



**Texas State Soil and Water Conservation Board  
 Clean Water Act §319(h) Nonpoint Source Grant Program  
 FY 2010 Project 10-10**

**SUMMARY PAGE**

<b>SUMMARY PAGE</b>						
Title of Project:	Implementation of the Leon River Watershed Protection Plan through Technical and Financial Assistance to Repair or Replace On-Site Sewage Facilities in Hamilton County					
Project Goals:	1) Identify and inspect on-site sewage facilities (OSSFs); 2) To promote the availability of technical and financial assistance to homeowners; 3) To provide technical and financial assistance to homeowners for the repair, replacement, or removal of OSSFs; 4) Educate the homeowners on proper OSSF maintenance; 5) Educate inspectors, installers, and maintenance providers on proper installation, inspection, operation and maintenance of OSSFs					
Project Tasks:	1) Project Administration; 2) Promotion of OSSF Program; 3) Repair, Replace, or Remove OSSFs; 4) Outreach and Education					
Measures of Success:	1) Locations of OSSFs identified and inspected in Hamilton County; 2) Number of failing OSSFs repaired or replaced; 3) Nitrogen, phosphorus, sediment and bacteria load reductions achieved; 3) Availability of technical and financial assistance is promoted through the distribution of appropriate publications; 4) Needed technical assistance is provided to homeowners for the repair, replacement, or removal of OSSFs; 5) Cost-share provided to a minimum of 25 homeowners; 6) Increase public knowledge on the proper maintenance of OSSFs					
Project Type:	Implementation (X); Education (X); Planning ( ); Assessment ( ); Groundwater ( )					
Status of Water Body: 2008 Texas Water Quality Inventory and 303(d) List	<u>Segment ID:</u>	<u>Parameter:</u>			<u>Category:</u>	
	1221 – Leon River Below Proctor Lake	Bacteria Chlorophyll-a, Depressed Dissolved Oxygen			5a CS	
	1221C – Pecan Creek	Bacteria			5c	
Project Location (Statewide or Watershed and County)	Leon River Watershed below Proctor Lake and above Belton Lake in Hamilton County					
Key Project Activities:	Hire Staff (X); Surface Water Quality Monitoring ( ); Technical Assistance (X); Education (X); Implementation (X); BMP Effectiveness Monitoring ( ); Demonstration ( ); Planning ( ); Modeling ( ); Bacterial Source Tracking ( ); Other ( )					
Texas NPS Management Program Elements:	Element One LTG Objectives 1, 2, 3, 5, 6, 7 Element One STGs 2B, 2C, 2D, 3A, 3B, 3D, 3F Elements Three and Four					
Project Costs:	Federal:	\$418,477	Non-Federal:	\$66,536	Total:	\$485,013
Project Management:	Hamilton County					
Project Period:	November 1, 2011 – July 31, 2015					

**Part I – Applicant Information**

Applicant							
Project Lead	Dickie Clary						
Title	Hamilton County Commissioner, Precinct 4						
Organization	Hamilton County						
E-mail Address	dickie.clary@co.hamilton.tx.us						
Street Address	102 North Rice						
City	Hamilton	County	Hamilton	State	TX	Zip Code	76531
Telephone Number	254-372-3339			Fax Number			

Applicant							
Project Lead	Anish Jantrania						
Title	Department of Biological and Agricultural Engineering						
Organization	Texas AgriLife Research						
E-mail Address	<a href="mailto:Anish.Jantrania@agnet.tamu.edu">Anish.Jantrania@agnet.tamu.edu</a>						
Street Address	720 East Blackland Road						
City	Temple	County	Bell	State	TX	Zip Code	76502
Telephone Number	(254) 774-6014			Fax Number	(254) 774- 6001		

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.
Hamilton County	Project coordination and administration; identify locations and inspect OSSFs, work with homeowners to repair, replace, or remove OSSFs; assist with education and outreach.
Texas AgriLife Extension Service – Department of Biological and Agricultural Engineering (BAEN)	Provide education materials and delivery of OSSF workshop focused on proper maintenance and care for OSSFs.

**Part II – Project Information**

Project Type						
Surface Water	X	Groundwater				
Does the project implement recommendations made in a completed Watershed Protection Plan or an adopted TMDL or Implementation Plan?				Yes	No	X
If yes, identify the document.		<i>DRAFT Watershed Protection Plan for the Leon River Below Proctor Lake and Above Belton Lake</i>				
If yes, identify the agency/group that developed and/or approved the document.		Brazos River Authority	Year Developed	2011		

Watershed Information				
Watershed Name(s)	Hydrologic Unit Code (8 Digit)	Segment ID	305 (b) Category	Size (Acres)
Segment 1221 – Leon River Watershed below Proctor Lake and above Belton Lake	12070201	1221	5a	871,488

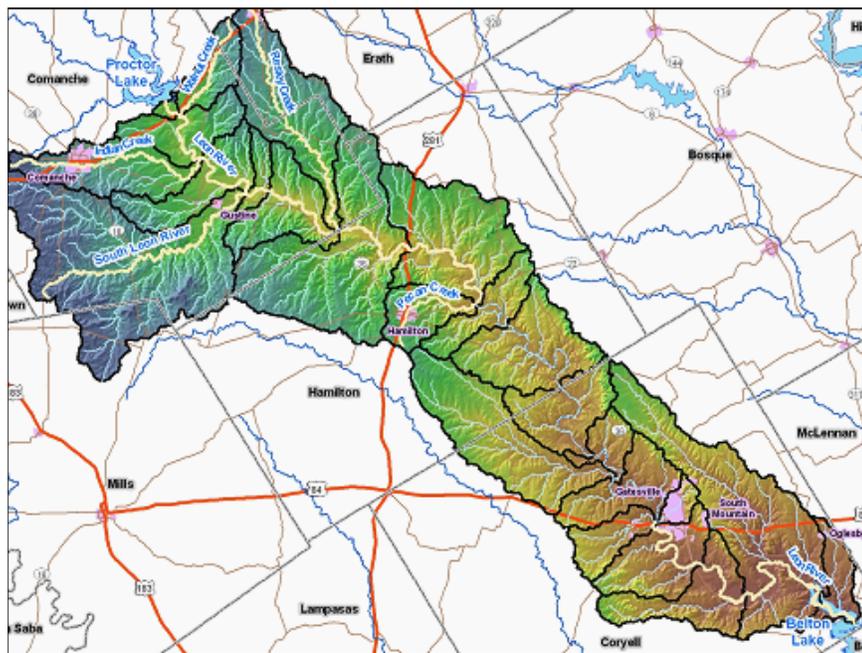
Water Quality Impairment			
Describe all known causes (pollutants of concern) of water quality impairments from any of the following sources: 2008 Texas Water Quality Inventory and 303(d) List, Clean Rivers Program Basin Summary, Basin Highlights Reports or Other Documented Sources.			
<b>SegID: 1221: Leon River Below Proctor Lake:</b>			
	<u>Impairment</u>	<u>Category</u>	<u>Year Listed</u>
<i>1221_01 Directly upstream of Lake Belton</i>	bacteria	5a	1996
<i>1221_04 From the confluence with Plum Creek, upstream to the confluence with Pecan Creek</i>	bacteria	5a	1996
<i>1221_05 From confluence with Pecan Creek, upstream to confluence with South Leon Creek</i>	bacteria	5a	1996
<i>1221_06 From confluence with South Leon Creek upstream to confluence with Walnut Creek</i>	bacteria	5a	1996
<i>1221_07 From the confluence with Walnut Creek upstream to Lake Proctor</i>	bacteria	5a	1996
<b>SegID: 1221C: Pecan Creek (unclassified water body):</b>			
	<u>Impairment</u>	<u>Category</u>	<u>Year Listed</u>
<i>1221C_01 Entire water body</i>	bacteria	5c	2006

## Project Narrative

### Problem/Need Statement

The Leon River watershed, located in the Brazos River Basin, is bound by Proctor Lake upstream and Belton Lake downstream. The Leon River (Segment 1221) is approximately 190 miles long and the watershed is approximately 1,375 square miles covering portions of Comanche, Erath, Hamilton, and Coryell Counties. A small portion of the watershed lies within Mills County. The Leon River watershed is a predominantly rural, agricultural watershed dominated by rangeland with some cropland. Forests also cover a sizable amount of the watershed. A significant amount of dairy production also exists in the northern portion of the watershed.

In 1996, Segment 1221 was placed on the Texas *303(d) List* of impaired waters for bacteria levels “Not Supporting Contact Recreation Use”. The 2008 *§303(d) List* identified all but two of the segment’s assessment units as impaired or having a concern for near non-attainment resulting from elevated *E. coli* levels. Additionally, five tributaries of the Leon River are impaired for bacteria (1221A – Resley Creek, 1221B – South Leon River, 1221C – Pecan Creek, 1221D – Indian Creek, and 1221F – Walnut Creek).



Placement of the Leon River on the *§303(d) List* caused the Texas Commission on Environmental Quality (TCEQ) to initiate the development of a total maximum daily load (TMDL). A draft TMDL was published by TCEQ in 2008 that indicated a 21% load reduction in bacteria levels would be needed to restore water quality in the Leon River. Sources of bacterial pollution identified in the Leon River watershed included as wastewater treatment facility discharges, storm water runoff, failing OSSFs, wildlife and feral animals, as well as fecal deposition from livestock and pets.

In the midst of the TMDL development process, stakeholders sought to initiate the development of a watershed protection plan (WPP) for the Leon River. Through TSSWCB project 06-12, *Leon River*

*Watershed Protection Plan Project*, a WPP for the Leon River is anticipated to be completed in Fall 2011. Both the draft TMDL and the draft WPP identify failing OSSFs as a contributor of bacteria to the watershed. The magnitude of pollutant loading from OSSFs at the subwatershed scale was estimated in the draft TMDL report using the 1990 U.S. Census and an assessment of failure rates. The census has an estimated 5,800 OSSFs within the watershed.

All stakeholders agreed that additional data was needed to identify the number and location of failing OSSFs in each subwatershed as well as technical and financial assistance for homeowners to address and correct this issue.

**Project Narrative****General Project Description (Include Project Location Map)**

TSSWCB will administer federal CWA §319(h) funds through Hamilton County for support of an Environmental Inspector who will provide technical assistance to homeowners in evaluating and ensuring proper maintenance of OSSFs in the Leon River watershed. The Environmental Inspector will identify and inspect malfunctioning OSSFs. Owners with malfunctioning systems will be assisted in acquiring cost share assistance for the repair, replacement (including proper abandonment of the existing system if needed), or removal of OSSFs.

The Environmental Inspector will identify homeowners in Hamilton County with OSSFs and develop a database of their locations. In addition, the Environmental Inspector will develop a cost share application for eligible participants as well as a system to prioritize cost share utilization. The system will include, but is not limited to, factors such as proximity to waterways, OSSF location, technology type, functionality, development density, soil type, land surface elevation, system age, floodplain elevation, depth to groundwater, and compliance history. Special focus will be given to OSSFs within subwatersheds 50 and 80, the City of Jonesboro, and OSSFs within riparian areas and floodplains.

The Environmental Inspector will conduct inspections of all OSSFs in Hamilton County. During each inspection, the OSSF location will be geo-located. Malfunctioning OSSFs will be recommended for the Hamilton County OSSF Program and will be ranked according to the system. A total of \$253,867 in cost share will be provided through this project and will assist a minimum of 25 homeowners. When needed, the Environmental Inspector will assist homeowners in leveraging all available financial assistance for OSSF repair, replacement, or removal beyond the scope of this project, such as TCEQ Supplemental Environmental Project monies through the Leon-Bosque RC&D or the Economically Distressed Areas Program (EDAP) and Clean Water State Revolving Fund (CW-SRF) through the Texas Water Development Board.

This project will conduct a series of workshops to increase public knowledge on OSSFs. BAEN will conduct a total of four workshops (two each) targeting owners of anaerobic and aerobic OSSFs. The workshops will describe proper routine maintenance techniques that will improve the effectiveness of their wastewater treatment system. Also, two workshops will target inspectors, installers, and maintenance providers to demonstrate proper techniques to inspect, install, upgrade, maintain and replace anaerobic and aerobic OSSFs. Additionally, TCEQ will host a meeting for Justices of the Peace to provide education on their jurisdictional role in addressing OSSF compliance issues. Pre- and post workshop surveys will be conducted to gauge knowledge gained. Homeowners enrolled in the Hamilton County OSSF Program will be required to attend at least one workshop.

Tasks, Objectives and Schedules						
Task 1:	Project Administration					
Costs:	Federal:	\$23,714	Non-Federal:	\$28,438	Total:	\$52,152
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:	Hamilton County 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 <sup>th</sup> of January, April, July and October. QPRs shall be distributed to all project partners.					
	Start Date:	Month 1		Completion Date:	Month 42	
Subtask 1.2:	Hamilton County 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 42	
Subtask 1.3:	Hamilton County will host meetings or conference calls with TSSWCB and BAEN at least quarterly to discuss project activities, project schedule, communication needs, deliverables, and other requirements. Hamilton County will develop lists of action items needed following each project coordination meeting and distribute to project personnel.					
	Start Date:	Month 1		Completion Date:	Month 42	
Subtask 1.4	Hamilton County will attend and participate in the Leon River Watershed Steering Committee, Focus Groups, Technical Advisory Group meetings, City Councils, and County Commissioners Courts in order to communicate project goals, activities, and accomplishments to affected parties.					
	Start Date:	Month 1		Completion Date:	Month 42	
Subtask 1.5	Hamilton County will develop (Months 1 – 6), host and maintain (Months 7 – 42) a webpage for the dissemination of project information ( <a href="http://www.co.hamilton.tx.us">http://www.co.hamilton.tx.us</a> ). Webpage shall include information on the OSSF Program, educational materials, and project deliverables.					
	Start Date:	Month 1		Completion Date:	Month 42	
Subtask 1.6	Hamilton County will complete and submit a final report to TSSWCB at the culmination of the project. At a minimum the Final Report shall describe the success of the project including number of OSSFs repaired, replaced, or removed, educational material provided to the public, workshops, and knowledge gained through the Hamilton County OSSF Program. This report will be provided in electronic and hard copy format.					
	Start Date:	Month 34		Completion Date:	Month 42	
Deliverables	<ul style="list-style-type: none"> <li>• Quarterly progress reports in electronic format</li> <li>• Reimbursement Forms and necessary documentation in hard copy format</li> <li>• Lists of action items needed from project coordination meetings</li> <li>• Project website</li> <li>• Final Report (electronic copy and 3 hard copies)</li> </ul>					

<b>Tasks, Objectives and Schedules</b>						
Task 2:	Promotion of Hamilton County OSSF Program					
Costs:	Federal:	\$43,920	Non-Federal:	\$8,358	Total:	\$52,278
Objective:	To promote the Hamilton County OSSF Program and the availability of technical and financial assistance. To encourage participation in the Hamilton County OSSF Program by homeowners in the Leon River watershed. Develop a system to prioritize cost-share utilization and collect additional OSSF data.					
Subtask 2.1	Hamilton County will hire (Months 1 – 3) an Environmental Inspector to inspect OSSFs and provide technical assistance to homeowners in Hamilton County. The Environmental Inspector will also assist with the development and delivery of educational materials (Task 4). The Environmental Inspector will acquire the proper training and certifications (Months 4 – 10) to fulfill the job requirements which includes Texas Engineering Extension Services' Designated Representative Basic Training Course.					
	Start Date:	Month 1		Completion Date:	Month 10	
Subtask 2.2:	The Environmental Inspector will identify homeowners in Hamilton County with OSSFs to distribute notifications announcing the availability of technical and financial assistance for the repair, replacement, or removal of OSSFs. This list of homeowners will be based on existing County records and updated accordingly.					
	Start Date:	Month 4		Completion Date:	Month 36	
Subtask 2.3:	The Environmental Inspector will develop and distribute flyers, brochures, letters, new releases and other appropriate promotional publications to encourage homeowner participation in the Hamilton County OSSF Program. The TSSWCB must approve all announcements, letters, and publications prior to distribution.					
	Start Date:	Month 4		Completion Date:	Month 36	
Subtask 2.4:	The Environmental Inspector will work with BAEN to educate homeowners about water quality issues and how proper OSSF maintenance can abate pollutant loadings. The Environmental Inspector will support, promote, and participate in, as appropriate, any field days, demonstrations, or education events sponsored by BAEN (Task 4) for the Leon River watershed.					
	Start Date:	Month 4		Completion Date:	Month 42	
Subtask 2.5	The Environmental Inspector will develop a Hamilton County OSSF Program cost share application for homeowners.					
	Start Date:	Month 4		Completion Date:	Month 36	
Subtask 2.6:	The Environmental Inspector will develop a system to prioritize cost share applications. The system shall be consistent with the priorities identified in the WPP and shall include, but are not limited to, factors such as proximity to waterways, OSSF location, technology type, functionality, development density, soil type, land surface elevation, system age, floodplain elevation, depth to groundwater, and compliance history. Special focus shall be given to OSSFs within subwatersheds 50 and 80 as identified in the WPP, the City of Jonesboro, and OSSFs within riparian areas and floodplains.					
	Start Date:	Month 1		Completion Date:	Month 36	
Deliverables	<ul style="list-style-type: none"> <li>• Promotional publications, as developed and distributed</li> <li>• Cost share application</li> <li>• System to prioritize cost share applications</li> <li>• List of homeowners to target technical and financial assistance</li> </ul>					

Tasks, Objectives and Schedules						
Task 3:	Repair, Replacement, or Remove OSSFs					
Costs:	Federal:	\$314,070	Non-Federal:	\$2,572	Total:	\$316,642
Objective:	To inspect OSSFs in Hamilton County. To provide technical assistance to homeowners in the Leon River watershed (Hamilton County) for the repair, replacement, or removal of failing or non-compliant OSSFs. To provide financial assistance to support to the repair, replacement, or removal of OSSFs in order to achieve OSSF load reductions in the Leon River watershed.					
Subtask 3.1:	The Environmental Inspector will conduct inspections on OSSFs identified in Subtask 2.2. The Environmental Inspector will approach landowners to conduct inspections on existing, permitted OSSFs in Hamilton County (with a goal of 25% each year). Priority areas identified in the WPP will be targeted for inspections. To date, there are an estimated total of 900 permitted OSSFs in Hamilton County. The Environmental Inspector will document any follow-up technical assistance needed. The Environmental Inspector will conduct annual inspections on all OSSFs repaired or replaced through this project to ensure that the homeowners are maintaining their OSSFs.					
	Start Date:	Month 4		Completion Date:	Month 42	
Subtask 3.2:	Each OSSF location shall be geo-referenced (i.e., coordinates from a GPS receiver). The Environmental Inspector will create a spreadsheet and map describing and showing the location of all OSSFs inspected and enrolled in the Hamilton County OSSF Program. The map will not reveal the identity or exact location of any homeowner.					
	Start Date:	Month 4		Completion Date:	Month 42	
Subtask 3.3:	The Environmental Inspector will assist homeowners in Hamilton County within the Leon River watershed in applying for and obtaining cost share to aid in the repair, replacement (including proper abandonment of the existing system if needed), or removal of OSSFs. The project provides \$253,867 in CWA §319(h) funding as cost share assistance. Homeowners shall be eligible to receive cost share based on the average rate to replace an OSSF.					
	Start Date:	Month 4		Completion Date:	Month 42	
Subtask 3.4:	The Environmental Inspector will prioritize applications for the Hamilton County OSSF Program based on the system developed under subtask 2.6.					
	Start Date:	Month 4		Completion Date:	Month 42	
Subtask 3.5:	The Environmental Inspector will assist homeowners in leveraging all available financial assistance for OSSF repair, replacement, or removal beyond the scope of this project, such as TCEQ Supplemental Environmental Project monies through the Leon-Bosque RC&D or the Economically Distressed Areas Program (EDAP) and Clean Water State Revolving Fund (CW-SRF) through the Texas Water Development Board.					
	Start Date:	Month 4		Completion Date:	Month 42	
Subtask 3.6:	The Environmental Inspector will track utilization of obligated cost share funds and assist homeowners in utilizing obligated cost share funds on schedule.					
	Start Date:	Month 4		Completion Date:	Month 42	
Deliverables	<ul style="list-style-type: none"> <li>List of properties inspected through this project</li> <li>Annual inspections for properties enrolled in the OSSF Program</li> <li>Map of project area showing locations of OSSFs inspected and enrolled in the OSSF Program; map will not reveal the identity of any homeowner</li> <li>Cost share applications for homeowners enrolled in the OSSF Program</li> </ul>					

<b>Tasks, Objectives and Schedules</b>						
Task 4:	Outreach and Education on OSSF Maintenance and Installation					
Costs:	Federal:	\$36,773	Non-Federal:	\$27,168	Total:	\$63,941
Objective:	To provide educational materials and workshops targeted at homeowners, businesses, inspectors, installers, and maintenance providers. A fact sheet will be developed outlining the Hamilton County OSSF Program. Pre- and post workshop surveys will be administered to gauge the increase in knowledge of educational attendees.					
Subtask 4.1:	BAEN will deliver workshops targeted to owners of anaerobic and aerobic OSSFs in years 2 and 3 (4 total workshops). These workshops will describe proper routine maintenance techniques that will improve the effectiveness of their wastewater treatment system. The purpose and proper function of the OSSF will be described with an emphasis on how water use patterns, cleaning products, personal care products and organic material can impact OSSF function. As a requirement for receiving cost share assistance through this project, homeowners must attend at least one workshop specific to their respective type of OSSF.					
	Start Date:	Month 13		Completion Date:	Month 45	
Subtask 4.2:	BAEN will conduct two workshops for inspectors, installers, and maintenance providers to demonstrate proper techniques to inspect, install, upgrade, maintain and replace anaerobic and aerobic OSSFs. These courses will be approved for continuing education credits toward the practitioner's OSSF licenses with TCEQ.					
	Start Date:	Month 3		Completion Date:	Month 45	
Subtask 4.3:	Hamilton County will coordinate with TCEQ to conduct a workshop for Justices of the Peace to provide education on their jurisdiction and role in addressing OSSF compliance issues.					
	Start Date:	Month 1		Completion Date:	Month 36	
Subtask 4.4:	BAEN will administer pre- and post-workshop surveys to gauge the knowledge gained by educational program participants. The surveys will be administered at the beginning and end of each workshop to evaluate knowledge gained and intended behavioral change.					
	Start Date:	Month 1		Completion Date:	Month 45	
Subtask 4.5:	BAEN will develop/provide fact sheets detailing proper homeowner maintenance of OSSFs for dissemination by the Environmental Inspector. Fact sheets will describe the function, operation and maintenance of OSSFs as well as information regarding the Hamilton County OSSF Program.					
	Start Date:	Month 1		Completion Date:	Month 6	
Deliverables	<ul style="list-style-type: none"> <li>List of participants, agendas, and meeting material for each workshop</li> <li>Delivery of educational workshops</li> <li>Informational fact sheets</li> <li>Summary of survey results</li> </ul>					

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

1) Identify and inspect OSSFs; 2) To promote the availability of technical and financial assistance to homeowners; 3) To provide technical and financial assistance to homeowners for the repair, replacement, or removal of OSSFs; 4) Educate the homeowners on the proper OSSF maintenance; 5) Educate inspectors, installers, and maintenance providers proper installation, inspection, operation and maintenance of OSSFs

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

1) Locations of OSSFs identified and inspected in Hamilton County; 2) Number of failing OSSFs repaired or replaced; 3) Nitrogen, phosphorus, sediment and bacteria load reductions achieved; 3) Availability of technical and financial assistance is promoted through the distribution of appropriate publications; 4) Needed technical assistance is provided to homeowners for the repair, replacement, or removal of OSSFs; 5) Cost share provided to a minimum of 25 homeowners; 6) Increase public knowledge on the proper maintenance of OSSFs

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

Goals and/or Milestone(s)

Element One - Element 1 – Explicit short- and long-term goals, objectives and strategies that protect surface...water

LTG: To protect and restore water quality from NPS pollution through assessment, implementation and education

Objectives

- 1 – Focus NPS abatement efforts ... and available resources in watersheds identified as impacted by NPS pollution.
- 2 – Support the implementation of state, regional, and local programs to prevent NPS pollution through assessment ... and education.
- 3 – Support the implementation of state, regional, and local programs to reduce NPS pollution, such as the implementation of strategies defined in state-approved TMDL Implementation Plans and Watershed Protection Plans
- 5 – Develop partnerships, relationships, memoranda of agreement, and other instruments of facilitate collective, cooperative approaches to manage NPS pollution.
- 6 – Increase overall public awareness of NPS issues and prevention activities.
- 7 – Enhance public participation and outreach by providing forums for citizens and industry to contribute their ideas and concerns about the water quality management process.

Goal Two – Implementation: Coordinate and administer the implementation of TMDL Implementation Plans and/or Watershed Protection Plans and other state, regional, and local plans/programs to reduce NPS pollution. Manage all CWA§319 grant funds efficiently and effectively to target implementation activities to the areas identified as impacted, or potentially degraded with respect to use by NPS pollution.

- Objective B – Develop and implement BMPs to address constituents of concern or water bodies not meeting water quality standards in watersheds identified as impacted by NPS pollution.
- Objective C – Develop and implement BMPs to address NPS constituents of concern or water bodies not meeting water quality standards in aquifers identified with impacts or as vulnerable in the latest state approved *Texas Water Quality Inventory and 303(d) List* or in Chapter 5 of this document.
- Objective D – Implement state-approved TMDL Implementation Plans and Watershed Protection Plans developed to restore and maintain water quality in water bodies identified as impacted by nonpoint source pollution

Goal Three – Education: Conduct education and technology transfer activities to help increase awareness of NPS pollution and prevention activities contributing to the degradation of water bodies, ... , by NPS.

- Objectives A – Enhance existing outreach programs at the state, regional, and local levels to maximize the effectiveness of NPS education.
- Objectives B – Administer programs to educate citizens about water quality and their potential role in causing NPS pollution.
- Objectives D – Conduct outreach through the Clean rivers Program, Texas Cooperative Extension, Soil and Water conservation Districts, and others to facilitate broader participation in decision-making and provide a more complete understanding of water quality issues and how they relate to each citizen.
- Implement outreach activities identified in the *Texas Groundwater Protection Strategy* to prevent NPS impacts to groundwater.
- Objectives F – Implement public outreach and education to maintain and restore water quality in waterbodies impacted by NPS pollution.

Element 3 – Balanced approach that emphasizes both state-wide nonpoint source programs and on-the-ground management of individual watersheds

Element 4 – Abatement of water quality impairments from nonpoint source pollution and prevention of significant threats to water quality from present and future nonpoint source activities

**Estimated Load Reductions Expected (Only applicable to implementation projects)**

An OSSF accepts the wastewater generated in a facility, treats the wastewater by removal of specific contaminants of concern and returns the water to the hydrologic cycle. Residential wastewater has an estimated loading of contaminants based on each person and their water usage on a daily basis (Table 1). A functioning OSSF should reduce the contaminant loading to the receiving environment based on the level of treatment provided within the system. A malfunctioning OSSF will have a reduced ability to remove contaminants from the wastewater.

Table 3-7. Constituent mass loadings and concentrations in typical raw residential wastewater [*Onsite Wastewater Treatment Systems Manual* (EPA/625/R-00/008; February 2002)]

Constituent	Mass loading (grams/person/day)	Concentration <sup>a</sup> (mg/L)
Total suspended solids (TSS)	35-75	155-330
Total nitrogen (TN)	6-17	26-75
Total phosphorus (TP)	1-2	6-12
Fecal coliforms (FC) <sup>b</sup>	-	10 <sup>6</sup> -10 <sup>8</sup>

<sup>a</sup> concentration estimated based on a water use of 60 gallons per person per day.

<sup>b</sup> concentration presented in Most Probable Number of organisms per 100 milliliters.

The projected nitrogen load reduction is estimated for system replacement and systems receiving operation and maintenance activities resulting from greater awareness. Annual nitrogen loading to an OSSF is estimated at 44 lbs. The replaced systems results in a 50% reduction in nitrogen loading. The fecal coliform loading to the watershed will be reduced by  $5.6 \times 10^8$  per system per year (Cogger and Carlile, 1984).

Effectiveness of particular BMPs in reducing pollutants is dependent on a myriad of factors including natural weather phenomena and the ability of landowners to correctly install, operate, maintain or manage the BMP. With these factors in mind, the estimated load reductions to be expected, as presented above, should be regarded as the “best case scenario” with probability that actual reductions will be less.

The mechanism for reporting pollutant load reductions achieved through implementation of BMPs funded with CWA §319(h) monies, is through the EPA Grants Reporting and Tracking System (GRTS). Actual load reductions achieved can only be reported after the BMPs are installed and operational. Currently, EPA Program Activity Measures (PAMs) only call for load reductions achieved for nitrogen, phosphorus, and sediment. Nitrogen, phosphorus, and sediment load reductions achieved through this project will be reported through GRTS.

**Part III – Financial Information**

<b>Budget Summary</b>			
Federal	\$ 418,477	% of total project	86.2%
Non-Federal	\$ 66,536	% of total project	13.8%
Total	\$ 485,013	Total	100%
Category	Federal	Non-Federal	Total
Personnel	\$ 77,518	\$ 30,198	\$ 107,716
Fringe Benefits	\$ 11,435	\$ 10,106	\$ 21,541
Travel	\$ 0	\$ 4,500	\$ 4,500
Equipment	\$ 0	\$ 0	\$ 0
Supplies	\$ 2,419	\$ 135	\$ 2,554
Contractual	\$ 30,056	\$ 20,037	\$ 50,093
Construction	\$ 253,867	\$ 0	\$ 253,867
Other	\$ 24,685	\$ 1,560	\$ 26,245
Total Direct Costs	\$ 399,980	\$ 66,536	\$ 466,516
Indirect Costs (≤15%)	\$ 18,497	\$ 0	\$ 18,497
Total Project Costs	\$ 418,477	\$ 66,536	\$ 485,013

<b>Budget Justification (Federal)</b>		
Category	Total Amount	Justification
Personnel	\$ 77,518	Environmental Inspector @ 100% effort for three years
Fringe Benefits	\$ 11,435	14.75% of Personnel
Travel	\$ 0	N/A
Equipment	\$ 0	N/A
Supplies	\$ 2,419	Computer and printer, General Office Supplies, Postage for Mailings, Handheld GPS
Contractual	\$ 30,056	Texas AgriLife Extension – BAEN
Construction	\$ 253,867	Financial assistance for replacement/repair (includes proper abandonment)/ removal of at least 25 OSSFs
Other	\$ 24,685	Office rent, Utilities, Phone and Cell Phone, Fuel, Truck operation and maintenance
Indirect	\$ 18,497	5% of Total direct federal excluding contractual

<b>Budget Justification (Non-Federal)</b>		
Category	Total Amount	Justification
Personnel	\$ 30,198	County Commissioner @ 20% for three years (\$21,600) County Clerk @ 5% for three years (\$5,250) County Extension Agent @ 5% for three years (\$1,628) County Office Assistant @ 2.5% for three years (1,720)
Fringe Benefits	\$ 10,106	County Commissioner @ 20% for three years (\$7,332) County Clerk @ 5% for three years (\$1,811) County Extension Agent @ 5% for three years (\$241) County Office Assistant @ 2.5% for three years (\$722)
Travel	\$ 4,500	County Commissioner – 3,000 miles @ \$0.50 per miles for three years (\$4,500)
Equipment	\$ 0	N/A
Supplies	\$ 135	Office Supplies
Contractual	\$ 20,037	Texas AgriLife Extension – BAEN
Construction	\$ 0	N/A
Other	\$ 1,560	Meeting Space – 4 meetings per year for three years (\$1,200) Office Equipment and Phone (\$360)
Indirect	\$ 0	N/A

<b>Contractual Budget Justification (Federal) – Texas AgriLife Extension – BAEN</b>		
Category	Total Amount	Justification
Personnel	\$ 17,000	Extension Program Specialist, Ryan Gerlich,(0.1 FTE) for three years
Fringe Benefits	\$ 4,686	Extension Program Specialist, Ryan Gerlich,(0.1 FTE) for three years
Travel	\$ 2,100	Trips to watershed (mileage 336 miles @ \$0.505/mile in a personal vehicle or \$0.25/mile in an extension vehicle, hotel and per diem). These trips will cover two specialists and one program specialists' travel over the course of the project. Additional trips will be needed to discuss program activities with project partners.
Equipment	\$ 0	N/A
Supplies	\$ 350	Office Supplies
Contractual	\$ 0	N/A
Construction	\$ 0	N/A
Other	\$ 2,000	Program materials for conducting training events. Printing/copies of materials, fact sheet, educational manuals, copies, materials describing events.
Indirect	\$ 3,920	15% of Total Federal Direct Costs

<b>Contractual Budget Justification (Non-Federal) – Texas AgriLife Extension – BAEN</b>		
Category	Total Amount	Justification
Personnel	\$ 11,197	Extension Specialist, Saqib Mukhtar (0.02866 FTE) for three years
Fringe Benefits	\$ 2,424	Extension Specialist, Saqib Mukhtar (0.02866 FTE) for three years
Travel	\$ 0	N/A
Equipment	\$ 0	N/A
Supplies	\$ 0	N/A
Contractual	\$ 0	N/A
Construction	\$ 0	N/A
Other	\$ 0	N/A
Indirect	\$ 3,541	26 % of Total Direct Costs (Non-federal)
Un-recovered Indirect Costs	\$ 2,875	11 % of Total Direct Costs (Federal)