

Bacteria Reduction Plan
Guadalupe River Above Canyon Lake TMDL Implementation Project

Stakeholder Meeting
Thursday, December 13, 2012, 11:45 a.m.
Guadalupe Basin Natural Resources Center Classroom

Meeting Summary

The following document is a review of items discussed at the stakeholder meeting with additional information and graphics inserted where applicable. Please contact Tara Bushnoe (tbushnoe@ugra.org) for any additional information or questions.

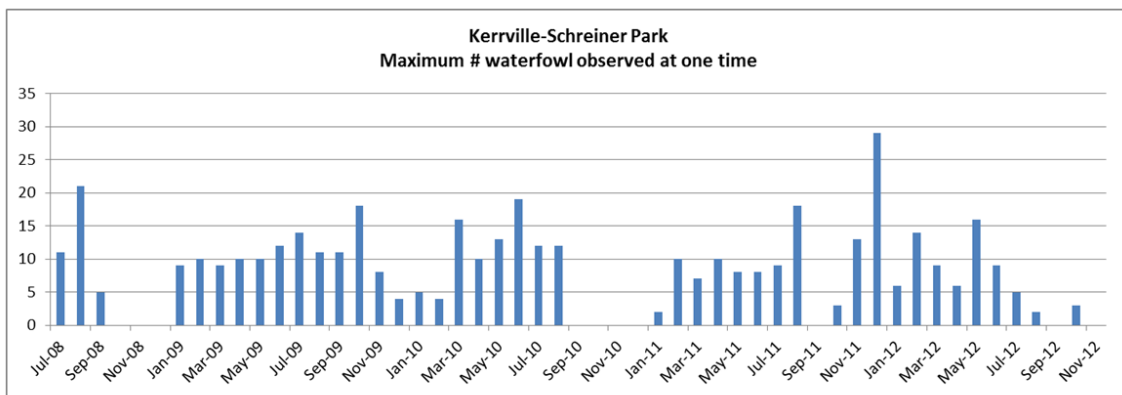
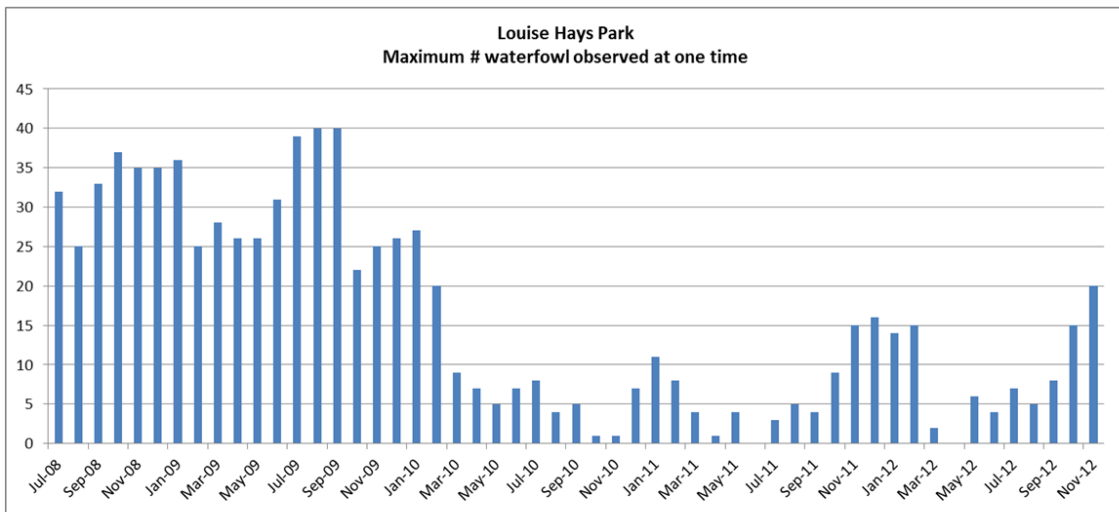
- Welcome and introduction
 - Tara Bushnoe, Bacteria Reduction Plan project manager for UGRA
 - Individuals present at the meeting represented entities or organizations that have been identified as stakeholders because of their interest in the water quality of the Guadalupe River in Kerr County.
 - The role of the stakeholder is to:
 - Provide input and feedback on Bacteria Reduction Plan activities
 - Stay informed and apprised of all Bacteria Reduction Plan activities
 - Assist in disseminating accurate information
 - The meeting material was presented jointly by Tara Bushnoe and Lauren Young of the Texas Commission on Environmental Quality TMDL Program.

- Bacteria Reduction Plan and Implementation Plan Year One Update
 - Project background and history: UGRA has been working with the Texas Commission on Environment Quality (TCEQ) to address an area of the Guadalupe River that has been identified as impaired because of elevated bacteria levels. Specifically the area from the confluence of Town Creek through Flat Rock Lake.
 - Under the federal Clean Water Act, states must establish water quality standards, have regular monitoring to determine whether standard are met and prepare an inventory of the status of water quality. Every two years, the TCEQ reviews available water quality data and compiles the results in the “Texas Integrated Report.” Water bodies that do not meet water quality standards are placed on the list of impaired water bodies called the 303(d) list.
 - Once a water body is on the 303(d) list the state is required by the Clean Water Act to develop a [Total Maximum Daily Load \(TMDL\) study](#) to characterize the scope and severity of the impairment. A TMDL is like a budget for a specific pollutant. In our case bacteria levels are “over budget” in the Guadalupe River in Kerrville, and the TMDL outlines how much bacteria load reduction needs to take place in order to meet standards for recreation.

- Once the TMDL was completed in 2007, UGRA and other local entities collaborated with TCEQ to develop a plan to address the bacteria impairment. UGRA applied to TCEQ for grant funding to put the plan together locally. That involved hiring an engineer to assess what bacteria reduction strategies would be most effective and working with a stakeholder group to propose a locally endorsed plan which is called the Implementation Plan.
- The goal of the Implementation Plan is to put the recommendations of the TMDL into action to reduce bacteria concentrations so that the contact recreation standard will be met in the Guadalupe River in Kerrville. It is a local solution to a local problem that answers the questions: What are people are willing to do to help clean up the water? Who will be responsible? When should the activities be completed?
- [The Implementation Plan for the Guadalupe River above Canyon Lake](#) (the official title of our plan) specifically outlines management measures to address bacteria pollution from wildlife, human contributions, pet waste, urban runoff and wastewater.
- UGRA applied to TCEQ for grant funding to put the management measures in place. This grant is called the “Bacteria Reduction Plan”
 - Funded by TCEQ Nonpoint Source Program
 - \$475,201 Total Project
 - 60% Federal Funding (\$285,121)
 - 40% Local Match (\$190,080) – through in kind services
 - Project term: October 15, 2011 – August 31, 2014
 - Partners
 - UGRA
 - City of Kerrville
 - Kerr County
 - TXDOT
- Management measures update – the following is an update of what has been done during the last year to address each of the management measures.
 - Wildlife (Partners involved: UGRA, City of Kerrville, Kerr County, TXDOT)
 - Install bird exclusion/deterrent structures
 - Bird deterrent structures designed for SH 16 and SH 534 bridges
 - Plans reviewed by local partners
 - Comments incorporated
 - TXDOT utility installation agreement executed
 - Publically bid
 - Contractor selected for installation of structures on three spans of SH 16 bridge. Structures will be a combination of ¾” polyethylene netting and spikes to prevent nesting and roosting in these sections.
 - Construction start date December 17, 2012. One lane closure in each direction of SH 16 Bridge.



- Reduce bird feeding and manage waterfowl population
 - Both of these management measures are still in the planning stages and aimed at reducing contributions from resident duck and geese populations in Louise Hays and Kerrville-Schreiner Parks
 - 24 surveys have been conducted. In all, waterfowl counts in Louise Hays Park are lower than in prior years and counts at Kerrville-Schreiner Park are similar to prior years.



- Human Contributions (Partners involved: UGRA, City of Kerrville, Kerr County, TXDOT)
 - City of Kerrville Wastewater collection system improvements in FY12
 - \$7,938,219.60 committed to improvements
 - 25,660 lateral feet of collection line system repaired/replaced
 - 1 lift station replaced (Birkdale station)
 - 15 manholes replaced
 - 59 manholes rehabilitated
 - 9 city cleanouts replaced
 - 276 customer service cleanouts repaired
 - Gravity main footage
 - 54,481 lateral feet inspected via camera
 - 190,225 lateral feet cleaned/vacuumed
 - 1,698 lateral feet root sawed
 - I think most people in our community would be **amazed** at what goes into keeping this vital infrastructure operational.
 - OSSF priority area mapping
 - In Kerr County, the Environmental Health Department regulates OSSFs (on-site sewage facilities) and we worked with them to develop the plan
 - Designated a priority area – 300 feet from water body
 - Identify properties in area and cross referenced that information with OSSF database to determine households with OSSFs in the priority area.

Watershed	Total Number of Septic Properties	Number of Septic Properties in Priority Area
Town Creek	276	21
Camp Meeting Creek	906	69
Quinlan Creek	121	9
Guadalupe River	84	6
Total	1390	105

- OSSF homeowner education – in development
- Pet Waste (Partners involved: UGRA, City of Kerrville, Kerr County)
 - Education program – in development
 - Pet waste stations
 - Seven active station in Flat Rock Park
 - Five active stations in Kerrville Parks
 - Ten planned stations along River Trail



- Effectiveness monitoring
 - Weekly monitoring of seven pet waste stations in Flat Rock Park which includes weighing quantity of waste collected.
 - 80-100 pounds of waste/month
 - 2,700 pounds removed since November 2010
- Urban Runoff
 - Storm water education programs
 - Interactive kiosk to teach users about non-point source pollution and storm water runoff has been purchased and is planned to be placed at Riverside Nature Center and other public venues in 2013.
 - UGRA makes numerous presentations each year to students and other groups using the watershed model to demonstrate nonpoint source pollution.



- River clean ups
 - 2012 UGRA Annual River Clean collected 11,165 pounds of trash
 - UGRA Annual River Crossing Clean Up Program 16,170 pounds in FY12
 - Kerrville resident Tim Lewis has initiated his own clean up on Town Creek four times per year. This effort is supported by UGRA, City of Kerrville, and Riverside Nature Center
 - Street sweeping
 - City of Kerrville conducted 488 hours of street sweeping in FY12
 - Wastewater
 - The Kerrville wastewater treatment facility is downstream of the bacteria impairment and therefore has zero contribution to bacteria loads.
 - The only other permitted wastewater treatment facility in the project area is for Hill Country Camp and that system is currently not in operation.
 - Future plans – activities planned for Year 2 of Bacteria Reduction Plan
 - Continuation of Year 1 activities (water quality monitoring, surveys, street sweeping, river clean up, watershed model presentations)
 - Complete bird deterrent structures
 - Install additional pet waste stations
 - Waterfowl management
 - OSSF homeowner’s guide development and distribution
 - Education
 - Evaluating effectiveness
 - Need to develop a different survey method for measuring changes in public attitudes, behaviors, and knowledge of water quality pollution issues.
 - Web page development
 - TCEQ is going to launch a website for the Bacteria Reduction Plan that will outline project activities and track status.
 - The website will include maps, graphs, photos and links to related information.
 - The interactive map component will allow the user to zoom into the watershed and view the location of various activities.
- Questions and Answers
 - Contact information for additional questions
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