

Water Quality Monitoring in the Geronimo Creek Watershed and Facilitation of the Geronimo and Alligator Creeks Watershed Partnership

Guadalupe-Blanco River Authority
FY2011 CWA Section 319(h)
Project No. 11-06

Quarterly Report Number 7

Covering work accomplished April through June, 2013

July 12, 2013

I. Abstract

Water quality monitoring was continued. Wet weather targeted monitoring for the spring quarter was conducted in May, with five stations being dry. GBRA and Extension held the meeting of the Geronimo Creek/Alligator Creek Watershed Partnership on June 10, 2013. First annual cleanup was very successful (approximately 100 volunteers, just under 3,000 pounds of trash at seven locations). First newsletter was distributed and name was selected for future newsletters (The Geronimo Flow).

II. Overall Progress and Results by Task

TASK 1: Project Administration

Subtask 1.1: GBRA 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 to the project website.

- GBRA prepared the progress report for January through March 2013 and submitted the report on April 11, 2013.

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 January through March 2013 on April 30, 2013.

30% complete – On-going

Subtask 1.3: GBRA 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. GBRA will develop lists of action items needed following each project coordination meeting and distribute to project personnel.

- Many calls and emails were shared between GBRA, Extension, TSSWCB, and Partnership members, to plan for the quarterly partnership meeting and for the Geronimo and Alligator Creeks Cleanup Event. Discussions were had with Extension and TSSWCB concerning possible no-cost extension of project through September 30, 2014.

30% complete – On-going

Subtask 1.4: GBRA will continue to host and maintain a website (<http://geronimocreek.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. Extension shall contribute content matter for the website as appropriate.

- June 24, 2014 - The Geronimo Creek Partnership webpage was edited with the changes suggested by Extension (attached) and to post the first newsletter.

30% complete – On-going

TASK 2. Quality Assurance

Subtask 2.1: GBRA will develop a QAPP for activities in Task 4 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.

Consistent 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 (NELAC) 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) and Volume 2: Methods for Collecting and Analyzing Biological Assemblage and Habitat Data (RG-416).

- No work was performed under this task in this quarter.

25% completed – On-going

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

- No work was performed under this task in this quarter.

20% completed – On-going

TASK 3. Support and Facilitation of WPP Implementation

Subtask 3.1: Extension will continue to employ a Geronimo Creek Watershed Coordinator to engage and facilitate the Geronimo Creek Watershed Partnership. In coordination with GBRA, the Watershed Coordinator will be responsible for the general oversight and coordination of all project activities, be responsible for reporting requirements and directing educational activities, and serve as the primary conduit for interaction with landowners, citizens, and entities to facilitate the implementation of the WPP. The Watershed Coordinator shall successfully complete (or have already completed) the Texas Watershed Planning Short Course. The Watershed Coordinator shall participate in Texas Watershed Coordinator Roundtables and the TSSWCB Southeast and South Central Texas Regional Watershed Coordination Steering Committee meetings, as necessary.

- The facilitation by AgriLife Extension continued under this contract. Major activities facilitated include the first annual Geronimo and Alligator Creeks Cleanup Event and the quarterly Partnership meeting.
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20% completed – On-going

Subtask 3.2: Extension will facilitate public participation and stakeholder involvement in the watershed planning process, specifically by facilitating meetings of the Partnership Steering Committee (at least quarterly) and Work Groups (as needed) to provide regular updates on the status of monitoring efforts, progress in identifying implementation funding, and movement towards water quality restoration and seek input and recommendations on needed activities. Extension 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 WC will provide counties, cities and other partners with updates on progress of implementation of the WPP, if they are unable to regularly attend Partnership Steering Committee meetings.

- GBRA hosted the meeting of the Geronimo Creek/Alligator Creek Watershed Partnership on June 10, 2013. Extension facilitated. Presentations attached. The stream clean-up held in April was discussed.
- April 6, 2013 – Cleanup was held. A total of 7 planning meetings were held in the months prior to the event to coordinate efforts. Report was given at the June 10 Partnership meeting.
- Extension produced the first newsletter, The Geronimo Flow, and distributed it to stakeholders and had it posted to the project website.

10% completed – On-going

Subtask 3.3: Extension will assist governmental and non-governmental organizations (i.e., responsible parties in the Geronimo Creek WPP) in identification and acquisition of resources (financial and technical) to enable WPP implementation. Extension 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.

- Extension assisted with the preparations for the cleanup and worked the event. Extension purchased supplies, coordinated the site where the trash was accepted, and

- directed volunteers to their designated sites.
- Extension made contact with representatives from the Cities of Seguin and New Braunfels for the purpose of engaging them in conversation to explore the potential for developing grant proposals for the TCEQ 319(h) Nonpoint Source Program. Seguin is waiting to see if their latest proposal (submitted last year) will receive funding before attempting developing another proposal. New Braunfels is actively working through the development and implementation of their phase II stormwater permit, and want to wait until that is more complete.
 - Extension contacted County Extension Agents to begin work on coordinating for both Comal and Guadalupe counties to participate this fall in the Texas Department of Agriculture Hog Out County Grants Program.

20% completed – On-going

Subtask 3.4: Extension will 1) evaluate and track progress toward achieving milestones established in the WPP; and, 2) work with GBRA to assess water quality data collected through the Clean Rivers Program, this project, and other data collection efforts in relation to achieving load reductions. Extension will develop, publish, print, and distribute to stakeholders, a biennial addendum to the Geronimo Creek WPP that describes modifications/updates to goals and milestones, explains new understandings of sources and cause of water quality issues, documents success in achieving goals and milestones, and success in achieving water quality improvement and load reductions. As the WPP will be published in fall 2011, this draft biennial addendum would most appropriately be published in fall 2013. This draft biennial addendum will function as the Final Report for this project.

- Extension began development of spreadsheets for the purpose of tracking implementation activities. All implementation activities listed in Tables 8.1 and 8.2 will be carefully monitored and updated as implementation proceeds.

0% completed– On-going

Subtask 3.5: Extension will coordinate education and outreach activities as identified in the Geronimo Creek WPP. GBRA will make presentations on the Geronimo Creek Partnership and WPP and general NPS pollution information to local schools and community organizations. Extension 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 Geronimo Creek watershed.

- The first annual stream clean-up was held for the Geronimo and Alligator Creeks.
 - Event held April 6, 2103.
 - Sites were selected and assigned to groups, based on age appropriateness and access. Recon found 8 sites for the first year.
 - Navarro ISD provided primary location for registration
 - Teams that participated:
 - Alamo Industrial employees and families
 - Texas Lutheran University Biology class
 - Continental employees and families
 - Families of Oak Springs Subdivision
 - Geronimo Creek Retreat (labor and cash)

- Navarro High School Interact
 - Seguin High School National Honor Society
 - Dr. Elizabeth Fowler DVM and family
 - Friedens Church men volunteers
 - Individuals and families
- City of New Braunfels Solid Waste Department donated disposal/recycling services for the event (estimated value of \$1,500) and allowed use of space at the New Braunfels Airport to stage dumpsters and second registration location. Participants collected almost 3,000 pounds of trash and debris.

Media outreach materials included: a pre- and post-event press release, radio public service announcements, and postings to the project webpage. The New Braunfels newspaper ran two post-event articles.

30% completed – On-going

Subtask 3.6: GBRA will include information about this project in GBRA newsletters (e.g., *River Run*) and Clean Rivers Program publications regarding progress to implement the Geronimo Creek WPP. GBRA will solicit content matter for these publications from Project Partners as appropriate.

- GBRA included information on the watershed protection plan and implementation activities in the final 2013 Clean Rivers Program Basin Summary Report.
- GBRA's Public Communication Department worked with the Seguin High Schools Speech and Technology Summer School class and the Environmental Science class. These classes chose the Geronimo Creek watershed to be the focus of their classes. GBRA gave them a tour of the watershed and assisted them with using resources such as Google Earth. The Speech and Technology class worked on outreach items, such as magnets, bumper stickers and placemats, to raise awareness of Geronimo and Alligator Creeks (attached). They contacted several restaurants in the watershed and got their permission to use the specially designed placemats on September 17 (World Water Monitoring Day). The Environmental class is writing a grant that GBRA's River Foundation can submit to the Toyota Foundation for funding of a Bacterial Source Tracking project.
- GBRA also gave several presentations at the Seguin Outdoor Learning Center and the Big Red Barn. These presentations centered on water quality, macroinvertebrates, environmental protection and highlighted the Geronimo Creek (Comal and Seguin ISDs).
- The Spring 2013 River Run edition featured an article summarizing the results of the April Cleanup Event.

20% completed– On-going

Subtask 3.7: Extension will develop, publish, and distribute 4 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. Extension will solicit content matter for the newsletters from project partners as appropriate.

- Extension compiled the first newsletter. Requested suggestions for a name from Steering Committee members at June meeting. Settled on “*The Geronimo Flow*”. The newsletter was distributed via email to stakeholders and posted to a new tab created on the project webpage.

20% completed – On-going

Subtask 3.8: Extension will facilitate communication with stakeholders in order to engage the public and affected entities in WPP implementation. Extension will utilize all appropriate communication mechanisms including direct mail, e-mail, the project website, and mass media (print, radio, television). Extension will develop and disseminate general project informational materials, including, but not limited to, flyers, brochures, letters, factsheets, news releases, and other appropriate promotional publications. Extension will develop and utilize a listserv (e.g., <http://listserv.tamu.edu/>) to facilitate direct discussion between stakeholders. Extension will explore the appropriate use of social media (i.e., Facebook) as a stakeholder communication mechanism for this watershed. Extension will solicit content matter for educational materials from project partners as appropriate.

- Extension emailed the steering committee information about the cleanup and the upcoming meeting.
- Extension and GBRA had multiple phone conversations with interested volunteers, both before and after the cleanup event. Extension and GBRA developed pre- and post press releases, radio PSAs, and announcements for the event on the project webpage.

0% completed – On-going

Subtask 3.9: Extension will make deliberate efforts to increase awareness of the WPP and secure implementation support thereof from county and municipal governments throughout the watershed.

- Extension made contact with representatives from the Cities of Seguin and New Braunfels for the purpose of engaging them in conversation to explore the potential for developing grant proposals for the TCEQ 319(h) Nonpoint Source Program. Seguin is waiting to see if their latest proposal (submitted last year) will receive funding before attempting developing another proposal. New Braunfels is actively working through the development and implementation of their phase II stormwater permit, and want to wait until that is more complete.
- Extension contacted CEAs to begin work on coordinating for both Comal and Guadalupe counties to participate this fall in the Texas Department of Agriculture Hog Out County Grants Program.
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10% completed– On-going

Subtask 3.10: Extension will maintain a spreadsheet of watershed stakeholders and affected parties for use in engaging the public in the watershed planning process. The spreadsheet will be added to based upon previous efforts of Extension in TSSWCB project 08-06. The spreadsheet will represent a diverse cross section of Geronimo Creek landowners, citizens, local businesses, local and regional governmental entities and elected officials, state and federal agencies,

and environmental and special interest groups.

- Extension updated the stakeholder email spreadsheet with participant emails obtained from the cleanup event. This event added 41 new contacts to the stakeholder list. This email list was updated after the June 10th stakeholder meeting with any new emails, as usual.

0% completed – On-going

Subtask 3.11: Extension 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.

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10% completed – On-going

TASK 4. Water Quality Data Collection and Analysis

Subtask 4.1: GBRA will conduct routine ambient monitoring at seven sites once per month, collecting field, conventional, flow and bacteria parameter groups. The QAPP developed in Task 2 will precisely identify the sites. The sampling period extends over 21 months. The number of samples planned for collection through this subtask is 147. Currently, routine ambient monitoring is conducted monthly at one station by GBRA (12576) through the Clean Rivers Program. Sampling through this subtask will complement existing routine ambient monitoring regimes such that routine water quality monitoring is conducted monthly at eight sites in the Geronimo Creek watershed. GBRA's Regional Laboratory will conduct sample analyses. Field parameters are pH, temperature, dissolved oxygen and conductance. Conventional parameters are total suspended solids, turbidity, sulfate, chloride, nitrate nitrogen, ammonia nitrogen, total kjeldahl nitrogen, chlorophyll-a, pheophytin, total hardness, and total phosphorus. Flow parameters are flow collected by gage, electric, mechanical or Doppler, including severity. Bacteria parameter is *E. coli* enumerated using USEPA Method 1603.

- April 16, 2013 -
 - Routine monitoring at seven sites - CRP monitoring at one site. One site was dry – Geronimo Creek at Huber Road (20742).
- May 13, 2013 -
 - Routine monitoring at seven sites - CRP monitoring at one site. One site was dry – Geronimo Creek at Huber Road (20742).
- June 12, 2013 -
 - Routine monitoring at seven sites - CRP monitoring at one site. One routine site was dry and not sampled (Geronimo Creek at Huber Road (20742)).

20% completed – On-going

Subtask 4.2: GBRA will conduct routine ambient monitoring at six sites once per quarter year, collecting field, conventional, flow and bacteria parameter groups; specific parameters are defined in Subtask 4.1. The QAPP developed in Task 2 will precisely identify the sites. The sampling period extends over seven seasons. The number of samples planned for collection through this subtask is 42. Spatial and seasonal variation will be captured in these snapshots of watershed water quality. GBRA's Regional Laboratory will conduct sample analyses.

- Dry weather monitoring for the summer quarter was conducted on June 12, 2013. Of the six targeted and eight routine sites, four sites were dry (Geronimo Creek at Huber Road (20742), Alligator Creek at Barbarosa Road (20750), Alligator Creek at FM 1102 (20748). And Alligator Creek at FM 1101 (20749)). The unnamed tributary at Laubach Road (20753) and Alligator Creek at Huber Road 20743) were dry with pools.

20% completed – On-going

Subtask 4.3: GBRA will conduct biased flow monitoring at fourteen sites once per season under wet conditions, collecting field, conventional, flow and bacteria parameter groups; specific parameters are defined in Subtask 4.1. These sites shall be the same as the sites for routine ambient monitoring described in subtasks 4.1-4.2. If a storm event was captured under routine monitoring in subtasks 4.1-4.2, a separate biased flow sample will not be collected under this subtask. The QAPP developed in Task 2 will precisely identify the sites. The sampling period extends over seven seasons. The number of samples planned for collection through this subtask is 98. Spatial, seasonal and meteorological variation will be captured in these snapshots of watershed water quality. GBRA's Regional Laboratory will conduct sample analyses.

- Wet weather monitoring was conducted for the spring quarter on May 13, 2013. Of the six targeted sites and eight routine sites, five sites were dry (unnamed tributary at Laubach Road (20753), Geronimo Creek at Huber Road (20742), Alligator Creek at Barbarosa Road (20750), Alligator Creek at FM 1102 (20748). And Alligator Creek at FM 1101 (20749)).

10% completed – On-going

Subtask 4.4: GBRA will conduct routine groundwater monitoring at up to four sites (e.g., two spring and two wells) once per quarter year, collecting field, conventional, flow and bacteria parameter groups; specific parameters are defined in Subtask 4.1. The QAPP developed in Task 2 will precisely identify the sites. The sampling period extends over seven quarters. The number of samples planned for collection through this subtask is 28. GBRA's Regional Laboratory will conduct sample analyses.

- GBRA collected groundwater well samples at two sites and one spring site on March 25, 2013 (spring quarter) and June 12, 2013 (summer quarter).

20% completed – On-going

Subtask 4.5: GBRA will transfer monitoring data from activities in subtasks 4.1-4.4 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 the *TCEQ Surface Water Quality Monitoring Data Management Reference Guide*. GBRA will post data from monitoring activities collected in subtasks 4.1-4.4 to the project website in a timely manner. GBRA will submit Station Location Requests to TCEQ, as needed, to obtain TCEQ station numbers for new monitoring sites. Data Correction Request Forms will be submitted to TSSWCB whenever errors are discovered in data already reported. All monitoring data files, data summary reports and data correction request forms will also be provided to Extension. GBRA will input monitoring regime, as detailed in the QAPP, into the TCEQ CMS.

- Data was submitted to TSSWCB for March 2013 on May 21, 2013.
- GBRA has been instructed to discontinue submittal of data to TSSWCB. TCEQ and TSSWCB are developing a process to allow contractors to submit data directly to TCEQ's SWQMIS.

20% completed – On-going

Subtask 4.6: GBRA will develop a final Assessment Data Report summarizing water quality data collected through Task 4. The Report shall, at a minimum, provide an assessment of water quality with respect to effectiveness of BMPs implemented and a discussion of interim short-term progress in achieving the Geronimo Creek WPP water quality goals. GBRA will summarize the results from Task 4 in the GBRA's Clean Rivers Program Basin Highlights Report and Basin Summary Report. GBRA will provide updates on the results and activities of Task 4 to the Steering Committee.

- No work was performed under this task in this quarter.

0% completed– On-going

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

- Routine monitoring was conducted.
- The first annual stream clean-up was held on Geronimo and Alligator Creeks (almost 100 volunteers, just under 3,000 pounds of trash at seven locations).
- wet weather monitoring was conducted in the quarter. But it was not significant enough to put flow in all targeted sites.

IV. Projected Work for Next Quarter

The following will be accomplished during the coming quarter:

- a. Monitoring will continue at routine sites.
- b. Webpage will continue to be updated.
- c. Newsletter development will continue.
- d. Extension will give a presentation at Seguin Kiwanas.
- e. Extension is looking at purchasing newspaper space for the purpose of publishing monthly articles that will educate about practices to improve water quality in the area.

- f. Extension will work with project partners to prepare for the new (pending approval) Comal-Guadalupe SWCD field technician position.
- g. Extension will work with Comal and Guadalupe Counties to encourage them to participate in the TDA Hog Out County Grants Program.
- h. Extension will work with Comal and Guadalupe Counties On-Site Sewage Facilities programs to advertise the homeowner septic system workshops coming this fall.