

Clean Water Act Section 319(h) Nonpoint Source Pollution Control Program Project

Lampasas Watershed Assessment and Protection Project

Quarterly Report Number 6

Covering work accomplishments during October thru December, 2009

prepared by

Texas AgriLife Research

Task 1: Lampasas River WPP Development and Project Administration

Subtask 1.1: Conduct quarterly meetings, or as appropriate, with project participants, and other interested parties to discuss project schedule, lines of responsibility, communication needs, and other requirements. (Start Date: Month 1; Completion Date: Month 36)

- Compiled a complete contact list of all TAG members and agencies which included over 120 people from various state and federal agencies
- Organized a December meeting of all TAG members to discuss data and project needs, however meeting was rescheduled for February due to hazardous weather conditions

40% Complete – On-going

Subtask 1.2: Identify and recruit key stakeholders through public education and outreach. Organize stakeholder group. Prepare and distribute semi-annual newsletter to stakeholders. Develop and host watershed website. (Start Date: Month 1; Completion Date: Month 36)

- Texas AgriLife and TSSWCB selected 19 Steering Committee candidates which were approved by the Partnership
- All Steering Committee candidates were approved by the Partnership
- Prepared and distributed a Partnership newsletter that was emailed to over 160 members
 - Newsletter is attached to appendix
- Updated project website with meeting announcements, agendas and presentations
- Created a “Join our Mailing List” option on project website
- Updated “Partners” and “Links” pages on project website

75% Complete – On-going

Subtask 1.3: Organize workgroups based on stakeholder recommendations. (Start Date: Month 1; Completion Date: Month 36)

- Recommended five areas for Topical Workgroups:
 - Wastewater Infrastructure
 - Agricultural Issues

- Habitat and Wildlife
- Urban/ Suburban Issues
- Outreach and Education
- Asked stakeholders to volunteer for preferred workgroups
 - 4 volunteers for Wastewater Infrastructure
 - 12 volunteers for Agricultural Issues
 - 13 volunteers for Habitat and Wildlife
 - 4 volunteers for Urban/Suburban Issues
 - 7 volunteers for Outreach and Education
- Stored all collected workgroup information in Lampasas WPP database

70% Complete – On-going

Subtask 1.4: Conduct stakeholder meetings as appropriate (stakeholder/community driven), and conduct workgroup meetings according to project demands. (Start Date: Month 1; Completion Date: Month 36)

- Held Steering Committee meeting in November in Lampasas attended by 69 members
 - Notice of meeting mailed to over 400 stakeholders
 - Press release announcing meeting was sent to area newspapers
 - Notice, press release and agenda attached in appendix
- Held Steering Committee meeting in December in Lampasas attended by 30 members
 - Notice of meeting emailed to over 160 stakeholders
 - Agenda attached in appendix

30% Complete – On-going

Subtask 1.5: Prepare stakeholder and workgroup educational programs as requested. (Start Date: Month 1; Completion Date: Month 36)

- Collaborated with Texas AgriLife Extension to present “What is a Watershed” to all stakeholders at the December SC meeting

25% Complete – On-going

Subtask 1.6: Develop Lampasas River WPP. (Start Date: Month 12; Completion Date: Month 36)

- No activity this quarter.

0% Complete – On-going

Task 2: Development of load duration curves for the Lampasas River Watershed

Subtask 2.1: Develop flow duration curves using historical stream-flow data. (Start Date: Month 10; Completion Date: Month 14)

- No activity this quarter.

30% Complete – On-going

Subtask 2.2: Develop LDCs to characterize pollutant loadings in the Lampasas River Watershed for all parameters of concern. Determine if and under what conditions bacteria levels exceed water quality standards. (Start Date: Month 10; Completion Date: Month 14)

- No activity this quarter.

25% Complete – On-going

Subtask 2.3: Calculate the load reductions necessary to meet water quality standards. (Start Date: Month 10; Completion Date: Month 14)

- No activity this quarter.

15% Complete – On-going**Task 3: Watershed inventory and geographic analysis of land use influencing *E. coli* migration and other NPS pollution within the Lampasas River Watershed.**

Subtask 3.1: In order to develop and implement DQOs and QA/QC activities necessary to ensure environmental data of known and acceptable quality is generated through this project, a QAPP for Tasks 2-4 will be developed that is consistent with *EPA Requirements for Quality Assurance Project Plans (QA/R-5)* and the *Environmental Data Quality Management Plan for the TSSWCB*. (Start Date: Month 1; Completion Date: Month 8)

- No activity this quarter

100% Complete –

Subtask 3.2: Classify current land use for the watershed using existing land use/land cover data utilizing most current imagery available. (Start Date: Month 11; Completion Date: Month 18)

- Develop the land cover classification methodology using a subset of the Lampasas River watershed

35% Complete – On-going

Subtask 3.3: Verify classification of land use through ground-truthing of sub-sampled land units, and collection of available data. (Start Date: Month 11; Completion Date: Month 18)

- No activity this quarter

15% Complete – On-going

Subtask 3.4: Delineate the Lampasas River Watershed into catchments using highest resolution digital elevation model available. (Start Date: Month 11; Completion Date: Month 18)

- Obtained 10m DEM and developed flow direction and flow accumulation grids

30% Complete – On-going

Subtask 3.5: Compile all of feature class, raster, and tabular data into a comprehensive geo-database reflecting existing watershed conditions. (Start Date: Month 11; Completion Date: Month 18)

- No activity this quarter

50% Complete – On-going

Task 4: Utilize Spatially Explicit Load Enrichment Calculation Tool (SELECT) for analysis of the Lampasas River Watershed.

Subtask 4.1: Compile and estimate the contribution of potential sources of *E. coli* and other parameters within the watershed. (Start Date: Month 19; Completion Date: Month 26)

- Completed annotated bibliography on *E. coli* literature

10% Complete – On-going

Subtask 4.2: Allocate numbers of each potential source category, in a spatial context according to land use classification using GIS. (Start Date: Month 19; Completion Date: Month 26)

- No activity this quarter

0% Complete – On-going

Subtask 4.3: Identify potential pollutant sources across the landscape based on proximity to hydrology, land use, and other factors using SELECT analysis. (Start Date: Month 19; Completion Date: Month 26)

- No activity this quarter

0% Complete – On-going

Subtask 4.4: Utilize the hybrid statistical and process-based approach of SPARROW (Spatially Referenced Regressions on Watershed Atttributes) to quantify uncertainty in SELECT parameters. (Start Date: Month 19; Completion Date: Month 26)

- No activity this quarter

0% Complete – On-going

Task 5: Facilitate implementation of the Lampasas River WPP.

Subtask 5.1: Work with stakeholders and workgroups to prioritize implementation activities based on consensus and continual watershed assessment and awareness. (Start Date: Month 18; Completion Date: Month 36)

- No activity this quarter

0% Complete – On-going

Subtask 5.2: Assist stakeholders in identification and acquisition of resources necessary to proceed with watershed implementation and protection strategies, and in anticipation of future watershed needs. (Start Date: Month 18; Completion Date: Month 36)

- No activity this quarter

17% Complete – On-going

Subtask 5.3: Identify metrics or other indicators which will be used to evaluate successful implementation or improvement of watershed health over time. (Start Date: Month 18; Completion Date: Month 36)

- No activity this quarter

8% Complete – On-going

Activities Planned for Next Quarter

- Host TAG meeting in February at Blackland Research and Extension Center
- Develop and distribute Partnership newsletter
- Continue website development and creation of outreach materials.
- Complete and submit Flow Duration Curves, Load Duration Curves and Load Reductions to TSSWCB for review and then present to Steering Committee for comment and review
- Conduct other outreach activities including education and information workshop planning.
- Obtain or create outreach materials about bacteria impairments and other issues as needed.
- Plan a watershed tour for Steering Committee, Work Groups and Partnership
- Complete flow and load duration analysis. Document methods, assumptions, source data, and results. Thoroughly vet findings through project's internal technical peer review process prior to public release.

Appendix:

November Newsletter:

Lampasas River Watershed Partnership
 November 2009 Newsletter

Dear Lampasas River Partners,

Welcome to the inaugural edition of the Lampasas River Watershed Partnership monthly newsletter! We hope to keep all of our stakeholders informed of upcoming events and our progress on the development of the Lampasas River Watershed Protection Plan.

The Partnership's first Steering Committee meeting was held on November 12, 2009 at the Lampasas High School. We would like to say a big THANK YOU to Michael Stoldt and the City of Lampasas for providing refreshments for the meeting. Among some of the more important tasks that were undertaken at the Steering Committee meeting, was the Partnership's approval of the Ground Rules and Steering Committee members. A copy of the approved Ground Rules is now available on our website (www.lampasasriver.org). The selection process of our Steering Committee is outlined in the Ground Rules. Steering Committee members are listed below, along with a brief background and the area of the watershed from which they hail.

Member	Background	Location
Bettie Black	Rancher, Business Owner, Teacher	Star
Dickie Clary	Hamilton Co Commissioner, Farmer, Rancher	Hamilton
Jed Garren	Mills Co Commissioner, Farmer, Rancher	Goldthwaite
Chris Meis	Rancher, Southwest Hamilton Wildlife Management Association, Commercial landscape contractor	Evant
Rodney Parrish	Farmer, Rancher	Evant
Mickey Edwards	Rancher, Educator	Lampasas
Travis Herring	Rancher, Hill Country SWCD #534	Lometa
Ed Lilley	Landowner, Master Naturalist	Lampasas
Danny Stephens	OMI Wastewater Treatment Operator	Lampasas
Michael Stoldt	Lampasas City Manager	Lampasas
Henry Stoneham	Landowner	Lampasas
Joan Kelley	Keep Killeen Beautiful	Killeen
Kristina Ramirez	City of Killeen Engineer – Drainage Dept, Lake Stillhouse Cleanwater Steering Committee	Killeen
Woody Ray	Veterinarian, Rancher	Killeen
Judy Parker	Clearwater Underground Water Conservation District, Landowner	Killeen
Bradley Ware	Rancher, Landowner	Ding Dong
Jenna Barrett	Brazos River Authority	Lampasas River Watershed

The November Steering Committee meeting also included a review of the historical water quality data that placed the Lampasas River on the State of Texas 303(d) list of impaired waterbodies and an overview of current monitoring efforts by the Texas Commission on Environmental Quality and the Brazos River Authority's Clean Rivers Program. The agenda, presentations, and a meeting summary are now available on our website.

We are also in the process of organizing our Work Groups. The Steering Committee approved five Work Groups based off of issues identified by stakeholders. They include, 1) Wastewater Infrastructure, 2) Agricultural Issues, 3) Habitat and Wildlife, 4) Urban and Suburban Issues and 5) Education and Outreach. If you would like to participate on a Work Group and haven't already signed up, please let me know so that I can put you on the contact list for that Work Group.

The Partnership has several events scheduled in the upcoming months. Our initial meeting of the Technical Advisory Group (TAG) will be held on December 4, 2009. The objective of this meeting will be to update state and federal agencies on the progress the Partnership and Steering Committee have made so far and to gather information on individual agency programs that will prove useful in our endeavors.

We will also have a Steering Committee meeting on December 10, 2009 from 6 pm – 9 pm at the Lampasas County Farm Bureau Office, 1793 N US Highway 281 in Lampasas. This meeting will provide Steering Committee and Work Group members with the knowledge they need to make informed decisions about the scientific analysis being conducted for the development of the WPP. An agenda will be emailed and made available on our website two weeks prior to the meeting. As with all meetings, all interested stakeholders are encouraged to attend this meeting.

Looking further ahead, we will have our third Steering Committee meeting on January 14, 2010, also at the Lampasas County Farm Bureau Office to discuss Load Duration Curves, water quality goals, and the load reductions needed within the watershed. February will prove to be a fun month for the Partnership, with a bus tour of the Lampasas River watershed planned. If there is something of specific interest (i.e. management practice or location along the river), please let us know so that it can be considered. The watershed tour will be open to Steering Committee and Work Group members first and then to the TAG and general Partnership members if space allows. More information on date, times and agenda will be made available as details are finalized.

Finally, as you may have noticed at our November Steering Committee meeting, I will soon be out of commission for a few months. My husband and I are expecting our first child and I will be out on maternity leave from approximately December 1 until early February. Steve Potter, our Technical Coordinator, with the assistance of Dr. June Wolfe, a scientist here at Texas AgriLife Research will be carrying the project forward during my absence. Steve can be reached by phone at (254) 774-6038 and email at spotter@brc.tamus.edu and June can be reached by phone at (254) 774-6016 and email at jwolfe@brc.tamus.edu, should you have any questions or concerns. You can also contact Pamela Casebolt with the Texas State Soil and Water Conservation Board at (254) 773-2250 ext. 247 or pcasebolt@tsswcb.state.tx.us.

We would like to say Thank You to those who have volunteered their time to lead the efforts to improve our watershed. We hope that you have enjoyed the inaugural edition of the Lampasas River Partnership newsletter. If you have something of note to mention, please let us know. Look for future editions to be delivered to your email box monthly.

Wishing you a very Happy Thanksgiving,

Lisa Prcin

Watershed Coordinator

Texas AgriLife Research at Blackland Research & Extension Center

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Temple, TX 76502

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November Meeting Notice:

Dear Lampasas River Partner,

Texas AgriLife Research at Blackland Research & Extension Center and the Texas State Soil and Water Conservation Board cordially invite you to the Lampasas River Watershed Partnership Steering Committee meeting on Tuesday, November 10, 2009 in the Lampasas High School Lecture Hall at 2716 South Hwy. 281 in Lampasas. Please use the main entrance and the Lecture Hall is located near the Library.

As you may be aware, the State of Texas has identified the Lampasas River as impaired due to elevated levels of bacteria. North Fork Rocky Creek, a tributary of the Lampasas River, is also impaired for depressed dissolved oxygen. Due to these and other water quality issues, we are partnering with local citizens and landowners to solve the water quality issues by developing a watershed protection plan (WPP). A WPP is a stakeholder driven process that holistically addresses all the sources and causes of impairments and concerns, identifies solutions, and prioritizes implementation projects.

Light refreshments will be served at 6:00 p.m. and the meeting will start at 6:30 p.m.

A meeting agenda is included with this letter as well as a map of the Lampasas River Watershed. If you are interested in the materials presented at the Lampasas River WPP kick-off meetings held in May 2009 or would like more information, please visit the Lampasas River watershed website at <http://www.lampasasriver.org>. If you have any questions regarding this process, please contact me by phone at (254) 774-6030 or by e-mail at lprcin@brc.tamus.edu.

Respectfully,

Lisa Prcin
Lampasas River Watershed Coordinator

November Meeting Announcement Press Release:

Press Release: Public Invited to Lampasas River Watershed Partnership Meeting on November 10

The Lampasas River Watershed Partnership Steering Committee will meet Tuesday, November 10 in Lampasas to discuss water quality monitoring in the watershed and the Partnership's framework.

The meeting will be from 6:30-8:30 p.m. at the Lampasas High School Lecture Hall, 2716 S. Hwy 281. Light refreshments and meeting sign-in will begin at 6:00 p.m.

The Lampasas River watershed encompasses parts of Bell, Burnet, Coryell, Hamilton, Lampasas, Mills, and Williamson Counties. "A watershed includes the main stem of the river and all of the tributaries that drain into it, all of which are affected by what happens in the surrounding cities and communities," said Dirk Aaron, AgriLife Extension agent for Bell County.

According to the "2008 Texas Water Quality Inventory and 303(d) List," the Lampasas River is impaired by elevated bacteria concentrations making it unsuitable for contact recreation use. North Fork Rocky Creek, a tributary of the Lampasas River, is also impaired for depressed dissolved oxygen.

Texas AgriLife Research and the Texas State Soil and Water Conservation Board are partnering with landowners in the Lampasas River watershed to protect and improve the area's water quality through the development of a Watershed Protection Plan (WPP). A WPP is a cooperative partnership that holistically addresses all sources of water quality impairment and prioritizes best management practices and restoration strategies that assure the long term health of the watershed. "Through the WPP process, stakeholders will be able to make informed decisions to develop management recommendations that will protect and improve water quality in the Lampasas River watershed," said Lisa Prcin, Lampasas River Watershed Coordinator with Texas AgriLife Research.

The upcoming meeting will focus on building the Partnership by confirming members of the Steering Committee and establishing Work Groups focused on areas such as wastewater infrastructure, agricultural issues, habitat and wildlife, urban/suburban issues and outreach and education as they relate to water quality within the Lampasas River watershed. "We're encouraging anyone with expertise or an interest in any of these areas to attend the Steering Committee meeting and join a Work Group," said Prcin.

"A Clean Water Act Section 319(h) Nonpoint Source grant was provided to Texas AgriLife Research by the Texas State Soil and Water Conservation Board and the U.S. Environmental Protection Agency to facilitate the development of this WPP," noted Pamela Casebolt, project manager with the Texas State Soil and Water Conservation Board.

For more information on the meeting, please contact Prcin at 254.774.6030 or lprcin@brc.tamus.edu, or Casebolt at 254.773.2250, ext 247, pcasebolt@tsswcb.state.tx.us.

More information on the Lampasas River Watershed Partnership can be found at <http://www.lampasasriver.org>.

November Steering Committee Meeting Agenda:

Lampasas River Watershed Partnership
Steering Committee Meeting
Tuesday, November 10, 2009
Lampasas High School

- | 6:00 ~~Arrive, s~~Sign-in, ~~light refreshments~~
- 6:30 Welcome
Travis Herring, Director, Hill Country Soil & Water Conservation District #534
- | 6:35 Review of the WPP Process and ~~Summation of Initial~~May 2009 Partnership Kickoff Meetings
| Lisa Prcin, ~~Watershed Coordinator,~~ Texas AgriLife Research
- | 6:50 ~~Brazos River Authority~~ Clean Rivers Program and ~~Water Quality Monitoring in the~~ Lampasas River Watershed
Jenna Barrett, Brazos River Authority
- | 7:00 ~~Texas Commission on Environmental Quality's Special Project –~~ Bacteria Water Quality Sampling and Analysis in the Lampasas River Watershed
Eric Reese, Texas Commission on Environmental Quality
- | 7:10 Watershed Characterization and Data Analysis ~~used in the Framework of Watershed Protection Plans~~
Steve Potter, ~~Technical Coordinator,~~ Texas AgriLife Research
- 7:25 Discussion and Questions
- | 7:40 ~~Roles of Steering Committee and Work Groups and the Watershed Partnership~~ Lampasas River Watershed Partnership Framework and Ground Rules
| Lisa Prcin, ~~Watershed Coordinator,~~ Texas AgriLife Research
- | 8:00 ~~Formalize~~ Steering Committee Members
| Lisa Prcin, ~~Watershed Coordinator,~~ Texas AgriLife Research
- | 8:05 Formalize and Task the Work Groups
| Steve Potter, ~~Technical Coordinator,~~ Texas AgriLife Research
- 8:15 Next Steps for the Lampasas River Watershed Partnership
- | 8:20 Break into Work Groups to Set Up Meetings and Discussion
| Steve Potter, ~~Technical Coordinator,~~ Texas AgriLife Research

8:30 Adjourn

December Steering Committee Meeting Agenda:

Lampasas River Watershed Partnership
Steering Committee Meeting
Thursday, December 10, 2009
Lampasas County Farm Bureau Office

6:00 Sign In

6:15 Welcome

6:20 Non-point source hydrology: precipitation, land use, stream flow, contaminants, and the concept of mass loadings

7:10 Understanding the Source – Impairment conceptual model and what it means for water quality

7:20 Break-Out Session – Group Exercises in Source – Impairment model

7:40 Break

7:50 Introduction to estimating contaminant loads with Flow Duration Curves (FDC) and Load Duration Curves

8:10 Modeling 101, plus GIS and spatially explicit models

8:40 Next Steps

9:00 Adjourn

Photos from Killeen Meeting:

