



**Texas State Soil and Water Conservation Board
 Clean Water Act §319(h) Nonpoint Source Grant Program
 FY 2014 Workplan 14-09**

SUMMARY PAGE

Title of Project	Surface Water Quality Monitoring to Support the Implementation of the Geronimo and Alligator Creeks Watershed Protection Plan					
Project Goals	<ul style="list-style-type: none"> • Generate data of known and acceptable quality for surface and ground water quality monitoring of main stem and tributary stations • Collect water quality data for use in assessing water quality improvement and progress in achieving restoration • Communicate water quality conditions to the public and the Partnership in order to support adaptive management and to expand public knowledge on Geronimo and Alligator Creeks water quality data • Coordinate and conduct water resources and related environmental outreach/education efforts across the watershed 					
Project Tasks	(1) Project Administration; (2) Quality Assurance; (3) Water Quality Data Collection and Analysis					
Measures of Success	<ul style="list-style-type: none"> • Data of known and acceptable quality are generated for surface water quality monitoring of main stem and tributary stations and groundwater monitoring of shallow wells from the Leona Aquifer • Water quality data is communicated to the public and the Partnership • Increased watershed stewardship among Geronimo Creek watershed stakeholders • Provide technical assistance to the Geronimo Creek Partnership • Maintain project webpage to communicate water quality data, provide information to stakeholders, and provide access to education and outreach 					
Project Type	Implementation (); Education (X); Planning (); Assessment (X); Groundwater ()					
Status of Waterbody on 2012 Texas Integrated Report	<u>Segment ID</u> 1804A	<u>Parameter of Impairment or Concern</u> Bacteria nitrate-nitrogen			<u>Category</u> 5c CN	
Project Location (Statewide or Watershed and County)	Geronimo Creek Watershed in Guadalupe and Comal Counties					
Key Project Activities	Hire Staff (); Surface Water Quality Monitoring (X); Technical Assistance (X); Education (X); Implementation (); BMP Effectiveness Monitoring (); Demonstration (); Planning (); Modeling (); Bacterial Source Tracking (); Other ()					
2012 Texas NPS Management Program Reference	<ul style="list-style-type: none"> • Component 1 LTGs 1, 3, 7 • Component 1 STGs 1B, 1E, 3F • Component 3 					
Project Costs	Federal	\$135,021	Non-Federal	\$90,014	Total	\$225,035
Project Management	• Guadalupe-Blanco River Authority					
Project Period	October 1, 2014 – September 30, 2016					

Part I – Applicant Information

Applicant							
Project Lead		Debbie Magin					
Title		Director of Water Quality Services					
Organization		Guadalupe Blanco River Authority					
E-mail Address		dmagin@gbra.org					
Street Address		933 E. Court St.					
City	Seguin	County	Guadalupe	State	TX	Zip Code	78155
Telephone Number	(830) 379-5822			Fax Number			

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 TCEQ.
Guadalupe Blanco River Authority	Provide project administration, water quality monitoring, data and analysis review, outreach and education, technical assistance
Geronimo and Alligator Watershed Partnership	Provide input on monitoring strategies.

Part II – Project Information

Project Type

Surface Water	<input checked="" type="checkbox"/>	Groundwater	<input checked="" type="checkbox"/>						
Does the project implement recommendations made in (a) a completed WPP, (b) an adopted TMDL, (c) an approved I-Plan, (d) a Comprehensive Conservation and Management Plan developed under CWA §320, (e) the <i>Texas Coastal NPS Pollution Control Program</i> , or (f) the <i>Texas Groundwater Protection Strategy</i> ?						Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
If yes, identify the document.		Geronimo and Alligator Creeks Watershed Protection Plan							
If yes, identify the agency/group that developed and/or approved the document.		Geronimo and Alligator Creek Watershed Partnership facilitated by AgriLife Extension, GBRA and TSSWCB			Year Developed		2012		

Watershed Information

Watershed or Aquifer Name(s)	Hydrologic Unit Code (12 Digit)	Segment ID	Category on 2012 IR	Size (Acres)
Geronimo Creek (including its tributary, Alligator Creek)	121000202	1804A	5c	44,152

Water Quality Impairment

Describe all known causes (i.e., pollutants of concern) and sources (e.g., agricultural, silvicultural) of water quality impairments or concerns from any of the following sources: *2012 Texas Integrated Report*, Clean Rivers Program Basin Summary/Highlights Reports, or other documented sources.

2012 Texas Integrated Reports - Geronimo Creek was listed as impaired on the 2004 and 2006 303(d) Lists due to bacterial contamination. The data from that period of record showed that the geometric mean for *E. coli* bacteria exceeded the stream standard. The geometric mean of Geronimo Creek was 162 cfu/ 100 mL. The geometric mean of the *E. coli* data collected on Geronimo Creek between December 1, 2003 and November 30, 2010 (150 samples) and assessed in 2012 by TCEQ, was 199 organisms per 100 mL, higher than the reported geometric mean of 161 organisms per 100 mL (81 samples) in the 2010 assessment.

Clean Rivers Program 2013 Basin Summary Report - The 2013 Clean Rivers Program Basin Summary Report for the Guadalupe River Basin states that the analysis of the nitrate-nitrogen concentrations measured at the Haberle Road monitoring location over the past 10 years is showing a downward trend. The Basin Summary report supports the likelihood that the source of the nitrates is groundwater by noting that the low nitrate values occur during high flow events that dilute the influence of groundwater with high nitrates. The statistical analyses on the bacteriological data collected from 2003 through 2012 found that the geometric mean for *E. coli* is 154 organisms per 100 mL, lower but still greater than the contact recreation standard of 126 organisms per 100 mL.

Clean Rivers Program Basin Highlights Reports - The Clean Rivers Program Basin Highlights Reports for the Guadalupe River Basin since 2004 comment on the elevated nitrate-nitrogen concentrations, suggesting that the source appears to be groundwater seepage. The private wells that have been monitored in the area are shallow and have concentrations in excess of 20 mg/L.

2012 Nonpoint Source Management Program - NPS contamination is widespread in many Texas aquifers. The most widespread contaminant is nitrate, with a variety of potential sources. Potential nitrate sources may include leaking septic systems, storm water runoff, over application of fertilizer on cropland, and naturally occurring nitrate derived from the aquifer matrix. Nitrate is readily soluble and mobile in water, and is considered one of the major human health concerns in drinking water. Coincidentally, nitrate concentration may be an indicator of NPS pollution in groundwater, because it can move readily through the soil, entering aquifers by means of percolation. Nitrate in surface water indicates the potential for groundwater contamination. Other ambient groundwater quality constituents of concern are likely naturally occurring, and not necessarily good indicators of NPS influence on the aquifers.

Project Narrative

Problem/Need Statement

In 2007, the TSSWCB Regional Watershed Coordination Steering Committee, using established criteria, ranked Geronimo Creek in the top 3 watersheds for selection of WPP development. The TSSWCB project 08-06 entitled, *Development of a Watershed Protection Plan for Geronimo Creek*, began in June 2008. The project included water quality monitoring, water quality modeling and WPP development. The development of the WPP for Geronimo and Alligator Creeks has been a stakeholder driven process lead by Extension with support from the GBRA. The Geronimo and Alligator Creeks Watershed Partnership (the Partnership) Steering Committee includes local officials, land and business owners and citizens and is supported by state and federal agency partners. With technical assistance from project staff, the Steering Committee has identified issues that are of particular importance to the surrounding communities, and has contributed information on land uses and activities that has been helpful in identifying the sources of nutrient and bacterial impairments, and in guiding the development of the WPP.

Historical data identified the impairment for bacteria and a concern for nutrients. The water quality monitoring program attempted to fill gaps in the historical data but was severely hampered by the drought of 2008-09. Data collection in the project further verified that periodic elevations of *E. coli* levels continue to exist. Routine ambient water quality data is collected at one site (12576) by GBRA through the Clean Rivers Program (CRP). Through projects 08-06 and 11-06, GBRA conducted water quality monitoring that included additional routine ambient and targeted stream sites on Geronimo and Alligator Creeks and three tributaries, and quarterly monitoring of springs, and wells.

The Geronimo Creek WPP has been completed and accepted by EPA. This monitoring project is warranted to provide critical water quality data that will be used to judge the effectiveness of WPP implementation efforts and serve as a tool to quantitatively measure water quality restoration. This effort will continue stakeholder engagement by maintaining the project website, participating in the watershed partnership meetings to provide technical assistance and to share water quality data, and to provide outreach and education to stakeholders including local schools, municipal officials, and the newly forming Guadalupe County Master Naturalists.

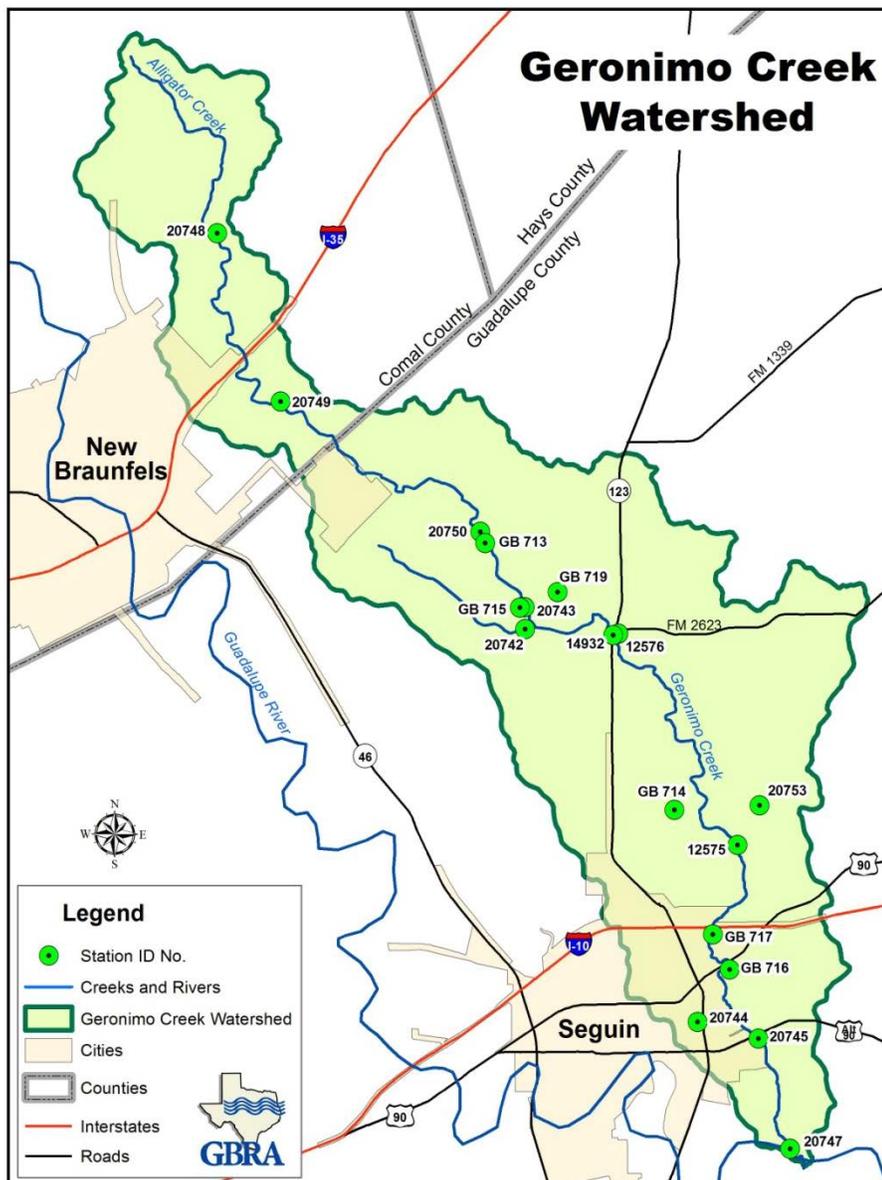
Project Narrative

General Project Description (Include Project Location Map)

The sampling program will be continued in this project by retaining 7 routine monthly sites and thirteen targeted sites. The monitoring program will collect additional data, look for trends and fill data gaps identified in projects 08-06 and 11-06. GBRA will continue to monitor the routine ambient monitoring location monthly under the CRP. One site will be located at Geronimo Creek at IH10 in order to collect routine and targeted monitoring downstream of the Oak Village North Subdivision. The City of Seguin has expanded its sanitary sewer service to the subdivision, taking the homes off of failing septic systems. The city is also completing an associated CWA Section 319 project that is funding the decommissioning of the septic systems. By offering access to these funds there will be an incentive for the hook-up of individual homes onto the city's collection system earlier than required.

GBRA will participate in the Geronimo Creek Watershed Partnership and assist stakeholder groups (cities, counties, agricultural groups, local businesses, HOAs, etc.) and partner agencies (NRCS, SWCDs, TCEQ, etc.) in preparation of full implementation as outlined in the WPP.

A comprehensive watershed approach was used to focus on the most significant potential sources of agricultural NPS pollution contributing to the current impairments, while at the same time looking ahead at potential future sources of pollution from urban and suburban growth. The outcomes of the 08-06 project included data in the form of load allocations and watershed models developed in partnerships with local stakeholders and have benefited the local governmental entities as they formulate master plans and storm water management strategies. Recommended best management practices that were identified by the steering committee, work groups and partner agencies and written into the watershed protection plan are in the process of being installed or being considered for funding. An important benefit or outcome of this project will be the development of water quality data prior to, during and after the installation of implementation strategies that get ahead of growth so that it can be



directed in an environmentally-safe and community-accepted direction. The project will include the purchase of a new autoanalyzer for the analysis of nutrients (ammonia-nitrogen, total kjeldahl nitrogen and total phosphorus).

In 2010, a continuous water quality monitoring station was deployed in Geronimo Creek at SH123 (WQS No. 14932), under a TCEQ CWA Section 319(h) project, “*GBRA – Continuous Water Quality Monitoring*”. The project collected dissolved oxygen, specific conductance, temperature, turbidity and pH every 15 minutes. As a part of that project, an educational kiosk was linked to the monitoring station to provide access to the real-time network and to environmental and nonpoint source pollution educational modules. The project was concluded in August 2012. GBRA will continue to maintain a real-time water quality monitoring station on the Geronimo Creek at SH123 (Station no. 14932) that collects field parameters and turbidity every 15 minutes. The data from this station, as a part of the TCEQ Continuous Water Quality Monitoring Network (CWQMN), is available to the public through TCEQ’s CWQMN website (http://www.tceq.state.tx.us/cgi-bin/compliance/monops/water_site_photo.pl?cams=741 and through links available on the GBRA educational kiosk located in the watershed.

List of monitoring locations and frequency of sample by type:

Segment	TCEQ Station ID	Site Description	Monitor	Monitor Type	Bacteria	Conventional	Flow	Field
1804A	20742	Geronimo Creek at Huber Road, Upstream of the Alligator Creek Confluence	GB	RT	21	21	21	21
1804A	20742	Geronimo Creek at Huber Road, Upstream of the Alligator Creek Confluence	GB	BF	7	7	7	7
1804A	20743	Alligator Creek at Huber Road (Headwater)	GB	RT	21	21	21	21
1804A	20743	Alligator Creek at Huber Road (Headwater)	GB	BF	7	7	7	7
1804A	14932	Geronimo Creek at SH 123	GB	RT	21	21	21	21
1804A	14932	Geronimo Creek at SH 123	GB	BF	7	7	7	7
1804A	12576	Geronimo Creek at Haberle Road	GB	RT	21	21	21	21
1804A	12576	Geronimo Creek at Haberle Road	GB	BF	7	7	7	7
1804A	20744	Bear Creek at East Walnut Street	GB	BF	14	14	14	14
1804A	20745	Geronimo Creek at HWY 90A	GB	RT	21	21	21	21
1804A	20745	Geronimo Creek at HWY 90A	GB	BF	7	7	7	7
1804A	21260	Geronimo Creek at IH 10 near Seguin	GB	RT	21	21	21	21
1804A	21260	Geronimo Creek at IH 10 near Seguin	GB	BF	7	7	7	7
1804A	21261	Geronimo Creek at Hwy 90 (Seguin Outdoor Learning Center)	GB	RT	21	21	21	21
1804A	21261	Geronimo Creek at Hwy 90 (Seguin Outdoor Learning Center)	GB	BF	7	7	7	7
1804A	20747	Geronimo Creek at Hollub Lane, Downstream of the City of Seguin WWTF	GB	RT	21	21	21	21
1804A	20747	Geronimo Creek at Hollub Lane, Downstream of the City of Seguin WWTF	GB	BF	7	7	7	7
1804A	20748	Alligator Creek at FM 1102	GB	BF	14	14	14	14
1804A	20749	Alligator Creek at FM 1101	GB	BF	14	14	14	14
1804A	20750	Alligator Creek at Barbarossa Road (CR 107A)	GB	BF	14	14	14	14
1804A	20753	Unnamed Tributary at Laubach Road (CR 108)	GB	BF	14	14	14	14
1804A	12575	Geronimo Creek at FM 20	GB	BF	14	14	14	14
1804A	GB713	Water Well at Alligator Creek headwaters	GB	BS	7	7	7	7
1804A	GB714	Water Well near Geronimo Creek at Laubach Road	GB	BS	7	7	7	7

Segment	TCEQ Station ID	Site Description	Monitor	Monitor Type	Bacteria	Conventional	Flow	Field
1804A	GB719	Spring at Timmermann Property	GB	BS	7	7	7	7

GB = GBRA; RT = Routine Monitoring; BF = Monitoring under Specific Flow Conditions (Targeted); BS = Monitoring by Season

Tasks, Objectives and Schedules						
Task 1	Project Administration					
Costs	Federal	\$0	Non-Federal	\$25,019	Total	\$25,019
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	GBRA 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 January, April, July and October. QPRs shall be distributed to all Project Partners.					
	Start Date	Month 1	Completion Date	Month 24		
Subtask 1.2	GBRA 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	GBRA will participate in coordination meetings or conference calls, at least quarterly, with Project Partners to discuss project activities, project schedule, communication needs, deliverables, and other requirements.					
	Start Date	Month 1	Completion Date	Month 24		
Subtask 1.4	GBRA will develop a Final Report that summarizes activities completed and conclusions reached during the project and discusses the extent to which project goals and measures of success have been achieved.					
	Start Date	Month 1	Completion Date	Month 24		
Subtask 1.5	GBRA will continue to host and maintain a website (http://geronimocreek.org/) to serve as a public clearinghouse for all project- and watershed-related information. All presentations, documents and results will be posted to this website. The website will serve as a means to disseminate information to stakeholders and the general public. GBRA will make presentations on the Geronimo Creek Partnership and WPP and general NPS pollution information to local schools and community organizations. GBRA will maintain the educational kiosk located in the watershed in order to provide outreach to stakeholders and to provide access to continuous water quality data generated at the real-time monitoring station located at Station No. 14932.					
	Start Date	Month 1	Completion Date	Month 24		
Deliverables	<ul style="list-style-type: none"> • QPRs in electronic format • Reimbursement Forms and necessary documentation in hard copy format • Project website maintenance • Final Report in electronic and hard copy formats 					

Tasks, Objectives and Schedules						
Task 2	Quality Assurance					
Costs	Federal	\$0	Non-Federal	\$11,558	Total	\$11,558
Objective	To develop 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	GBRA will develop a QAPP for activities in Tasks #3.1-3.5 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, 2012 (RG-415)</i> and <i>Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Assemblage and Habitat Data, 2007 (RG-416)</i> , and Title 30, Chapter 25 of the Texas Administrative Code, <i>Environmental Testing Laboratory Accreditation and Certification</i> , which describes Texas' approach to implementing the National Environmental Laboratory Accreditation Conference (NELAC) standards.					
	Start Date	Month 1		Completion Date	Month 3	
Subtask 2.2	GBRA will implement the approved QAPP. GBRA will submit revisions and necessary amendments to the QAPP as needed.					
	Start Date	Month 4		Completion Date	Month 24	
Deliverables	<ul style="list-style-type: none"> QAPP approved by TSSWCB and EPA in both electronic and hard copy formats Approved revisions and amendments to QAPP, as needed Data of known and acceptable quality as reported through Tasks #3.1-3.5 					

Tasks, Objectives and Schedules						
Task 3	Water Quality Data Collection and Analysis					
Costs	Federal	\$153,000	Non-Federal	\$35,458	Total	\$188,458
Objective	To collect water quality data in the Geronimo Creek watershed so a continuous data record can be maintained during the implementation of the Geronimo Creek WPP					
Subtask 3.1	<p>GBRA will conduct routine ambient monitoring at seven sites once per month, collecting field, conventional, flow and bacteria parameter groups. The QAPP developed in Task 2 will precisely identify the sites. The sampling period extends over 21 months. The number of samples planned for collection through this subtask is 147. Currently, routine ambient monitoring is conducted monthly at one station by GBRA (12576) through the Clean Rivers Program. Sampling through this subtask will complement existing routine ambient monitoring regimes such that routine water quality monitoring is conducted monthly at eight sites in the Geronimo Creek watershed.</p> <p>GBRA's Regional Laboratory will conduct sample analyses. GBRA will purchase an autoanalyzer for the nutrient analysis, including total kjeldahl nitrogen, total phosphorus and ammonia-nitrogen.</p> <p>Field parameters are pH, temperature, dissolved oxygen and conductance. Conventional parameters are total suspended solids, turbidity, sulfate, chloride, nitrate nitrogen, ammonia nitrogen, total kjeldahl nitrogen, chlorophyll-a, pheophytin, total hardness, and total phosphorus. Flow parameters are flow collected by gage, electric, mechanical or Doppler, including severity. Bacteria parameter is <i>E. coli</i>.</p>					
	Start Date	Month 4	Completion Date	Month 24		
Subtask 3.2	<p>GBRA will conduct routine ambient monitoring at six sites once per quarter year, collecting field, conventional, flow and bacteria parameter groups; specific parameters are defined in Subtask 3.1. The QAPP developed in Task 2 will precisely identify the sites. The sampling period extends over seven seasons. The number of samples planned for collection through this subtask is 42. Spatial and seasonal variation will be captured in these snapshots of watershed water quality. GBRA's Regional Laboratory will conduct sample analyses.</p>					
	Start Date	Month 4	Completion Date	Month 24		
Subtask 3.3	<p>GBRA will conduct biased flow monitoring at fourteen sites once per season under wet conditions, collecting field, conventional, flow and bacteria parameter groups; specific parameters are defined in Subtask 3.1. These sites shall be the same as the sites for routine ambient monitoring described in subtasks 3.1-3.2. If a storm event was captured under routine monitoring in subtasks 3.1-3.2, a separate biased flow sample will not be collected under this subtask. The QAPP developed in Task 2 will precisely identify the sites. The sampling period extends over seven seasons. The number of samples planned for collection through this subtask is 98. Spatial, seasonal and meteorological variation will be captured in these snapshots of watershed water quality. GBRA's Regional Laboratory will conduct sample analyses.</p>					
	Start Date	Month 4	Completion Date	Month 24		
Subtask 3.4	<p>GBRA will conduct routine groundwater monitoring at three sites (e.g., one spring and two wells) once per quarter year, collecting field, conventional, flow and bacteria parameter groups; specific parameters are defined in Subtask 3.1. The QAPP developed in Task 2 will precisely identify the sites. The sampling period extends over seven quarters. The number of samples planned for collection through this subtask is 21. GBRA's Regional Laboratory will conduct sample analyses.</p>					
	Start Date	Month 4	Completion Date	Month 24		

Subtask 3.5	GBRA will transfer monitoring data from activities in subtasks 3.1-3.4 to TCEQ for inclusion in the TCEQ SWQMIS at least quarterly. Data will be transferred in the correct format using the TCEQ file structure along with a completed Data Summary, as described in the most recent version of the <i>TCEQ Surface Water Quality Monitoring Data Management Reference Guide</i> . GBRA will post data from monitoring activities collected in subtasks 3.1-3.4 to the project website in a timely manner. Data Correction Request Forms will be submitted to TSSWCB whenever errors are discovered in data already reported. All monitoring data files, data summary reports and data correction request forms will also be provided to Extension. GBRA will input monitoring regime, as detailed in the QAPP, into the TCEQ CMS.				
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">Start Date</td> <td style="width: 25%; text-align: center;">Month 4</td> <td style="width: 25%; text-align: center;">Completion Date</td> <td style="width: 25%; text-align: center;">Month 24</td> </tr> </table>	Start Date	Month 4	Completion Date	Month 24
Start Date	Month 4	Completion Date	Month 24		
Subtask 3.6	GBRA will continue to maintain a real-time water quality monitoring station on the Geronimo Creek at SH123 (Station no. 14932) that collects field parameters and turbidity every 15 minutes. The data from this station, as a part of the TCEQ Continuous Water Quality Monitoring Network (CWQMN), is available to the public through TCEQ’s CWQMN website and through links available on the GBRA educational kiosk located in the watershed. The QAPP for this site is maintained by the TCEQ.				
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">Start Date</td> <td style="width: 25%; text-align: center;">Month 1</td> <td style="width: 25%; text-align: center;">Completion Date</td> <td style="width: 25%; text-align: center;">Month 24</td> </tr> </table>	Start Date	Month 1	Completion Date	Month 24
Start Date	Month 1	Completion Date	Month 24		
Subtask 3.7	GBRA will develop a final Assessment Data Report summarizing water quality data collected through Task 3. The Report shall, at a minimum, provide an assessment of water quality with respect to effectiveness of BMPs implemented and a discussion of interim short-term progress in achieving the Geronimo Creek WPP water quality goals. GBRA will summarize the results from Task 3 in the GBRA’s Clean Rivers Program Basin Highlights Report. GBRA will provide updates on the results and activities of Task 3 to the Steering Committee.				
Deliverables	<ul style="list-style-type: none"> • Monitoring data files and Data Summary in electronic format • Data correction request forms (as needed) in electronic format • Monitoring data updates posted to the project webpage • Summary of findings from monitoring activities included in GBRA CRP BHR in both electronic and hardcopy formats • Final Assessment Data Report in both electronic and hard copy formats 				

Project Goals (Expand from Summary Page)
<ul style="list-style-type: none"> • Generate data of known and acceptable quality for surface and ground water quality monitoring (routine ambient, targeted watershed, and spring flow) of main stem and tributary stations for field and conventional parameters, flow, and bacteria; and, groundwater monitoring of two shallow wells from the Leona Aquifer for conventional and bacteria parameters. • Support the implementation of the Geronimo Creek WPP by collecting water quality data for use in evaluating the effectiveness of BMPs, and in assessing water quality improvement and progress in achieving restoration. • Communicate water quality conditions to the public and to the Partnership on project results and activities in order to support adaptive management of the Geronimo Creek WPP and to expand public knowledge on Geronimo and Alligator Creeks water quality data. • Work with state and federal agencies, as appropriate, to bring technical and financial resources to the Geronimo Creek watershed.

Measures of Success (Expand from Summary Page)

- Provide technical assistance to the Partnership through collection and interpretation of water quality data.
- Data of known and acceptable quality are generated for surface water quality monitoring (routine ambient, targeted watershed, and spring flow) of main stem and tributary stations on Geronimo Creek for field and conventional parameters, flow, and bacteria and for groundwater monitoring of shallow wells from the Leona Aquifer for conventional and bacteria parameters.
- Water quality data is used to evaluate progress in implementing the Geronimo Creek WPP and achieving water quality restoration.
- Water quality data is communicated to the public and the Partnership in a timely fashion.
- Increased watershed stewardship among Geronimo Creek watershed stakeholders by coordinating the annual stream clean-up on the Geronimo and Alligator Creeks.
- Increased knowledge of citizens, landowners and agricultural producers of management measures identified in WPP through outreach and educational efforts.
- Continued operation and maintenance of the project website to announce relevant activities, project updates and other activities relevant to the WPP development and implementation process.

2012 Texas NPS Management Program Reference (Expand from Summary Page)

Components, Goals, and Objectives

Component One – Explicit short- and long-term goals, objectives and strategies that protect surface and groundwater.

Long-Term Goal – To... restore water quality from NPS pollution through assessment, implementation, and education.

- Objective 1 – Focus NPS abatement efforts, implementation strategies, and available resources in watersheds identified as impacted by nonpoint source pollution.
- Objective 3 – Support the implementation of... programs to reduce NPS pollution, such as the implementation of strategies defined in... WPPs, and other water planning efforts in the state.
- Objective 7 – Increase overall public awareness of NPS issues and prevention activities.

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 TCEQ and/or TSSWCB Quality Management Plans.

Short-Term Goal One – Data Collection and Assessment – Objective E – Conduct monitoring to determine effectiveness of... WPPs, and BMP implementation...

Short-Term Goal Three – Education – Objective F – Implement public outreach and education to maintain and restore water quality in water bodies by NPS pollution.

Component Three – Balanced approach that emphasizes both statewide NPS programs and on-the-ground management of individual watersheds.

EPA State Categorical Program Grants – Workplan Essential Elements

FY 2011-2015 EPA Strategic Plan Reference

Strategic Plan Goal – Goal 2 Protecting America’s Waters

Strategic Plan Objective – Objective 2.2 Protect and Restore Watersheds and Aquatic Ecosystems

Part III – Financial Information

Budget Summary				
Federal	\$	135,021	% of total project	60%
Non-Federal	\$	90,014	% of total project	40%
Total	\$	225,035	Total	100%
Category		Federal	Non-Federal	Total
Personnel	\$	0	\$ 44,925	\$ 44,925
Fringe Benefits	\$	0	\$ 17,970	\$ 17,970
Travel	\$	1,000	\$ 0	\$ 1,000
Equipment	\$	30,000	\$ 0	\$ 30,000
Supplies	\$	1,667	\$ 0	\$ 1,667
Contractual	\$	0	\$ 0	\$ 0
Construction	\$	0	\$ 0	\$ 0
Other	\$	102,354	\$ 15,888	\$ 118,242
Total Direct Costs	\$	135,021	\$ 78,783	\$ 213,804
Indirect Costs (≤ 15%)	\$	0	\$ 11,231	\$ 11,231
Total Project Costs	\$	135,021	\$ 90,014	\$ 225,035

Budget Justification (Federal)		
Category	Total Amount	Justification
Personnel	\$ 0	N/A
Fringe Benefits	\$ 0	N/A
Travel	\$ 1,000	Mileage for sample collection at the federal rate of \$0.555/mi. (average 65 mi per monitoring event; 28 monitoring events)
Equipment	\$ 30,000	50% of purchase price of an autoanalyzer for the analysis of water samples for nutrients (ammonia-nitrogen, total kjeldahl nitrogen and total phosphorus)*
Supplies	\$ 1,667	Supplies for water quality monitoring - bottles, replacement probes for field equipment, write-in-rain paper, etc.
Contractual	\$ 0	N/A
Construction	\$ 0	N/A
Other	\$ 102,354	Analyses of water quality monitoring samples described in Task 3(routine \$362/sample, targeted \$300/sample, springs \$340/sample, wells \$340/sample)
Indirect	\$ 0	N/A

* Remaining 50% will be funded by another project secured by GBRA or by GBRA itself.

Budget Justification (Non-Federal)		
Category	Total Amount	Justification
Personnel	\$ 44,925	<ul style="list-style-type: none"> • Director of Water Quality Services (0.12 FTE @ \$55/hr) - • Water Quality Field Technicians (2 @ 0.3 FTE @ \$26/hr and \$16.50/hr) • Website Administrator (0.03 FTE @ \$26/hr) • Administrative Assistant (0.03 FTE @ \$16/hr) • Education Coordinator (0.03 FTE @ \$32/hr)
Fringe Benefits	\$ 17,970	Fringe calculated at 40% of non-federal personnel
Travel	\$ 0	N/A
Equipment	\$ 0	N/A
Supplies	\$ 0	N/A
Contractual	\$ 0	N/A
Construction	\$ 0	N/A
Other	\$ 15,888	Clean Rivers Program monitoring at site 12576 (24 months @ \$362); Volunteer labor calculated at a rate of \$12/hour for approximately 100 volunteers for 3 hours/clean up event at one event per year for two years (\$12x100x3x2=\$7,200)
Indirect	\$ 11,231	Indirect calculated at 25% of non-federal Personnel