority's property lines on the San Antonio Channel Improvement Project area. The boundary corners will mainly be 5/8-inch iron rebar, 18 inches in length, with aluminum caps stamped SAN ANTONIO RIVER AUTHORITY. The markers will be placed at newly acquired boundary corners and will replace those removed during construction of the San Antonio River Improvements Project. Work will proactively identify SACIP boundaries in the areas of the Westside Creeks.

- **San Antonio River Authority Letter of Map Revision (LOMR) Delegation**
  This effort delegates the River Authority to do federal reviews of Conditional Letters of Map Revision (CLOMR) and Letters of Map Revision (LOMR) on behalf of the Federal Emergency Management Agency (FEMA) in Bexar, Wilson, Karnes and Goliad counties

- **Watershed Master Plan Maintenance**
  With the flood damage center analysis and related capital improvement project recommendations completed for the Upper San Antonio, Salado, and Leon creeks watershed master plans (WMPs), the work on these living documents in the current fiscal year will center upon water quality. Assessments utilizing models to be completed during the summer of 2014 will allow staff to recommend stormwater best management practices and, where feasible, projects with multiple benefits to maximize the value of the capital improvements projects recommended for the identified flood damage centers.

Support Services Efforts

- **Community Assistance: Bexar, Wilson, Karnes and Goliad Counties**
  The River Authority is dedicated to assisting communities within the district through promotion of partnerships and alliances with counties, cities, and other agencies, and through optimization of available funds. This effort will support all River Authority programs in Bexar, Wilson, Karnes and Goliad counties and serves to identify needs. Activities include regular visits with the communities through participation in related organizations, attendance at community meetings, and referrals from River Authority partners and employees. The goal of this effort is to support the River Authority's service goals and objectives by sharing River Authority staff expertise and resources within the district.

- **Educators' Conference**
  The Tenth Annual Water: A Living Lesson Educators' Conference is sponsored by the Edwards Aquifer Authority, University of Texas at San Antonio, Education Service Center Region 20, San Antonio River Authority, and San Antonio Water System, and continues the tradition of providing educators diverse opportunities to learn innovative, interactive, and tested methods of teaching water subjects. It explores practical, up-to-date examples of successful educational programs and materials through 40 interactive sessions of workshops and field trips to provide educators with physical resources and strategies for developing comprehensive water lessons to take back into the classroom. The River Authority's participation includes conference sponsorship and planning, preparation of the conference booklet and promotional materials, and presentation of workshops and field trips.

- **Environmental Awareness Initiative**
  As an active leader in environmental stewardship and water quality issues, the River Authority has developed an environmental awareness initiative designed to inform the entire San Antonio River Watershed community on ways citizens can protect and preserve the environment of the San Antonio River and its tributaries. The River Authority's commitment to this environmental education and outreach initiative is long-term, and as such, staff anticipates that this initiative will evolve over time to include other outreach programs. Through public and private sector cooperation, as well as with a potential increase of funding support for the environmental awareness initiative, the River Authority could maximize its efforts to develop a long-term outreach program that would help influence appreciation for the San Antonio River Watershed.

- **GIS Master Plan**
  This effort is to create, develop, edit, and implement a GIS Master for the River Authority. This effort will include stakeholder meetings with internal River Authority departments to gather the current state of GIS used and gather knowledge of future GIS needs. This effort also includes a system wide survey assessment of the current enterprise GIS system at the River Authority using the URISA GIS Capability Maturity Model to help identify areas of opportunity. This effort will include a GIS Master Plan document that includes a brief outline of the current state, a data governance architecture, a GIS organization model, and the new GIS technology domains that the River Authority GIS department will be expanding into. This effort will be the on-going maintenance of the GIS Master Plan document and timeline of GIS on-going efforts in Microsoft Project Management software application.

- **River Reach Quarterly Newsletter**
  The River Authority's quarterly newsletter provides information to the public about the River Authority's activities throughout the watershed.

- **Tax Increment Financing**
  Chapter 311 of the Texas Tax Code provides for the use of tax increment financing as a tool to promote and attract commercial and residential development or redevelopment in certain areas within the River Authority's jurisdiction. The River Authority may be asked to participate in a TIF project within a Tax Increment Reinvestment Zone (TIRZ) created by a local municipality or county.

SAN ANTONIO RIVER AUTHORITY
PROJECT PAGE INDEX
Projects Listed in Alphabetical Order

Project Name **Page**

SAN ANTONIO RIVER AUTHORITY
PROJECT PAGE INDEX
Projects Listed in Alphabetical Order

Project Name **Page**

Abbreviations & Acronyms

AFB	–	Air Force Base
BBASC	–	Basin and Bay Stakeholder Committee
BCCIP	–	Bexar County Capital Improvement Program
BMPs	–	Best Management Practices
BRWM	–	Bexar Regional Watershed Management
BST	–	Bacterial Source Tracking
CRP	–	Clean Rivers Program
DFIRM	–	Digital Flood Insurance Rate Map
EAA	–	Edwards Aquifer Authority
EDYS	–	Ecosystem Dynamic Simulation
EGIS	–	Enterprise Geographical Information System
FEMA	–	Federal Emergency Management Agency
FWRS	–	Flood Warning and Response System
GIS	–	Geographic Information System
GPD	–	Gallons per Day
GWSW	–	Ground Water Surface Water
HEC	–	Hydrologic Engineering Center
IBI	–	Index of Biotic Integrity
IGCR	–	Intergovernmental/Community Relations
ILA	–	Interlocal Agreement
LEED	–	Leadership in Energy and Environmental Design
LID	–	Low Impact Development
LIDAR	–	Light Detection and Ranging
LOMR	–	Letter of Map Revision
LSAR	–	Lower San Antonio River
MGD	–	Million Gallons per Day
NCD	–	Natural Channel Design
NPS	–	National Park Service
NRCS	–	Natural Resources Conservation Service
O&M	–	Operations and Maintenance
PCB	–	Polychlorinated biphenyls
QA/QC	–	Quality Assurance/Quality Control
RFP	–	Request for Proposal
RFQ	–	Request for Qualifications
RO	–	Reverse Osmosis
SACIP	–	San Antonio Capital Improvement Projects
SAHA	–	San Antonio Housing Authority
SAR	–	San Antonio River
SARA	–	San Antonio River Authority (the River Authority)
SARB	–	San Antonio River Basin
SARIP	–	San Antonio River Improvements Project
SCADA	–	Supervisory Control and Data Acquisition
SCTRWPG	–	South Central Texas Regional Water Planning Group
SR	–	Stream Restoration
TBL	–	Triple Bottom Line
TCEQ	–	Texas Commission on Environmental Quality
TIF	–	Tax Increment Financing
TIRZ	–	Tax Increment Reinvestment Zone
TWDB	–	Texas Water Development Board
TxDOT	–	Texas Department of Transportation
UDC	–	Unified Development Code
USACE	–	US Army Corps of Engineers
USDA	–	US Department of Agriculture
USGS	–	US Geological Survey
WSC	–	Water Supply Corporation
WSM	–	Watershed Management
WSMP	–	Watershed Master Plan
WSO	–	Watershed Operations
WW	–	Wastewater
WWTP	–	Wastewater Treatment Plant