



**Texas State Soil and Water Conservation Board
 State Nonpoint Source Grant Program
 FY 2018 Workplan 18-53**

SUMMARY PAGE			
Title of Project	Coordinating Implementation of the Lower Nueces River Watershed Protection Plan (WPP)		
Project Goals	<ul style="list-style-type: none"> To foster coordinated assistance activities for the Nueces River Watershed Partnership (NRWP) To conduct regular stakeholder meetings to encourage citizen participation, provide partners with updates on progress, and seek stakeholder input and recommendations on needed activities To support and facilitate the NRWP in identifying management measures to improve water quality, developing proposals to acquire funding for implementation of management measures, managing and tracking implementation projects as well as encourage adoption of best management practices (BMPs) Evaluate progress toward achieving milestones established in the WPP Coordinate and conduct water resources and related environmental outreach/education efforts across the watershed 		
Project Tasks	(1) Project Administration; (2) Support and Facilitation of WPP Implementation; (3) Outreach, Education, and Community Support;		
Measures of Success	<ul style="list-style-type: none"> Provide technical assistance to NRWP Evaluate progress toward achieving milestones Increased knowledge of citizens, landowners and agricultural producers of management measures identified in WPP 		
Project Type	Implementation (X); Education (X); Planning (); Assessment (); Groundwater ()		
Status of Waterbody on 2014 Texas Integrated Report	<u>Segment ID</u> 2102	<u>Parameter of Impairment or Concern</u> Total Dissolved Solids (TDS) Chlorophyll- <i>a</i>	<u>Category</u> 5c CS
Project Location (Statewide or Watershed and County)	Lower Nueces River Watershed in Jim Wells, Nueces, and San Patricio Counties		
Key Project Activities	Hire Staff (); Surface Water Quality Monitoring (); Technical Assistance (); Education (X); Implementation (X); BMP Effectiveness Monitoring (); Demonstration (); Planning (); Modeling (); Bacterial Source Tracking (); Other ()		
2017 Texas NPS Management Program Reference	<ul style="list-style-type: none"> Component 1 –LTG 2, 3, 5, 6 Component 1 – STGs 2D, 3B, 3D, 3F Component 2 		
Project Costs	\$100,000		
Project Management	<ul style="list-style-type: none"> Nueces River Authority 		
Project Period	May 1, 2018 – April 30, 2020		

Part I – Applicant Information

Applicant							
Project Lead	Rocky Freund						
Title	Deputy Executive Director						
Organization	Nueces River Authority						
E-mail Address	rfreund@nueces-ra.org						
Street Address	602 N. Staples Street Suite 280						
City	Corpus Christi	County	Nueces	State	TX	Zip Code	78401
Telephone Number	(361) 653-2110			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 Texas Commission on Environmental Quality (TCEQ).
Nueces River Authority (NRA)	Provide project management and oversight. Serve as watershed coordinator, project reporting, provide assistance for stakeholder relations, support the development of annual reports. Provide coordination of ongoing implementation efforts. Assess water quality data collected through the Clean Rivers Program (CRP) in relation to achieving load reductions.
Texas AgriLife Extension Service	Provide training and assistance to the watershed coordinator and NRWP.
Nueces River Preservation Association, City of Corpus Christi, Jim Wells County, Nueces County, San Patricio County, Department of Agriculture – Natural Resources Conservation Service (NRCS), Soil and Water Conservation Districts (SWCDs), Texas Parks and Wildlife Department (TPWD)	Members of the NRWP; provide support for implementation efforts, data analysis, and report generation.

Part II – Project Information

Project Type									
Surface Water	<input checked="" type="checkbox"/>	Groundwater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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.		Lower Nueces River Watershed Protection Plan – April 2016							
If yes, identify the agency/group that developed and/or approved the document.		Nueces River Watershed Partnership facilitated by Nueces River Authority			Year Developed	2016			

Watershed Information				
Watershed or Aquifer Name(s)	Hydrologic Unit Code (12 Digit)	Segment ID	Category on 2014 IR	Size (Acres)
Lower Nueces River Watershed	121101110701 - 121101110705	2102	5c	116,862

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: *2014 Texas Integrated Report*, Clean Rivers Program Basin Summary/Highlights Reports, or other documented sources.

Total Dissolved Solids (TDS)

The TDS average exceeded the 500 mg/L criteria in the 2014 Texas Integrated Report and is on the 303(d) list of impaired water bodies. The 2008 and 2013 CRP Basin Summary Reports also showed increasing trends for TDS. The TDS average continues to exceed the standard and the increasing trends remain for the data analyzed (December 1, 2009 through November 30, 2016) for the Draft 2018 CRP Basin Summary Report. The land use / land cover in the watershed is primarily cultivated cropland (38%), shrub / scrub (19%), and hay / pasture (18%). Runoff from the cropland, especially when the fields are barren, major bank manipulations, groundwater seepage, oil and gas pipeline leaks, and failing septic systems may be contributing factors to this impairment.

Chlorophyll-a

Chlorophyll-a is listed as a concern for both assessment units (2102_01 – lower 25 miles and 2102_02 – upper 14 miles) in the 2014 Texas Integrated Report. The concern in 2102_01 was first listed in 2008. The concern in 2102_02 was first listed in 2012. The 2008 CRP Basin Summary Report noted an increasing trend in the chlorophyll-a levels in both assessment units. The 2013 CRP Basin Summary Report and the Draft 2018 CRP Basin Summary Report noted an increasing trend in chlorophyll-a levels only in 2102_02. Chlorophyll-a levels are currently meeting the screening level in 2102_01. The river has seen periods of drought and high levels of water hyacinth infestations and periods of flooding which flushed out the water hyacinth which may be related to the fluctuating chlorophyll-a levels.

Turbidity

A turbidity spike (from 20 NTU to 1,900 NTU) in November 2009 resulted in a drinking water violation at the City of Corpus Christi O.N. Stevens Water Treatment Plant. A sediment loading model, developed by the United States Geological Survey, indicated that the turbidity increase was most likely due to localized, heavy rainfall in the Bayou Creek tributary. The land use in the Bayou Creek watershed is primary cropland, which was bare after crop harvest at the time of the storm event. Bank manipulation by landowners may also be contributing to the problem.

Chloride and Sulfate

The 2008 and 2013 CRP Basin Summary Reports also showed increasing trends for chloride and sulfate. The chloride average was approaching its 250 mg/L criteria, but the sulfate average was well below its 250 mg/L criteria. Data collected since the 2013 analysis shows the chloride levels falling well below the criteria. Chloride is currently meeting the standard.

Bacteria

The 2013 CRP Basin Summary Report indicated a slight increasing trend in *E. coli* concentrations in 2102_01, but well below the 126 cfu/100 mL geometric mean criteria. As of the 2014 Integrated Report, 2102_02 is still well below the criteria at 28.1 cfu/100 mL, and 2102_01 is at 116.4 cfu/100 mL, up from 82 cfu/100 mL in the 2012 Integrated Report. The data analyzed for the Draft 2018 CRP Basin Summary has a geometric mean of 124.3 cfu / 100ml in 2102_01 and 32.3 cfu/100 ml in 2102_02. There are several small communities along the river that rely on on-site septic facilities (OSSFs) for wastewater disposal. An OSSF repair and replacement project is currently underway. As of March 2018, 7 repairs and 11 replacements have been completed.

Due to the location of the CRP monitoring sites, located at the upstream end of their respective assessment units, the measured parameters may not reflect the actual values in the assessment unit. Therefore, the measurements taken at Station 12964 are more appropriate for analysis of 2102_02. Routine monitoring began in FY2012 at Station 20936 at Hazel Bazemore Park and in the 4th quarter of FY 2016 at Station 21815 upstream of the saltwater barrier dam at Labonte Park. Both stations are located near the downstream end of 2102_01 and were added to obtain more representative information in order to better evaluate the water quality of this assessment unit.

Project Narrative

Problem/Need Statement

The Choke Canyon / Lake Corpus Christi Reservoir System supplies water for municipal and industrial use in the Coastal Bend area of South Texas. The City of Corpus Christi is the primary water supplier. Nearly one half million people rely on this source for their drinking water supply. The water is released from Lake Corpus Christi and delivered to water treatment plants downstream via the Nueces River Below Lake Corpus Christi (Segment 2102). The segment forms the county line between Jim Wells and San Patricio Counties and between Nueces and San Patricio Counties.

The 2014 Integrated Report lists chlorophyll-*a* as a concern on the lower 25 miles of the segment (2102_01) and the upper 14 miles of the segment (2102_02). TDS is an impairment on the 303(d) List for this segment.

The upper 30 miles or so of the river segment flows primarily through rural ranch and farm lands. Several small communities; the City of San Patricio and River Estates in San Patricio County and Sandy Hollow in Nueces County; rely on OSSFs for wastewater disposal. Sediment loading from cropland and other land uses is a concern for this area, primarily for the City of Corpus Christi for treatment and drinking water standards and industry for the efficiency of their plant operations. Excess nutrients from farm land and bacteria from failing septic systems may also contribute to water quality degradation.

The lower nine miles of the river has more development on the Nueces County side. An area known as County Road (CR) 73 is located along the river just west of the City of Corpus Christi. The residences rely on septic systems for wastewater disposal. However, not all houses have properly functioning septic systems, if any at all. The area is low lying and prone to flooding, especially when Lake Corpus Christi is full and water spills over the dam. CR 73 has been a popular spot for illegal dumping, and items such as refrigerators and cars have been dumped in the river itself. Within the watershed and the City of Corpus Christi city limits is a golf course and relatively dense housing. Therefore, failing (or lack of) septic systems, excessive fertilizers, and storm water runoff are possible pollutant sources.

One goal of the WPP and the Nueces River Watershed Partnership is to address these issues to reverse the TDS impairment and prevent additional parameters from exceeding water quality standards.

This proposal will also promote natural riparian habitats through educational workshops. A riparian area is the interface between land and a river or stream.

A properly functioning riparian buffer provides for:

- Banks and channels to be more stable with the right kinds and amounts of vegetation resulting in less erosion
- High energy of flood flows to be dissipated by riparian vegetation, especially woody vegetation
- Water velocity to be slowed, allowing more sediment to drop
- Sediment to be trapped and stabilized by riparian vegetation
- Excess nutrients to be utilized by riparian vegetation and contaminants or pathogens to be broken down or destroyed by microbial activity in riparian areas
- Organic materials to be trapped by riparian vegetation providing a more favorable situation for additional plant establishment
- Riparian banks and floodplains to act as a sponge to absorb and store a portion of flood flows. This water will then be released slowly to improve the hydrology of the stream after a runoff event
- The diversity of vegetation will provide improved habitat for wildlife and aquatic species

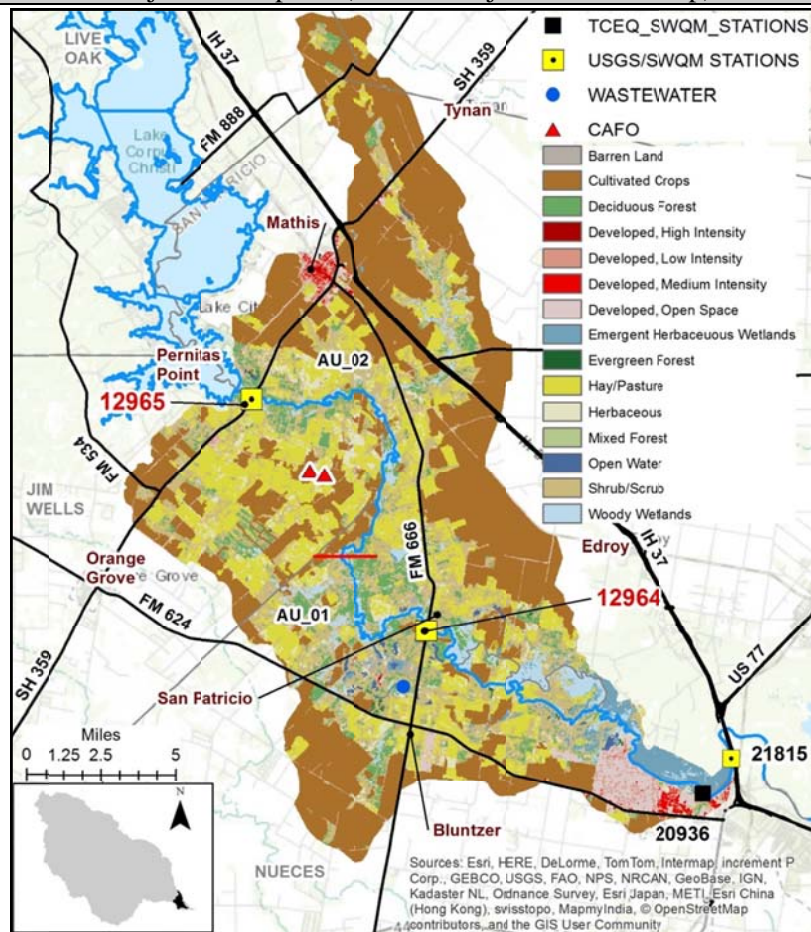
(Adapted from Steve Nelle, Riparian Notes, Note Number 1, December 2003;
<http://www.remarkableriparian.org/notes/1.pdf>)

From August 2010 – July 2012, the City of Corpus Christi broadened their interlocal agreement with NRA to include a source water protection program for the Lower Nueces River, focusing primarily on problems along CR 73. NRA, with support of the City of Corpus Christi, broadened the scope of the project to implement the EPA’s Healthy Watersheds Initiative by developing a source water protection plan (SWPP) addressing the nine elements fundamental to a potentially successful plan.

Since October 2012, development of a WPP, expanding on the previous SWPP, continued with funding from EPA through TSSWCB. The WPP was completed and submitted to EPA in January 2016. The EPA accepted the WPP, as it met the nine elements of a successful watershed-based plan, in April 2016.

Project Narrative

General Project Description (Include Project Location Map)



Through a local presence in the watershed, the NRA, as watershed coordinator, will continue to serve as the primary conduit for interaction with landowners, citizens, and entities to facilitate the implementation of the WPP. NRA will coordinate meetings with the NRWP Steering Committee to update them, seek their input and recommendations on needed activities, and continue to support and facilitate implementation efforts of the plan. NRA will continue to assist cities, counties, local boards, and businesses to identify management measures to improve water quality and acquire resources to enable WPP implementation. NRA will work with state and federal agencies, as appropriate, to bring technical and financial assistance to the watershed.

As part of an adaptive management approach embraced by stakeholders, NRA will continue to evaluate progress toward achieving milestones established in the WPP and assess water quality data in relation to achieving load reductions. Water quality data are collected quarterly at the four sites shown on the map. These sites are a subset of the routine monitoring conducted by NRA for the TCEQ’s Clean Rivers Program.

Coordination of outreach and education efforts by NRA will facilitate and support public participation by private individuals and local officials in the implementation of the Lower Nueces River WPP. NRA will develop publications, such as a semi-annual newsletter, factsheets, and website content, to promote and communicate watershed pollution prevention efforts. Additionally, NRA will coordinate and conduct water resources and educational outreach education efforts across the watershed, such as riparian habitat conservation and Lone Star Healthy Streams workshops for land owners.

Tasks, Objectives and Schedules			
Task 1	Project Administration		
Costs	\$28,085		
Objective	To effectively administer, coordinate and monitor all work performed under this project including technical and financial supervision and preparation of status reports.		
Subtask 1.1	NRA will prepare electronic quarterly progress reports (QPRs) for submission to the TSSWCB. QPRs shall document all activities performed within a quarter and shall be submitted by the 1 st of March, June, September, and December. QPRs shall be distributed to all Project Partners.		
	Start Date	Month 1	Completion Date
Subtask 1.2	NRA will perform accounting functions for project funds and will submit appropriate Reimbursement Forms to TSSWCB at least quarterly.		
	Start Date	Month 1	Completion Date
Subtask 1.3	NRA will host coordination meetings or conference calls, at least quarterly, with Project Partners to discuss project activities, project schedule, communication needs, deliverables, and other requirements. Cooperating Entity will develop lists of action items needed following each project coordination meeting and distribute to project personnel.		
	Start Date	Month 1	Completion Date
Deliverables	<ul style="list-style-type: none"> • QPRs in electronic format • Reimbursement Forms and necessary documentation in hard copy format • Final Report in electronic and hard copy formats 		

Tasks, Objectives and Schedules			
Task 2	Support and Facilitation of WPP Implementation		
Costs	\$27,064		
Objective	Facilitate continued stakeholder involvement in the NRWP to ensure successful implementation of the Lower Nueces River WPP and track implementation.		
Subtask 2.1	NRA will serve as the Watershed Coordinator to engage and facilitate the NRWP and entities identified in the Lower Nueces River WPP. NRA will serve as the primary conduit for interaction with landowners, citizens, and entities to facilitate the implementation of the WPP. NRA shall successfully complete (or have already completed) the Texas Watershed Planning Short Course. NRA shall participate in Texas Watershed Coordinator Roundtables.		
	Start Date	Month 1	Start Date
Subtask 2.2	NRA will assist governmental and non-governmental organizations in the Lower Nueces River watershed in identification and acquisition of resources (financial and technical) to assist with WPP implementation. NRA will actively seek and pursue funding opportunities and work with partners to develop grant proposals. NRA will work with state and federal agencies, as appropriate, to bring technical and financial resources to the watershed.		
	Start Date	Month 1	Start Date
Subtask 2.3	NRA will 1) evaluate and track progress toward achieving milestones established in the WPP; and 2) assess water quality data collected through the CRP and other data collection efforts in relation to achieving load reductions.		
	Start Date	Month 1	Start Date
Subtask 2.4	NRA will facilitate public participation and stakeholder involvement in the watershed planning process, specifically by hosting meetings of the NRWP Steering Committee (bi-annually) to provide regular updates on progress to implement the WPP and seek input and recommendations on needed activities. NRA will coordinate meetings, secure meeting locations, prepare and disseminate meeting notices and agendas. Meeting summaries will be prepared and posted to the project website.		
	Start Date	Month 1	Start Date

Subtask 2.5	NRA will maintain a database of watershed stakeholders and affected parties for use in engaging the public in the watershed planning process.			
	Start Date	Month 1	Start Date	Month 24
Subtask 2.6	NRA will attend and participate in other public meetings as appropriate in order to communicate project goals, activities and accomplishments to affected parties. Such meetings may include, but are not limited to, city councils, county commissioners' courts, CRP Basin Steering Committee and Coordinated Monitoring, SWCDs, groundwater conservation districts, and other appropriate meetings of critical watershed stakeholder groups.			
Deliverables	<ul style="list-style-type: none"> • Notices, agendas, meeting materials, attendance lists, and summaries from NRWP meetings • Documentation of resource opportunities identified, applied for and resources obtained to support plan implementation • Stakeholder contact list, updated as needed 			

Tasks, Objectives and Schedules				
Task 3	Outreach, Education and Community Support			
Costs	\$44,851			
Objective	To promote involvement, provide information transfer and encourage participation in the Lower Nueces River Watershed Partnership			
Subtask 3.1	NRA will coordinate and conduct water resources and related environmental outreach/education efforts across the watershed, as identified in the Lower Nueces River WPP.			
	<p>NRA will look into the feasibility of conducting the following water resources and related environmental outreach/education events: local community clean-ups, Texas Watershed Steward Program, Riparian Management workshops, Urban Riparian workshops, rainwater harvesting workshops, Texas Well Owner Network trainings, well screening events, Texas Stream Team volunteer monitoring trainings, Lone Star Healthy Streams workshops, and Feral Hog workshops. NRA will work with the entities that administer/fund these programs and try to direct delivery of these programs to the Lower Nueces River depending on priorities of those entities and programs.</p> <p>NRA will make presentations on the NRWP, WPP and general nonpoint source pollution information to local schools and community organizations.</p> <p>NRA will support, promote, and participate in, as appropriate, any field days, demonstrations, site tours, or educational events sponsored by Texas AgriLife Extension, NRCS, and/or SWCDs for the Lower Nueces River watershed.</p>			
	Start Date	Month 1	Completion Date	Month 24
Subtask 3.2	NRA will continue to host and maintain the NRWP website (http://www.nuecesriverpartnership.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.			
	Start Date	Month 1	Completion Date	Month 24

Tasks, Objectives and Schedules			
Task 3	Outreach, Education and Community Support		
Subtask 3.3	<p>NRA will facilitate communication with stakeholders in order to engage the public and affected entities in the watershed planning process. NRA will utilize all appropriate communication mechanisms including direct mail, e-mail, the project website, and print media. NRA will develop and disseminate general project informational materials, including, but not limited to: flyers, brochures, letters, factsheets, news releases, and other appropriate promotional publications. NRA will include information about the project in CRP publications. NRA maintains an email distribution list to facilitate direct discussion between stakeholders. NRA will develop, publish, and distribute 4 semi-annual newsletters that highlight Lower Nueces River watershed activities; the newsletter shall be distributed as most appropriate to individual landowners and entities in the watershed. NRA will solicit content matter for educational materials from Project Partners as appropriate. TSSWCB must approve all project-related content in any informational materials and promotional publications prior to distribution.</p>		
	Start Date	Month 1	Completion Date
			Month 24
Deliverables	<ul style="list-style-type: none"> • Documentation of workshops including handouts, agendas and attendance rosters • Project website and usage statistics • Educational and promotional materials, as developed and disseminated • 4 semi-annual newsletters 		

Project Goals (Expand from Summary Page)
<ul style="list-style-type: none"> • Facilitate and continue implementation of the Lower Nueces WPP and foster coordinated assistance activities between the Cities, Counties, NRA, TSSWCB, local SWCDs, NRCS, and members of the NRWP by providing a local presence in the Lower Nueces River Watershed. • Conduct NRWP Steering Committee meetings to provide updates on progress, seek stakeholder input and recommendations on needed activities, and encourage citizen participation. • Support and facilitate the NRWP in identifying management measures to improve water quality, developing proposals to acquire funding for implementation of management measures, managing and tracking implementation projects as well as facilitating education programs in order to encourage adoption of BMPs. • Work with state and federal agencies, as appropriate, to bring technical and financial resources to the Lower Nueces River watershed. • Track and document implementation efforts to assess progress toward achieving milestones established in the WPP. Coordinate and conduct water resources and related environmental outreach/education efforts across the watershed, by developing publications, website content to promote and communicate watershed efforts, organizing training programs, and by participation in local community clean up events.

Measures of Success (Expand from Summary Page)
<ul style="list-style-type: none"> • Provide technical assistance to the NRWP through identification and acquisition of resources, seek and pursue funding opportunities, and develop grant proposals. • Evaluate progress toward achieving milestones in the WPP. • Reduction in TDS loadings and potential de-listing of the impairment. • Reduction in potential bacterial contamination and nutrient loading for streams from agricultural and urban NPS pollution. • Increased knowledge of citizens, landowners and agricultural producers of management measures identified in WPP through outreach and educational efforts including training programs.

2017 Texas Nonpoint Source Management Program Reference (Expand from Summary Page)	
Goals and/or Milestone(s)	
Component 1 – Explicit Short- and Long-term goals, objectives, and strategies that protect surface and groundwater.	
Long-Term Goal Two – Support the implementation of state, regional, and local programs to prevent reduce NPS pollution through assessment, implementation and education, such as the implementation of strategies defined in state-approved TMDL Implementation Plans and Watershed Protection Plans.	
Long-Term Goal Three – Support the implementation of state, regional, and local programs to reduce NPS pollution, such as the implementation of strategies defined in... WPPs.	
Long-Term Goal Five – Develop partnerships, relationships... to facilitate collective, cooperative approaches to manage NPS pollution.	
Long-Term Goal Six – Increase overall public awareness of NPS issues and prevention activities.	
Short-Term Goal Two – Implementation – Objective D – Implement... WPPs developed to restore and maintain water quality in water bodies identified as impacted by non-point source pollution.	
Short-Term Goal Three – Education – Objective B – Administer programs to educate citizens about water quality and their potential role in causing NPS pollution.	
Short-Term Goal Three – Education – Objective D – Conduct outreach...to facilitate broader participation and partnerships. Enable stakeholders and the public to participate in decision-making and provide a more complete understanding of water quality issues and how they relate to each citizen.	
Short-Term Goal Three – Education – Objective F – Implement public outreach and education to maintain and restore water quality in water bodies by NPS pollution.	
Component 2 – Working partnerships and linkages to appropriate state, interstate, tribal, regional, and local entities, private sector groups, and Federal agencies.	

Part III – Financial Information

Budget Summary	
Category	Cost
Personnel	\$ 60,619
Fringe Benefits	\$ 18,185
Travel	\$ 3,995
Equipment	\$ 0
Supplies	\$ 3,158
Contractual	\$ 0
Construction	\$ 0
Other	\$ 1,000
Total Direct Costs	\$ 86,957
Indirect Costs (15%)	\$ 13,043
Total Project Costs	\$ 100,000