

## **Arroyo Agricultural Issues Work Group Meeting**

Meeting Summary – November 4, 2004, 1:00 – 3:00pm

Attending Work Group Committee Members – 11/4 Meeting

Kevin Wagner – TSSWCB  
Richard Eyster – TDA  
Cecilia Gerngross – TWRI/TCE  
Juan Anciso – TCE  
Jaime Longoria – Hidalgo SWCD  
Wi-Bin Chang – TAMU, Kingsville  
Shancar – TAMU, Kingsville  
Larry Skloss – Hidalgo SWCD  
Gene Lester – Arroyo Colorado Audobon  
Kay Jenkins – TPWD  
Denise Gentsch – Syngenta  
B. Eduardo Mendez – TSSWCB  
Osvaldo Longoria – USDA-NRCS  
Roger Miranda – TCEQ  
Ray Prewett - TCM  
Laura De La Garza – Citizen  
Andy Garza – TSSWCB

### **Welcome and Introductions – Andy Garza:**

Mr. Garza welcomed the group and introductions were made.

### **Arroyo Colorado TMDL Progress Report – Roger Miranda:**

In 2002, TCEQ completed a draft TMDL report for the Arroyo. TCEQ recognized that the 90% reductions described by the draft TMDL were not reasonable. As a result of uncertainty in the modeling used, TCEQ is moving forward with a project to improve the modeling. A timeline was distributed to the group for discussion. Through a joint agreement with USGS, a study has been initiated to reduce the uncertainty associated with the model inputs. In-stream data collection begins in 2005 and will be completed in 2006. Once the data collection is completed, the Phase II TMDL Hydrodynamic and water quality modeling will begin. This will be completed in 2007. The final TMDL is expected to be adopted and approved in September 2008.

### **Watershed Action Plan Status & Timeline – Kevin Wagner:**

The Work Group will shoot for finalizing the watershed protection plan by March 2005 in order to be able to apply for FY05 Clean Water Act Section 319 funds.

### **Committee Input on Watershed Action Plan – Kevin Wagner:**

The Work Group then discussed, in detail, the agricultural sources of nutrients, the conservation practices needed to reduce nutrient runoff and the load reductions expected from the recommended conservation practices. Runoff from cropland, both irrigated and non-irrigated,

was identified as the primary agricultural source of nutrients. The practices recommended by the Work Group to address runoff from these sources include the following:

- Conservation Crop Rotation
- Residue Management
- Irrigation Water Management
- Irrigation System
- Nutrient Management
- Irrigation Land Leveling
- Irrigation Pipeline
- Grade Stabilization Structure
- Buffer Strips
- Cropland Conversion (i.e. Pasture Planting)

The Work Group estimated that with a good education program and 75% cost-share, 98% participation could be expected.

A 1998 report from TIAER provides a good estimate of the reductions that can be expected as a result of implementation of these conservation practices and will be utilized in the watershed plan to determine the expected loading reductions.

Education on nutrient management was identified as a key component to the success of the watershed plan. Through Free Soil Testing Campaigns and Crop Nutrition Management Meetings, the TCE currently provides education on nutrient management in the watershed. The Work Group discussed notifying all producers in the watershed and providing them information on what they could do to reduce nutrient runoff and the programs available to assist.

#### **Ag Edge-Of-Field Effects Study – Dr. Chang:**

The meeting concluded with a presentation by Dr. Chang from Texas A&M, Kingsville on Environmental Research in the Valley. A study was proposed to the Work Group to:

- Characterize water quality impacts from edge-of-field to drainage ditches in sub-watersheds.
- Study the mitigation capacities of the ditch ecosystems in the sub-watersheds.
- Monitor spatially along the ditches to measure pollutant losses due to decay and percolation into groundwater.
- Utilize available & measured waste loading data to calibrate SWAT (Soil & Water Assessment Tool) to estimate the total non-point source loading into the river.
- Apply DRAINMOD, a water management model for shallow water table soils to predict the effects of drainage and associated water management practices.
- Apply SWAT and hydrograph separation techniques to estimate base flow.
- Monitor shallow groundwater to assess the extent of agricultural pollution in the water table.
- Integrate SWAT and DRAINMOD to evaluate pollutant loading to the river through base flow in the sub watersheds.

#### **Adjourn – Andy Garza:**

The Work Group will plan to meet in January or February 2005. Reminders will be sent both one month and again one week in advance of the meetings. The meeting adjourned at 3:00.