

# Arroyo Colorado Habitat Work Group

April 24, 2008

2:00 pm - 4:00 pm

## MEETING SUMMARY

### ATTENDEES

Kim Jones, TAMUK

Laura de la Garza, TWRI

Amy Rangel, TWRI

Megan Meier, TWRI

Cecilia Wagner, TWRI

Roger Miranda, TCEQ

Dr. Jose Martin, Universidad Automoma de  
Tamulipas, Mexico

Dr. Efran, Universidad Automoma de  
Tamulipas, Mexico

Wayne Bartholomew, Frontier Audobon

Jim Tabak, Valley Land Fund

Hudson Deyoe, UTPA

Paul Duke, UTPA

Jack Wilson, Valley Land Fund

Chris Hatcock, TPWD

Amy Spaulding, Valley Land Fund

Audrey Martin, Valley Land Fund

John Martin, Valley Land Fund

Kendall Keyes, TPWD

Elizabeth Heise, UTB

**Welcome and Introductions**.....Dr. Kim Jones, TAMUK

### Arroyo Colorado Watershed Protection Plan

AC WPP Implementation Highlights.....Laura De La Garza and Cecilia Wagner, TWRI

- Ag Assessment sampling has begun
- Received EPA Integrated Farm Education Grant
- Water Quality Monitoring, meeting with Cleans River Program, 7 to 12 sites
- Making progress on making water quality data readily available in form of graphs
- Volunteer monitors collecting data
- Working on storm drain marking and roadway signage
- 4 cities wetland projects progressing
- To develop PSAs to be aired on KMBH 88 FM radio; community spotlight, scripts needed 2-3 weeks in advance

**Lower Laguna Madre Sea Grass Presentation** ..... Dr. Hudson DeYoe, UTPA

- Looking at health of sea grass. Production and biomass dynamics of the sea grass, *Thalassia testudinum*, in the LLM.
- LLM is changing; 4 tropical species of algae now found in the LLM; water temperature is changing; wastewater treatment plant discharge is increasing with the increased urban development on SPI.
- 3 main species of sea grass in LLM
- Quarterly sampling - not looking at distribution but at condition/health at specific sites
- LLM responses to climate change, developmental pressures and passage closure
- Collected baseline information on sea grass (spatial differences and sediment quality)
- Texas Sea Grass Monitoring Plan (need distributional data and performance data)
- AC nutrients can influence water quality (influence variable based on time of year)

- Multi-year water quality data show AC tidal segment is higher than the other locations sampled in average concentration of Chl A, phosphorus and ammonium
- Clear water site (ABC) had the highest shoot density and total biomass, with Green Island (at mouth of AC) having the lowest density and biomass
- Root-shoot ratio highest at clear water ABC site
- Longer leaf lengths mean less light is available; thus clear water site has smaller leaves
- Green Island has light as a limiting factor; less light probably due to high phytoplankton abundance fueled by AC nutrients
- There is a lot of TSS data but there is a need to characterize turbidity

**UTPA Graduate Student Paul Duke**

- Expressed interest in characterizing Arroyo Colorado water quality
- It was suggested that he do a flow/nutrient water budget on a specific segment of the AC. The stretch between Donna and La Feria was recommended.
- Sampling should be done on a monthly basis to determine baseline steady-state loading; source assessment pilot study

**Reynosa's Canal Rodhe.....Dr. Efrain Jaime Ang, Universidad Automoma de Tamulipas**

- Project similar to AC - Many institutions are working on water quality issues in Reynosa
- Reynosa is a dynamic portion of the state of Tamaulipas in Mexico; over ½ million people (based on census but probably closer to 800,000) in city and lots of development is happening in this area; shares border with US in LRGV
- Growth from industry and commercial enterprises; population growth; lack of space and security/crime are threatening quality of life and environment
- Rapid growth with lack of planning has resulted in lack of public infrastructure; need wastewater treatment and water supply; resulting also in health issues
- Recreational and thematic park envisioned along Canal Rodhe; goes through the middle of city. Within 1 km, it affects 60 colonias
- Canal is being looked upon currently as a structural problem rather than a pollution / resource problem. Project trying to generate awareness of function of canal and the opportunity / resources of the waterbody
- In addition to potential ecological benefits, there are potential social benefits
- If attitude towards the waterbody could be changed, then city problems could be resolved
- Envision recreational/family outings resources, educational areas (museums, library, ), police/medical kiosks, post office, tourism information; natural areas; and shops/restaurants; would help weave together all the social levels in Mexico and solve city's infrastructure issues
- Opportunities for scientific investigation: studies of sustainable development, water quality and conservation/quantity, land use impacts on water, water re-use, effects of water regulations, public health initiative (water-borne diseases), local studies can take pressure off of national regulatory agencies, socio-economic studies (social equity)

**Project Updates:**

Regional Wetland Study .....Dr. Kim Jones, TAMUK

- Rio Hondo Oxbow
- Port of Harlingen Dredge Spoil Site and Upstream Site

- San Benito Wetland Expansion
- 100 acre site off Dilworth Road\*New potential site
- Goviata Sandpit in La Feria
- Martin, TAMUK grad student is looking at building a model for wetland systems working with Dr. Benavides, UTB, using LIDAR data.

319 Regional Detention Facility Study Proposal.....Dr. Kim Jones, TAMUK

- Proposes to study and model two existing regional storm water detention facilities in McAllen with the goal of demonstrating their effectiveness; possibly improve their effectiveness; and to share and translate these systems in the AC watershed.
- TAMUK resubmitted proposal to TCEQ. It is currently under review.

**Project Discussion:**

Natural Area Inventory .....Laura De La Garza, TWRI; Jim Tabak, Valley Land Fund

- Working with VLF and USFWS
- VLF currently working on mapping lands under conservation easements/fee simple
- Jim Tabak stressed importance of providing economic incentives of putting land under conservation easements and the need to educate landowners about these incentives
  - Need to get NRCS information on conservation incentives out to a greater audience
  - Need for list of landowners in the AC watershed (Cecilia said that they were working on it however a change in personal has slowed the process)
  - Laura stressed a need for that information to share with the VLF for targeted outreach

Proposed Rio Hondo Nature Center .....Laura De La Garza, TWRI

- Did not receive CMP grant, will re-submit, but plan to proceed with conceptual design
- Partner with Valley Proud, City of Rio Hondo, Rio Hondo ISD, TPWD (Sam Patten), USFWS, Cameron County, Native Plant Society, landscape designers Sue Griffin, Billy Snyder, and Mike Heep
- James Matz suggested a 2 hour meeting on a Saturday at a school in Rio Hondo; present a few designs and solicit feedback; June target date

**Available Grants/Potential Studies** ..... Cecilia Wagner, TWRI

- 2 from USFWS; need to submit to TPWD in May

**Other Business**..... Tony Reisinger, Texas Sea Grant

- VLF's interest in taking the lead in appropriate action items listed in of the habitat component of the ACWPP
  - Action items 1 and 2 are most appropriate; potentially Action 10-large scale wetlands
  - Taking the lead in wetland mitigation banking (in-line with Action 10) - construct large off-channel treatment wetlands that treat flows from multiple sources including wastewater treatment facilities and NPS runoff from urban and agricultural areas

**Next Meeting Date/Adjourn**.....Dr. Kim Jones, TAMUK

- July 24, 2008
- Laura is working on rescheduling the Victoria wetland field trip for mid-June