

**Development of a Watershed Protection Plan  
for Geronimo Creek**

Guadalupe-Blanco River Authority  
FY09-11 CWA Section 319(h)  
Project No. 08-06

**Quarterly Report Number 4**

Covering work accomplished October through December, 2009

January 15, 2009

**I. Abstract**

Many administrative tasks, meetings and planning activities occurred during the reporting period. Initial public meetings were held in October in Seguin and New Braunfels for the start of the project. A Texas Watershed Steward Workshop was held in Seguin for the watershed and surrounding areas and was also very well attended. Monitoring of sites is ongoing and data gathering for watershed characterization continued.

**II. Overall Progress and Results by Task**

**TASK 1: Project Administration and Coordination**

**Subtask 1.1:** The GBRA will prepare electronic quarterly progress reports for submission to TSSWCB. Progress reports shall document all activities performed within a quarter and shall be submitted by the 15<sup>th</sup> of January, April, July and October. All progress reports will be posted to the project website and provided to all project partners.

- GBRA prepared the progress report for July 2009 through September 2009 and submitted the report on October 15, 2009.

30% complete – On-going

**Subtask 1.2:** GBRA will perform accounting functions for project funds and will submit appropriate reimbursement forms to TSSWCB at least quarterly.

- GBRA submitted the invoice for July 2009 through September 2009 on October 29, 2009.

20% complete – On-going

**Subtask 1.3:** GBRA will host coordination meetings or conference calls with TSSWCB and any subcontractors as appropriate, at least quarterly to discuss project activities, project schedule, communication needs, deliverables, and other

requirements.

- Several planning meetings and conference calls were held between October and December:
  - Attended Watershed Planning Discussion meeting at TCEQ on December 3, 2009.
  - Attended and presented at the two public meetings that introduced the project held in Seguin and New Braunfels.
  - Hosted Texas Watershed Stewards in Seguin. Presented information on Geronimo Creek and its associated impairments.
  - Attended the Guadalupe County Flood Mitigation Study public meeting. Presented information on the WPP project to the public.
  - Transmitted historical data and Seguin wastewater data to TAMU.
  - October 13, 2009 Geronimo Planning Team discussed the public meetings and the upcoming Texas Watershed Steward Meeting over conference call.
  - November 4, 2009 Meeting in Seguin between AgriLife Extension and Debbie Magin discussed planning activities for upcoming TWS workshop. December 8 a planning meeting was coordinated by GBRA for Extension, GBRA and TSSWCB to discuss, develop and review initial meeting materials for the first Geronimo and Alligator Creek Watershed Partnership Meeting. (Debbie Magin, Liz Sedlacek, Cinde Thomas-Jimenez, Lee Gudgell, Nikki Dictson, and Loren Henley)
  - December 11 and 18, 2009 GBRA coordinated conference calls for planning of the first Partnership Meeting in January and to select the Steering Committee. The review of meeting materials included advertising agenda, letters, press release, ground rules, presentations and discussion of steering committee members. (Debbie Magin, Liz Sedlacek, Cinde Thomas-Jimenez, Lee Gudgell, Nikki Dictson, Mark McFarland, Ward Ling, TJ Helton, Aaron Wendt and Loren Henley)
  - Reviewed and made comments on news release, ground rules, steering committee list, presentations, agenda for the first steering committee meeting.

~~10~~20% complete – On-going

## **TASK 2. Quality Assurance**

**Subtask 2.1:** GBRA will develop a quality assurance project plan (QAPP) for activities in tasks 3 and 4, consistent with *EPA Requirements for Quality Assurance Project Plans (QA/R-5)* (May 2006) and the *TSSWCB Environmental Data and Quality Management Plan* (August 2007).

Consistency with Title 30, Chapter 25 of the Texas Administrative Code, Environmental Testing Laboratory Accreditation and Certification, which

describes Texas' approach to implementing the National Environmental Laboratory Accreditation Conference standards, shall be required.

All monitoring procedures and methods prescribed in the QAPP shall be consistent with the guidelines detailed in the TCEQ *Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue* (RG-415) December 2003) and *Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data* (RG-416) (August 2005).

100% completed – On-going

**Subtask 2.2:** GBRA will submit revisions and necessary amendments to the QAPP as needed.

- Lee Gudgell submitted an amendment to the QAPP for the following changes:
  - Extend the monitoring period from 12 to 24 months in order to collect additional routine samples and targeted samples. Drought conditions, causing dry stream beds, prevented early samples from being collected.
  - Corrections to the list of GBRA employees-names and titles.
  - Update of SWQM reference from 2003 to 2008.

50% completed – On-going

### **TASK 3.** Water Quality Monitoring

**Subtask 3.1:** Technical consultant will compile historical and baseline data on the Geronimo Creek watershed, including water quality data, land use, topography, soil types and vegetation.

- TAMU Team began collecting existing and historical data on the watershed.
- TAMU Team continued collecting existing and historical data and began evaluating the historical data including the flow data, water quality data, Agricultural Statistics numbers for livestock, and numbers for wildlife.
- TAMU Team began accumulating existing GIS layers for the watershed including land use, soil types, vegetation, streams, urban areas, cities, counties, roads and topography.

~~5~~75% completed – On-going

**Subtask 3.2:** GBRA, with consultation with the technical consultant, will produce a twelve-month water quality monitoring plan based on information identified in Subtask 3.1, including monthly routine and targeted monitoring of the stream and tributaries, quarterly monitoring of the springs (up to four locations), and the

quarterly monitoring of wells (up to four locations) that are in close proximity to be contributing to the stream flow through springs.

100% completed – On-going

**Subtask 3.3:** GBRA will conduct water quality monitoring of the watershed as described in the plan developed in Subtask 3.2 and under the QAPP developed in Subtask 2.1.

- July through September 2009 – GBRA continued the monitoring portion of the project under the signed QAPP.
  - October 2009
    - All eight routine sites were monitored under wet weather conditions, including the routine site collected under the Clean Rivers Program.
    - Five of the seven targeted sites were monitored under wet weather conditions. Two sites were dry: Unnamed tributary at Heinemeyer Road and unnamed tributary at Laubach Road.
  - November 2009
    - Seven routine monitoring sites were collected, including the routine site collected under the Clean Rivers Program. One routine site was not monitored, due to dry conditions: Geronimo Creek at Huber Road.
    - No targeted monitoring was conducted.
    - Geronimo Creek WWTP sampled for the fall season.
    - Groundwater sites (3) sampled for the fall season. It was discovered that the original groundwater site on Laubach Road was not groundwater, but a potable water pipe from Springs Hill Water Supply. A new well in very close proximity to the Laubach well was found and sampled. It will replace the quarterly groundwater site.
  - December 2009
    - All eight routine sites were monitored under wet weather conditions, including the routine site collected under the Clean Rivers Program.
    - No targeted wet weather monitoring was conducted.
- Data was reviewed for September, October and November for representativeness and quality assurance. Data will be transmitted to TSSWCB in SWQM-IS format after the stations are assigned permanent station location numbers. Those numbers will be applied for in the next quarter. In the interim the data will be put into excel spreadsheets and made available on the project website and through email to the steering committee members.

30% completed – On-going

#### TASK 4. Water Quality Modeling and Data Analysis

**Subtask 4.1:** The Technical Consultant will perform services that include the selection of a model(s) that facilitate development of the watershed protection plan; produce geographical information including digitizing of land use data to the sub-watershed level; data analysis to rank sources of the impairments; estimation of the fate and transport of bacteria, nutrients and other constituents; and production tools that can be used to evaluate the effectiveness of best management practices.

- October - December – emails, calls made by Extension, GBRA, SSL, BAEN and TWRI to discuss and receive approval on modeling QAPP which was received on November 30, 2009.
- On multiple dates in October - December discussions between Extension, TAMU and GBRA were held about historical data availability including water quality and flow data. On October 1, 2010 Extension (Dr. Mark McFarland, Nikki Dictson, Ward Ling, and Matt Berg) held a meeting with the modelers at TAMU to discuss the project, modeling QAPP, exchange historical data and determine what other data was still needed.
- On October 27<sup>th</sup>, Extension met with Kyna McKee to discuss livestock census data.
- On October 11<sup>th</sup>, Extension met with Dr. Karthi, Taesoo Lee, and Kyna McKee to discuss the existing and historical data.
- December 16, 2009 meeting with the modelers at TAMU was held to discuss the modeling QAPP, exchange existing and historical data and determine what other data was still needed as well as discuss the timeline for modeling results.-

~~15~~20% completed – On-going

**Subtask 4.2:** The Technical Consultant will perform all necessary phases of modeling that facilitate development of the watershed protection plan as described in Task 5.

- Gathering historical data to characterize the watershed.
- Land Use data from Texas Parks and Wildlife was acquired for this project along with the necessary GIS files for the watershed.
- Once the modeling QAPP was approved TAMU began working on digitizing the land use data for the watershed from 2008 aerial imagery photography.
- TAMU is evaluating the flow data from USGS gage stations and from historical sampling sites to model flows for the Geronimo Creek Watershed.
- TAMU is gathering the existing and historical data and GIS layers that will be needed for the SELECT modeling.

~~3~~30% completed – On-going

## TASK 5. Watershed Partnership and Plan Development

**Subtask 5.1:** GBRA will subcontract with the Texas AgriLife Extension Service (Extension) to facilitate the development of the Geronimo Creek Watershed Partnership Steering Committee and associated subcommittees for the purpose of plan development, including Texas Watershed Steward training for stakeholders.

- October 1-5, 2009 - calls and emails between GBRA and AgriLife to discuss powerpoint presentations and agendas for the public meetings held in Seguin and New Braunfels.
- The Geronimo and Alligator Creek Watershed Protection Plan public meetings were held on October 6 and 8, 2009. The October 6<sup>th</sup> meeting was held in Seguin at the GBRA River Annex, and the October 8<sup>th</sup> meeting was held in New Braunfels. Both meetings were well attended and attendance sheets and agendas are attached to this report. The meetings began with a welcome from County Representatives and the GBRA General Manager; Debbie Magin presented historical Water Quality Data; Brian Koch presented Watershed Protection Planning; Nikki Dictson presented on the Geronimo and Alligator Creeks Watershed Partnership; Lee Gudgell presented on the Geronimo Creek Monitoring Project; Ward Ling presented the Next Steps and Texas Watershed Steward Program.
- Extension developed materials for the public meetings including a letter and survey. The survey instrument was disseminated to the public through, mail, email, and handed out in the public meetings. The public could use the survey to indicate their desired level of participation in the project, and was used as an aid to select the steering committee for the project.
- Project information is and will continue to be updated on the website: [geronimocreek.org](http://geronimocreek.org) including meeting times and dates, press releases and any publications, and general project materials.
- Debbie Magin, Ward Ling and Nikki Dictson attended the public meeting for the Flood Protection Study being conducted by Guadalupe County on November 4<sup>th</sup>, 2009. Ward Ling presented an overview of the Geronimo and Alligator Creeks Watershed Protection Plan.
- Extension developed advertising materials for the Texas Watershed Steward Workshop including a flier, press release, and emails to the public. Fliers and information on TWS were delivered at the two public meetings.
- The Texas Watershed Steward Workshop for the Watershed was held on November 10, 2009 in Seguin at the GBRA River Annex and was a great success with 73 in attendance at the all day workshop. Workshop topics included: Program introduction, Overview of watershed systems; Overview of watershed impairments; Managing to improve watershed function; and Community driven watershed protection and management discussion.
- Ward Ling and Debbie Magin presented an update on the Geronimo and Alligator Creek WPP project at the Southeast and South Central Texas WSCS meeting on December 3, 2009 in Columbus.

- TWS workshop attendees filled out surveys about the workshop, their knowledge of the issues and their intentions to implement management practices in their watershed. These surveys will be evaluated along with the 6 month post surveys for this project.
- Project materials were developed for the Partnership Meetings in January and February including agendas, presentations, handouts, ground rules, etc. These materials were reviewed and edited during the month of December and these edits were incorporated for a final review.
- In order to develop a balanced draft Steering Committee, Extension and GBRA consulted with Extension County Agents, Comal and Guadalupe SWCD, and local and regional governments. Contacts were made with various local interest groups. Participation surveys were assessed and planning meetings occurred on December 8<sup>th</sup> and conference calls on the 11<sup>th</sup> and 18<sup>th</sup> were held to determine the draft Steering Committee Members.
- Invitations/Reminders were sent out to the Steering Committee and to the public to publicize the January 12, meeting.

~~200~~15% completed – On-going

**Subtask 5.2:** Extension, in collaboration with GBRA, will develop the Geronimo Creek Watershed Protection Plan.

- Extension and GBRA are gathering historical data and information that will be needed for the plan and to characterize the watershed.

35% completed – On-going

### **III. Related Issues/Current Problems and Favorable or Unusual Developments**

The Quality Assurance Project Plan was amended to reflect changes in personnel at GBRA, updated the Surface Water Quality Monitoring guidance from 2003 to 2008 and to extend the monitoring task from 12 to 24 months. The sampling portion of the project was severely hampered by the drought. By extending the project we will be able to attempt to sample the dry sites and obtain the proposed number of sampling events.

### **IV. Projected Work for Next Quarter**

The following will be accomplished during the coming quarter:

- a. Hold the first steering committee meeting in January and second in February.
- b. Hold the first work group meetings in March.
- c. Continue to monitor the routine and targeted sites.
- d. Update the website with a table of sites and associated data.
- e. Send out data tables to steering committee members.
- f. Apply to TCEQ for permanent station location numbers for monitoring sites.

- g. Work will continue on watershed characterization and data gathering efforts in the Geronimo Creek Watershed.
- h. Project materials will be developed for the Partnership and Work Group Meetings in January, February, and March including agendas, presentations, handouts, etc.
- i. Invitations/Reminders will go out to publicize the January, February, and March Meetings.
- j. Modeling and data assessment will continue over the next quarter.
- k. GBRA and Extension will develop an outline for the draft WPP and start incorporating background information and data.