



**Texas State Soil and Water Conservation Board
 State Nonpoint Source Grant Program
 FY 2014 Project 14-51 Workplan**

PROJECT SUMMARY PAGE		
Title of Project	Recreational Use Attainability Analysis for San Miguel Creek	
Project Goals/Objectives	<ul style="list-style-type: none"> To collect the needed data to evaluate factors affecting attainment of recreational use in Segment 2108 To facilitate public participation and coordinate stakeholder involvement to ensure that decision-making is founded on local input and that watershed action is successful Develop a comprehensive GIS inventory and evaluate historical water quality data. 	
Project Tasks	(1) Project Administration; (2) Quality Assurance; (3) Assess Attainability of Recreation Use; (4) Public Participation and Stakeholder Coordination; (5) Comprehensive GIS Inventory	
Measures of Success	<ul style="list-style-type: none"> Decision-making for RUAA is founded on local stakeholder input Obtain access to private lands to conduct RUAA surveys Complete two RUAA surveys at each selected site Keep landowners and stakeholders informed regarding the RUAA 	
Project Type	Implementation (); Education (); Planning (); Assessment (X)	
Status of Waterbody on 2012 Texas Water Quality Inventory and 303(d) List	<u>Segment ID</u> 2108 San Miguel Creek	<u>Parameter</u> Bacteria
Project Location (Statewide or Watershed and County)	San Miguel Creek in Medina, Frio, Atascosa, and McMullen counties.	
Key Project Activities	Hire Staff (); Surface Water Quality Monitoring (); Technical Assistance (); Education (X); Implementation (); BMP Effectiveness Monitoring (); RUAA (X); Demonstration (); Planning (); Modeling (); Bacterial Source Tracking (); Other (X)	
Texas NPS Management Program Elements	<ul style="list-style-type: none"> Component 1 – Long Term Goal Objectives A, G Component 1 – Short Term Goals 1A, 1B, 1C, 3D, 3F Components 2, 5 	
Project Costs	\$128,571	
Project Management	<ul style="list-style-type: none"> Nueces River Authority 	
Project Period	November 1, 2013 – October 31, 2015	

Part I – Applicant Information

Applicant							
Project Lead	Rocky Freund						
Title	Deputy Executive Director						
Organization	Nueces River Authority						
E-mail Address	rfreund@nueces-ra.org						
Street Address	400 Mann Street, Suite 1002						
City	Corpus Christi	County	Nueces	State	Texas	Zip Code	78401
Telephone Number	361-653-2110			Fax Number	361-653-2115		

Project Partners	
Names	Roles & Responsibilities
Texas State Soil and Water Conservation Board (TSSWCB)	Provide state oversight and management of all project activities and ensure coordination of activities with related projects and the Texas Commission on Environmental Quality (TCEQ).
Nueces River Authority (NRA)	Responsible for all project activities and tasks. Responsible for project administration. Develop and maintain relationships with landowners and stakeholders. Coordinate public meetings and coordinate with local stakeholders to ensure communication and collaboration. Perform surveys for RUAA, developing and incorporating previously collected information and geographic information system (GIS) data, and completing technical reports.

Part II – Project Information

Watershed Information				
Watershed Name	Hydrologic Unit Code (12 Digit)	Segment ID	305(b) Category	Size (Acres)
San Miguel Creek	121101090502	2108	5b	546,126
	121101090505			
	121101090205			
	121101090402			
	121101090204			
	121101090503			
	121101090504			
	121101090305			
	121101090501			
	121101090303			
	121101090406			
	121101090405			
	121101090304			
	121101090302			
	121101090404			
	121101090403			
	121101090301			
	121101090401			
	121101090203			
	121101090105			
	121101090104			
121101090202				
121101090103				
121101090201				
121101090102				
121101090101				

Water Quality Impairment

Describe all known causes of water quality impairments from any of the following sources: 2012 Texas Water Quality Inventory and 303(d) List, Clean Rivers Program Basin Summary/Highlights Reports, or other documented sources.

San Miguel Creek (Segment 2108) is comprised of two assessment units (2108_01 and 2108_02) 66 miles long extending from Choke Canyon Reservoir in McMullen County to the confluence of Perez Creek and Chacon Creek in Frio County.

Segment 2108_01 is not supporting the contact recreation use due to excessive bacteria. In 2006, segment 2108_01 was listed as being impaired for bacteria. This listing has continued through to the 2012 Texas Integrated Report. The 2012 Clean Rivers program (CRP) Basin Summary Report noted a geometric mean of 131 cfu/100 ml for *E. coli*. These levels exceed the 126 cfu/100 ml geometric mean criteria.

Project Narrative

Problem/Need Statement

San Miguel Creek reaches 66 miles extending from Choke Canyon Reservoir in McMullen County to the confluence of Perez Creek and Chacon Creek in Frio County. The San Miguel Creek watershed is largely shrub, crops, and pasture with no major communities but a number of small communities. Tributaries to San Miguel Creek include Chacon Creek, Live Oak Creek, Lagunillas Creek, and Bacerro Creek. Road crossings include TX 85, TX 97, CR 347, CR 343, State Hwy 16, and FM 140. Currently there is one active water quality monitoring station and one USGS stream flow gauge, both located near Tilden. Permitted wastewater treatment facility (WWTF) outfalls on this segment include San Miguel Electric Cooperative, Moore Water Supply Corporation (WSC), and the cities of Charlotte, Devine, and Natalia.

The TCEQ and the TSSWCB established a joint, technical Task Force on Bacteria Total Maximum Daily Loads (TMDL) in September 2006 charged with making recommendations on cost-effective and time-efficient bacteria TMDL development methodologies. The Task Force recommended the use of a three-tier approach that is designed to be scientifically credible and accountable to watershed stakeholders. The tiers move through increasingly aggressive levels of data collection and analysis in order to achieve stakeholder consensus on needed load reductions and strategies to achieve those reductions. In June 2007, the TCEQ and the TSSWCB adopted the principles and general process recommended by the Task Force. Fundamental in the three-tier approach is ensuring that the appropriate water quality standard (i.e., designated use) is applied to the waterbody before initiating any watershed planning activity (e.g., TMDL or watershed protection plan).

Major revisions to the Texas Surface Water Quality Standards (TSWQS) have been adopted by TCEQ, including modifications to contact recreation use and bacteria criteria. As part of this process, TCEQ developed procedures for conducting RUAAs. In order for a new category of recreational use or a different bacteria water quality criterion to be applied to a waterbody, an RUAAs will need to be conducted. TCEQ and TSSWCB have collaborated on developing a list of priority waterbodies for collecting information needed for RUAAs.

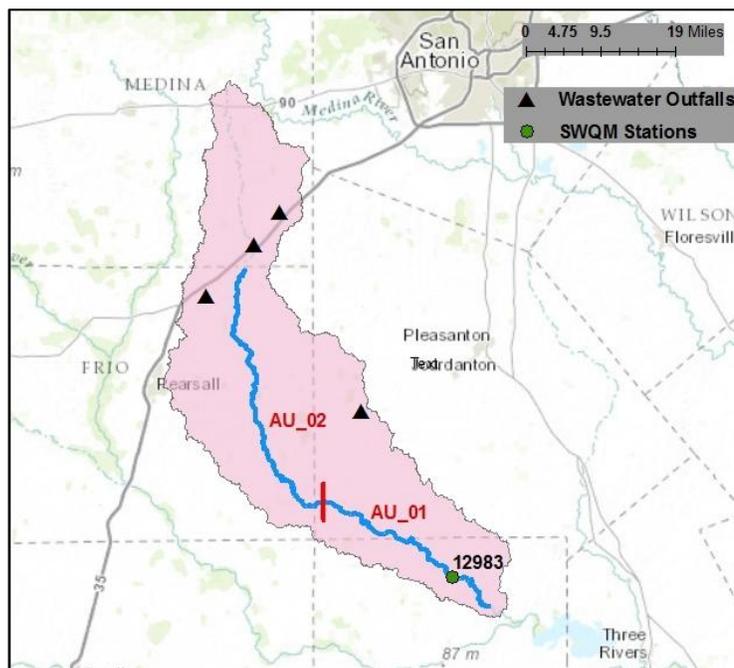
In 2006, San Miguel Creek was listed as being impaired for bacteria based on fecal coliform and *E. coli* analyses. It was assessed as having a geometric mean for fecal coliform of 259 cfu/100ml and was declared impaired for *E. coli* but no concentrations were reported in the assessment. Since it is not known with certainty that recreational use in San Miguel Creek occurs, the findings from an RUAAs will provide additional information regarding the level of recreational use occurring in Segment 2108.

In accordance with the *Memorandum of Agreement Between the TCEQ and the TSSWCB Regarding TMDLs, Implementation Plans, and Watershed Protection Plans*, the TSSWCB has agreed to take the lead role in conducting an RUAAs in the study area. Through this project, the TSSWCB and NRA will work with local stakeholders to progress through the data collection components of an RUAAs and at the end of this project have adequate data that either supports the existing designated use (primary contact recreation) or supports a change in designated use.

Project Narrative

General Project Description (Include Project Location Map)

This project consists of performing a Comprehensive RUAA on San Miguel Creek (Segment 2108) for the purpose of ascertaining the level of recreational use occurring in the creek. This project will adhere to the procedures provided in the *TCEQ Procedures for a Comprehensive RUAA and a Basic RUAA Survey*.



This Comprehensive RUAA of San Miguel Creek consists of 4 main tasks: a) conducting the required two surveys of San Miguel Creek, b) public participation and stakeholder interaction c) evaluation of historical bacterial water quality data and d) compilation of GIS data pertaining to the San Miguel Creek watershed.

RUAA survey site selection is predicated on reconnaissance trips, public participation, and stakeholder interaction. An initial reconnaissance trip will be completed prior to meeting with stakeholders, and follow up trips when interaction with local landowners provides opportunities for additional sites.

Two surveys will be conducted at each of the selected sites by NRA. Each survey will be conducted per the most recently applicable TCEQ RUAA guidance and will include the collection of transect information along a stretch of the creek at each site, numerous physical observations, and collection of survey information from

individuals either actively recreating at each site or knowledgeable of the site and San Miguel Creek in general. Each survey will be performed at a time of year under weather and hydrologic conditions that are conducive to observing recreational use on San Miguel Creek, which means when air temperatures are warm to hot ($>70^{\circ}$ F). Field surveys will be conducted during the period people would most likely be using the waterbody for contact recreation. A historical information review will be conducted on recreation use that occurred on San Miguel Creek on and after November 28, 1975.

The public education and stakeholder interaction task is critical to the success of the project. This task will be performed by NRA to accomplish two complimentary goals – obtaining landowner permission for access to sites along San Miguel Creek and ensuring that decision-making regarding the RUAA is founded on local input. A public meeting will be held where the RUAA process is described and solicitation is made for access to the waterbody. Direct interaction with affected city councils, county commissioners courts, and soil and water conservation districts (SWCD)s will occur. Any necessary follow-up meetings will be conducted to further communicate the RUAA process and to obtain landowner permission for access to the creek. A final public meeting will be conducted to present findings of the RUAA surveys.

Tasks, Objectives and Schedules				
Task 1	Project Administration			
Costs	\$6,158			
Objective	To effectively administer, coordinate and monitor all work performed under this project including technical and financial supervision and preparation of status reports.			
Subtask 1.1	NRA will prepare electronic quarterly progress reports (QPRs) for submission to the TSSWCB. QPRs shall document all activities performed within a quarter and shall be submitted by the 15 th of March, June, September and December. QPRs shall be distributed to all project partners.			
	Start Date	Month 1	Completion Date	Month 24
Subtask 1.2	NRA will perform accounting functions for project funds and will submit appropriate Reimbursement Forms to TSSWCB at least quarterly.			
	Start Date	Month 1	Completion Date	Month 24
Subtask 1.3	NRA will host coordination meetings or conference calls with TSSWCB at least quarterly to discuss project activities, project schedule, communication needs, deliverables, and other requirements. NRA will develop lists of action items needed following each project coordination meeting and distribute to project personnel.			
	Start Date	Month 1	Completion Date	Month 24
Deliverables	<ul style="list-style-type: none"> • Quarterly progress reports in electronic format • Reimbursement Forms and necessary documentation in hard copy format • List of action items needed from project coordination meetings 			

Tasks, Objectives and Schedules				
Task 2	Quality Assurance			
Costs	\$9,784			
Objective	To develop and implement data quality objectives (DQOs) and quality assurance/control (QA/QC) activities to ensure data of known and acceptable quality are generated through this project.			
Subtask 2.1	NRA will develop a quality assurance project plan (QAPP) for activities in Task 3 and Task 5 consistent with the most recent versions of <i>EPA Requirements for Quality Assurance Project Plans (QA/R-5)</i> and the <i>TSSWCB Environmental Data Quality Management Plan</i> .			
	All monitoring procedures and methods prescribed in the QAPP shall be consistent with the guidelines detailed in the <i>TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue (RG-415)</i> and <i>Volume 2: Methods for Collecting and Analyzing Biological Assemblage and Habitat Data (RG-416)</i> . All procedures and methods prescribed in the QAPP shall be consistent with the guidelines detailed in the latest version of the <i>TCEQ Procedures for a Comprehensive RUAA and a Basic RUAA Survey</i> .			
Subtask 2.2	Start Date	Month 1	Completion Date	Month 2
	NRA will implement the approved QAPP. NRA will submit revisions and necessary amendments to the QAPP as needed.			
Subtask 2.2	Start Date	Month 3	Completion Date	Month 24
	NRA will implement the approved QAPP. NRA will submit revisions and necessary amendments to the QAPP as needed.			
Deliverables	<ul style="list-style-type: none"> • QAPP approved by TSSWCB in both electronic and hard copy formats • Approved revisions and amendments to QAPP, as needed • Data of known and acceptable quality as reported through Task 3 			

Tasks, Objectives and Schedules			
Task 3	Assess Attainability of Recreational Use		
Costs	\$40,435		
Objective	To collect information that can be used to evaluate factors affecting attainment of recreational use in San Miguel Creek		
Subtask 3.1	NRA will conduct at least one reconnaissance trip to assess potential survey sites. The reconnaissance trip(s) will be a follow-up on the interaction with landowners under Task 4. The goal will be to have approximately 3 sites per 5 miles of river, for a maximum of 39 sites dependent on accessibility.		
	Start Date	Month 1	Completion Date
Subtask 3.2	Utilizing information from subtask 5.1 (comprehensive GIS inventory), subtask 3.1 (reconnaissance trip), Task 4 (public input), and other relevant information, NRA will identify sites for RUAA data collection. Proposed sites should be located in areas where the waterbody is accessible to the public and has the highest potential for recreational use (primary contact). Because public access is limited along this waterbody, other sites will also be selected for the purpose of characterizing the physical characteristics of the stream to assist in determining the potential level of recreation use that can be supported. The sites should be well-spaced and, in general, distributed such that there are 3 sites for every 5 miles of stream.		
	Start Date	Month 1	Completion Date
Subtask 3.3	NRA shall conduct a thorough historical information review of the recreational uses of the waterbody back to November 28, 1975. Historical resources that should be examined include, but are not limited to, photographic evidence, local newspapers, museum collections, published reports, historical society records, and long-term landowners/residents. Texas Parks and Wildlife Department and commercial providers of outdoor recreation goods and services should be consulted for historical information.		
	Start Date	Month 1	Completion Date
Subtask 3.4	NRA will conduct 2 field surveys at each selected site. Surveys shall be conducted during a normal warm season (air temperature $\geq 70^{\circ}\text{F}$) during baseflow conditions. Baseflow conditions are sustained or typical dry, warm-weather flows between rainfall events, excluding unusual antecedent conditions of drought or wet weather. The surveys should be performed during the period people would most likely be using the waterbody for contact recreation, typically March to October (e.g., spring break, summer, holidays or weekends).		
	To ascertain the suitability of the streams for contact recreation use, field surveys shall document hydrological characteristics of the stream, such as width and depth of channel and substantial pools, air/stream temperature, bank access, and stream substrate. Information to be collected shall at least satisfy those questions found on the Field Data Sheet from the latest version of the <i>TCEQ Procedures for a Comprehensive Recreational UAA and a Basic UAA Survey</i> .		
Subtask 3.5	NRA shall document and describe antecedent (prior to fieldwork) rainfall conditions (approximately the previous 30 days) at each selected site.		
	Start Date	Month 4	Completion Date
Subtask 3.6	NRA shall collect a digital photographic record of each selected site during the field surveys. Photographs shall include upstream, left and right bank, and downstream views. Any evidence of observed uses or indications of human use shall be photographed. Photographs should clearly depict the entire channel and each transect measured.		
	Start Date	Month 4	Completion Date
Subtask 3.6	In order to obtain information on existing and historical uses and stream characteristics, NRA shall conduct interviews of 1) users present during the field surveys, 2) streamside landowners along the field survey transects, 3) local residents, and 4) commercial providers of outdoor recreation goods and services. Surveys shall include at least those questions found on the Interview Form from the latest version of the <i>TCEQ Procedures for a Comprehensive Recreational UAA and a Basic UAA Survey</i> .		
	Start Date	Month 1	Completion Date

Subtask 3.7	NRA will combine findings from historical information review, field surveys, and user interviews into a Technical Report that shall at least include those contents described for a Comprehensive RUAA in the latest version of the <i>TCEQ Procedures for a Comprehensive Recreational UAA and a Basic UAA Survey</i> .			
	Start Date	Month 14	Completion Date	Month 24
Deliverables	<ul style="list-style-type: none"> • Contact Information Form from the latest version of the <i>TCEQ Procedures for a Comprehensive Recreational UAA and a Basic UAA Survey</i> • Field Data Sheets and Data Summary in electronic format • Digital photographic record, cataloged in an appropriate manner • Interview Forms and Data Summary in electronic format • Technical Report summarizing historical information review, field surveys, and user interviews 			

Tasks, Objectives and Schedules				
Task 4	Public Participation and Stakeholder Coordination			
Costs	\$42,777			
Objective	To facilitate public participation and coordinate stakeholder involvement to ensure that decision-making is founded on local input and that watershed action is successful.			
Subtask 4.1	NRA will facilitate public participation activities and coordinate stakeholder involvement in the project. NRA will develop (Months 1-2) and maintain (Months 3-24) a list of stakeholders likely to be affected by this project.			
	Start Date	Month 1	Completion Date	Month 24
Subtask 4.2	NRA will provide logistical support for public meetings, including, but not limited to, securing meeting facilities, preparing/disseminating meeting notices and agendas, and preparing meeting summaries. At a minimum, public stakeholder meetings shall consist of an initial public meeting (~Month 3), a project update meeting (~Month 10), and a meeting presenting final Technical Reports (~Month 16). A primary objective of the public meetings is to solicit landowner permission for private-land access to San Miguel Creek for survey sites. NRA will participate in all public stakeholder meetings.			
	Start Date	Month 1	Completion Date	Month 24
Subtask 4.3	NRA, as appropriate, will attend and participate in other public meetings, including, but not limited to, city council meetings, county commissioners' court meetings, SWCD meetings, and NRA Clean Rivers Program (CRP) Steering Committee and Coordinated Monitoring meetings, in order to communicate project goals, activities, and accomplishments to affected parties.			
	Start Date	Month 1	Completion Date	Month 24
Subtask 4.4	NRA will develop and disseminate educational materials to watershed stakeholders, including, but not limited to, flyers, brochures, letters, and news releases. NRA will include project updates in the CRP Basin Summary Report and/or Basin Highlights Report. NRA will host and maintain a webpage to serve as a public clearing house for all project-related information. The website will serve as a means to disseminate information to stakeholders and the general public.			
	Start Date	Month 1	Completion Date	Month 24
Deliverables	<ul style="list-style-type: none"> • Stakeholder contact list, updated as appropriate • Public meeting notices, agendas, materials, summaries and lists of attendees • Educational materials, as developed and disseminated • List of other meetings attended and dates with brief summary of topics discussed and action needed included in QPRs • Information developed for inclusion in CRP materials 			

Tasks, Objectives and Schedules				
Task 5	Comprehensive GIS Inventory			
Costs	\$29,417			
Objective	To develop a comprehensive GIS inventory for the study area, and evaluate historical water quality data.			
Subtask 5.1	NRA will develop a comprehensive GIS inventory for the study area. Data should include the most recent information available on land use/land cover classification, elevation, soils, stream networks, reservoirs, roads, public parklands, municipalities and satellite imagery or aerial photography. Locations of TCEQ surface water quality monitoring stations, United States Geological Survey (USGS) gages, public access points to the waterbodies, floodwater-retarding structures, wetlands, Texas Pollutant Discharge Elimination System (TPDES) permittees (including WWTFs, Concentrated Animal Feeding Operations (CAFO)s and Municipal Separate Storm Sewer Systems (MS4)), and subdivisions should also be included. Sites permitted for land application of sewage sludge and septage should be included.			
	Start Date	Month 1	Completion Date	Month 12
Subtask 5.2	NRA will conduct a historical data review for the waterbody in order to assess and characterize trends and variability in water quality, specifically bacteria. Historical data collection activities should concentrate on 1) ambient water quality data; 2) streamflow and water level data; 3) precipitation records; and 4) permitted facilities, discharges, and effluent quality. At a minimum, USGS, National Weather Service, Texas Parks and Wildlife Department (TPWD), Texas Water Development Board (TWDB), NRA, TCEQ, and the U.S. Environmental Protection Agency (EPA) should be queried for data related to the study area.			
	Start Date	Month 1	Completion Date	Month 18
Deliverables	<ul style="list-style-type: none"> Comprehensive GIS inventory and historical water quality monitoring data to be used in the RUAA report. 			

Project Goals (Expand from Summary Page)
<ul style="list-style-type: none"> To collect needed data to evaluate factors affecting attainment of recreational use in Segment 2108 by collecting all necessary data required for a Comprehensive RUAA; specifically, observations and physical measurements will be made of San Miguel Creek at several locations, survey information will be obtained from landowners familiar with the watershed and persons observed recreating in or near the creek, and review of historical records in Frio, Atascosa, McMullen, and Medina counties. To facilitate public participation and coordinate stakeholder involvement to ensure that decision-making is founded on local input and that watershed action is successful by hosting and conducting public meetings, disseminating informational materials, and direct interaction with affected local entities. Develop a comprehensive GIS inventory and evaluate historical water quality data.

Measures of Success (Expand from Summary Page)
<ul style="list-style-type: none"> Decision-making for RUAA activities is founded on local stakeholder input garnered at public meetings hosted for project and direct interaction with affected local entities. Obtain access to private lands to conduct RUAA surveys by obtaining permission from private landowners to gain access to survey sites on San Miguel Creek through their property. Complete two RUAA surveys at each selected site as described in TCEQ's RUAA guidance. Keep landowners and stakeholders informed regarding this RUAA through public meetings; a final public meeting where findings of the RUAA are presented constitutes this measure of success. Factors affecting attainment of recreation use are assessed and adequate data of known and acceptable quality is provided that either supports the existing use or supports changing the water quality standard.

2012 Texas Nonpoint Source Management Program Reference (Expand from Summary Page)
Goals and/or Milestone(s)
Component 1 – Explicit short- and long-term goals, objectives and strategies that protect surface... water
Long Term Goal – Objective A – Focus NPS abatement efforts, implementation strategies, and available resources in watersheds identified as impacted by NPS pollution.
Long-Term Goal – Objective G – Enhance public participation and outreach by providing forums for citizens... to contribute their ideas and concerns about the water quality management process.
Short-Term Goal One – Data Collection and Assessment – Objective A – Identify... waterbodies... from the Texas Water Quality Inventory and 303(d) List... that need additional information to characterize non-attainment of designated uses and quality standards.
Short-Term Goal One – Data Collection and Assessment – Objective B – Ensure that monitoring procedures meet quality assurance requirements and are in compliance with EPA-approved... TSSWCB Quality Management Plan.
Short-Term Goal One – Data Collection and Assessment – Objective C – Conduct special studies to determine sources of NPS pollution and gain information...
Short-Term Goal Three – Education – Objective D – Conduct outreach through the Clean Rivers Program, SWCDs, and others to facilitate broader participation and partnerships [to] enable stakeholders and the public to participate in decision-making and provide a more complete understanding of water quality issues and how they relate to each citizen.
Short-Term Goal Three – Education – Objective F – Implement public outreach and education to maintain and restore water quality in waterbodies impacted by NPS pollution.
Component 2 – Working partnerships and linkages to appropriate state, interstate, tribal, regional, and local entities, private sector groups, and Federal agencies.
Component 5 – The state program identifies water and their watersheds impaired by NPS pollution..., the state establishes a process to progressively address these identified waters by conducting more detailed watershed assessments...

Part III – Financial Information

Budget Summary	
Category	Costs
Personnel	\$ 80,062
Fringe Benefits	\$ 24,019
Travel	\$ 6,220
Equipment	\$ 0
Supplies	\$ 500
Contractual	\$ 0
Construction	\$ 0
Other	\$ 1,000
Total Direct Costs	\$ 111,801
Indirect Costs ($\leq 15\%$)	\$ 16,770
Total Project Costs	\$ 128,571

Budget Justification		
Category	Costs	Justification
Personnel	\$ 80,062	<ul style="list-style-type: none"> • Deputy Executive Director – Project Oversight (3%) • Water Quality Specialist – project manager (30%) will perform administrative duties, QAO duties, GIS support and oversee the RUAA Surveys including analysis and technical reporting • Aquatic Resource Specialist – will be a key staff member on all project aspects including the RUAA surveys, bacteria source survey and GIS support/analysis (25%) • Information Systems Coordinator – will provide technical assistance as needed (15%) • Resource Protection and Education Director – will assist with outreach and stakeholder involvement (2%) • Director of Finance – budget oversight (15%)
Fringe Benefits	\$ 24,019	Calculated at 30% of personnel salary
Travel	\$ 6,220	Travel for reconnaissance trip, public and stakeholder meetings, and RUAA surveys – includes lodging, per diem, vehicle rental, and gas expenditures.
Equipment	\$ 0	N/A
Supplies	\$ 500	<ul style="list-style-type: none"> • Miscellaneous presentation materials and supplies (\$100) • Printing and binding reports and handouts (\$100) • Advertising for meetings (\$300)
Contractual	\$ 0	N/A
Construction	\$ 0	N/A
Other	\$ 1,000	<ul style="list-style-type: none"> • ArcGIS license (\$1,000)
Indirect	\$ 16,770	Calculated at 15% of Total Direct Cost