TEXAS WATER RESOURCES INSTITUTE
AND
TEXAS TECH UNIVERSITY

Development of the Upper Llano River Watershed Protection Plan
FY 2011 Workplan 11-04

Quarter no. 1 From 1/1/12 Through 3/31/12

I. Abstract

The Upper Llano River Watershed Protection Plan project, which was initiated in November 2011, continued to gear up this quarter. The first quarterly conference call with the project team and TSSWCB was held on April 5, 2012. The SLWA website continued to be a resource for stakeholders in the watershed, reaching a total of 756 unique visitors this quarter. The Quality Assurance Project Plan for the GIS Inventory and Land Use/Land Cover Analysis was submitted to TSSWCB and significant progress was made on development of the Water Quality Monitoring QAPP. The Director of the Llano River Field Station, who serves as the watershed coordinator, met with the South Llano Watershed Alliance on February 26, 2012. Two project fact sheets were developed, one on the project and one on the watershed plan development. Significant progress was made on gathering existing GIS data for the watershed with 27 data layers being compiled by SSL. Finally, a Texas Water Symposium was held on March 22, 2011 at 7 PM at the Texas Tech University campus in Junction to discuss "Healthy Watersheds: Where all is connected and how best to manage our precious natural resources. Next quarter, work will focus on (1) finalizing the Water Quality Monitoring QAPP and gaining its approval, as well as the approval of the GIS Inventory and Land Use/Land Cover Analysis QAPP, by the TSSWCB and EPA; (2) developing the steering committee and scheduling the first stakeholder meeting; (3) meeting with SWCDs and other stakeholders; (4) initiating water quality monitoring and other field work; and (5) hosting a workshop on invasive species.

II. Overall Progress and Results by Task

Task 1 Project Administration

Subtask 1.1 TWRI 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 and posted on the project website.

The following actions have been completed during this reporting period:

a. The second quarterly report was prepared and submitted on April 11, 2012.

10% Complete

Subtask 1.2 TWRI 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. The contract was initiated on November 29, 2011 with a start date of November 1, 2011.
b. Subaccounts for ESSM and SSL were set up on January 5, 2012.
c. The TTU and SLWA subcontracts were initiated circa February 22, 2012.
d. The first invoice in the amount of $368.06 was submitted on January 31, 2012. The second invoice will be submitted the end of April 2012.

5% Complete

Subtask 1.3 TWRI 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. TWRI 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. The first quarterly conference call was held on April 5, 2012. Kevin Wagner, Jana Lloyd, Tom Arsuffi, Scott Richardson, Raghavan Srinivasan, Bob Lyons, Tyson Broad, Kendria Ray, and Ken Rainwater participated. Primary action items identified included:
    - TSSWCB review of the landuse/landcover QAPP and submission to EPA for approval
    - TWRI finalizing and submitting the Monitoring QAPP
    - TTU-LRFS hiring 2 PhD students and 1 post-doc
    - TTU-LRFS developing the steering committee
    - TWRI, ESSM, and TTU-LRFS scheduling needed workshops for year 1
b. The second quarterly conference call has been scheduled for July 5, 2012 at 9:00 am.

10% Complete

Subtask 1.4 TWRI will work with project personnel from ESSM, TTU-WRC, TTU-LRFS, and SLWA to prepare the WPP incorporating input from stakeholders and findings of monitoring, modeling, and data analysis tasks.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

Subtask 1.5 SLWA will continue to host and maintain a website (http://southllano.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. TWRI and TTU-LRFS shall contribute content matter for the website as appropriate.

The following actions have been completed during this reporting period:

a. The SLWA website continues to be a resource for stakeholders in the watershed on land and water stewardship, hydrologic and weather conditions, latest news, upcoming events, community participation, and related topics. Upcoming events in the watershed described on the website include:
    - South Llano Paddling Trail Launch, April 14, Junction
    - SLWA Board Meeting, Apr 19, City of Junction Meeting Room, 5:30

- Seven Hundred Springs Tour, Rescheduled Apr 28, Junction, 10am

b. This quarter, a total of 756 unique visitors viewed the website.
c. Next quarter, TSSWCB will provide the TWRI, TTU-LRFS, and SLWA some example websites for other successful watershed efforts to help improve website resources and impact.

10% Complete

Subtask 1.6 The Director of TTU-LRFS will serve as the Upper Llano River Watershed Coordinator and be responsible for the general oversight and coordination of all project activities, reporting requirements, and educational activities, and serve as the primary conduit for interaction with landowners, citizens, and entities to facilitate the development of the WPP. The Watershed Coordinator shall successfully complete (or have already completed) the Texas Watershed Planning Short Course and participate in Texas Watershed Coordinator Roundtables.

The following actions have been completed during this reporting period:

a. The Director of the TTU-LRFS completed the Texas Watershed Planning Short Course on November 14-18, 2011.
b. The hiring of two PhD students and one post-doctoral position by the TTU-LRFS is expected to be completed early next quarter.

100% Complete

Task 2 Quality Assurance

Subtask 2.1 TWRI will develop a QAPP for water quality monitoring activities in Tasks 4 and 5 and a QAPP for watershed modeling activities in Task 6 consistent with the most recent versions of EPA Requirements for Quality Assurance project Plans (QA/R-5) and the TSSWCB Environmental Data Quality Management Plan.

The following actions have been completed during this reporting period:

a. The QAPP for Task 4 - GIS Inventory and Land Use/Land Cover Analysis was submitted to the TSSWCB for review on March 7, 2012.
b. TWRI is approximately 50% done with drafting the QAPP for Task 5 - Water Quality Monitoring. Upon completion of the draft, it will be reviewed and edited by the TTU-LRFS prior to submission to TSSWCB next quarter.
c. No activity to report this quarter on development of the QAPP for Task 6 watershed modeling activities.

40% Complete

Subtask 2.2 TWRI will implement the approved QAPPs. TWRI will submit revisions and necessary amendments to the QAPPs as needed.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

Task 3 Public Participation and Stakeholder Coordination

Subtask 3.1 TTU-LRFS, with input from TWRI, SWLA, and Texas AgriLife Extension Service, will compile (Months 1-3) and maintain (Months 4-36) 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 SLWA. The database and stakeholder group 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. This quarter, the Director of the TTU-LRFS continued work on developing the steering committee.

5% Complete

Subtask 3.2 TTU-LRFS will facilitate public participation and stakeholder involvement in the watershed planning process, specifically project meetings and activities. TTU-LRFS will coordinate meetings, secure meeting locations, prepare and disseminate meeting notices and agendas. Meeting summaries will be prepared and posted to the project website. It is anticipated that at a minimum, quarterly public meetings will be sufficient; however, if more meetings are deemed necessary, they will be scheduled accordingly. Meeting frequency may be adjusted throughout the course of the project to accomplish project goals. TSSWCB will review and approve all meeting notices, agendas, and meeting summaries prior to public dissemination.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.
b. Work will begin next quarter to schedule a stakeholder meeting.

5% Complete

Subtask 3.3 TTU-LRFS 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:

a. TTU-LRFS met with the SLWA on February 26 to discuss the Upper Llano Watershed Protection Plan.
b. The next meeting of the SLWA is on April 19 at 5:30 pm at the City of Junction Meeting Room.
c. TTU-LRFS and/or TWRI will meet with local SWCDs next quarter to provide them an overview of the project and gather input.

5% Complete

Subtask 3.4 TTU-LRFS will facilitate communication with stakeholders in order to engage the public and affected entities in the watershed planning process. TTU-LRFS will utilize all appropriate communication mechanisms including direct mail, e-mail, the project website, and mass media (print, radio, television). TTU-LRFS will utilize the existing SWLA Google Group to facilitate direct discussion between stakeholders. TTU-LRFS will develop, publish, and distribute 5 semi-annual newsletters (1 in year 1 and 2 in years 2 and 3) that highlight Upper Llano River watershed activities; the newsletter shall be distributed as most appropriate to individual landowners and entities in the watershed. TSSWCB must approve all project-related content in any educational materials and publications prior to distribution.

The following actions have been completed during this reporting period:

a. The SLWA Google Groups "South Llano River Project" group is emerging as an effective tool for communicating with stakeholders. Those interested can sign-up for the group at the SLWA website (http://southllano.org/). This quarter, this Google group has been used to transmit info on the SLWA board meeting, the 700 Springs Tour, the Opening of the Paddling Trail, an upcoming Riparian Grazing Workshop, the Texas Water Symposium on Healthy Watersheds, and other timely materials.
b. Two project fact sheets were developed, one on the project and one on the watershed plan development. Both fact sheets are attached.
c. Media mentions this quarter include the following:
    - Healthy Watersheds: Managing Natural Water Storage and Filtration Systems; Texas Public Radio; http://www.tpr.org/programs/newsmakerhour.html
    - Symposium Underscores Importance of Watershed Planning to Protect Texas Water for Future Generations; http://www.hillcountryalliance.org/HCA/News022312
d. Next quarter, the Hill Country Alliance will have a 60 second radio spot on the Llano River Watershed Protection Plan.

10% Complete

Subtask 3.5 TTU-LRFS will coordinate with SCSC to host a Texas Watershed Steward Program workshop focused on the Upper Llano River through TSSWCB project 11-05, Continued Statewide Delivery of the Texas Watershed Steward Program.

The following actions have been completed during this reporting period:

a. The coordinators of the Texas Watershed Steward Program are aware of the need to deliver a program in the Upper Llano watershed and as such, it has been placed on their delivery list. However, a date for the program has not yet been identified.

5% Complete

Task 4 GIS Inventory and Land Use/Land Cover Analysis

Subtask 4.1 TAMU-SSL will collaborate with project partners, local agencies and stakeholders to develop a comprehensive GIS inventory of the Upper Llano River watershed. This GIS inventory will include the most recent information available on land use, elevation, soils, stream networks, reservoirs, roads, public park lands, municipalities and satellite imagery or aerial photography. Locations of SWQM stations, USGS gages, public access points to the waterbodies, floodwater-retarding structures, wetlands, known OSSFs, TPDES permittees (including WWTFs, CAFOs and MS4s), and subdivisions will also be included. Sites permitted for land application of sewage sludge and septage should be included.

Information from subtasks 5.4 and 5.5 should be included. The cumulative impact of TSSWCB-certified WQMPs on the management of agricultural and silvicultural lands should be documented. TAMU-SSL will provide watershed maps for stakeholder meetings as needed.

The following actions have been completed during this reporting period:

a. Significant progress has been made on gathering existing GIS data for the watershed. Twenty-seven data layers have already been compiled (list attached).
b. Work continues on obtaining info on known OSSFs, TPDES permittees, public access points, subdivisions, and sites permitted for land application of sewage sledge and septage. SSL is also following up on land cover descriptions for the Texas Ecological Systems mapping project from TPWD.
c. The inventory indicates that there are no floodwater-retarding structures (according to the NRCS dams shapefile) or WQMPs (according to the TSSWCB Dublin Regional Office) in the watershed.

50% Complete

Subtask 4.2 TAMU-SSL will perform a combination of satellite based image (2006-2010) classification schemes and where needed "heads-up digitizing" of the 2006-2010 NAIP aerial photos of the watershed using ESRI's ArcGIS 9.x software. TAMU-SSL will identify individual LULC classes and delineate them in shapefile or ArcGIS grid format with a minimum mapping unit of 2 ac on screen. LULC classes will be comparable to NLCD. TAMU-SSL will verify LULC classification through field sampling and ground truthing information to an accuracy of 80% or greater. Ground control points used in the field sampling will be collected for at least ten locations per land use type using GPS units with an accuracy of 1-10 m.

The following actions have been completed during this reporting period:

a. The 2010 NAIP aerial photos (1 m resolution) have been acquired. Due to the drought last year, 2011 aerial photos were not acquired.
b. Once the QAPP is approved, a team from the SSL will be sent to the watershed to collect ground-truthing data.

5% Complete

Subtask 4.3 TAMU-SSL will provide the GIS inventory and LULC update to the TTU-WRC for utilization in the watershed model. TAMU-SSL will also provide TTU-LRFS needed maps for the WPP.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

Task 5 Water Quality Monitoring

Subtask 5.1 TTU-LRFS will conduct routine ambient monitoring at 14 mainstem sites and tributaries quarterly, collecting field parameters, conventional parameters, and flow. The QAPP, as detailed in Task 2, will precisely identify sites. The sampling period extends over 30 months. The number of samples planned for collection through this subtask is 140. Currently, routine ambient monitoring is conducted quarterly at 2 stations by LCRA and TCEQ (16701 and 17425) through the Clean Rivers Program.

Sampling will be coordinated with these entities to prevent duplication of efforts and ensure comparability. Flow data will be collected by gage, electric, mechanical or Doppler, and flow severity will be noted. Field parameters measured will include pH, temperature, conductivity, and dissolved oxygen. Conventional parameters measured will include total suspended solids, turbidity, sulfate, chloride, nitrate nitrogen, ammonia nitrogen, total kjeldahl nitrogen, chlorophyll a, pheophytin, total hardness, total phosphorus and E. coli (enumerated using USEPA Method 1603). The Edwards Aquifer Research & Data Center at Texas State University, a NELAC accredited laboratory, will conduct sample analysis, provide all containers and chain of custody.

The following actions have been completed during this reporting period:

a. No activity to report this quarter. Awaiting completion and approval of Monitoring QAPP.
b. TTU-LRFS is working to identify the best locations for the 14 stream sampling sites for inclusion in the QAPP.

0% Complete

Subtask 5.2 TTU-LRFS will conduct biological monitoring (fish, macroinvertebrate, and habitat assessment) at 14 locations twice a year for 2 years to assess the cumulative impact of pollutant loading on stream health and biological communities of stream health. Biotic conditions and assessments for main stem and lower portions of the watersheds are just beginning as part of the Guadalupe Bass Restoration Project for the South Llano River with TPWD in conjunction with TTU-LRFS and Texas State University.

The following actions have been completed during this reporting period:

a. No activity to report this quarter. Awaiting completion and approval of Monitoring QAPP.

0% Complete

Subtask 5.3 TTU-LRFS will conduct spring sampling at 6 sites including 700 Springs, Big Paint and Tanner Springs. TTU-LRFS will work with Kimble County Groundwater Conservation District to identify other priority springs. Quarterly field, conventional, and flow parameters will be collected. Water quality parameters to be measured are defined in Subtask 5.1. The QAPP, as detailed in Task 2, will precisely identify sites. The sampling period extends over 30 months. The number of samples planned for collection through this subtask is 60. The Edwards Aquifer Research & Data Center, a NELAC Accredited Laboratory, will conduct sample analysis and provide all containers and chain of custody.

The following actions have been completed during this reporting period:

a. No activity to report this quarter. Awaiting completion and approval of Monitoring QAPP.
b. TTU-LRFS is working to identify the 6 springs to be sampled. This will be included in the QAPP.

0% Complete

Subtask 5.4 TTU-LRFS will conduct surveys and map distribution and abundance of invasive emergent and aquatic plants from the headwaters (Llano Springs, 700 Springs, South Llano River and North Llano River) to Junction. TTU-LRFS and ESSM will work with the TPWD Aquatic Habitat Enhancement Program Director to determine BMPs for controlling or eradicating invasive species and develop an invasive species management plan for incorporation into the WPP.

The following actions have been completed during this reporting period:

a. No activity to report this quarter. Awaiting completion and approval of Monitoring QAPP.

0% Complete

Subtask 5.5 TTU-LRFS will conduct surveys and map the distribution, abundance, and severity of cut and eroding banks on the South and North Llano Rivers.

The following actions have been completed during this reporting period:

a. No activity to report this quarter. Awaiting completion and approval of Monitoring QAPP.

0% Complete

Subtask 5.6 TTU-LRFS will conduct a historical data review for the waterbody, to be included in the WPP, in order to assess and characterize trends and variability in water quality. Historical data collection activities will concentrate on 1) ambient water quality data (including groundwater); 2) stream flow and water level data; 3) precipitation records; and 4) biological data. U.S. Geological Survey, National Weather Service, TPWD, Texas Water Development Board, GCDs, LCRA, TCEQ, EPA and others will be queried for data related to the study area.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

Subtask 5.7 Through TSSWCB project 05-02 FY05 Statewide NPS Pollution Management Project, USGS will install and operate one new real-time streamflow gage at an appropriate location on the South Llano River as near the outlet of the assessment unit as is practical. Through this project, and contingent upon TSSWCB project 05-02, TTU-LRFS will work with USGS to provide operation and maintenance for this new real-time streamflow gage. Continuous sampling extends over 36 months. This gaging station will complement the existing gages maintained by the USGS. The USGS maintains real-time gages at 08150000 Llano River near Junction and 08148500 North Llano River near Junction and collects periodic data at gages 08149500 Seven Hundred Springs near Telegraph and 08149400 South Llano River near Telegraph. TTU-LRFS will work with USGS to ensure continued operation of these other USGS gages throughout the duration of the project.

The following actions have been completed during this reporting period:

a. The TSSWCB and USGS are currently working with TXDOT on obtaining approval to install the gage on a bridge.

5% Complete

Subtask 5.8 TTU-LRFS will transfer monitoring data from activities in Subtask 5.1-5.3 and 5.7 to TSSWCB for inclusion in the TCEQ SWQMIS at least quarterly. Data will be transferred in the correct format using the TCEQ file structure, along with a completed Data Summary, as described in the most recent version of TCEQ Surface Water Quality Monitoring Data Management Reference Guide. TWRI will submit Station Location Requests to TCEQ, as needed, to obtain TCEQ station numbers for new monitoring sites. TWRI will input monitoring regime, as detailed in the QAPP, into the TCEQ CMS. Data Correction Request Forms will be submitted to TSSWCB whenever errors are discovered in data already reported. All monitoring data files, Data Summary, and Data Correction Request Forms will also be

provided to LCRA. TTU-LRFS will post monitoring data from activities in Task 5 to the project website in a timely manner.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

Subtask 5.9 TTU-LRFS, with assistance by TWRI, will incorporate the watershed assessment findings in the WPP developed through Task 8.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

Task 6 Modeling and Data Analysis

Subtask 6.1 TTU-WRC, with cooperation from project partners, will evaluate models, such as SWAT and EDYS, to simulate flow and water quality at appropriate subwatershed scales and identify BMPs and targeted locations to enhance the quality of runoff and recharge. TTU-WRC will recommend the use of a suitable candidate model. Once the most suitable model is selected by TTU-WRC, TWRI, and TSSWCB, TTU-WRC will assist TWRI in developing a modeling QAPP (Task 2). TTU-WRC will collect and evaluate relevant hydrologic data for the Upper Llano River watershed, including rainfall, stream flow, and groundwater conditions, as well as recent land use and vegetation distributions generated through Tasks 4-5.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

Subtask 6.2 TTU-LRFS will employ EPA's Causal Analysis/Diagnosis Decision Information System (CADDIS) to conduct a causal evaluation of the benthic macroinvertebrate data. CADDIS, an online application, provides a pragmatic guide for determining the causes of detrimental changes and undesirable biological conditions observed in aquatic systems. CADDIS supports defensible causal analyses of the mechanisms, symptoms, and stressor-response relationships for various stressors in order to draw appropriate conclusions.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

Subtask 6.3 TTU-WRC, with cooperation from project partners, will summarize modeling findings to inform the stakeholders about the physical behavior of their watershed resulting from various implementation scenarios and work with project partners to incorporate this into the WPP.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

Task 7 Public Outreach and Education

Subtask 7.1 ESSM, in conjunction with the TTU-LRFS, TTU-WRC, and SLWA will provide watershed training workshops for landowners on riparian protection, land stewardship, grazing management, invasive species, brush control, conservation, wildlife and habitat plans and water resource issues. Two workshops per year are planned to provide adequate coverage of the broad range of elements associated with water and watersheds and to allow a broad coverage of stakeholder groups. Pre- and post-participant surveys will be administered at selected events to evaluate (1) changes in producer knowledge and awareness and (2) expected adoption of BMPs.

The following actions have been completed during this reporting period:

a. The TTU-LRFS, in conjunction with the Lady Bird Johnson Wildflower center, SLWA, Texas Parks and Wildlife Department, Texas Forest Service, and USDA-APHIS, will host a workshop on "Helping Protect the South Llano River by STOPPING THE SPREAD OF INVASIVE PLANTS & PESTS" on June 9, 2012 from 9 am-4 pm). Presenters will include Dr. Tom Arsuffi & Jessica Strickland.
b. Delivery of the Texas Well Owner Network program has tentatively been planned for late Fall; however, delivery has not yet been scheduled.
c. TWRI will also work with the Extension State Forage Specialist to coordinate delivery of the Lone Star Healthy Streams Program in the watershed as well.
d. Finally, workshops on recovery of areas impacted by wildfires, particularly the Oasis Fire, are planned for the last 2 Saturdays in May.

15% Complete

Subtask 7.2 TTU-LRFS will develop and offer a K-12 TEKS based water and watershed curriculum unit. Students will understand the concepts of river basins and watersheds and be able to identify their river basin and local watershed. It is anticipated that about 90 ISDS and 7,500 K-12 students and teachers will receive watershed education and training over the 3 years of the project. TTU-LRFS expand existing curriculum developed by the LRFS Outdoor School (http://www.depts.ttu.edu/hillcountry/OLC/index.php), an award winning, Texas High School Project recognized Exemplar Program. This program is a STEM No Child Left Behind standards-based transdisciplinary, inquiry-based, innovative curriculum that incorporates multiple best learning practices to improve instruction for at-risk students and provide training for teachers. The Outdoor School incorporates GLOBE (Global Learning and Observations to Benefit the Environment, http://globe.gov/) training and protocols into the STEM curricular units. GLOBE is a federal K-12 environmental education program instituted by NASA, NOAA, and NSF. For this new curriculum unit we will use GLOBE Watershed Dynamics to enable students to investigate their own watershed in order to understand the flow of water through the watershed, how human activities within the watershed both depend on and impact its hydrology, and how land use changes can affect the plant and animal communities in the watershed. TTU-LRFS Outdoor School will also work with the TWDB Conservation Education Specialist to implement Major Rivers: A Texas Water Education Program. The curricular resources to develop this unit are free from GLOBE and TWDB.

The following actions have been completed during this reporting period:

a. The Director of the TTU-LRFS is currently participating in development of an Environmental Literacy Plan for Texas. Participation in this effort will provide valuable insight for curriculum development efforts associated with this project and will currently help infuse the Healthy Watersheds concept into the Environmental Literacy Plan.

0% Complete

Subtask 7.3 TTU-LRFS will organize a Texas Water Symposium in partnership with Texas Public Radio, Schreiner University, Hill Country Alliance, SLWA, and TWRI on EPA's Healthy Watersheds Initiative with this project as a case study for Texas. The Symposium will be held at TTU- LRFS in front of a live audience and taped for broadcast during Texas Public Radio's Newsmaker Hour. TWS will include panelists from key stakeholder groups and cover the importance, process and benefits of WPPs.

The following actions have been completed during this reporting period:

a. The second session of the 2011-2012 edition of the Texas Water Symposium on Thursday, March 22, 2011 at 7 PM at the Texas Tech University campus in Junction.
    - The topic: Healthy Watersheds: Where all is connected and how best to manage our precious natural resources.
    - The Healthy Watersheds panel consisted of:
        i. Gary Garrett –Program Director Watershed Policy & Management, Texas Parks and Wildlife Department
        ii. Aaron Wendt, Statewide Watershed Planning Coordinator, Texas State Soil and Watershed Conservation Board
        iii. Christy Muse – Executive Director, Hill Country Alliance
        iv. Tom Arsuffi – Director, Texas Tech University Llano River Field Station
        v. Kevin Wagner – Associate Director, Texas Water Resources Institute
    - Tim Birdsong - Ecosystem/Habitat Assessment Chief, Texas Parks and Wildlife Department will moderate.
    - The panel provided background, context and examples of the watershed approach in protection of water and natural resources in the Texas and the Hill Country.

100% Complete

Task 8 Watershed Protection Plan Development

Subtask 8.1 TTU-LRFS, in collaboration with project partners, will develop a WPP for the Upper Llano River watershed that is consistent with and satisfies the expectations of the nine elements fundamental to watershed-based plans as described in EPA's 2004 Nonpoint Source Program and Grants Guidelines for States and Territories [68 Fed. Reg. 60653-60674 (October 23, 2003)] and incorporates the elements of EPA's Healthy Watersheds Framework as described in the technical guidance document Identifying and Protecting Healthy Watersheds (EPA 2011). The WPP shall be founded on decisions made by stakeholders through the watershed planning process (Task 3) and incorporate findings from project Tasks 4-7. TTU-LRFS will facilitate public review and stakeholder approval of the WPP.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

Subtask 8.2 TTU-LRFS will develop an "executive summary" style document, based on the WPP, which will serve as a public outreach tool to garner support for the implementation of the WPP and achieve long term sustainability.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

Subtask 8.3 After EPA has completed a satisfactory nine element consistency review of the WPP, TWRI will publish, print, and distribute the WPP and "executive summary" document to stakeholders.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

III. Related Issues/Current Problems and Favorable of Unusual Developments

- N/A

IV. Projected Work for Next Quarter

- Prepare and submit Year 1, Quarter 3 Progress Report on July 15, 2012
- TTU-LRFS complete hiring of support staff for project
- Complete and submit Monitoring QAPP
- Evaluate consistency of SLWA website with other WPP project websites
- Meet with SWCDs and other stakeholders
- Continue work on stakeholder list
- Schedule first stakeholder meeting
- TSSWCB & TTU-LRFS agreement on USGS gage maintenance
- Schedule needed workshops for coming year