



**Texas State Soil and Water Conservation Board  
 State General Revenue Nonpoint Source Grant Program  
 FY 2010 Workplan 10-54**

PROJECT SUMMARY PAGE		
Title of Project	Surface Water Quality Monitoring to Support the Implementation of the Plum Creek Watershed Protection Plan [Short Title: SWQM for Plum Creek WPP II]	
Project Goals/Objectives	<ul style="list-style-type: none"> <li>• Generate data of known and acceptable quality for surface water quality monitoring of main stem and tributary stations</li> <li>• Support the implementation of the Plum 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</li> <li>• Communicate water quality conditions to the public and the PCWP Steering Committee in order to support adaptive management of the Plum Creek WPP</li> </ul>	
Project Tasks	<ol style="list-style-type: none"> <li>1) Project Administration and Coordination</li> <li>2) Quality Assurance</li> <li>3) Routine Ambient Surface Water Quality Monitoring</li> <li>4) Targeted Watershed Surface Water Quality Monitoring</li> <li>5) Data Management</li> </ol>	
Measures of Success	<ul style="list-style-type: none"> <li>• Data of known and acceptable quality are generated for surface water quality monitoring of main stem and tributary stations</li> <li>• Water quality data is used to evaluate progress in implementing the Plum Creek WPP and achieving water quality restoration</li> <li>• Water quality data is communicated to the public and the PCWP Steering Committee</li> </ul>	
Project Type	Implementation ( ); Education ( ); Planning ( ); Assessment (X)	
Status of Waterbody on 2008 Texas Water Quality Inventory and 303(d) List	<u>Segment ID</u> 1810	<u>Parameter</u> bacteria ammonia; nitrate+nitrite nitrogen; total phosphorus
		<u>Category</u> 5c CN
Project Location (Statewide or Watershed and County)	Plum Creek Watershed in Caldwell, Hays and Travis Counties	
Key Project Activities	Hire Staff (X); Surface Water Quality Monitoring (X); Technical Assistance ( ); Education ( ); Implementation ( ); BMP Effectiveness Monitoring ( ); Demonstration ( ); Planning ( ); Modeling ( ); Bacterial Source Tracking ( ); Other ( )	
Texas NPS Management Program Elements	<ul style="list-style-type: none"> <li>• Element One (LTG Objectives A, C, F; STGs 1B, 1C, 1E, 2D, 3D)</li> <li>• Element Two, Four, Five</li> </ul>	
Project Costs	\$30,000	
Project Management	<ul style="list-style-type: none"> <li>• Guadalupe-Blanco River Authority</li> </ul>	
Project Period	May 1, 2010 – January 31, 2011	

## Part I – Applicant Information

Applicant							
Project Lead		Debbie Magin					
Title		Water Quality Services Director					
Organization		Guadalupe-Blanco River Authority					
E-mail Address		<a href="mailto:dmagin@gbra.org">dmagin@gbra.org</a>					
Street Address		933 E Court St					
City	Seguin	County	Guadalupe	State	TX	Zip Code	78155
Telephone	830-379-5822			Fax	830-379-9718		

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 TCEQ.
Guadalupe-Blanco River Authority (GBRA)	Perform all work described in tasks.
Texas AgriLife Extension Service, Department of Soil and Crop Sciences (AgriLife Extension) [McFarland]	Continue facilitation of stakeholder process through TSSWCB project 08-07.

## Part II – Project Information

### Watershed Information

Watershed Name	Hydrologic Unit Code (8 Digit)	Segment ID	305(b) Category	Size (Acres)
Plum Creek Watershed	12100203	1810	5c	248,949

### Water Quality Impairment

Describe all known causes of water quality impairments from any of the following sources: 2008 Texas Water Quality Inventory and 303(d) List, Clean Rivers Program Basin Summary/Highlights Reports, or other documented sources.

- *2007 GBRA CRP Basin Highlights Report* –Nutrient enrichment is a concern, likely due to high numbers of WWTFs contributing effluent. The southern part of the watershed has a history of oil and gas activities, leading to concerns for dissolved salts that can be contributed by improperly plugged oil and gas wells. The segment is in an area being developed very rapidly. Concerns are the cumulative impacts on watersheds caused by construction and multiple subdivision development. Also the potential for impacts by agricultural NPS pollution exists.
- *2008 GBRA CRP Basin Summary Report* – Plum Creek site 17406 shows trends of diminishing water quality because the stream is effluent dominated. Total phosphorus shows an upward trend over time, exceeding the screening level 42% of the time. Nitrate nitrogen shows an increasing trend over time, exceeding the screening concentration 50% of the time.
- *2008 TWQI* – contact recreation use impairment, nutrient screening levels concern; NPS and point source
- *2009 GBRA CRP Basin Highlights Report* – Nitrate-nitrogen and total phosphorus concentrations at these stations are some of the highest in the river basin. Both point and nonpoint sources contribute to the bacteria impairment. Based on land use analysis, sources of the pollutants include urban sources, such as urban runoff and pet waste, as well as agricultural activities and wildlife (deer) and invasive species (feral hogs) sources.

## Project Narrative

### Problem/Need Statement

Plum Creek rises in Hays County north of Kyle and runs south through Caldwell County, passing Lockhart and Luling, and eventually joins the San Marcos River at their confluence north of Gonzales County. Plum Creek is 52 miles in length and has a drainage area of 389 mi<sup>2</sup>. According to the *2008 Texas Water Quality Inventory and 303(d) List*, Plum Creek (Segment 1810) is impaired by elevated bacteria concentrations (category 5c) and exhibits nutrient enrichment concerns for ammonia, nitrate+nitrite nitrogen and total phosphorus.

TSSWCB and AgriLife Extension established the Plum Creek Watershed Partnership (PCWP) in April 2006. The PCWP Steering Committee completed the *Plum Creek Watershed Protection Plan* in February 2008. Information about the PCWP is available at <http://plumcreek.tamu.edu/>. Sources of pollutants identified in the Plum Creek WPP include urban stormwater runoff, pet waste, failing or inadequate on-site sewage facilities (septic systems), wastewater treatment facilities, livestock, wildlife, invasive species (feral hogs), and oil and gas production.

Originally, the Plum Creek WPP was to be developed using only existing water quality data. However, discussions with stakeholders identified data gaps which would make source identification and establishment of water quality goals difficult. Accurate source identification was key to prioritizing implementation projects for funding. Through TSSWCB project 03-19, *Surface Water Quality Monitoring to Support Plum Creek Watershed Protection Plan Development*, GBRA collected water quality data to fill the identified data gaps. During the project, sampling of water quality data was severely hampered by a prolonged drought that covered the watershed, causing the tributaries to run dry and the springs to slow to almost negligible flow.

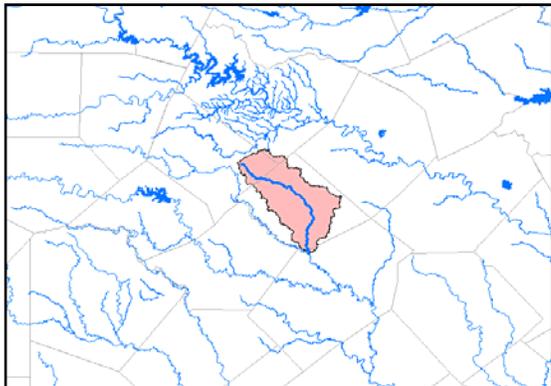
Facilitated by AgriLife Extension, implementation of the Plum Creek WPP is currently underway. TSSWCB project 08-07, *Implementing Agricultural Nonpoint Source Components of the Plum Creek WPP*, provides technical and financial assistance through the local SWCDs to agricultural producers in developing and implementing water quality management plans (WQMPs). In order to reduce feral hog impacts on the stream, education and technical assistance is being provided, through project 08-07, by AgriLife Extension to landowners in the watershed on strategies to reduce and manage feral hog populations. The Cities of Kyle, Lockhart and Luling will be implementing BMPs, through TCEQ CWA §319(h) funding, designed to reduce pollutants contributed by stormwater in the urbanized areas in the watershed, including pet waste. An education and outreach campaign was initiated during the watershed planning process that focused on educating watershed residents and landowners on the impacts of specific land use activities, illegal dumping, proper operation and maintenance of OSSFs, and proper disposal of pet waste.

To demonstrate improvements in water quality, the Plum Creek WPP describes a water quality monitoring program designed to evaluate the effectiveness of BMPs implemented across the watershed and their impacts on instream water quality. Water quality data will be used in the adaptive management of the WPP in order to evaluate progress in implementing the Plum Creek WPP and achieving water quality restoration.

There is a need to continue the monitoring regime originally funded through TSSWCB project 03-19 and to implement the monitoring program described in the Plum Creek WPP.

## Project Narrative

### General Project Description (Include Project Location Map)



Through this project, GBRA will continue to collect surface water quality monitoring data to characterize the Plum Creek watershed. Monitoring data will be used to assess and evaluate the effectiveness of the BMPs that have been or will be implemented in the watershed as a result of the Plum Creek WPP. Two types of surface water quality monitoring will be conducted: routine ambient and targeted watershed. This will provide a more complete and representative data set to characterize the Plum Creek watershed and document water quality improvements.

GBRA will conduct all work performed under this project including technical and financial supervision, preparation of status reports, coordination with local stakeholders, surface water quality monitoring sample collection and analysis, and data management. GBRA will participate in the PCWP, Steering Committee, and Technical Advisory Group (TAG) in order to communicate project goals, activities and accomplishments to affected parties. GBRA will continue to host and maintain an Internet webpage <http://www.gbra.org/plumcreek/> for the dissemination of information.

GBRA will develop and implement a QAPP to ensure water quality data of known and acceptable quality are generated through this project. See table on page 6 for proposed water quality monitoring sites. The QAPP will precisely identify sites. GBRA will submit monitoring data to TSSWCB for inclusion in the TCEQ SWQMIS.

Currently, routine ambient water quality data is collected monthly at 3 main stem stations by GBRA (17406, 12640, and 12647) through the Clean Rivers Program. Through this project, GBRA will conduct routine ambient monitoring at an additional 5 sites monthly, collecting field, conventional, flow and bacteria parameter groups. Sampling period extends over 9 months. This will complement existing routine ambient monitoring regimes such that routine water quality monitoring is conducted monthly at 8 sites in the Plum Creek watershed.

GBRA will conduct targeted watershed monitoring at 40 sites twice per season, once under dry weather conditions and once under wet weather conditions, collecting field, conventional, flow and bacteria parameter groups. Sampling period extends through 3 seasons. Spatial, seasonal and meteorological variation will be captured in these snapshots of watershed water quality.

GBRA will post monitoring data to the GBRA website in a timely manner. GBRA will summarize the results and activities of this project through inclusion in GBRA's Clean Rivers Program Basin Highlights Report and/or Basin Summary Report. Additionally, the results and activities of this project will be summarized in quarterly reports to the stakeholders of the PCWP Steering Committee and in updates/revisions to the Plum Creek WPP as prepared by AgriLife Extension.

Proposed Monitoring Locations				
Station ID	Lat dd	Long dd	Task	Short Description <sup>1</sup>
12556	29.760135	-97.602083	3 – ROUTINE	CLEAR FORK PLUM CREEK AT SALT FLAT RD (CR 128)
12558	29.941452	-97.699623	3 – ROUTINE	ELM CREEK AT CR 233
12640	29.657329	-97.601895	3 – ROUTINE	PLUM CREEK AT CR 135
12647	29.865290	-97.615261	3 – ROUTINE	PLUM CREEK AT OLD MCMAHAN RD (CR 202)
17406	29.960328	-97.798169	3 – ROUTINE	PLUM CREEK AT PLUM CREEK RD
20488	29.961136	-97.747981	3 – ROUTINE	BRUSHY CREEK AT ROCKY RD (UPSTREAM OF NRCS 14)
20491	29.904499	-97.639690	3 – ROUTINE	DRY CREEK AT FM 672
20500	29.699616	-97.611752	3 – ROUTINE	WEST FORK PLUM CREEK AT BIGGS RD (CR 131)
12555	29.676201	-97.624745	4 – TARGETED	SALT BRANCH AT FM 1322
12557	29.885462	-97.665213	4 – TARGETED	TOWN CREEK AT E MARKET ST (UPSTREAM OF LOCKHART 1 WWTF)
12559	29.973520	-97.812572	4 – TARGETED	PORTER CREEK AT DAIRY RD
12642	29.699576	-97.603849	4 – TARGETED	PLUM CREEK AT BIGGS RD (CR 131)
12643	29.752783	-97.592958	4 – TARGETED	PLUM CREEK AT FM 1322
12645	29.821800	-97.584232	4 – TARGETED	PLUM CREEK AT YOUNG LN (CR 197)
12648	29.881869	-97.630368	4 – TARGETED	PLUM CREEK AT CR 186
12649	29.937758	-97.725391	4 – TARGETED	PLUM CREEK AT CR 233
14945	29.826294	-97.667809	4 – TARGETED	CLEAR FORK PLUM CREEK AT OLD LULING RD (CR 213)
16709	29.892423	-97.691030	4 – TARGETED	TOWN CREEK WEST OF LOCKHART
18343	29.923288	-97.678864	4 – TARGETED	PLUM CREEK UPSTREAM OF US 183
20480	30.019034	-97.878859	4 – TARGETED	PLUM CREEK DOWNSTREAM OF NRCS 1 SPILLWAY
20481	29.971198	-97.818635	4 – TARGETED	BUNTON BRANCH AT HEIDENREICH LN
20482	30.033032	-97.771327	4 – TARGETED	BRUSHY CREEK AT FM 2001 (DOWNSTREAM OF NRCS 12)
20487	29.978394	-97.765739	4 – TARGETED	BRUSHY CREEK AT SH 21
20483	29.997951	-97.743359	4 – TARGETED	ELM CREEK AT SH 21 (DOWNSTREAM OF NRCS 16)
20489	29.980675	-97.711878	4 – TARGETED	COWPEN CREEK AT SCHUELKE RD
20496	29.796080	-97.562103	4 – TARGETED	TENNEY CREEK AT TENNEY CREEK RD
20490	29.920943	-97.794519	4 – TARGETED	CLEAR FORK PLUM CREEK AT FARMERS RD
20493	29.852633	-97.696935	4 – TARGETED	CLEAR FORK PLUM CREEK AT PR 10 (STATE PARK)
20497	29.782009	-97.681234	4 – TARGETED	WEST FORK PLUM CREEK AT FM 671
20479	30.003040	-97.887410	4 – TARGETED	UNNAMED TRIBUTARY AT FM150 (NEAR HAWTHORNE DR.)
20495	29.857500	-97.580278	4 – TARGETED	DRY CREEK AT FM 713
20484	29.963415	-97.830645	4 – TARGETED	PLUM CREEK AT HEIDENREICH LN (DOWNSTREAM OF KYLE WWTF)
20501	29.687082	-97.640094	4 – TARGETED	SALT BRANCH AT SALT FLAT RD (UPSTREAM OF LULING WWTF)
20498	29.752690	-97.485810	4 – TARGETED	COPPERAS CREEK AT TENNEY CREEK RD (DOWNSTREAM OF CAL-MAINE)
12538	30.030363	-97.827320	4 – TARGETED	ANDREWS BRANCH AT CR 131
20505	30.024289	-97.831044	4 – TARGETED	RICHMOND BRANCH AT DACY LANE
20504	30.024378	-97.822186	4 – TARGETED	PORTER CREEK TRIBUTARY AT QUAIL COVE RD
20510	29.766720	-97.557020	4 – TARGETED	HINES BRANCH AT TENNEY CREEK RD (CR 141) (DOWNSTREAM OF CAL-MAINE)
20503	29.991145	-97.858179	4 – TARGETED	PLUM CREEK AT LEHMAN RD
20502	30.009444	-97.846667	4 – TARGETED	BUNTON BRANCH AT DACY LN (UPSTREAM OF NRCS 5)

1 – NRCS # indicates PCCD Floodwater Retarding Structure

**Project Goals (Expand from Summary Page)**

- Generate data of known and acceptable quality for surface water quality monitoring (routine ambient and targeted watershed) of main stem and tributary stations on Segment 1810 (Plum Creek) for field, conventional, flow, and bacteria parameters
- Support the implementation of the Plum Creek WPP by collecting water quality data for use in evaluating the effectiveness of BMPs that have been or will be implemented, and in assessing water quality improvement and progress in achieving restoration
- Communicate water quality conditions to the public and the PCWP Steering Committee in order to support adaptive management of the Plum Creek WPP

**Measures of Success (Expand from Summary Page)**

- Data of known and acceptable quality are generated for surface water quality monitoring (routine ambient and targeted watershed) of main stem and tributary stations on Segment 1810 (Plum Creek) for field, conventional, flow, and bacteria parameters
- Water quality data is used to evaluate progress in implementing the Plum Creek WPP and achieving water quality restoration
- Water quality data is communicated to the public and the PCWP Steering Committee in a timely fashion

**2005 Texas Nonpoint Source Management Program Reference (Expand from Summary Page)**

**Goals &/or Milestone(s)**

Element 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 A – Focus NPS abatement efforts, implementation strategies, and available resources in watersheds identified as impacted by nonpoint source pollution.
- Objective C – Support the implementation of... programs to reduce NPS pollution, such as the implementation of strategies defined in... WPPs.
- Objective F – 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... TSSWCB Quality Management Plans.

Short-Term Goal One – Data Collection and Assessment – Objective C – Conduct special studies to determine sources of NPS pollution and gain information to target...BMP implementation.

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

Short-Term Goal Two – Implementation – Objective D – Implement... WPPs developed to restore and maintain water quality in water bodies identified as impacted by NPS pollution.

Short-Term Goal Three – Education – Objective D – Conduct outreach through the Clean Rivers Program... 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.

Element Two – Working partnerships and linkages to appropriate state, ...regional, and local entities, private sector groups, and federal agencies.

Element Four – Abatement of water quality impairments from NPS pollution... [through] projects which address the most significant threats to water quality and have the best potential to... reduce NPS pollution...

Element Five – The state program identifies... watersheds impaired by NPS pollution... Further, the state establishes a process to progressively address these identified waters by conducting more detailed watershed assessments and developing watershed implementation plans, and then by implementing the plans.

Tasks, Objectives and Schedules			
Task 1	Project Administration and Coordination		
Costs	\$0		
Objective	To effectively administer, coordinate and monitor all work performed under this project including technical and financial supervision, preparation of status reports, and coordination with local stakeholders.		
Subtask 1.1	GBRA will prepare electronic quarterly progress reports (QPRs) for submission to TSSWCB. QPRs shall document all activities performed within a quarter and shall be submitted by the 15 <sup>th</sup> of March, June, September, and December. QPRs shall be distributed to all project partners and posted on the project website.		
	Start Date	Month 1	Completion Date
			Month 9
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 9
Subtask 1.3	GBRA will participate in coordination meetings, conference calls, or TTVN meetings with the TSSWCB, hosted by AgriLife Extension through TSSWCB project 08-07, at least quarterly to discuss project activities, project schedule, communication needs, deliverables, and other requirements. GBRA will develop lists of action items needed following each project coordination meeting and distribute to project personnel.		
	Start Date	Month 1	Completion Date
			Month 9
Subtask 1.4	GBRA will attend and participate in the PCWP, Steering Committee, and TAG meetings in order to communicate project goals, activities and accomplishments to affected parties.		
	Start Date	Month 1	Completion Date
			Month 9
Subtask 1.5	GBRA will develop and disseminate project informational materials, including, but not limited to, flyers, brochures, letters, news releases, and other appropriate promotional publications. As appropriate, GBRA will include information about the project, in the <i>GBRA River Run</i> and other publications. TSSWCB must approve all announcements, letters and publications prior to distribution.		
	Start Date	Month 1	Completion Date
			Month 9
Subtask 1.6	GBRA will continue to host and maintain an Internet webpage <a href="http://www.gbra.org/plumcreek/">http://www.gbra.org/plumcreek/</a> for the dissemination of information.		
	Start Date	Month 1	Completion Date
			Month 9
Deliverables	<ul style="list-style-type: none"> <li>• QPRs in electronic format</li> <li>• Reimbursement Forms and necessary documentation in either electronic or hard copy format</li> <li>• Lists of action items needed from project coordination meetings</li> <li>• Promotional materials, as developed and disseminated</li> <li>• Project website</li> </ul>		

Tasks, Objectives and Schedules			
Task 2	Quality Assurance		
Costs	\$0		
Objective	To develop and implement data quality objectives (DQOs) and quality assurance/quality 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 3-4 consistent with <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> .		
	Consistency with 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, shall be required.		
	Start Date	Month 1	Completion Date
Subtask 2.2	GBRA will implement approved QAPP. GBRA will submit revisions and necessary amendments to the QAPP as needed.		
	Start Date	Month 1	Completion Date
Subtask 2.3	In anticipation of conducting Bacterial Source Tracking (BST) in the watershed as called for in the Plum Creek WPP, GBRA will explore the feasibility of obtaining NELEC accreditation for EPA method 1603.		
	Start Date	Month 1	Completion Date
Deliverables	<ul style="list-style-type: none"> <li>QAPP for Tasks 3-4 approved by TSSWCB in both electronic and hard copy formats</li> <li>Approved revisions and amendments to QAPP, as needed</li> <li>Data of know and acceptable quality as reported through Tasks 1 and 5</li> </ul>		

Tasks, Objectives and Schedules			
Task 3	Routine Ambient Surface Water Quality Monitoring		
Costs	\$9,450		
Objective	To provide water quality data to assess the effectiveness of implementing the Plum Creek WPP by enhancing current routine ambient monitoring regimes.		
Subtask 3.1	GBRA will conduct routine ambient monitoring at 5 sites monthly, collecting field, conventional, flow and bacteria parameter groups. See table on page 6 for proposed sites. The QAPP, as detailed in Task 2, will precisely identify sites.		
	<p>Sampling period extends over 9 months. Total number of sample events scheduled for collection through this subtask is 45. Currently, routine ambient monitoring is conducted monthly at 3 stations by GBRA (17406, 12640 and 12647) 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 8 sites in the Plum Creek watershed.</p> <p>GBRA's Regional Laboratory will conduct sample analysis.</p> <p>Field parameters are pH, temperature, conductivity, and dissolved oxygen. Conventional parameters are total suspended solids, turbidity, sulfate, chloride, nitrate nitrogen, ammonia nitrogen, chlorophyll a, pheophytin, total hardness, total kjeldahl nitrogen and total phosphorus. Flow parameters are flow collected by gage, electric, mechanical or Doppler, including severity. Bacteria parameters are <i>E. coli</i>.</p>		
	Start Date	Month 1	Completion Date
Deliverables	<ul style="list-style-type: none"> <li>Water quality data from routine ambient monitoring as reported through Tasks 1 and 5</li> </ul>		

Tasks, Objectives and Schedules			
Task 4	Targeted Watershed Surface Water Quality Monitoring		
Costs	\$20,550		
Objective	To provide water quality data to assess the effectiveness of implementing the Plum Creek WPP through targeted watershed monitoring.		
Subtask 4.1	GBRA will conduct targeted watershed monitoring at 40 sites twice per season, once under dry weather conditions and once under wet weather conditions each season, collecting field, conventional, flow and bacteria parameter groups. Of these 40 sites, 8 sites shall be the same as the sites for routine ambient monitoring described in Task 3 allowing for 32 sites for targeted watershed monitoring only. See table on page 6 for proposed sites. The QAPP, as detailed in Task 2, will precisely identify sites.		
	<p>Sampling period extends through 3 seasons. Total number of sample events scheduled for collection through this subtask is 240. Spatial, seasonal and meteorological variation will be captured in these snapshots of watershed water quality.</p> <p>GBRA's Regional Laboratory will conduct sample analysis.</p> <p>Field parameters are pH, temperature, conductivity and dissolved oxygen. Conventional parameters are nitrate nitrogen, ammonia nitrogen, total kjeldahl nitrogen and total phosphorus. Flow parameters are flow collected by gage, electric, mechanical or Doppler, including severity. Bacteria parameters are <i>E. coli</i>.</p>		
	Start Date	Month 1	Completion Date
Deliverables	<ul style="list-style-type: none"> <li>Water quality data from targeted watershed monitoring as reported through Tasks 1 and 5</li> </ul>		

<b>Tasks, Objectives and Schedules</b>			
Task 5	Data Management		
Costs	\$0		
Objective	To manage and transfer monitoring data for use in evaluating the success of implementing the Plum Creek WPP, and for inclusion in the TCEQ SWQMIS.		
Subtask 5.1	GBRA will transfer monitoring data from activities in Tasks 3-4 to TSSWCB for inclusion in the TCEQ SWQMIS. 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 <i>TCEQ Surface Water Quality Monitoring Data Management Reference Guide</i> .		
	Data Correction Request Forms will be submitted to TSSWCB whenever errors are discovered in data already reported.		
	All monitoring data files, Data Summary and Data Correction Request Forms will also be provided to AgriLife Extension.		
	Start Date	Month 1	Completion Date
			Month 9
Subtask 5.2	GBRA will post monitoring data from activities in Tasks 3-4 to the project website in a timely manner.		
	Start Date	Month 1	Completion Date
			Month 9
Subtask 5.3	No independent final report will be prepared for this project.		
	Rather, GBRA will summarize the results and activities of this project through inclusion in GBRA's Clean Rivers Program Basin Highlights Report and/or Basin Summary Report. The data will be reviewed and analyzed for trends in the same manner as required in the Basin Summary Report.		
	Additionally, the results and activities of this project will be summarized in quarterly reports to the PCWP Steering Committee and in updates/revisions to the Plum Creek WPP as prepared by AgriLife Extension.		
	Start Date	Month 1	Completion Date
			Month 9
Deliverables	<ul style="list-style-type: none"> <li>Monitoring data files and Data Summary in electronic format</li> <li>Data Correction Request Forms (as needed) in electronic format</li> <li>Monitoring data updates posted to the GBRA website</li> <li>Final report (GBRA CRP BHR and/or BSR) at culmination of project in both electronic and hard copy formats</li> </ul>		

**Part III – Financial Information**

<b>Budget Summary</b>	
<b>Category</b>	<b>Costs</b>
Personnel	\$ 0
Fringe Benefits	\$ 0
Travel	\$ 0
Equipment	\$ 0
Supplies	\$ 0
Contractual	\$ 0
Construction	\$ 0
Other	\$ 30,000
<b>Total Direct Costs</b>	<b>\$ 30,000</b>
<b>Indirect Costs (≤15%)</b>	<b>\$ 0</b>
<b>Total Project Costs</b>	<b>\$ 30,000</b>

<b>Budget Justification</b>		
<b>Category</b>	<b>Costs</b>	<b>Justification</b>
Personnel	\$ 0	
Fringe Benefits	\$ 0	
Travel	\$ 0	
Equipment	\$ 0	
Supplies	\$ 0	
Contractual	\$ 0	
Construction	\$ 0	
Other	\$ 30,000	Analysis of water quality samples for Tasks 3-4.
Indirect	\$ 0	
<b>SOURCE</b>	TSSWCB will provide \$30,000 in non-federal funds sourced from state appropriations (FY2010 General Revenue) through the Nonpoint Source Grant Program to the GBRA.	