

TEXAS TECH UNIVERSITY
AND
TEXAS WATER RESOURCES INSTITUTE
Implementation of the Upper Llano River Watershed Protection Plan
FY 2018 Work Plan 15-11

**EPA State Categorical Program Grants – Workplan Essential Elements
FY 2011-2015 EPA Strategic Plan Reference
Strategic Plan Goal – Goal 2 Protecting America’s Waters
Strategic Plan Objective – Objective 2.2 Protect and Restore Watersheds and Aquatic Ecosystems**

Quarter no. 9 from 01/01/18 through 3/31/18

I. Abstract

During this period, the Llano River Field Station (LRFS) met several times with the Steering Committee and various working groups of the Hill County Conservation Network to draft a strategic plan and to discuss implementation of the NRCS Resource Conservation Partnership Program. Seven demonstration wildlife exclosures were constructed at LRFS. In collaboration with TWRI, a grant proposal to continue WPP Implementation was submitted to US Bureau of Reclamation and a grant proposal for riparian restoration at Junction City Lake was submitted to National Fish and Wildlife Foundation. Next quarter, work will focus on (1) continuing water quality monitoring with Texas Stream Team volunteers; (2) hosting a rainwater harvesting workshop; and (3) beginning preparation of the final grant report, water quality data assessment, and factsheets.

II. Overall Progress and Results by Task

Task 1 Project Administration

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 TTU-LRFS 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 15th of January, April, July and October. QPRs shall be distributed to all Project Partners.

The following actions have been completed during this reporting period:

- a. The ninth quarterly report was prepared and submitted.

80% Complete

Subtask 1.2 TTU-LRFS will perform accounting functions for project funds and will submit appropriate Reimbursement Forms to TSSWCB at least quarterly.

The following actions have been completed during this reporting period:

- a. An up-to-date budget is not currently available, however, based on previous quarterly expenditures, it is estimated that \$128,170 of \$181,207 has been spent.

b. 71% Complete

Subtask 1.3 TTU-LRFS 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. TTU-LRFS will develop lists of action items needed following each project coordination meeting and distribute to project personnel.

The following actions have been completed during this reporting period:

- a. Met with project partners on January 19 and February 7 to discuss upcoming programs

75% Complete

Subtask 1.4 TTU-LRFS will develop a Final Report that summarizes activities completed and conclusions reached during the project and discusses the extent to which project goals and measures of success have been achieved.

The following actions have been completed during this reporting period:

- a. No actions occurred this quarter.

0% Complete

Task 2 Support and Facilitation of WPP Implementation

Facilitate continued stakeholder involvement in the Upper Llano River Watershed to ensure successful implementation of the Upper Llano River WPP and track implementation.

Subtask 2.1 TTU-LRFS will continue to employ an Upper Llano River Watershed Coordinator (WC) to engage and facilitate the Upper Llano River WCC, watershed stakeholders, and entities identified in the Upper Llano River WPP. The WC will serve as the primary conduit for interaction with landowners, citizens, and entities to facilitate the implementation of the WPP. The WC shall successfully complete (or have already completed) the Texas Watershed Planning Short Course. The WC shall participate in all Texas Watershed Coordinator Roundtables held during the project period. The WC shall be stationed in the Upper Llano River watershed.

The following actions have been completed during this reporting period:

- a) Dr. Tom Arsuffi, Director of the TTU-LRFS and Tyson Broad, Upper Llano River Watershed Coordinator and web manager for the Llano River Watershed Alliance have completed the Texas Watershed Planning Short Course and both are stationed at the TTU Llano River Field Station in Junction.
- b) Tyson Broad continued meeting with local organizations and landowners regarding funding opportunities through the WPP. See Subtask 3.2

85% Complete

Subtask 2.2 The WC will assist governmental and non-governmental organizations in the Upper Llano River watershed, in identification and acquisition of resources (financial and technical) to enable

WPP implementation. The WC, with assistance from TWRI, will actively seek and pursue funding opportunities and work with partners to develop grant proposals. The WC will work with state and federal agencies, as appropriate, to bring technical and financial resources to the watershed.

The following actions have been completed during this reporting period:

- a) LRFS met with local NRCS staff re Conservation Innovation Grant opportunities, January 11
- b) LRFS discussed potential grant partnerships with Llano River Watershed Alliance Board, January 11
- c) LRFS participated in meeting of Hill Country Conservation Network, a partnership of organizations exploring collaborative efforts and funding on Hill Country natural resource issues, January 25.
- d) RFS participated in webinar for Regional Conservation Partnership Program, January 30
- e) LRFS, with assistance from TWRI, submitted grant application for \$24k to National Fish and Wildlife Foundation for Riparian Restoration at City of Junction Lake through the Five Star and Urban Waters Restoration Grant Program, January 31.
- f) LRFS, with assistance from TWRI, submitted grant application for 100k to fund the Watershed Coordinator position for two years through the US Bureau of Reclamation WaterSmart Cooperative Watershed Management Program, January 31.
- g) LRFS participated in meeting of Hill Country Conservation Network to prepare water quantity and quality goals for the Hill Country Network Strategic Plan, including components of the Upper Llano WPP, February 16 (San Marcos), February 26 (Bee Cave), March 6 (Austin), March 19 (Bee Cave).
- h) LRFS met with partners in Regional Conservation Partnership Program to discuss implementation and distribution of funds and technical assistance, February 16, San Marcos

80% Complete

Subtask 2.3 The WC, with assistance from TWRI, will 1) evaluate and track progress toward achieving milestones established in the Upper Llano River WPP; and, 2) work with LCRA to assess water quality data collected through the Clean Rivers Program and other data collection efforts in relation to achieving load reductions.

The following actions have been completed during this reporting period:

- a) NRCS reported 1,802 acres of brush were treated in the watershed during the quarter for a total of 18,926 acres since WPP implementation began. The annual goal is 9,000 acres
- b) There were 1,635 acres treated with prescribed burning during the quarter for a total of 8,387 acres since WPP implementation began. The annual goal is 5,400-7,700 acres.
- c) Six 100 x 100 foot wildlife exclosures and one 500 x 500 wildlife exclosure were constructed at the Llano River Field Station as part of Riparian Restoration and Wildlife Management efforts of the WPP, February 2018.

80% Complete

Subtask 2.4 The WC will facilitate public participation and stakeholder involvement in the watershed planning process, specifically by hosting meetings of the Upper Llano River WCC to provide regular

updates on progress to implement the WPP and seek input and recommendations on needed activities. TWRI will assist with agenda development and facilitation as needed. The WC will coordinate meetings, secure meeting locations, prepare and disseminate meeting notices and agendas. Meeting summaries will be prepared and posted to the project website.

The following actions have been completed during this reporting period:

- There were no actions this quarter.

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65% Complete

Subtask 2.5 The WC will maintain a database of watershed stakeholders and affected parties for use in engaging the public in the watershed planning process. The stakeholder group will be added to based upon previous efforts of TTU-LRFS and TWRI in TSSWCB project 11-04, Development of the Upper Llano River Watershed Protection Plan. The spreadsheet will represent a diverse cross section of Upper Llano River landowners, citizens, local businesses, local and regional governmental entities and elected officials, state and federal agencies, and environmental and special interest groups.

The following actions have been completed during this reporting period:

- a. The Upper Llano Watershed Protection Plan stakeholder database is now at 485 landowners, citizens, local businesses, local and regional governmental entities and elected officials, state and federal agencies, and environmental and special interest groups.

80% Complete

Subtask 2.6 The WC 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, Clean Rivers Program Basin Steering Committee and Coordinated Monitoring, local soil and water conservation districts (SWCDs), groundwater conservation districts and other appropriate meetings of critical watershed stakeholder groups.

The following actions have been completed during this reporting period:

This quarter, TTU-LRFS met with/participated in the following meetings/activities:

- a. Tom Arsuffi discussed WPP Riparian Restoration Projects at Texas Riparian Association via Skype, January 18.
- b. Tom Arsuffi presented the educational elements of WPP at Winston School Symposium for K-12 Learning Disabled, January 26, San Antonio.
- c. LRFS provided input regarding opportunities through the WPP to Junction City Council re new City Water Plan, February 1
- d. Tyson Broad discussed the WPP at the Hill Country Land Conservation Team Meeting in Blanco, February 8.
- e. Tom Arsuffi made a presentation on the WPP at Wildland Conference in McAllen, February 21.
- f. Tyson Broad attended the LCRA Water Quality Advisory Committee, March 6, Austin.
- g. Tom Arsuffi attended TWDB Region F meeting, March 15, Big Spring.

80% Complete

Subtask 2.7 The WC will provide information to LCRA for inclusion in the Clean Rivers Program Basin Summary Report and Basin Highlights Report regarding progress to implement the Upper Llano River WPP.

The following actions have been completed during this reporting period:

- Data are now being populated in the Stream Team database.

50% Complete

Subtask 2.8 The WC will develop, publish, and distribute 2 semi-annual newsletters that are designed to keep landowners and entities informed of ongoing WPP implementation activities, including water quality data collection and progress toward achieving milestones in the WPP. The newsletter shall be distributed as most appropriate to individual landowners and entities in the watershed. The WC will solicit content matter for the newsletters from Project Partners as appropriate. TSSWCB must approve all project-related content in any informational materials and promotional publications prior to distribution.

The following actions have been completed during this reporting period:

- a) Draft Winter Newsletter was completed and distributed to stakeholders on January 26.

65% Complete

Subtask 2.9 The WC will facilitate communication with stakeholders in order to engage the public and affected entities in WPP implementation. The WC will utilize all appropriate communication mechanisms including direct mail, e-mail, the project website, and mass media (print, radio, television). The WC, with assistance of TWRI, will develop and disseminate general project informational materials, including, but not limited to, flyers, brochures, letters, factsheets, news releases, and other appropriate promotional publications. The WC, with assistance of the LRWA, will utilize a website, listserv, and social media to facilitate direct discussion between stakeholders. The WC 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.

The following actions have been completed during this reporting period:

- a. The LRWA website, listserv, and Facebook page is a resource for stakeholders in the watershed on land and water stewardship, hydrologic and weather conditions, latest news, upcoming events, community participation, and the Watershed Protection Plan.
- b. For the quarter January to March of 2018, there were 944 sessions and 792 users of the website, with daily visits at 9/day. A weekly newsletter, "Watershed Week in Review" is prepared by LRWA/LRFS and distributed to listserv subscribers (331) and Facebook friends and via the website.
- c. The Facebook page for the Alliance currently has 492 "Likes" and reached a total of 2,4849 Facebook users during the first quarter of 2018.

80% Complete

Task 3 Outreach, Education and Community Support

To promote involvement, provide information transfer and encourage participation in the Upper Llano River WCC and WPP implementation efforts

Subtask 3.1 The WC, with assistance from TWRI, will coordinate and conduct water resources and related environmental outreach/education efforts across the watershed, as identified in the Upper Llano River WPP. The WC will work with collaborating entities to organize the following training programs:

- *Lone Star Healthy Streams (Feral Hog component) workshop – 1 event*
- *Lone Star Healthy Streams (Grazing Cattle component) workshop – 1 event*
- *Rainwater harvesting workshop – 1 event*
- *Texas Well Owner Network training and well screening event -1 event*
- *In partnership with the Llano River Watershed Alliance workshops -2 Watershed topic events*
- *LRFS Outdoor School K-12 STEM Watershed Curriculum – 20 Separate Independent School District Events*
- *LRFS Outdoor School K-12 STEM Teacher Professional Development (Water, Natural Resource and Environmental Literacy) – 2 workshops*

The WC will work with the entities that administer/fund these programs and try to direct delivery of these programs to the Upper Llano River watershed depending on priorities of those entities and programs.

The following actions have been completed during this reporting period:

- The Rainwater Harvesting Workshop has been set for June 9.

80% Complete

Subtask 3.2 The WC will coordinate education and outreach activities as identified in the Upper Llano River WPP. The WC will make presentations on the Upper Llano River WPP and general NPS pollution information to local schools and community organizations. The WC will support, promote, and participate in, as appropriate, any field days, demonstrations, site tours, or education events sponsored by AgriLife Extension, USDA-NRCS, and/or SWCDs for the Upper Llano River Watershed.

The following actions have been completed during this reporting period:

- a) Tyson Broad met with Hill Country Alliance staff to discuss education and outreach activities for the new year, Bee Cave, January 16

80% Complete

Task 4 Volunteer Monitoring

To monitor water quality benefits of WPP implementation efforts

Subtask 4.1 Volunteer Coordination and Training – Upon receipt of funding notification, TTU-LRFS will facilitate the organization and training of local watershed volunteers through the Texas Stream Team’s training programs A training event will be hosted locally and TTU-LRFS personnel as appropriate will become trainers as well so that any new interested parties can be trained as needed.

The following actions have been completed during this reporting period:

- LRFS, along with LRWA, facilitated coordination and training of volunteers and distribution of sampling kits. LRFS continues to provide technical and monitoring supply support for volunteer monitors.

80% Complete

Subtask 4.2 Volunteer Monitoring – Sampling will be conducted by volunteer monitors at multiple locations across the watershed in parallel with the routine monitoring. Parameters monitored will include water temperature, pH, DO, total dissolved solids, conductivity, salinity, water clarity, and E. coli enumeration. Volunteer data will be reported to the Texas Stream Team. Field observations will also be recorded and include flow level, algae cover, water color, water clarity, water surface, water conditions, water odor, present weather, days since last significant precipitation, rainfall accumulation, and stream velocity. Data collection and sample analysis will be conducted as described in the Texas Stream Team Water Quality Monitoring Manual and QAPP.

The following actions have been completed during this reporting period:

- a) Volunteer monitoring was done on 9 sites during January and March.

50% Complete

Subtask 4.3 Data Management – Volunteer monitors will utilize Texas Stream Team practices and procedures for recording, validating and submitting data into the Texas Stream Team database. Additionally, these data will be incorporated into the watershed specific database developed by and housed at TTU-LRFS as well as the Stream Team’s database and dataviewer. Volunteer monitoring data will not be sent to TCEQ for future water body assessment purposes, but will instead be utilized by the watershed coordinator for directing future BMP assessments and performance evaluations.

The following actions have been completed during this reporting period:

- a) Data are being entered for evaluation in the database, but there continue to be problems with data appearing in dataviewer.

50% Complete

Subtask 4.4 Water Quality Data Assessment – TTU-LRFS and TWRI will conduct a water quality data assessment to reveal trends in water quality over the course of the project, track impacts of implementation, and aid in further identification of areas of concern in the watershed.

The following actions have been completed during this reporting period:

- a) Initiated data compilation for water quality assessment

5% Complete

III. Related Issues/Current Problems or Unusual Developments

- There were problems with DO readings from one of water quality meters for January survey.
- Budget revision request submitted from TWRI.

IV. Projected Work for Next Quarter

The following actions are projected to occur during the next quarter:

- a. Begin preparation of final report.
- b. Prepare final water quality data assessment.
- c. Complete factsheets.
- d. Continue Water Quality monitoring and other field work with Texas Stream Team volunteers
- e. Prepare newsletter for June release.
- f. Continue meeting with government entities and other stakeholders to discuss funding opportunities via WPP.
- g. Continue discussions with TWA re a potential role as Non-profit Financial Agent for WPP.
- h. Host Rainwater Catchment workshop.
- i. Host meeting of Coordination Committee.