Revised Agenda
Meeting of
The Arroyo Colorado Watershed Steering Committee

Thursday May 25, 2006 6:00 pm – 9:00 pm

Rio Red Classroom of the Citrus Center
312 International Blvd, Weslaco, Texas 78596

6:00 SOCIAL AND REFRESHMENTS

6:30 OPENING (Laura De La Garza)

- Welcome
  - Introductions
  - General House Keeping (facilities, refreshments, breaks, meeting format)
- Reminder to sign attendance log
- New Logo and Brochures
- Aeration Structures (Jude Benavides)

6:45 UPDATES, HIGHLIGHTS, AND OUTSTANDING ISSUES FROM WORKGROUPS (Jude Benavides)

- Agriculture Issues (Andy Garza and Aaron Wendt)
- Wastewater Infrastructure (Roger Miranda)
- Habitat Restoration (Kay Jenkins)
  - Discuss Recommended Action Items
- Outreach and Education (Laura De La Garza)
  - Results of Market Survey
  - Top Recommendations
- TMDL/Further Issues (Roger Miranda)

7:50 CLEAN RIVERS PROGRAM AND WATER QUALITY MONITORING FOR THE ARROYO COLORADO (Cory Horan, TCEQ Clean Rivers Program)

8:00 BREAK

8:15 REVIEW INTEGRATED WATERSHED PROTECTION PLAN (Jude Benavides, Laura De La Garza, and Work Group Leaders

- Review Top Recommendations
- Discuss Funding Opportunities (Roger Miranda)
  - 319 Funds
  - Coastal Impact Assistance Program (CIAP)
- Discuss Priorities for Funding

8:50 CLOSURE (Jude Benavides)

- Expected Outcomes for Next Meeting
- Questions and Comments

Arroyo Colorado Watershed Partnership
Steering Committee and Partnership Meeting
Meeting Summary – May 25, 2006

AARON	WENDT	TX STATE SOIL AND WATER CONSERVATION BOARD
ANDY	GARZA	TX STATE SOIL AND WATER CONSERVATION BOARD
CHRIS	RAKESTRAW	COALITION TO SAVE THE ARROYO COLORADO
CLARE	LEE	U.S. FISH AND WILDLIFE SERVICE
CORY	HORAN	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
DON	HOCKADAY	THE UNIVERSITY OF TX PAN AMERICAN
EARLENE	LAMBETH	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
EDDIE	ESQUIVEL	TEXAS A&M KINGSVILLE
ERNESTO	REYES	US FISH AND WILDLIFE SERVICE (USFWS)
JOE	HINOJOSA	CITY OF BROWNSVILLE
JOHN	WALLACE	USFWS LAGUNA ATASCOSA NWR
JOHN	JACOB	TEXAS SEA GRANT
JUDE A.	BENAVIDES	UNIVERSITY OF TEXAS BROWNSVILLE
KEVIN	WAGNER	TEXAS WATER RESOURCE INSTITUTE
LAURA	DE LA GARZA	TAMU TEXAS SEA GRANT
LISA	WILLIAMS	THE NATURE CONSERVANCY
MARY LOU	CAMPBELL	FRONTERA AUDUBON/SIERRA CLUB
NEIL	HAMAN	TEXAS WATER DEVELOPMENT BOARD
RAMON	UCKOO	TAMU KINGSVILLE
RANDY	BLANKINSHIP	TEXAS PARKS AND WILDLIFE DEPARTMENT
RAY	PREWETT	TX CITRUS MUTUAL
RICK	REYES	INTL BOUNDARY WATER COMMISSION
ROGER	MIRANDA	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
SHAD	NELSON	TAMU KINGSVILLE
STEVE	BEARDEN	RIO GRANDE VALLEY SUGAR GROWERS
TERRY	LOCKAMY	TEXAS COOPERATIVE EXTENSION
TONY	REISINGER	SEA GRANT MARINE ADVISORY SERVICE
WAYNE	BELZER	INTL BOUNDARY AND WATER COMMISSION
WENDY	JEPSON	TEXAS A&M UNIVERSITY
WESLEY	ROSENTHAL	TEXAS A&M UNIVERSITY

MEETING ATTENDEES

CALL TO ORDER/WELCOME/INTRODUCTIONS:

Laura De La Garza opens meeting at 6:30 PM with a reminder to sign in. Laura reminded the group that the meeting was being recorded. Self-introductions were then made.

DISCUSSION ON NEW BROCHURE AND LOGO

The new brochures was the first order of business. Laura said that one thousand (1,000) brochures titled “Arroyo Colorado: The Little Waterway with a Big Job” was produced by Karen Ford of White Hat Creative, Linda Fernandez, and the O&E Work Group and that the feedback received was very positive . The Texas Commission on Environmental Quality (TCEQ) offered to reprint the brochures giving an opportunity for revisions and improvements. Laura solicited comments from Steering Committee and group offering another opportunity for input and comments. She also informed the group of a $450 donation initiated by Rocky Freund of the Nueces River Authority from funds from the Texas Clean Rivers Program to assist in the layout of the new brochures.

Laura asked for comments on new brochure and members said that it was, “slick”, “nice”, and “eye-catching”. One member asked if it could be mailed and suggested that we direct mail it. Laura said that it was not designed as a mailer but that it could still be sent out. She also said that the brochure would be improved by including the link between cleaning up the Arroyo Colorado and the economic value of doing so which was recommended by focus group participants.

Laura presented the new logo, explained that it was tested in the focus group meetings and that there would be one additional change. A member suggested changing “admíralo” to “disfrútalo” and asked for any comments. Joe Hinojosa and others agreed that “disfrútalo” was more appropriate. Laura asked if members wanted to keep both the English and Spanish tag line. There was general agreement that the tag line be in both English and Spanish.

AERATION STRUCTURE DISCUSSION

Laura turned over the meeting to the chairman, Dr. Jude Benavides. Jude welcomed the group and said that most of them should have heard from him via e-mail regarding the proposed aeration structure for the Harlingen area. He explained that he had been asked to informally poll the Steering Committee (SC) members to determine if the Arroyo Colorado Watershed Partnership (Partnership) wanted to formally support the project. He said he received 15 “yes” votes, 3 abstained, and zero “no” votes. Several members abstained because of a procedural issue, conflict of interest, and/or question of the necessity of the project based on the fact that dissolved oxygen (DO) levels were in the range of 5 mg/l as per regulations and that was supporting wildlife. Jude said biologic need for wildlife to be able to transverse upstream and downstream was expressed by concerned members. Jude asked what the SC wanted to do. Vote today, discuss more, conduct another vote or accept answers?

Randy Blankinship reminded group that this consensus-based group and then Jude open it up for discussion. Randy acknowledged the 3 abstaining votes included himself. Randy said that he had conservations with Bill Norris and Ernesto Reyes who went on the field trip and that was of benefits him. Randy said that Bill Norris is willing to reduce the level of the structure in the middle and allow passage of canoes and kayaks which addresses recreation use but that there is not enough information for the Coastal Fisheries group and others within Texas Parks and Wildlife Department (TPWD) in regards to the impediment to fish movement; that there is no

good evidence that there will be complete restriction to movement so he will not object to the project but will abstain.

Randy said he had more for the record regarding the stated purpose of structures and how it has changed. He said the project was presented to Army Corp of Engineers (ACOE) as an environmental project to improve DO levels in Arroyo Colorado, they were issued a permit, and it was later presented to Habitat Work Group and subsequently to the SC more along the lines of the aesthetic value, with perhaps DO benefits. Randy said that there was not enough information to adequately address the impediment to aquatic organisms and that what was most disturbing was that the project had morphed. He said that the project was presented to ACOE as an environmental project to improve DO, then presented to Habitat Work Group more along the lines of aesthetics, with perhaps environmental benefit, and that the design and impact of the structures were not presented adequately to the Habitat Work Group and SC.

Randy stated that the other issue is related to procedure, that it is the purpose of this group to steer process and focus on the pollutant loading issue as expressed as low DO in the zone of impairment (ZOI). The field test taken at the Donna aeration structure showed a 0.7 mg/l improvement but the proposed sites are not in the zone of impairment and unlikely to show improvements in that area. Randy asked if it is concluded that the structures are not geared to improving water quality in the ZOI, is it in the purview for the SC to support such a project and that he needed to state it for the record for TPWD.

Chris Rakestraw if we have additional measurements? Roger said that DO levels are about 5.5 mg/L in the summertime and that 5.5 mg/l average is not high going in to ZOI. Roger agreed that the aeration structures may not improve DO levels in the ZOI.

Don Hockaday stated that the DO problem was not at the surface and the bigger picture is that people are doing something to help solve the problem, it is more exposure and brings attention, and this over rides other concerns. Don said that he did not know if it will interfere with migration of aquatic life and he agrees 100% that we need to focus on ZOI, but also on the whole watershed as well.

Chris said that we should be careful and not mislead people about the helpfulness of this project, and that it might become of minimal value in the long run. She expressed the concern of giving people a false sense of doing something. Another member said that it is a step into the right direction but not a cure all. Laura said the project has lots of community support like from the Valley Sportsman Club, Coastal Conservation Association, and the City of Harlingen and if the structures are not harmful and do not impede fish and people flow, it helps with outreach and education and that other projects can be done in association with the structures. The field trip revealed a predominance of an invasive plant species, “giant cane” (Arundo) and that this presented an opportunity to do an outreach event and replant any disturbed areas with native plants.

Chris asked why these groups support the project. Tony Reisinger said that the Valley Sportsman Club has been working on it for 10 years as aeration structures. Jude said that he has not seen a model on how these structures will function and he offers to look at the literature and

try to estimate from that. He said that not one single element is going to solve the problem but that it will be a combination of efforts, and that it is our job to educate, say what is being done, and express the need to do more. Jude said the structures have a visible component but from a scientific view, there is not enough information and that we need to look at it from a cost benefit analysis.

A member asks if this is a weir project. Laura said that it was not a solid dam-like structure, that it would be a concrete rip-rap structure with a sloped approach, designed to back up water 0.5 to 1.5 feet, and that the project sponsors were willing to modify the design. Someone asked if the structures went all the way across? Laura said yes, and that now, they would have a chute down the middle. A member stated that behind the structures one would see sedimentation and that there is a maintenance issue. Jude said that if we support this project we need to address all concerns. Laura said that the project still needed final approval from USFW and IBWC; that during the field trip Bill Norris agreed to work with TPWD and USFW on a final design. Bill said that the structures would be built out of recycled concrete material from roads, that the City of Harlingen has the material stockpiled, and that big "rocks" would be placed on the bottom with a depression in the center.

The discussion on the aeration structures concluded with a request for a new design to be presented to the group and that for now the issue will be tabled.

UPDATES/HIGHLIGHTS AND OUTSTANDING ISSUES FROM WORK GROUPS

Andy Garza began the report on the Agricultural Issues portion of the plan. He said that in the last one and a half months, twenty-seven (27) water quality management plans (WQMPs) had been completed with $102,000 of cost share assistance; the busiest time of the year for application of cost share assistance is August and September when crops have been harvested and that activity is slow this time of year. Overall, Andy said that things are coming along well.

Aaron Wendt said that the goal is to have 33% of the farmland in management by 2010 and 50% by 2015. In general, good progress is being made on the agricultural component of the plan. On the monitoring side, the proposal to conduct additional water quality monitoring was submitted to the EPA.

Wes Rosenthal said that several years ago he did a project with the state board (TSSWCB) and used a watershed model to look at the effectiveness of the implementation of best management strategies. Wes said that he is working on a proposal to update the model and that it will include the aeration structures because the SWAT model can model such structures. The proposal will be submitted to the USDA. Laura asked the SC for approval to write a letter of support. No objections were made.

Aaron discussed the third component of the plan, the educational component. He said that based on the market survey distributed today, it is extremely important to involve the Texas Cooperative Extension agents, and that is one thing they are already doing; that they are on schedule with the current grant on deliverables and that they are doing more crop tours and field days. Aaron said that the agricultural component of the plan is pretty much done and that they

just needed to finalize it. Laura said that as soon as it is completed she will post it on the website. Jude asked for any final questions. None received.

Roger Miranda discussed the wastewater component of the plan. He said that the finalized plan would be posted next month and that there was almost unanimous participation in the plan. Of the eighteen (18) operators, fourteen (14) had signed on to the pollution reduction plan. Roger said that things are already happening, that two (2) new permits were issued with reductions. The City of Donna has gone from 20/20 to 10/15, the City of Pharr went from a 10 mg/l BOD to 7.5 mg/l BOD, and that we are starting to see reductions in effluent concentrations. A number of polishing cells are in the plan proposed for 2006-2010 and beyond that in 2011-2015. Funding has been identified and things are coming along. Future funding depends on the SC for the bigger regional wetland systems. It will take participation of several entities along with drainage districts. Roger stated the need to prioritize and that this will be discussed after the break.

Roger discussed the legal status of watershed protection plans. He said that the state is going in the direction of watershed planning and that his section (the TMDL section) is spearheading the effort with the TCEQ. The TSSWCB has six (6) plans in the works and that there are many issues with watershed planning, and one is future growth. Unlike a TMDL, watershed plans do not have a loading limit. The loading limit is set by the conditions of a TMDL; there might be agreement amongst stakeholders or other regulatory mechanisms in place like ordinances that could regulate loading. At this time, we do not know what will happen with the legal status of watershed plans, especially in impaired waterbodies. Roger said that he would keep us posted and that a TMDL is still in process. He said that there is a real possibility that after 6-8 years after the watershed plan is implemented then another mechanism could come into play if water quality does not improve in the Arroyo Colorado, and that mechanism is a TDML.

Roger said that this was a good time to discuss the TMDL Work Group; that data is being collecting to attempt to establish a viable TMDL for the Arroyo Colorado. He said it is very complicated because of physical modifications to the stream; the DO problem in the ZOI is an artifact of high loading and the physical modifications and this is what they are attempting to find out. This week the TCEQ along with the U. S. Geological Survey, are collecting the second round of data and that this is unlike what they have done in the past when they looked at concentrations and field parameters. This time they are looking at very specific conditions of the stream such as oxygen production depth rates and gradation. During the first round of the TMDL study they had to use literature values and this time they are using a fully dynamic 3-D model. Roger said that he was interested in Wes' work that will determine current watershed loading. The first TDML was modeled with the HSPF model with data that is now outdated. Wes' model will use new land use data along with in-stream water quality data now being collected in the tidal portion of the stream.

Roger said that the TCEQ management wants to give time for the watershed plan to work. That they do not want to stop the TMDL effort and will be monitoring water quality and load reductions as a result of this plan. The state will go to the next level if necessary because of the federal mandate that the water is fishable and swimmable in the Arroyo Colorado. The question is still a legal issue of the status of watershed protection plans.

Jude asked if there were any additional questions and then introduced Kay Jenkins to discuss the habitat component of the plan. Kay stated that the plan was complete and she passed out a limited number of computer disks with the complete copy of the plan. She proceeded to discuss the following ten (10) action items as outlined in the habitat component of the plan.

Action 1 - Support the ongoing efforts of the federal, state and local agencies and organizations to implement terrestrial habitat conservation objectives in the Arroyo Colorado watershed through partnerships and funding.

- Laguna Atascosa National Wildlife Refuge Proposed Refuge Expansion Plan, including acquisition of land along the shores of the Arroyo Colorado from the current refuge boundaries to the Port of Harlingen (USFWS 1999).
- U.S. Fish and Wildlife Service Wildlife Corridor Project.
    - Texas Parks and Wildlife Department's Private Lands Enhancement and Landowner Incentive Program.
    - The Consolidated Farm Service Agency's Conservation Reserve Program and Agricultural Conservation Program.
    - The Nature Conservancy of Texas conservation and restoration of native terrestrial vegetation through cooperative projects and private lands initiatives (The Nature Conservancy 2001).

Action 2 - Protect and restore existing riparian areas, resacas, and freshwater wetlands.

- Acquire updated land use and land cover data to help stakeholders identify existing or former riparian areas, resacas and freshwater wetlands.
- Conserve riparian areas through acquisition, conservation easements and other conservation actions such as the Natural Resources Conservation Service's Wetland Reserve Program.
- Restore riparian areas by partnering with public and private landowners to reduce habitat clearing or overgrazing on lands adjacent to drainages and the Arroyo Colorado, control invasive plant species, restore hydrology (occasional flooding), and re-vegetate with native riparian plant species.
- Protect and restore resacas and freshwater wetlands through acquisition and restoration of hydrology.
- Support the use of native plants in vegetated filter strips (Strategy 5 in APAI 2006) employed near riparian areas, resacas and other freshwater wetlands.

Action 3 - Work with drainage districts to modify drainage ditches and maintenance practices to reduce channel and streambank erosion

- Support the acquisition of wider easements for drainages to allow for the modification of drainage ditches and for implementation of Strategies 2, 4, 5 and 6 in the final technical report (APAI 2006).
- Participate with drainage districts to develop channel configurations that do not require as much vegetation removal through mechanical means or the use of herbicides.
- Develop partnerships with drainage districts and adjacent landowners to allow for improved channel configuration designs that support wetlands within the channels and riparian areas along the banks (Strategies 2, 4 and 6 in the final technical report by APAI 2006).
- Serve in advisory capacities to assist in the development of pilot channel configurations with banks that are less steep and that can support vegetation such as riparian woodland plants or native prairie grasses.
- Assist the IBWC in developing license conditions that seek to reduce channel and streambank erosion such as requiring the implementation of vegetated filter strips (Strategy 5 in the final technical report by APAI 2006) between row crop fields and the pilot channel.
- Assist the IBWC and landowners in identifying hot spots of channel and streambank erosion.

Action 4 - Participate with IBWC during development of maintenance or new work projects for the Arroyo Colorado.

- Serve in advisory capacities to assist in the development of pilot channel configurations with banks that are less steep and that can support vegetation such as riparian woodland plants or native prairie grasses.
- Assist the IBWC in developing license conditions that seek to reduce channel and streambank erosion such as requiring the implementation of vegetated filter strips (Strategy 5 in the final technical report by APAI 2006) between row crop fields and the pilot channel.
- Assist the IBWC and landowners in identifying hot spots of channel and streambank erosion.

Action 5 - Develop partnerships with the IBWC, drainage districts, and private landowners to implement bank/slope stabilization projects (Strategy 4 in the final technical report APAI 2006) in hot spots along the Arroyo Colorado or in drainages within the watershed.

Action 6 - Implement projects that would detain storm water runoff reduce sediment load and reduce the volume and velocity of the flow of the runoff in drainage ditches and the Arroyo Colorado (Strategies 1, 2, 3 and 6 in the final technical report APAI 2006).

Action 7 - Support ongoing and increased use of vegetated filter strips (Strategy 5 in the final technical report APAI 2006) around agricultural production and urban development areas to slow storm water runoff from these areas.

Action 8 - Implement storm water wetland systems (Strategies 2, 3, and 6 in the final technical report APAI 2006) in urban developments, redevelopments and in areas under agricultural production to reduce non-point source pollutant loading to the Arroyo Colorado.

Action 9 - Build constructed wetlands for tertiary treatment of waste streams from individual wastewater treatment plants (Strategy 7 in the final technical report APAI 2006) and/or for polishing flows from multiple wastewater treatment plants in close proximity (Strategy 8 in the final technical report APAI 2006) with habitat features when feasible.

Action 10 - Construct large off-channel treatment wetlands that treat flows from both point and non-point discharges and provide habitat (Strategy 10 in the final technical report APAI 2006).

Kay asked if there were any questions and that she hoped to get these action items approved so that they could be incorporated into the plan. Kay said that these action items were not ranked.

Randy asked about erosion associated with development and that there were more and more concerns about flooding issues because development and flooding systems have not kept up. He asked if we should be raising concern about the impact of flooding along with erosion because a lot could happen in a hurry. Kay said that we should keep in mind that we are dealing with a DO problem and not flooding and that one action item deals with storm water detention; that the APAI document has many recommendations for storm water management. She said that we do not have to have a Bermuda grass lined hole, that we could have a wet pond and more.

Roger stated that the drainage ditches are designed to move the water as fast as possible and if we want to widen it, it must be done in a way to move water. Kay said that we could still have a widen area and support grass, that grass bends over when flooding. The strategy is to have a straight ditch, then widen an area, and back to ditch. This will allow the load to be dropped. John Jacob said that it was not necessary to only have grass. Harris County Flood Control District has more water to deal with in a flat terrain. Where there is room to widen they are doing that, and at first, they thought they could not have trees but now they are thinking of a hardwood forest.

Jude said that trees have lower impact than grass on flow and the main concern is if you are talking about regional areas, or main thoroughfares, you can do environmental friendly methods and simultaneously look at flood control issues, habitat protection and restoration; but this needs to be done ahead of time. He said that he is talking with Cameron County Drainage District #1 on changing their practices based on a flood study

he and UTB have been working on. If one does not use concrete lined ditches, there is more maintenance. A member said that the drainage ditches are cleared every 5-10 years and sometimes every 15 years, and generally they are just mowed. Kay suggested that when they do need to be cleared, that they consider doing it in the winter because in summertime there is more potential for low DO levels.

PRESENTATION ON THE TCEQ CLEAN RIVERS PROGRAM

Jude called for a 10 minute break. Upon return from the break, Jude introduces Cory Horan, TCEQ Clean Rivers Program (CRP). Cory said the CRP is a statewide water quality monitoring program and the 66% of the data collected is used for 303(d) and water quality impact assessments. The program works in several ways and that they primarily work with river authorities, and on the Rio Grande, they work with the International Boundary and Water Commission (IBWC). Cory introduced Wayne Belzer from the IBWC, as his counterpart here in the Valley and through that partnership they have developed a comprehensive water quality monitoring network in the Rio Grande Valley with other partners and stakeholders whom do the monitoring.

Cory said that they offer training, equipment, and analysis for water sampling and that he was here introduce the CRP to the SC and other stakeholders in an effort to help get volunteer monitors. He said that they will soon have a contract with a laboratory and that the lab would provide sampling bottles. Samples will then be shipped back to the lab. The IBWC has offered to pay for the analysis of the samples collected from the Arroyo Colorado and that the data will be covered under the TCEQ Clear Rivers Quality Assurance Project Plan (QAPP).

Cory said that their program was looking for people willing to commit to monitor one or more sites on a routine basis (quarterly). This volunteer effort is a way to collect data on a limited budget and that their efforts would count as in-kind services for matching grant money. Laura said that water quality monitoring must be a part of the watershed plan and that the plan is to monitor the Arroyo Colorado at 12 sub-basins pour points locations. Laura acknowledges the TCEQ CRP and the IBWC for offering to pay for the analysis and she said that this helps meet the grant matching fund requirement.

Kay asked about documentation and if all the volunteer work will be applied to the grant. Cory said that he was not sure but the project would start in September 2006. Tony said one group that could help with the monitoring is the Texas Master Naturalist. Laura said she also has a list of volunteers; that the UTB science club might also assist and that this was a way to involve people. She said that the IBWC Mercedes office semi-committed to assist in the monitoring of two (2) sites and that the TCEQ is already monitoring five (5) sites.

Kay asked how often the samples would be collected. Cory said they like to do quarterly monitoring. Wayne Belzer said that they monitor on an as need basis. If the data shows rapid changes that they would do more testing, if stabilized, changes would not be seen and that they would go to quarterly. He said that they have sites that require weekly,

monthly, or quarterly monitoring and the frequency is based on need of the location. Wayne said that all money and equipment would go through the IBWC and to feel free to contact him at (915) 832-4703. Cory Horan also said he could be reached at (512) 239-4026. Jude said that has enjoyed working with the TCEQ and the IBWC and that it is of value to the Partnership to help.

Jude asked if there were any additional question and then turned the meeting over to Laura.

PRIORITIZING TOP STRATEGIES

Laura passed out the attached list of top strategies for water improvement, asked that everyone please sign and date them for record, and that the point the exercise is to prioritize projects for funding. She asked that the listed strategies be ranked 1-9 and that she would first go through a PowerPoint presentation to highlight plan elements. Kay asked if everyone or just the SC were to rank projects. Laura asked all present to rank the projects and if the outcome was different, the SC recommendations will be first consideration.

Laura said that based on the measures currently in the plan, it is estimated that we will realize as 10 % BOD, 11% total nitrogen, 12% total phosphorus, and 18% sediment loading reduction. That these numbers represent the measures proposed by the wastewater and agricultural components of the plan and that we could do better, that we should aim for a 20% reduction over the next 15 years. Laura said that the goal of a 20% reduction is somewhat nebulous and that many plan recommendations are not currently in these initial estimated calculations.

Laura asked Roger what else is not the calculations. Roger said that the level of phosphorous reductions in association with sediment might be added reductions in phosphorous and that riparian improvements along the non-tidal segment could have benefits to DO in tidal segment. He said that there were many things that we cannot get a good fix on, that the EPA recognizes this so they developed the term adaptive management; we can talk about reductions calculated and about predicting improvements on water quality but that we will not know the affects on water quality until implemented.

Laura said that EPA guidance documents recommend hard reductions numbers so she is putting in the plan a 20% load reduction as the target and if there were any comments. There were no comments.

Laura next presented the current mission statement of “Restore, preserve, and protect water quality…” and suggested revising it to “Reduce the additions of pollutants to the Arroyo Colorado to the maximum extent possible in order to meet state water quality standards and improve the natural terrestrial, riparian, and aquatic habitat associated with the Arroyo Colorado Watershed.” The group agreed and accepted the revised mission statement.

Laura said the estimated cost of the wastewater and agricultural measures presented in those components of the plan is $65 million. Roger said that those numbers are surprising. Randy asked if the regional wetlands were included. Laura said yes, that they are in the wastewater component of the plan. Randy asked if it included land acquisition. Roger said his estimates were based on construction costs estimated by Loretta Mokry. Neil Haman said that the wastewater numbers were low. Randy said that we need to say that the numbers do not include land acquisition and that we are looking at potentially higher costs.

Laura next goes through the top recommended measures/strategies for water quality improvement using PowerPoint to show examples and current conditions of the watershed. The following is the list presented:

- Regional constructed wetlands to treat flows from multiple sources
    - Detailed site assessment of Sub-Basin 5 and 8
    - Land acquisition, engineering, and construction
    - Management and maintenance
- Enhanced treatment of treated wastewater effluent
    - 13 Municipalities and/or Public Utilities
- Improved drainage ditches
    - Demonstration projects
    - Management practices
- Fill data gaps for management decisions, education, and outreach
    - Ag edge-of-field
    - Tributary (drainage ditches) quality
    - WWTF nutrients (nitrogen, phosphorous, ammonia) loading
    - Urban storm water runoff
    - Land use changes
- Manage Date with Geographic Information System (GIS)
    - Man power
    - Hardware, software, and data distribution
- Conserve (and restore) existing riparian and wetland habitats
    - Restoration projects
    - Land acquisition
- Education and Outreach
    - Awareness promotion, general public and targeted groups
    - Video, PSAs, signage, information sheets, workshops
- Reduce channel and stream bank erosion
- Test and promote existing and new BMPs that focus on water quality improvements
    - Ponds, bioengineering, vegetative filter strips, use of compost, etc
    - Low impact development techniques, such as, rain gardens, infiltration basins, rainwater harvesting, inverse gutters, pervious pavement, etc
    - (Agricultural BMPs included in this category.)

Laura stated that going through this process is important for prioritizing projects for the plan and grant funding and that since we were not a non-profit group, it was up to the cities, universities, and other governing entities such as the drainage districts to take the lead in these projects. The Arroyo Colorado Watershed Partnership would assist and collaborate on the projects.

Randy asked if we applied for the Coastal Impact Assessment Program (CIAP) grant would it be for an individual project or for many projects as part of an overall watershed project. He also said that they were more likely to give money to efforts regionally thought out. Laura agreed and said that the ability to apply for many projects in one grant application depended on the size of the available grant.

CLOSING COMMENTS

Jude asked when we should schedule the next meeting. Laura said that we could expect the next meeting the end of July. Jude said that he would send an email out as follow-up to the aeration structures issue.

Meeting ended at 9:00 PM.

RESULT OF THE TOP STRATEGIES RANKING EXERCISE

Twelve (12) Steering Committee members submitted their recommendations for prioritizing the top strategies for improving the quality of water in the Arroyo Colorado. Additionally, five (5) other active members submitted their recommendations. The following lists the results of the ranking of top strategies:

<u>Top Strategies in Order of Priority as Listed by All Participants in Ranking Exercise</u>

1. Regional constructed wetlands to treat flows from multiple sources and enhanced treatment of treated wastewater effluent tied as top priority.
2. Conserve and restore existing riparian and wetland habitats.
3. Test and promote existing and new BMPs which focus on water quality improvements.
4. Education and outreach.
5. Improve drainage ditches.
6. Fill data gaps for management decisions, education, and outreach, and reduce channel and streambank erosion tied in ranking.
7. Manage data with a Geographic Information System (GIS)

<u>Top Strategies in Order of Priority as Listed by Participating Steering Committee Members in Ranking Exercise</u>

1. Regional constructed wetlands to treat flows from multiple sources and enhanced treatment of treated wastewater effluent tied as top priority.
2. Conserve and restore existing riparian and wetland habitats.

3. Fill data gaps for management decisions, education, and outreach.
4. Test and promote existing and new BMPs which focus on water quality improvements.
5. Improve drainage ditches.
6. Education and outreach.
7. Reduce channel and streambank erosion.
8. Manage data with a Geographic Information System (GIS)