

# Buck Creek Watershed Partnership

July 2012 Newsletter

<http://buckcreek.tamu.edu>

## Buck Creek WPP Comments Received and Being Addressed

By Lucas Gregory

The Buck Creek Watershed Protection Plan (WPP) has made its way through the preliminary review process. Comments, questions and suggestions were received from EPA in mid-May and are actively being addressed. Many of the received comments and questions highlighted areas where some clarification or better wording was needed to make the intentions of the plan clear; however, several of the comments received were more substantial and require a fair amount of effort to address.

The manner in which pollutant loading to the creek was calculated, potential loadings from individual pollutant sources and the methods for selecting management recommendations are the items that received the most questioning. This information is largely contained in Chapters 7 and 9 and Appendices C, D and F. Specific questions related to exactly how loads and expected load reductions were calculated. To respond to these questions, the project team has been conferring and is reviewing the strategies used to develop these assessments. The team is currently developing a refined approach that more appropriately evaluates loadings to the creek and better estimates potential load reductions from recommended management measures. It is anticipated that addressing these and other comments will be concluded near the end of July 2012. You will be notified when the edits are completed and a revised draft will be posted on the project website.

At that point, the WPP will again go to EPA for review. EPA will review the plan to ensure that it meets its "9 Key Elements of a Successful Watershed Plan." This review should take approximately 60 days for EPA to complete. At that point, EPA will either agree that the plan does meet its "9 Key Elements" or indicate that it does not and for what reasons. Following this acceptance review, WPP implementation efforts in the watershed should be eligible for grant funding from EPA through its Clean Water Act Section 319(h) nonpoint source grant program.



## Nitrogen Crediting in Buck Creek

By Alejandra Arreola-Triana

Researchers working on the Buck Creek Watershed Protection Plan (WPP) will hold a field day where area residents can learn how to take advantage of the nitrogen available within the Buck Creek Watershed.

The Rolling Plains Summer Crops Field Day will start at 7:30 a.m. on July 17 at the Chillicothe Research Station, located at 1340 FM 392 in Chillicothe, Texas. The event will include a field tour and discussions on topics such as irrigation water-use efficiency, tillage and nitrogen crediting.

Dr. Paul DeLaune, assistant professor of Environmental Soil Science at the AgriLife Research and Extension Center at Vernon, will talk to the Rolling Plains' residents about nitrogen crediting.

"Nitrogen crediting account for the nitrate that is in irrigation water," DeLaune said. "By using the nitrogen that is naturally available a producer can reduce the use of commercial fertilizer."

Reducing the use of fertilizers and "mining" nitrogen from local groundwater has the potential to improve water quality in the watershed.

"Buck Creek has been identified by the state as having a water quality concern due to elevated nitrate levels," DeLaune said. "Water quality data collected in Buck Creek through efforts to develop the Buck Creek WPP suggests that groundwater return-flow to the creek may contribute the nitrate seen in the creek."

With nitrogen crediting, DeLaune said, irrigators can apply less fertilizer than what is required by a crop and then make up for this deficit with the nitrogen available in their irrigation water. "Accounting for this available nitrogen in irrigation water has the potential to reduce nitrate levels in local groundwater resources." DeLaune said.

If this is done on a wide scale, DeLaune added, the nitrate levels in the groundwater can be reduced over time, which may result in a decrease in the quantity of nitrate making its way into the creek. "Accounting for all sources of nitrogen is the first step in developing a balanced nitrogen budget, which decreases the likelihood of over-applying nitrogen and movement of nitrogen below the root zone."

DeLaune said the nitrogen source is still unknown. "It should be noted that historical groundwater data pre-dating commercial fertilizer production indicate elevated nitrate levels in the groundwater," he said.

Dr. Bridget Scanlon from the Bureau of Economic Geology at the University of Texas is conducting research to help identify the source of nitrate in the Seymour Aquifer.

Nitrogen crediting not only benefits the Buck Creek Watershed, but also the producers' pocketbook. The potential savings depend on the amount of nitrate in their well and the amount of irrigation water applied, as well as the price of nitrogen. "The average nitrate concentration in the Seymour Aquifer is 13.5 mg/L," DeLaune said. "If a producer applies 12 inches of this water, he is applying 37 pounds of nitrogen per acre. If nitrogen costs \$0.60 per pound, then the producer will save \$22 per acre."

DeLaune currently has a demonstration of nitrogen crediting at the Chillicothe Research Station. "The demonstration consists of a fertility demonstration," he said, "where cotton was fertilized at different rates, either accounting or not accounting for groundwater nitrogen levels."

DeLaune's results so far show that applying nitrogen credits does not limit quantity or quality of cotton produced and can lead to substantial savings.

During the field day, producers will have the opportunity to see the demonstrations and observe some initial results.

For more information, about the field day contact DeLaune at 940-552-9941 ext. 207, or by email [pbdelaune@ag.tamu.edu](mailto:pbdelaune@ag.tamu.edu).

### AgriLife Extension helps test new mesquite control herbicide

Range specialists from the Texas AgriLife Extension Service have been working with Dow AgroSciences LLC to develop a new herbicide for mesquite control. The new herbicide, Sendero, is the "new standard for mesquite control in Texas," according to the company.

The recommended use for Sendero is 28 ounces per acre and it has a high, 56–75 percent, control rating. It has been approved by the U.S. Department of Agriculture Natural Resources Conservation Service. Use of Sendero as a broadcast application on mesquite has been approved for use in the Natural Resources Conservation Service Environmental Quality Incentives Program brush control program.

The new herbicide has many advantages such as having non-restricted use—meaning there is no need to apply for a pesticide license, no livestock grazing restrictions, and appears to be very specific to mesquite.

For more information on Sendero, read the AgriLife Today story at <http://today.agrilife.org/2012/06/19/agrilife-extension-helps-test-new-mesquite-control-herbicide/>.

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