

July 11, 2002

**Memorandum**

**To:** Extension Personnel

**Subject:** Request for Proposals - Extension Soil & Water Conservation

Attached is an announcement of funding available to support Extension soil and water conservation projects and a request for proposals. If you have ongoing efforts or desire to establish a project in this general area please send in your proposal by the August 9, 2002 deadline.

We have also attached the proposal evaluation instrument that will be used by a 4-5 person review team for proposal prioritization, which will guide funding allocations.

These funds are administered by Texas Cooperative Extension through the Texas Water Resources Institute (TWRI).

A separate, companion grants program, also focusing on soil and water conservation issues, has been issued by Texas Agricultural Experiment Station through TWRI. Contact our office if you have questions (979-845-1851).

Sincerely,

*Original signed by C. Allan Jones*

C. Allan Jones  
Director

*Original signed by B. L. Harris*

B. L. Harris  
Executive Director  
Texas Water Resources Institute

CAJ/BLH/ew  
Attachments

cc: Chester Fehlis  
Edward Hiler  
Ed Smith  
Kyle Smith  
Margaret Hale  
Kathy Volanty  
Bonnie McGee  
Martha Couch  
Ron Lacewell

# **Texas Cooperative Extension Soil and Water Conservation Projects Request for Proposals**

Texas Cooperative Extension, through the Texas Water Resources Institute, invites the submission of proposals from County Extension Agents and/or Extension Specialists related to agricultural soil and water conservation efforts. Proposals funded through this offering can be for projects from any region of the State, but must focus on soil and water conservation.

A separate, companion request for research proposals has been issued by the Texas Agricultural Experiment Station/Texas Water Resources Institute. In both programs, cooperation and collaboration between TAES and TCE is strongly encouraged.

## **I. Funding Sources**

Since 1991 Texas Cooperative Extension has allocated funds to assist in the development of programs focused on agricultural producers and other Texas residents for the voluntary implementation of innovative approaches to soil and water conservation through the "Agricultural Soil and Water Conservation Program" (*Part XVII, Chapter 521, Subchapter G(2) - Texas Administrative Code*). These funds, allocated by the Texas Legislature to Texas Cooperative Extension, support activities to advance State efforts through agricultural conservation, education, and demonstration programs.

## **II. Multi-disciplinary Approaches**

Multi-disciplinary projects are encouraged where possible and appropriate. All disciplines within Texas Cooperative Extension are included in this solicitation. Resources available throughout TCE provide diverse opportunities to enhance currently operating projects. Examples of specific interest for program development include, but are not limited to:

- a) Multiple-use opportunities that provide information and encouragement to agricultural producers for adopting soil and water conservation practices.
- b) Economic benefits and evaluation strategies of soil and water conservation practices.
- c) New technology adapted as economical and practical means of conservation.
- d) Creation of educational programs that relate the interdependent nature of conservation and agricultural productivity.
- e) Sustainable agricultural practices as related to resource conservation.

## **III. Geographic Coverage and Conservation Concerns**

Projects funded through this solicitation are open to all geographic regions in the State and must address soil and water conservation concerns. These concerns may include, but are not limited to:

- X irrigation efficiency
- X wind erosion control
- X conservation tillage
- X water management and conservation
- X soil management
- X tillage practices
- X soil quality/soil health
- X resource management
- X cropping systems and rotations
- X mulching
- X crop water requirements
- X conservation buffer strips
  
- X wetlands management
- X riparian zone management
- X brush control for soil, water and wildlife management
- X land management related to soil and water conservation
- X conservation practices economics

- X youth educational programs about water conservation
- X carbon sequestration
- X “green” program concepts and policies
- X water security issues

#### **IV. Funding Levels**

This program is expected to provide approximately \$100,000 per year for Extension education projects. Individual proposals should not exceed \$10,000 nor request funding for more than one year. Proposals can be developed for multiple years. However, since funds are made available on a year-to-year basis, there is no assurance that activities proposed beyond the initial project year will be funded. Questions related to possible funding continuation or other issues related to the RFP offering should be directed to the Texas Water Resources Institute, phone (979-845-1851), fax (979-845-8554) or via e-mail to e-weichert@tamu.edu

#### **V. Proposal Submission (3 page limit)**

Those interested in receiving funding under this program should complete the attached project narrative and budget sheet and send them to the following address.

Ellen M. Weichert  
Administrative Assistant  
Texas Water Resources Institute  
1500 Research Parkway, Suite 240  
2118 TAMU  
College Station, TX 77843-2118

Phone: (979-845-1851)  
Fax: (979-845-8554)  
E-mail: e-weichert@tamu.edu

#### **VI. Deadline for Proposal Submission**

All submissions must be received by 5:00 p.m. August 9, 2002. Please e-mail a copy of the proposal **and** send a hard copy or faxed copy with the required signatures. Approval signatures of unit heads are required. Proposals may be faxed to (979) 845-8554.

#### **VII. Funding Period**

Grants will be funded for a period not to exceed one year (funding period September 1, 2002 - August 31, 2003). Extensions may be granted on a case-by-case basis by the Texas Water Resources Institute.

#### **VIII. Budget**

Complete the attached Budget Form as shown.

#### **IX. Reporting**

A final report of activities funded through this grant will be due October 1, 2003. This report will include number of contacts; training sessions; project accomplishments and outcomes; and additional needs related to the project activities. Future funding decisions related to activities in the project area or discipline will consider this final report. These reports must be submitted to provide for accountability of funds usage.

#### **X. Proposal Review**

Proposals will be reviewed by 4-5 reviewers using the attached evaluation instrument. To ensure competitiveness of your proposal, clearly address the elements to be used in the review and ranking process.

## PROJECT NARRATIVE

Name of the Project: **Forest Soils-Based Best Management Practices Decision Support System**

Is This a New Project or Request for Continuation?: **New Project**

Geographic Area of the Project: **43 East Texas counties in which commercial forests occur.**

Name of Principal Investigator(s)\*: **Dr. C. Darwin Foster**

County(s) and/or University Department(s), TAEX, or Unit: **Forestry Extension Unit/Department of Forest Science**

Mailing Address(es): **2135 TAMU  
College Station, TX 77843-2135**

Phone: **979.845.1351**

Fax: **979.845.6049**

E-mail: **cdfoster@tamu.edu**

\*Other investigators' address, phone, fax, e-mail may be listed on an attached sheet of paper.

Amount of Funding Requested: **\$9,800**

### **Project Need, Description and Expected Outcomes**

Discuss the situation and need for the project, describe the proposed project and expected outcomes/benefits, and suggest how the proposed project will involve the use of innovation and new technology.

The commercial forestland in Texas occurs in 43 East Texas counties. Some 300,000 nonindustrial private forest landowners (NIPFs) own almost two-thirds of the 12 million acres of forestland. NIPFs artificially regenerate approximately 50,000 acres of pine plantations and selectively harvest many times that many acres each year.

Several years ago, the forestry community implemented voluntary Best Management Practices (BMPs) designed to minimize the impact of forestry operations on site and water degradation. Some of the forest industry use proprietary soils-based decision support models to guide them in prescribing the best forest management options for each site. However, these models are not available to NIPFs who are generally not knowledgeable about how their forestry activities potentially affect future site quality. The proposed project will develop a soils-based decision support system to be used as a guide for planning and implementing sustainable forest management activities.

We will use existing Natural Resources Conservation Service (NRCS) digital databases Soil Survey Geographical Data Base (SSURGO) and State Soil Geographic Data Base (STATSGO) as the base information. Since these databases are very complex, key variables such as: soils group, drainage class, horizon depths, surface texture, subsurface texture, and productivity class will be converted to a new, simpler database. The "new" spatially explicit database will also include geology data from the University of Texas Bureau of Economic Geology and landscape position data from United States Geological Survey Digital Elevation Models (DEMs).

Geographic Information Systems (GIS) such as ARC/INFO and/or ArcView will be employed to visualize, explore, query, and analyze these data geographically. Using the above listed soils variables and other pertinent data, we will develop decision keys for such activities as harvest scheduling, mechanical site preparation, erosion potential, fertilization response, herbicide application, rutting potential, tree species selection, etc.

Since the resulting database will be large and complex, the most appropriate delivery platform will be used to ensure that the information is available to the broadest possible audience.

Although the major emphasis of this project will be on development of the soils-based decision support system, training sessions about the use of the system will be conducted for key professionals who work with forest landowners, including: Forestry Extension personnel, Texas Forest Service foresters, County Extension Agents, and a select group of forestry consultants. Subsequent projects will enhance this system by designing easily used techniques to increase the utility of this powerful tool. For example, "heads-up" digitizing procedures will be developed to allow the landowner to digitize such things as his/her property boundaries, timber stand lines, streamside management zones, wetlands,

etc. from maps, color infrared photographs, and satellite imagery. The digitizing process will be performed with a few clicks of the mouse on a personal computer. These maps can then become part of the geographic and tabular databases.

### **Specific Soil and Water Conservation Issues Addressed**

Relative to the needs of current conservation projects (listed in Section III, or others), what concern(s) is/are addressed by this project?

The following concerns can be affected by knowledgeable landowners who properly plan sustainable forest management activities: wind erosion control, conservation tillage, water management and conservation, soil management, soil quality/soil health, resource management, conservation buffer strips, wetland management, riparian zone management, brush control for soil, water and wildlife management, land management related to water conservation, conservation practices economics, youth educational programs about water conservation, carbon sequestration, and "green" program concepts and policies.

### **Collaboration**

What agencies, groups, organizations, or additional TCE/TAES disciplines are included in this project? List all collaborators and their function in the project.

Dr. Eric Taylor, Forest Management Extension Specialist, and Dr. Brad Barber, Assistant Forest Resources Department Head, Texas Forest Service, will provide assistance in database development, decision support system development, and user education.

Dr. Raghavan Srinivasan, Associate Professor and Director of the Spatial Sciences Laboratory in the TAMU Department of Forest Science, and his staff will provide valuable assistance in database development and GIS program development.

Texas Cooperative Extension – County Extension Agents in the 43 East Texas counties where commercial forestland occurs.

Texas Forest Service – Foresters who consult/advise forest landowners in East Texas Area.

Natural Resources Conservation Service – Will assist in provide technical assistance as needed.

Submitted by \_\_\_\_\_  
(P.I. signature) C. Darwin Foster

Approved for submission \_\_\_\_\_  
(Unit Head signature) C. Darwin Foster