

**Meeting Summary of the Arroyo Colorado Habitat Restoration Workgroup of the  
Arroyo Colorado Watershed Steering Committee  
Texas A&M University Kingsville – Citrus Center  
August 13, 2004**

**ATTENDING WORKGROUP COMMITTEE MEMBERS**

Roger Miranda – TCEQ  
Earlene Lambeth – TCEQ  
Laura De La Garza – Arroyo Colorado Watershed Coordinator  
Kay Jenkins – TPWD  
Olivia Gomez – TPWD  
Gary Jones – IBWC  
John Wallace – USFWS Laguna Atascosa National Wildlife Refuge  
Lisa Williams – The Nature Conservancy  
Neil Haman – TWDB

**CALL TO ORDER/WELCOME/INTRODUCTIONS**

Kay Jenkins (TPWD) opened the third meeting of the Habitat Restoration Workgroup meeting held in Weslaco on August 13, 2004. The workgroup members in attendance introduced themselves. Laura De La Garza was introduced and welcomed as the newly hired Arroyo Colorado Watershed Coordinator.

Kay Jenkins briefly stated the workgroup's purpose is to develop a habitat restoration plan that would restore and enhance fish and wildlife and wetland habitats in both the nontidal and tidal segments of the Arroyo Colorado to improve BOD and nutrient assimilation and thus reduce the low dissolved oxygen problems in the tidal segment. The workgroup's plan is to be included in the broader Watershed Protection Plan. The workgroup is also tasked with finding funding sources to implement the habitat restoration plan.

**AGENDA ITEMS**

Update on Funding

Kay Jenkins updated the workgroup on funding currently available to the workgroup. The grant agreement between TCEQ and TPWD for \$48,000 was signed by both agencies. The funds will be used to help TPWD facilitate the workgroup's activities and are budgeted for personnel salary and benefits, travel costs, and supplies. Kay stated that TPWD would start spending the funds September 1, 2004 which is the beginning of the new fiscal year for the state.

Kay Jenkins reported that the proposal that TCEQ and TPWD submitted to the General Land Office (GLO) for CMP Cycle 9 funding for a feasibility study for habitat restoration and modification in the Arroyo Colorado has been approved by the Coastal Coordination Council for \$85,400. On June 9, 2004, Kay submitted a workplan for the feasibility study that will be included in the contract agreement between GLO and TPWD once GLO receives their federal funds. Roger Miranda and David Buzan helped review the workplan. The agreement between TPWD and GLO is expected to be signed in October or November of 2004.

Discussion followed that while the feasibility study would be very helpful to the workgroup, its scope was limited to the Texas coastal zone which stops at the tidal boundary on the Arroyo Colorado. GLO staff indicated that including the area between Harlingen and the Port of Harlingen just upstream from the coastal zone in the feasibility study would be acceptable. Roger Miranda suggested that the workgroup also study the upstream portion of the Arroyo Colorado to look for potential projects that could address dissolved oxygen problems in the water before it reached the zone of impairment. He suggested that portions of the channel receiving wastewater effluent and agricultural runoff would be good areas to study. Roger said that the portion of the Arroyo Colorado upstream of where the Main Floodway splits into the North Floodway and the Arroyo Colorado near Mercedes is where restoration efforts need to be directed to improve water quality in the stream before it reaches the impaired zone. Olivia Gomez will contact TCEQ to find out which monitoring stations in the upstream channel have indicated dissolved oxygen problems.

Roger Miranda asked if TPWD has decided whether to issue a request for qualifications or an interlocal agreement to secure a consultant or university to conduct the feasibility study. Kay Jenkins said that she has started researching the two options but has not received guidance from headquarters yet. She will follow up on that issue so that TPWD will be ready to hire a firm or university when the funds become available from GLO. Kay said that TPWD would hire an intern and/or Olivia would do a lot of the background and landowner research so that the consultant or university hired to do the feasibility study could concentrate on technical aspects of the feasibility study.

Kay Jenkins suggested that the Habitat Workgroup could work with the Agriculture Workgroup to obtain funding from Department of Agriculture and EPA programs that seek to reduce nonpoint source pollution from agricultural activities.

#### Workgroup Discussion and Approvals

Kay Jenkins asked if there was a way that emails could be sent among group members with the workgroup members' names showing on the copy list. Earlene Lambeth stated that TCEQ was following HB 2921 and that email addresses could only be shared among the group members if the members gave their permission to share their information. Kay said that TPWD would contact members not present at the meeting to ascertain their interest in staying on the workgroup and if their information could be shared among the members.

Suggested short-term and long-term goals for the Arroyo Colorado Habitat Restoration Workgroup developed by Roger Miranda that were distributed at the previous meeting were handed out again. A timeline, developed by TPWD, for producing the habitat restoration component of the Watershed Protection Plan that reflects the tasks in the agreement between TPWD and TCEQ was also distributed. Roger Miranda mentioned that the first task in the agreement between TPWD and TCEQ is to recruit more members for the workgroup. Discussion followed about stakeholders that are missing from the Habitat Workgroup that should be represented on the committee. It was suggested that staff from USGS, drainage districts within the watershed, irrigation districts within the watershed, and the Army Corps of Engineers should be encouraged to attend meetings. Kay Jenkins and Laura De La Garza

said they would contact the identified stakeholder groups that have not been attending workgroup meetings to see if they could send representatives. Kay also said TPWD would survey workgroup members to see what time of day they would prefer to meet. It was suggested that notices of the meetings and articles about the Habitat Workgroup could be placed in agricultural publications received by local agricultural producers to possibly increase their interest in participating in the Habitat Workgroup. Other suggestions for increasing attendance and participation in the workgroup included serving food, working around agriculture seasons, avoiding Wednesday evenings for meetings, providing education credits and doing more outreach.

Gary Jones from the International Boundary Water Commission (IBWC) was asked to tell the group about IBWC's role in managing the Arroyo Colorado. The IBWC maintains perpetual easements on the levees and the floodway above Harlingen including the Banker Floodway, Main Floodway, North Floodway, and Arroyo Colorado Floodway. IBWC only maintains the portion of the channel between the Port of Harlingen and Harlingen when the City of Harlingen requests it. He said that property owners with floodway easement agreements are not allowed to grow plants over three feet tall. Gary said that work on the Arroyo Colorado began with a federal project in the 1930s and that the IBWC office in Mercedes has maps, surveys and plans of all the projects that have been done on the Arroyo Colorado. Kay Jenkins and Laura De La Garza asked if they could come to the IBWC office and look at what resources are available and Gary said that it could be arranged.

Roger Miranda said the Habitat Workgroup is going to need to apply for grants to study and implement projects at potential restoration sites and that all agencies involved need to help implement the plan once it is developed. He said that the Arroyo Colorado is not a natural system and that it essentially begins at the Mission water treatment plant whose effluent serves as the "spring" that introduces perennial flow into the Arroyo Colorado. Federal Project 5 straightened and dredged the segment of the Arroyo Colorado up to the Port of Harlingen. Work on the channel upstream of McAllen was done in the 1970s. Now the workgroup needs to design a system for the Arroyo Colorado that works more like a natural river, improving dissolved oxygen conditions in the stream and protecting Laguna Madre from water quality impacts. Roger said that the workgroup goals and task timelines would need to be revised somewhat. Kay Jenkins said that she would attempt to update the goals and timeline and email them out to the workgroup members for review.

Discussion followed on where to direct TPWD to investigate potential restoration projects and sites in the Arroyo Colorado. Kay Jenkins suggested that old river bends that were cutoff from the main channel in the straightening and widening projects would make ideal sites for restoration of fisheries habitat and water quality improvement. She wondered if the cutoff bends could be reconnected to the main channel by dredging to restore flow through them or if water would have to be pumped out of the main channel into the upstream end of a cutoff bend and then pumped back into the main channel from the downstream end of the bend. It was suggested that whether or not you would pump water over a levee or not would depend on where on the river the restoration project was located. In the nontidal section of the stream where the river channel is located within flood levees, the water would probably have to be pumped out. Roger Miranda mentioned that in similar projects on other water

bodies, water is pumped out and through constructed wetlands that served as polishing ponds and then returned to the main water body. Kay said the group needs to know what volume of water needs to be filtered or cleaned to achieve the needed improvement in dissolved oxygen levels. Roger mentioned that Marty Matlock from Texas A&M University studied nutrient concentration levels upstream and downstream of the 163 L Gate at Llano Grande Lake near Mercedes. The study showed that there was a decline in the nutrient concentration below the lake but that it was not a significant decline. Roger suggested reading about the New River project in the Imperial Valley, California for project ideas.

Other restoration ideas were discussed. Roger Miranda suggested looking at wastewater treatment plants to see if there were funds that could be sought to create wetlands to serve as polishing ponds for the effluent before it reaches the Arroyo. Drainage ditches receiving agriculture runoff could possibly be widened to allow for constructed wetlands. Roger said that irrigated agriculture occurs above the zone of impairment and only dry land farming occurred in the lower reaches of the Arroyo Colorado, therefore drainage ditches entering the impaired zone were not likely to contribute much to the dissolved oxygen problem according to TCEQ studies. Roger stated that the Harlingen #2 wastewater treatment plant and the City of San Benito's wastewater treatment plant were the last wastewater treatment plants discharging into the Arroyo Colorado before the tidal boundary or impaired zone.

The workgroup suggested that TPWD and IBWC should work together to compile the background information needed for the habitat restoration plan. The workgroup would also like to see the IBWC's model it uses to determine floodway and levee dimensions and configurations. Specifically, the workgroup would like to know what roughness coefficients are used in the model for different types of vegetation. The workgroup would like to work with IBWC to develop the most eco-friendly floodway design and management that would also meet flood reduction requirements.

Kay Jenkins handed out a copy of the workplan that she had provided to GLO in June for the feasibility study that will look at habitat restoration and modification potential on the Arroyo Colorado in the impaired zone and just upstream to Harlingen. She said that the scope of work for either the request for qualifications or the interlocal agreement for the feasibility study would follow that workplan. Kay hopes that one of the outcomes of the feasibility study would be typical constructed wetland designs that could be used in more than one location. Kay also wants the study to determine how many acres of wetlands need to be created or how much volume of water need to be treated through the wetlands to meet the goals of the workgroup and steering committee. The study will also look at whether there are modifications that could be made to the navigation channel to reduce the dissolved oxygen problems. Kay asked the workgroup if TPWD was on the right track in coordinating the habitat workgroup and the meeting attendees said it was. Roger hoped that TPWD would have the interlocal agreement or request for qualifications ready to go out once GLO and TPWD's agreement was signed for the feasibility study.

#### Presentation

Kay Jenkins then presented a slide show with maps and photographs from her field trip on March 17, 2004 with a game warden and a local wildlife biologist. Due to high flow that

day, TPWD was able to go up the river from Camp Perry all the way in to Harlingen as far as the hike and bike trail bridge. Kay showed photos and maps of drainages discharging into the Arroyo that might be potential sites for constructed wetlands. She also showed photos and maps of other potential habitat restoration sites such as borrow pits, gravel mines, public parks, and disturbed areas along the shorelines. The workgroup attendees said they would like to go on a similar field trip. Kay said that she would arrange one or more field trips during the feasibility study so the workgroup could provide input into the alternatives that are presented in the feasibility study. Field trips with IBWC to look at upstream sites will also be considered so that TPWD can have a better understanding of the configuration of the channel upstream of the North Floodway diversion. The channel above the Port of Harlingen up to Harlingen is not as modified as the upstream and downstream portions of the stream.

## **CLOSURE**

Expectations for the next meeting are to have the workgroup goals solidified and to have the agreement between TPWD and GLO for the feasibility study signed. TPWD will also work on compiling background information that will be helpful for the workgroup. The next meeting is expected to be held in November.