Technical and Financial Assistance to Dairy Producers and Landowners of the North Bosque River Watershed Within the Upper Leon Soil and Water Conservation District

Texas State Soil and Water Conservation Board
FY01 CWA Section 319(h), TSSWCB Project # 01-14

WORKPLAN

October 1, 2001 – March 31, 2004

1. **Title of Project:** Technical and Financial Assistance to Dairy Producers and Landowners of the North Bosque River Watershed Within the Upper Leon Soil and Water Conservation District.

2. **Project Goals/Objectives:** This project will provide technical and financial assistance to landowners toward the development and implementation of certified Water Quality Management Plans (WQMPs) and/or Comprehensive Nutrient Management Plans (CNMPs) for the purposes of reducing nonpoint source (NPS) nutrient losses from agricultural operations that land-apply animal waste. Monitoring in micro-watersheds will be performed in order to determine NPS reductions. A final report will be developed assessing the preexisting and post-implementation effects of the project.

3. **Project Tasks:** (1) Organization of Technical Advisory Watershed Council. (2) Provide Technical and Financial Assistance to Dairy Producers and Landowners by Documenting the Increase in Best Management Practice (BMP) Implementation Through the Updating or Development of 58 WQMPs. (3) Conduct Micro-Watershed Producer Council Meetings and Coordinate the Edge-of-Field Monitoring Demonstration. (4) Micro-Watershed Monitoring and Sampling Results for the Edge-of-Field Monitoring Demonstration. (5) Development of Final Report Assessing the Preexisting and Post-Implementation Effects of This Project and the Identical CWA Section 319(h) Project Entitled *Technical and Financial Assistance to Dairy Producers and Landowners of the North Bosque Watershed Within the Cross-Timbers Soil and Water Conservation District*. (6) Implementation of Water Quality Management Plans Utilizing State Senate Bill 503 Funding.

4. **Measures of Success:** Demonstrate significant implementation of BMPs on agricultural operations that land-apply animal waste through the numbers of updated WQMPs, newly developed and implemented WQMPs or CNMPs, and monitoring data from within micro-watersheds of the North Bosque River watershed.

5. **Project Type:** Statewide (); Watershed (X); Demonstration (X); Other ().

6. **Waterbody Type:** River (X); Groundwater (); Other ().

7. **Project Location:** North Bosque River, Segment 1226; Upper North Bosque River, Segment 1255.

8. **NPS Management Program Reference:** State of Texas Agricultural/Silvicultural Nonpoint Source Management Program approved February 15, 2000.

9. **NPS Assessment Report Status:** Impaired (X); Impacted (); Threatened (); TMDL (X); Other ().

10. **Key Project Activities:** Hire Staff (X); Monitoring (X); Regulatory Assistance (): Technical Assistance (X); Education (X); Implementation(X); Demonstration (X); Other ().

11. **NPS Management Program Elements:** Milestones from the *1999 Texas Nonpoint Source Pollution Assessment Report and Management Program*, which will be implemented include: (1) Providing financial assistance to soil and water conservation districts for the implementation of water quality management

plans to reduce NPS pollution; (2) coordinating with federal, state, and local programs; (3) committing to technology transfer, technical support, administrative support, and cooperation between agencies and programs for the prevention of NPS pollution.

12. **Project Costs:** Federal ($789,584); Non-Federal Match ($487,162); Total Project ($1,267,746).

13. **Project Management:** Texas State Soil and Water Conservation Board (State Board). Cooperating Entities: Upper Leon Soil and Water Conservation District (SWCD); State Board Regional Office in Dublin, Texas; Texas Institute of Applied Environmental Research (TIAER); Natural Resources Conservation Service (NRCS).

14. **Project Period:** October 1, 2001 through March 31, 2004.

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Problem/Need Statement: The purpose for this project is to expand the activities of the Texas State Soil and Water Conservation Board (State Board) and local soil and water conservation districts (SWCDs) in an effort to reduce nonpoint source (NPS) pollution loadings in the North Bosque River watershed from agricultural activities. According to the 1999 State of Texas 303(d) List the North Bosque River (Segment 1226) and the Upper North Bosque River (Segment 1255) in the Brazos River basin are impaired. Both segments appeared on the Texas Natural Resource Conservation Commission (TNRCC) Total Maximum Daily Load (TMDL) Development Basin Schedule for 1998. According to water quality data contributed by the Texas Institute for Applied Environmental Research (TIAER), low dissolved oxygen and elevated levels of ammonia nitrogen, nitrite/nitrate nitrogen, chlorophyll *a*, orthophosphorus, bacteria and total phosphorus were found in the watershed. Modeling results show this is the result of contaminants originating from municipal wastewater treatment plants, animal feeding operations (AFOs), and animal waste application fields (WAFs). The TNRCC approved two TMDLs for phosphorus in the North Bosque River for Segments 1226 and 1255 on February 9, 2001, and submitted them to the United States Environmental Protection Agency (USEPA) for final review and approval. This project will be incorporated into the forthcoming TMDL Implementation Plan for the overall Watershed Action Plan (WAP) for the North Bosque River Basin in order to address the potential agricultural sources of NPS pollution.

As the lead agency in the State of Texas for the abatement of agricultural NPS pollution, the State Board works closely with local SWCDs to reduce NPS pollution. The State Board addresses the prevention or abatement of NPS pollution from various agricultural activities through the Water Quality Management Plan (WQMP) Program. A certified WQMP is a site-specific plan which includes appropriate land-treatment practices, production practices, technologies and combinations thereof, and an implementation schedule. This program is administered by the State Board and provides agricultural producers in priority areas such as the North Bosque River watershed an opportunity to comply with state water quality laws through traditional, voluntary, and incentive-based programs. The State Board oversees and is responsible for the cost-share component of the program. The local SWCDs are required to provide or arrange for technical assistance to applicants to implement Best Management Practices (BMPs) through certified WQMPs.

In many of the SWCDs in Texas, the Natural Resources Conservation Service (NRCS) provides technical assistance in the development of WQMPs. However, the ability of the NRCS to provide technical assistance and other services to SWCDs has been restricted due to continued reductions in personnel and additional federal program mandates. The roles and responsibilities of the NRCS have also greatly increased with the addition of federal program mandates such as the 1996 Farm Bill. This decrease in NRCS personnel and the addition of federal program mandates has strained the ability of the NRCS to provide technical assistance to local SWCDs in the development and implementation of WQMPs. Therefore, a limited amount of technical assistance will be provided by the NRCS.

General Project Description: The primary focus of the 319(h) program is to provide funds to states to implement technical assistance/BMPs that abate or reduce NPS pollution. The State Board is concurrently managing two identical projects in this watershed. One project is operated through the Cross-Timbers SWCD (Stephenville, Texas) and the other through the Upper Leon SWCD (Comanche, Texas). Both projects are identical in purpose and task and are connected by TIAER, which is responsible for providing the same services for both projects. The funding for the micro-watershed monitoring and the micro-watershed producer council co-coordination (see

paragraph 5 of this section) is provided within the workplan entitled *Technical and Financial Assistance to Dairy Producers and Landowners of the North Bosque River Watershed Within the Cross-Timbers Soil and Water Conservation District*, although the tasks and responsibilities surrounding those activities are included in both workplans. There will be one final report prepared by TIAER to assess the preexisting and post-implementation effects of both projects.

This project consists of the State Board working cooperatively with the Upper Leon SWCD in the North Bosque River watershed to provide technical and financial assistance to dairy producers and 3rd party landowners toward the development and implementation of certified WQMPs and CNMPs for the purposes of reducing NPS nutrient losses from agricultural operations that land-apply animal waste. Also, any 3rd party landowners outside of the North Bosque River watershed that utilize composted dairy manure from within the North Bosque River watershed on lands outside of the watershed will be eligible for cost-share assistance through the WQMP Program.

There are usually between 75-100 dairy operations in the North Bosque River watershed. Nearly all of the operations beneficially use all or a portion of the generated manure and wastewater as a nutritional supplement for the production of onsite crops (usually Coastal Bermuda grass). The remainder of the manure and wastewater is beneficially used for the same purpose on the land of 3rd parties (usually within the watershed) through contract-manure-hauler agreements. It is widely accepted that the application of animal manure and wastewater associated with the everyday operation of a dairy facility is a good source of nitrogen and phosphorus, both of which are (1) essential nutrients for the production of all agricultural crops as well as (2) parameters cited on the Texas 303(d) List as impairments for these segments. Evidently, as some soil tests have shown, the continual use of this practice has lead to the accumulation of soil phosphorus within the application fields. It has been suggested that elevated levels of soil phosphorus in some application fields is a contributor to the eutrophication of surface waters within the watershed. These projects target the application fields within the watershed for the implementation of best management practices (adjustment of application rates, filter strips, etc.) and remediation techniques (deep plowing, heavy cropping, etc.) in an effort to reduce the levels of phosphorus that may be migrating from the soil to surface waters during storm events.

In this project the Upper Leon SWCD will provide technical assistance. The Upper Leon SWCD technician, hired through this project, will work closely with the State Board Regional Office in Dublin, Texas. Technical assistance is best provided by local SWCDs because it allows for greater local support to landowners in the implementation of BMPs.

The district technician will work with landowners to develop WQMPs for waste application fields (WAFs) and update existing certified WQMPs to make consistent with the forthcoming TMDL Implementation Plan requirements and the current standards in the USDA-NRCS technical guidance within the watershed.

TIAER will monitor the North Bosque River watershed to determine the reduction of NPS pollution and provide data to inform micro-watershed producer councils of their contribution to NPS pollution. The micro-watershed producer councils will be made up of project participants within each micro-watershed and the monitoring will be set up at targeted areas within each micro-watershed. The monitoring effort will make use of numerous automated sampling systems in TIAER's possession that will be made available to this project, as well as supplemental support of the cost of data obtained through QAPPs approved by EPA or the State of Texas.

The data obtained from the micro-watershed monitoring will, at the beginning of the project, establish a baseline nutrient concentration within the smaller streams and tributaries that contribute flow to the 303(d) listed waterbodies within the watershed. As implementation of BMPs progresses, the micro-watershed monitoring approach will more effectively measure the success of these BMPs. The micro-watershed approach removes the cumulative effect agricultural NPS pollution from upstream tributaries, urban NPS pollution, and treatment plant effluent has on the sampling data from the 303(d) listed waterbodies. This is a more meaningful and telling approach, the results of which will not be known until the project is in effect.

An Edge-of-Field Monitoring Demonstration will be carried out so that each micro-watershed producer council will be able to realize the reality of NPS nutrient losses from WAFs. TIAER will produce a final report describing the implementation strategies and summarizing the monitoring data findings.

Tasks, Objectives, and Schedules:

Task 1: Organization of Technical Advisory Watershed Council and Hiring of the District Technician

Objective: Assemble a Technical Advisory Watershed Council (TAWC) from project management, cooperating entities, dairy producers, and other landowners. Meet at the onset of the project to determine ways of promoting project participation and thereafter on a quarterly basis to discuss project progression, details, organizational maintenance, and forthcoming agenda content for micro-watershed producer council meetings. One cooperating entity, TIAER, has special experience and knowledge from previous projects which pertains to micro-watershed producer councils. The transfer of technology and experience via the personnel TIAER makes available to this project will be essential to the success of this component of the project. Upper Leon SWCD will hire a technician qualified to carry out the assigned tasks as stated within this workplan.

Subtask 1.1 The State Board will, with the assistance of TIAER and the Upper Leon SWCD, assemble the TAWC from project management, and all cooperating entities. A representative from the TNRCC will be invited to attend each TAWC meeting. The Cross-Timbers SWCD will be included as a member of the TAWC because of its involvement with the State Board in the concurrent project entitled *Technical and Financial Assistance to Dairy Producers and Landowners of the North Bosque River Watershed Within the Cross-Timbers Soil and Water Conservation District*. Only one TAWC will be established within the watershed and it will serve in the capacity described within both workplans. (Start Date: Month 1; Completion Date: Month 1).

Subtask 1.2 The TAWC will meet soon after the contracts signing date. The TAWC members will determine ways of promoting project participation and details pertaining to the assemblage of the micro-watershed producer councils (Start Date: Month 1; Completion Date: Month 36).

Subtask 1.3 The TAWC will meet soon after the end of the project's first quarter and discuss the project's progression and begin the division of project participants into micro-watershed producer councils. The micro-watershed producer councils will be organized based on information from TIAER as provided for in Subtask 2.1. TIAER will transfer technology and experience pertaining to the organization and coordination of the micro-watershed producer councils. The TAWC will meet after the end of every quarter throughout the duration of the project to discuss the project's progression, maintain membership balance, and prepare agenda content for the micro-watershed producer council meetings (Start Date: Month 1; Completion Date: Month 36).

Subtask 1.4 The Upper Leon SWCD will hire a technician qualified to carry out the assigned tasks as stated within this workplan (Start Date: Month 1; Completion Date: Month 1).

Subtask 1.5 The Upper Leon SWCD and TIAER will submit progress reports on project activities to the State Board Project Lead (See Page 8) on a quarterly basis beginning one quarter-year after the signing date of all contracts and every quarter-year throughout the duration of the project. The reports will summarize the activities of the cooperating entity related to this project by subtask and will include a completion percentage estimation.

Deliverables

- Attendance lists each time the TAWC meets.
- List of activities or actions to be carried out based on decisions agreed upon by the TAWC after each meeting.
- Quarterly Reports from the Upper Leon SWCD and TIAER.

Task 2: Provide Technical Assistance to Dairy Producers and Landowners

Objective: Provide technical and financial assistance to landowners in the development and implementation of WQMPs and CNMPs on agricultural operations in the North Bosque River watershed. Also, any 3rd party landowners outside of the North Bosque River watershed that utilize composted dairy manure from within the North Bosque River watershed on lands outside of the watershed will be eligible for cost-share assistance through the WQMP Program. This task focuses on bringing existing certified WQMPs on unpermitted or unregistered AFOs and other agricultural lands used for animal waste application to be consistent with the most current standards in the USDA-NRCS technical guidance and any requirements stated within the forthcoming TMDL Implementation Plan (where applicable) for the watersheds, and developing and implementing CNMPs exclusively on the WAFs of permitted or registered Concentrated Animal Feeding Operations (CAFOs).

Subtask 2.1 TIAER will provide information pertaining to the delineation of the major watershed into a set number of smaller micro-watersheds. The set number of micro-watersheds is to be a permanent number for the duration of the project. If it becomes necessary, two or more micro-watersheds may be combined for the purposes of conducting meaningful micro-watershed producer council meetings. The number of participants within a micro-watershed necessary to carry out a meaningful meeting is to be decided and agreed during the initial meeting of the TAWC. This does not change the micro-watershed monitoring plan; monitoring will continue within each micro-watershed regardless of the status of the micro-watershed producer councils. The set number and boundaries of these micro-watersheds will serve as the geographic boundary lines for assembling the micro-watershed producer councils, the boundary lines for compiling preexisting BMPs within the watersheds, and the geographic boundary lines for participation in this project (See Subtask 2.2) (Start Date: Month 1; Completion Date: Month 1).

Subtask 2.2 To the extent possible, and with the assistance of TIAER, the State Board Regional Office in Dublin, Texas, and the NRCS, the Upper Leon SWCD technician will compile a list of the names and addresses of the owners or operators of all unpermitted or unregistered AFOs (with and without existing WQMPs), permitted or registered CAFOs, and 3rd party landowners receiving animal waste for the purposes of land application (Start Date: Month 1; Completion Date: Month 1).

Subtask 2.3 The Upper Leon SWCD, in cooperation with TIAER, the State Board Regional Office in Dublin, Texas, and the NRCS, will solicit participation in the project and provide notice of availability of technical and financial assistance based on recommendations from the TAWC in Subtask 1.3 This solicitation will be provided to owners and operators of unpermitted/unregistered AFOs (with and without existing WQMPs), permitted or registered CAFOs, and all 3rd party landowners currently receiving and land applying animal waste. Also, any 3rd party landowners outside of the North Bosque River watershed that utilize composted dairy manure from within the North Bosque River watershed on lands outside of the watershed will be eligible for cost-share assistance through the WQMP Program. (Start Date: Month 1; Completion Date: Month 1).

Subtask 2.4 The Upper Leon SWCD, with assistance from TIAER, NRCS, and the State Board Regional Office in Dublin, Texas, will compile the location and types of existing BMPs on each participant's land within the watershed on a tributary–watershed basis. This is to be an ongoing project subtask to be completed on the project completion date and then to be provided to TIAER so that the information can be included in the final report (See Task 5) (Start Date: Month 1; Completion Date: Month 35).

Subtask 2.5 The Upper Leon SWCD technician, with assistance from NRCS and the State Board Regional Office in Dublin, Texas, will upgrade all existing certified WQMPs identified in Subtask 2.2, implement nonpoint source aspects of CNMPs for WAFs owned, operated, or controlled by permitted or registered dairy operations, and develop WQMPs for all 3rd party landowners receiving animal waste for the purposes of land application to be consistent with the most current standards in the USDA-NRCS Technical Guidance and any requirements stated within the forthcoming TMDL Implementation Plan for the watershed (where applicable). Prioritization of WQMP development will likely be necessary based on geographic location in order to establish viable micro-watershed producer councils containing project participants. A total number of 58 WQMPs will be upgraded or developed under this project. (Start Date: Month 1; Completion Date: Month 36).

Subtask 2.6 The Upper Leon SWCD technician, the State Board Regional Office in Dublin, Texas, and TIAER personnel assigned to assist with this project (when possible) will conduct necessary and representative soil sampling with emphasis on phosphorus during the initial year of a participant's agreement to have a new or updated WQMP and in the final year of this project (i.e., soil sampling in years 1 and 3). If the participant's operation is a permitted or registered CAFO the sampling is to be carried according to the requirements set forth in the participant's written authorization (permit or registration) (Start Date: Month 1; Completion Date: Month 36).

Subtask 2.7 The Upper Leon SWCD, TIAER, and the State Board Regional Office in Dublin, Texas, will with assistance from NRCS provide follow-up technical assistance in the form of 100% annual status reviews regarding implementation to individuals after the WQMPs are developed for the duration of the project. Beyond the end date of the project, the annual status reviews will be carried out by the State Board Regional Office in Dublin, Texas, with assistance from NRCS when available (Start Date: Month 1; Completion Date: Month 36).

Deliverables

- Delineation of the watersheds including the set number of micro-watersheds and boundary lines within which participants' AFOs or WAFs must be located.
- Compilation of the location and types of existing BMPs for each micro-watershed.
- List of updated or newly developed WQMPs, CNMPs and BMPs implemented through this project.
- Cumulative soil sampling results from the first and the final year of this project for each micro-watershed.
- Documentation of WQMPs and CNMPs receiving annual review (prior to project end date).

Task 3: Conduct Tributary Watershed Council Meetings and Coordinate the Edge-of-Field Monitoring Demonstration

Costs: Funding for activities performed by TIAER and described within this project task is provided for within the concurrent State Board CWA Section 319(h) Project entitled *Technical and Financial Assistance to Dairy Producers and Landowners of the North Bosque River Watershed Within the Cross-Timbers Soil and Water Conservation District*.

Objective: Conduct micro-watershed producer council meetings on at least a semiannual basis to keep participants informed of the objectives of the project, present information concerning upcoming educational opportunities, discuss ways of expanding the project's participation, discuss WQMP development and implementation progress, inform participants of regulatory and TMDL related changes, discuss the latest micro-watershed monitoring results, discuss findings from the Edge-of-Field Monitoring Demonstration, and ensure and maintain participant involvement throughout the duration of the project. The Edge-of-Field Monitoring Demonstration is intended to show council members the reality of NPS nutrient losses from WAFs.

Subtask 3.1 The Upper Leon SWCD technician and TIAER personnel, with guidance from the TAWC (pertaining to tributary council membership), will prepare a schedule to cover a three-year period for micro-watershed producer council meetings to be held. The technician will arrange for a meeting place that is appropriate and suitable to the members of each council. The meeting place should be within in reasonable distance, if not within the geographic boundaries, of the corresponding micro-watershed. The technician will provide the schedule to the TAWC and to the appropriate TIAER personnel so that the latest monitoring data (See Subtask 3.3) can be provided prior to each micro-watershed producer council meeting. Council meetings will provide a forum for education of producers, follow-up on any issues with implementing WQMPs/CNMPs, and positive interaction for improving WQMP/CNMPs implementation status. This subtask will not be appropriate until such time the level of participation allows for beneficial meetings. Some micro-watersheds may reach a level of participation which warrants the beginning of

some micro-watershed meetings before others, so the development of the schedule should be flexible (Start Date: Month 1; Completion Date: Month 36).

Subtask 3.2 The Upper Leon SWCD technician will contact each member of a micro-watershed producer council by written correspondence prior to a scheduled meeting to inform the member of the meeting place, time, and suggested agenda items (from the TAWC) (Start Date: Month 1; Completion Date: Month 36).

Subtask 3.3 TIAER will provide to the Upper Leon SWCD the latest micro-watershed monitoring data, specific to the appropriate micro-watershed producer council prior to the scheduled meeting date and time (Start Date: Month 1; Completion Date: Month 36).

Subtask 3.4 The Upper Leon SWCD technician and TIAER personnel will conduct each micro-watershed producer council meeting, making an effort to involve producers in council meetings to the degree possible, while still accomplishing the agenda items provided by the TAWC (see Subtask 1.3) (Start Date: Month 1; Completion Date: Month 36).

Subtask 3.5 The Upper Leon SWCD technician will record the attendance and a list of discussed topics of each micro-watershed producer council meeting (Start Date: Month 1; Completion Date: Month 36).

Subtask 3.6 At the first Micro-watershed producer council meeting for each micro-watershed, the Upper Leon SWCD technician and the appropriate personnel from TIAER will introduce the members to the Edge-of-Field Monitoring Demonstration. The demonstration is intended to show the reality of NPS nutrient losses from WAFs. The automated sampling equipment should be rotated through each of the micro-watersheds by the completion date of the project. The results from the demonstration should be presented to the micro-watershed producer council at the next meeting or as available. The Upper Leon SWCD technician and TIAER personnel will develop an appropriately flexible schedule for rotating the sampling equipment (Start Date: Month 1; Completion Date: Month 36).

Deliverables

- Schedule for meetings of micro-watershed producer councils
- Lists of participants and dates contacted concerning each micro-watershed producer council meeting
- Sampling data provided by TIAER prior to each micro-watershed producer council meeting
- Attendance lists and discussed-topics lists from each micro-watershed producer council meeting

Task 4: Micro-Watershed Monitoring and Sampling Results for the Edge-of-Field Monitoring Demonstration

Costs: Funding for activities related performed by TIAER and described within this project task is provided for within the concurrent State Board CWA Section 319(h) Project entitled *Technical and Financial Assistance to Dairy Producers and Landowners of the North Bosque River Watershed Within the Cross-Timbers Soil and Water Conservation District.*

Objective: To develop Data Quality Objectives (DQO) and Quality Assurance Project Plan (QAPP), monitor micro-watersheds for data collection and analysis to show reductions in NPS pollution, and monitor WAFs authorized through the Edge-of-Field Monitoring Demonstration to provide data to inform micro-watershed producer councils of their water quality issues and problems.

Subtask 4.1 TIAER will develop DQOs and a QAPP to be approved by USEPA (Start Date: Month 1; Completion Date: Month 3).

Subtask 4.2 TIAER will obtain edge-of-field sampling equipment (mobile sites) and deploy in accordance with arrangements made by the corresponding micro-watershed producer council. TIAER will operate the edge-of-field monitoring equipment after installation and provide the results to the Upper Leon SWCD

when needed for micro-watershed producer council meetings as appropriate (Start Date: Month 4; Completion Date: Month 33).

Subtask 4.3 TIAER will perform routine sampling, storm sampling, and routine maintenance at strategic locations below each micro-watershed within the North Bosque River watershed, as identified by information described in Subtask 2.1. Some locations are to provide control, i.e., below tributary watersheds without waste application fields for statistical analysis to demonstrate nutrient loss reductions, and other locations will provide data for NPS treatments and practices realized through the implemented WQMPs (Start Date: Month 4; Completion Date: Month 33).

Subtask 4.4 TIAER will compile and analyze the sampling data. Data from the Edge-of-Field Monitoring Demonstration will be for informational and educational purposes only due to the limited data that will be collected from each site (Start Date: Month 4; Completion Date: Month 36).

Deliverables

- Approved QAPP
- Data Report

Task 5: Development of Final Report Assessing the Preexisting and Post-Implementation Effects of This Project and the Identical CWA Section 319(h) Project Entitled *Technical and Financial Assistance to Dairy Producers and Landowners of the North Bosque Watershed Within the Cross-Timbers Soil and Water Conservation District*

Costs: Funding for activities related performed by TIAER and described within this project task is provided for within the concurrent State Board CWA Section 319(h) Project entitled *Technical and Financial Assistance to Dairy Producers and Landowners of the North Bosque River Watershed Within the Cross-Timbers Soil and Water Conservation District.*

Objective: Develop a report detailing the activities and effectiveness of this project and the concurrent State Board CWA Section 319(h) project entitled *Technical and Financial Assistance to Dairy Producers and Landowners of the North Bosque Watershed Within the Cross-Timbers Soil and Water Conservation District.*
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Subtask 5.1 TIAER, with assistance from the Upper Leon SWCD, will develop the final report which will include the number of new WQMPs/CNMPs, the number of updated WQMPs, the extent of BMP implementation within each micro-watershed, and an executive summary and final analysis of the sampling data obtained during this project. The final report will also contain a summary of the effectiveness of the micro-watershed producer council as a viable component for future CWA Section 319(h) projects (Start Date: Month 35; Completion Date: Month 36).

Task 6 Implementation of Water Quality Management Plans Utilizing State Senate Bill 503 Funding

Objective: Provide agricultural and silvicultural producers an opportunity to comply with state water quality laws through a traditional voluntary incentive based program.

Subtask 6.1: Allocate FY2001, FY2002, and FY2003 Senate Bill 503 funds to the Upper Leon SWCD. A total of $200,274 in financial assistance will be provided to landowners within the Bosque River Watershed and the Upper Leon SWCD.

Subtask 6.2: Senate Bill 503 dollars will be spent on WQMPs in the Cross-Timbers SWCD. WQMPs insure farming or ranching operations are carried out in a manner consistent with state water quality goals. All approved WQMPs have the same legal status as TNRCC's point source pollution permits. The TSSWCB will review all of the WQMPs to make certain they are consistent with the state water quality standards and certify those that meet the necessary criteria. Funds will be allocated to landowners in the targeted area on a first-come-first-serve basis. Approximately 21 WQMPs will be implemented with these funds.

Subtask 6.3: The TSSWCB will implement the approximate 21 (WQMPs) in the targeted SWCDs in subtask 6.1 in cooperation with the SWCDs.

Subtask 6.4: The TSSWCB will ensure that the landowners implement the WQMPs as specified and agreed to in their WQMP implementation schedule.

Coordination, Roles and Responsibilities:

Cooperating Entities and a summary of their roles in this project:

- **Texas State Soil & Water Conservation Board- Project Lead:** Responsible for technical review and certification of WQMPs. Work with and assist the Upper Leon SWCD as needed in the implementation and development of WQMPs /BMPs. Also assist the district, as needed, in inventorying current BMPs and land use practices and the implementation of BMPs. Assist in the organization of, serve on, and be integrally involved in the decision-making activities of the Technical Advisory Watershed Council (Subtask 1.1). Assist in the development of the list of possible applicants (Subtask 2.2). Assist in sending out notifications of the availability of technical and financial assistance as needed (Subtask 2.3). Assist in the compilation of existing BMPs on a micro-watershed basis (Subtask 2.4). Assist with all soil sampling activities associated with this project (Subtask 2.6). Assist in the follow-up activities associated with annual status reviews (Subtask 2.7).

- **Upper Leon SWCD:** Assist in the organization of the Technical Advisory Watershed Council (Subtask 1.1). Responsible for hiring a technician qualified to carry out the tasks set forth in this workplan (Subtask 1.4). Responsible for submitting quarterly reports (Subtask 1.5). Responsible for the development of a list of possible applicants for the project (Subtask 2.2). Responsible for sending out notification of the availability of technical and financial assistance (Subtask 2.3). Responsible for compiling the condition of existing BMPs on a micro-watershed basis (Subtask 2.4). Responsible for the upgrading, development, and implementation of WQMPs (Subtask 2.5). Responsible for all soil sampling activities associated with this project (Subtask 2.6). Responsible for follow-up activities associated with annual status reviews throughout the duration of the project (Subtask 2.7). Responsible for developing a schedule for and conducting all micro-watershed producer council meetings and for providing prior notification of the meetings to participants through correspondence (Subtasks 3.1 and 3.2). Responsible for daily interaction with the dairy producers and landowners. Assist TIAER in the development of the final report (Subtask 5.1).

- **Natural Resources Conservation Service:** Serve on the Technical Advisory Watershed Council (Subtask 1.1). Assist in the development of a list of possible applicants as needed (Subtask 2.2). Assist in the development of a list of existing BMPs as needed (Subtask 2.2). Assist in the sending out of notification of the availability of technical and financial assistance as needed (Subtask 2.3). Assist in the upgrading, development, and implementation of WQMPs (Subtask 2.5). Assist in the follow-up activities associated with annual status reviews as needed (Subtask 2.7).

- **Texas Institute for Applied Environmental Research:** Responsible for submitting quarterly reports (Subtask 1.5). Assist the State Board in the development and facilitation of the Technical Advisory Watershed Council (Subtask 1.1). Transfer of technology and experience pertaining to the organization and coordination of micro-watershed producer councils from prior projects (Subtask 1.3). Provide information to the project related to the delineation of the two major watersheds into micro-watersheds (Subtask 2.1). Provide assistance to the SWCD technician in compiling a list of applicable participants (Subtask 2.2) and the location of existing BMPs (Subtask 2.4). Assist in the development of the schedule of micro-watershed producer council meetings (Subtask 3.1) and assist in conducting the meetings (Subtask 3.4). Develop Data Quality Objectives and a Quality Assurance Project Plan for approval by USEPA (Subtask 4.1). Obtain and operate as appropriate the edge-of-field sampling equipment (Subtask 4.2). Provide edge-of-field monitoring data and micro-watershed monitoring data to the Upper Leon SWCD and for the micro-watershed producer council meetings when needed (Subtasks 3.3 and 4.2). Perform micro-watershed monitoring (Subtask 4.3). Compile and analyze monitoring data (Subtask 4.4). Develop final report (Subtask 5.1).

Project Lead:

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Technical and Financial Assistance to Dairy Producers and Landowners of the North Bosque River Watershed Within the Upper Leon Soil and Water Conservation District
Budget for Upper Leon SWCD
7/1/01 - 3/31/04

Object Class Category		Federal Funds	Non-Federal Match	Total Costs
1. Personnel				
Dublin Regional Office				
10% Effort, 7/01/01 - 6/30/04		$0.00	$51,762.00	$51,762.00
Program Specialist III				
10% Effort, 7/01/01 - 3/31/04		$0.00	$10,000.00	$10,000.00
One Technician at Upper Leon SWCD @ $28,000/yr				
100 % Effort, 7/01/01 - 6/30/04		$85,400.00	$0.00	$85,400.00
Subtotal Personnel		$84,000.00	$61,762.00	$145,762.00
2. Fringe Benefits				
Benefits @ 28%		$22,120.00	$17,293.00	$39,413.00
Subtotal Salary and Fringe		$107,520.00	$79,055.00	$186,575.00
3. Travel		$0.00	$0.00	$0.00
4. Equipment				
One pick-up @ $18,000		$18,000.00	$0.00	$18,000.00
One pick-up mounted core sampler @ $10,000		$10,000.00	$0.00	$10,000.00
Subtotal Equipment		$28,000.00	$0.00	$28,000.00
5. Supplies				
One Computer @ $3,500		$3,500.00	$0.00	$3,500.00
One Printer/Plotter @ $1,000		$1,000.00	$0.00	$1,000.00
Software		$1,000.00	$0.00	$1,000.00
General Supplies		$2,102.00	$0.00	$2,102.00
Subtotal Supplies		$7,602.00	$0.00	$7,602.00
6. Contractual				
NRCS-Training		$19,462.00	$0.00	$19,462.00
NRCS Office Rental		$7,800.00	$0.00	$7,800.00
		$0.00	$0.00	$0.00
Financial Audit		$3,000.00	$0.00	$3,000.00
Subtotal Contractual		$30,262.00	$0.00	$30,262.00
7. Construction				
Upper Leon SWCD				
Implementation Assistance for	58 WQMPs	$580,000.00	$207,833.00	$787,833.00
S.B. 503 Allocation	20 WQMPs	$0.00	$200,274.00	$200,274.00

Subtotal Construction	$580,000.00	$408,107.00	$988,107.00
8. Other			
Truck gas, maintenance, etc.	$7,200.00	$0.00	$7,200.00
SWCD Admin Costs @ 5%	$29,000.00	$0.00	$29,000.00
Subtotal Other	$36,200.00	$0.00	$36,200.00
9. Total Direct Costs	**$789,584.00**	**$487,162.00**	**$1,276,746.00**
10. Indirect Costs	**$0.00**	**$0.00**	**$0.00**
11. Total Project Costs	**$789,584.00**	**$487,162.00**	**$1,276,746.00**