



DRAFT

## Westside Creeks Restoration Oversight Committee (WCROC) Meeting June 16, 2009 – 6:00 PM

### Meeting Notes

Attendees: **Members and Alternates** – Robert Ramirez, WCROC Co-Chair; Pam Martinez, Woodlawn Lake NA; George Martinez, Woodlawn Lake NA; Theodore Ozuna, Donaldson Terrace NA; Rod Radle, San Antonio Alternative Housing; Catherine Rainwater, Our Lady of the Lake University; Joanne Walsh, Downtown Residents Association; and Dianna Esquivel, Avenida Guadalupe Association. **Elected Officials** – Roberto Rodriguez, SARA Board Member. **Staff and Consultants** – Suzanne Scott, SARA; Rudy Farias, SARA; Gloria Rodriguez, SARA; Richard Mendoza, City of San Antonio; Ed Garza, AECOM; Andy Rooke, AECOM; Rudy Rivera, RJ RIVERA Associates, Inc., and Linda Vela RJ RIVERA Associates, Inc. **Members of the Public** – Albert Esquivel and Kamela Platt.

#### 1.0 Welcome & Introductions

Robert Ramirez, WCROC Co-Chair, called the meeting to order and asked the committee members to introduce themselves. Olga Lizcano, WCROC Co-Chair, thanked everyone for their attendance. Roberto Rodriguez, SARA Board Member, added that the Oversight Committee really appreciated everyone being at the meeting. Mr. Rodriguez thanked everyone for their flexibility and for making it on the third Tuesday of June. Mr. Ramirez said he would be stepping out early for a meeting in the City of Converse.

#### 2.0 Approval of Meeting Minutes (5/12/2009)

Mr. Ramirez asked for comments or corrections to the meeting minutes. Linda Vela, with RJ RIVERA Associates, Inc. advised regarding changes. The minutes of May 2009 were accepted with revision.

#### 3.0 Review Meeting Process/Protocol Revisions

Mr. Ramirez asked everyone to look at the document in their meeting packets that presented revisions to process and protocol. Abigail Kinnison asked if the new protocols meant that a subcommittee cannot take a position. Mr. Ramirez answered by saying that if the subcommittee has a position on an issue, they cannot go out and speak on their own. He added that they can bring their position to this oversight committee. Suzanne Scott, with SARA, clarified by saying that the subcommittees are a sum of the whole and it would not be the subcommittees that would take a position, but would rather present it to the Oversight Committee as a recommendation.

#### 4.0 Subcommittee Tours

Ms. Lizcano introduced Rudy Farias, with SARA, for a presentation of the subcommittee tours. Mr. Farias started by informing the committee that earlier in the month, the San Antonio River Authority took subcommittees on a tour of their respective creeks. He said they took two vehicles and at each creek they

stopped at two points to discuss what they had seen. Mr. Farias added that this was an opportunity for the subcommittee members to place the comments made at the workshop in the natural environment. He said they also had the opportunity to view the entire length of the creeks. Mr. Farias talked about the Martinez Creek tour on June 1, 2009. Then he talked about the Apache Creek tour and the comments made for Apache Creek. He discussed the comments such as the need for plenty of benches, incorporating murals, provide boardwalks at water's edge, and needing a canoe or kayak launch point at Elemendorf Lake. He then mentioned that the Alazán Creek tour was held on June 3, 2009. He said comments received were about the need to explore having a trolley car coming from downtown, safety/lighting, need to restore connectivity, and to consider a look out spot. Mr. Farias then said that the San Pedro Creek tour was on June 10, 2009 and there were 13 participants. He said they ended the tour at the San Antonio River. He said this portion has the environmental restoration work that is on-going. He added that he just wanted to provide an overview of what happened during the creek tours. Mr. Ramirez asked about preserving the wildlife. He also asked if there are any plans to repopulate or just let nature take its course. Mr. Rodriguez said he wanted to interject that at Elemendorf Lake, it seems like the egrets are increasing in large numbers and they appear to be moving to surrounding creeks. He said as trees are planted, they will start their natural process of multiplying and rehabilitate the areas.

A committee member asked if fish can survive in recycled water. Ms. Scott said yes, the whole river is recycled water right now. The committee member then asked where the water came from. Ms. Scott said it comes from the "Dos Rios" plant south of downtown. She added that it is still not drinkable, but it is very high quality recycled water. She said there is a discharge point at Brackenridge Park and there is also one by the Witte Museum. Ms. Scott said the San Antonio Water System, SAWS, just got a bill passed to interconnect Salado and Dos Rios. She also mentioned that SAWS has businesses that have contracts with them for reuse water, although it is a very limited supply. She said the future water plan has new supplies coming in and it is a very important component on how the SA River has water flowing year round. She pointed out some of the things that have been done to answer concerns about water on the Apache Creek. She said you can also make the water more visible by adding weirs or riffles.

Mr. Ramirez asked if there are any scenarios where reuse water would be deferred for use as drinking water. Ms. Scott said they are not talking about that here in San Antonio. She added that the "toilet to tap" concept is not something they think would go over well here in San Antonio.

## **5.0 Fluvial Geomorphology 101**

Andy Rooke, with AECOM, gave a brief primer on Flooding 101. He started by saying that Hydrologic Engineering is the study of what happens when it rains and water runs into the creeks. Mr. Rooke continued by explaining that Hydrology is rainfall hitting the ground and running off. He said that the rainfall rates in San Antonio are some of the highest on earth, per rainfall event. He mentioned that we also have steep, impervious terrain which is a perfect storm for creating "flash flood" conditions. He then showed a chart with rainfall records across the earth and another for Central Texas. He said the U.S. Army Corps of Engineers came in and attempted to stop the flooding by channelizing the creeks.

Mr. Rooke then discussed Hydraulics and said it is the study of how flows propagate through a creek system. He added Channelization, like what occurred within these Creeks, allows you to maximize flood carrying capacity in a minimum land area. He explained that a cross section of a natural stream shows it is full of meanders and interesting features that are removed by channelization. He said it will move flood water very quickly but is not aesthetically pleasing and is not natural.

Mr. Rooke then described how the removal of the channelization will have an impact on the hydrology and hydraulics. He said there is going to be more land area available and it is one thing we are going to be mindful of. He added that we need to know where land is available to do some of these things. Mr. Rooke added that one of the benefits is that an increased length of the restored stream can reduce flooding downstream. Mr. Rooke finished by mentioning that it is too early to tell actual impacts until we get deeper into our design.

Bill Norris, with Interfluve, was the next speaker and began by discussing the concept of Fluvial Geomorphology through a PowerPoint presentation. He said Geomorphology is how landscapes change over time. He added that over geologic time periods, there are some very big changes that happen but we do not see them in our lifetimes. In the PowerPoint presentation, he showed of how a creek works. He explained that eventually the bend shown in the image would cut-off and then create a little oxbow.

Mr. Norris then said that the committee might be asking, why all this talk about natural rivers? He explained that the Creeks are highly modified and even though they are highly modified, the natural processes are still happening. He added that the more we can figure out how those natural process work within the confines of the built environment, the more we can reduce operations and maintenance cost. Mr. Norris said that sediment is carried in the watershed and moves down the stream, where there might be disruptions.

Then Mr. Norris spoke about geologic processes. He said that Geomorphology is bigger than just streams. He explained that by fluvial geomorphology, we are just talking about streams. He added that usually the upper parts of the watershed are steeper, but that is not necessarily seen here. Mr. Norris said that as you get down to the bottom it is not so steep and you get flowing, meandering channels. He then said that sediment does move in gravel or sand bar.

Next, Mr. Norris discussed that the energy in the water is what makes sediment move. He said the more water there is, the more energy it has. He added that the biggest variable is slope, so the steeper creek reach can move bigger heavier sediment. Mr. Norris said another variable is creek depth and that with these projects they have dug the channel down so when the flows come in, the creek just gets deeper with the energy it has to move things. He said that slope and depth are both drivers. He continued by stating that if water has enough energy to move sediment and there is no sediment to move, then it is going to find sediment to move.

Mr. Norris said that water energy mainly depends on slope - deeper flows will move more sediment, flow volume, and conveyance area. He explained that energy is expended at the boundaries of the channel. He said that when you have a dam, all the sediment drops off above the dam. He then said the water that comes out of the dam has a lot of energy called "hungry" water or Clearwater scour. Mr. Norris added that even though there is potential for it to move sediment, there is nothing there for it to carry if there is concrete there. He continued by saying that if the sediment is not there, then there is more available energy to be able to find it.

Mr. Norris then discussed the ability of sediment and soil to resist erosion. He talked about how small particles, like silt and sand, can move easily. He said that larger particles like rock can be more resistant to movement. Next he focused on how the bedrock does not move, but may slowly dissolve or erode as sediment is transported. He added that the concrete acts like bedrock that has been put in by humans. Mr. Norris continued by saying that if the watershed has been urbanized, the sediment supply tends to be shut off. He said then we

have this “hungry” water looking to do something. He added that if boundaries are too small, then they can erode.

He followed that by discussing sediment transport continuity. Mr. Norris said that one of the things that we begin to look for is “sediment transport continuity”, which is to remove the bottlenecks. He added that when we look at these streams we will be fighting some of these issues because there are a lot bridges and other obstructions. He said that another thing creeks talk about are “dynamic equilibrium” which is somewhat balanced with respect to flows and sediment inputs. He continued by saying we must recognize constraints of existing infrastructure and cost.

Mr. Norris then discussed urbanized creeks. He talked about fixed boundaries, sinuosity (static location in valley), width (static location of streambanks), and depth. He mentioned bridge and culvert crossings that involve slope breaks and how they disrupt sediment continuity. He also said that dams can be formed when sediment sinks. Mr. Norris added that with the channel design we have to evaluate the hydrology and hydraulics, quantify sediment inputs, and design for sediment transport continuity (move sediment through) channel sizing. He continued by saying that one of the things being done on the Mission Reach is using weirs and riffles to dissipate the energy.

He concluded his presentation by discussing vegetation. He said that increasing the presence of trees and shrubs will increase flooding if conveyance area is not also increased. He added that we may need to balance between how many trees can be added to avoid impacting hydraulics. Finally, he talked about energy reduction and that the lack of sediment supply creates “hungry” water. He said that reducing energy with series of drop structures increases the conveyance area.

Mr. Norris then fielded questions from the Oversight Committee. Dr. Rainwater said that since all the channelization and cementing of everything, the river seems to feed upon itself. She added that once you channelize one area, you have to keep going. She asked what is the best way to reverse the process. Mr. Norris answered by saying that the process needs to start upstream and then work its way down.

Ms. Walsh said that given that statement about the San Antonio River, they have already started the restoration project, so what happens on these creeks will impact that project? Mr. Norris said that one of the benefits is that the creeks are built up so you will probably not see huge increases in water energy in the creeks.

Mr. Martinez asked if Mr. Norris had looked at the Westside Creeks much. He added that if he had, do you see in any particularly difficult areas. Mr. Norris said he had not personally seen the creeks, but had worked with similar projects in the past.

Mr. Radle asked if Mr. Norris had experienced cities or locations taking large areas of concrete and reclaiming it. Mr. Norris answered by saying his most pertinent experience is what was done on the Mission Reach. He added that the most difficult thing is the real estate that is available. He said it causes this expansion and contraction, so if you have an understanding of the natural processes you can design something. He added that it is not always possible due to utilities and bridge crossings constraints. Mr. Norris said that although you have ideals you still have to work within the constraints, you may not always have enough money to create a perfect stream. He said that from what he has seen, San Antonio is at the fore-front in terms of sheer volume of streams that are being restored.

Narciso Cano asked if Mr. Norris had studied tunnels under the river and under San Pedro Creek. He also asked how they affected his analysis. Mr. Norris said the area sediment sinks kind of like a damn. He said the suspended stuff is silt and sand, meaning all that is sediment. He added that at the exit of the tunnel there is more energy to erode things. Mr. Norris said a lot of the energy is dissipated because when it comes out of that tunnel it hits a lot of concrete. He said most of that energy, at least initially, is dissipated to cut down the erosive abilities of water. He mentioned that he suspects any type of restoration done downstream of a tunnel outlet has to be designed for that.

Mr. Cano then asked if it is fair to say that the construction of weirs on San Pedro Creek would help decrease the energy. Mr. Norris said he thinks there would have to be a lot of the same techniques that were used on Mission Reach. He added that the way you deal with it is to create drops, which in turn create turbulence.

Tom Lopez said when you look at the Westside Creeks, analyze the neighborhood because we have a lot of curious children. He stated that as you build conceptual things, it is going to be important to think about some safety concepts. He said he understands the stair step effect, but said that it is important to keep in mind safety factors. He added that there are still kids that play in these Creeks and we need to make them as kid-proof as possible. Mr. Lopez said that as a child, he used to love to go see the creek flood. He asked that they keep that in mind as this is examined. Mr. Norris said he did not know what percentage of that whole stream is in neighborhood areas, but that we need to keep that in the back of our minds.

## **6.0 Stakeholder Meeting Update**

Ed Garza said Mr. Norris had just arrived and would tour the Creeks tomorrow on the hottest day of this summer. Mr. Garza then provided a briefing on the stakeholder meetings being conducted as part of the process. He said that Dr. Rainwater helped coordinate a meeting with planners, architects and with OLLU. He added OLLU is trying to make connections to Elmendorf Lake in terms of their overall vision. He then talked about the coordination opportunities and design integration.

Mr. Garza also mentioned they had a successful meeting with former mayor Howard Peak, who chairs the Linear Creeks Advisory Board. He said they were charged to coordinate planning and restoration of creeks throughout Bexar County. He pointed out that this was made possible through funding provided by the City of San Antonio. He added that Mr. Rodriguez has been active on that committee as well. Mr. Garza said what is happening in this project is just a piece of the restoration that is happening throughout the county. He said there was an opportunity to brief Mr. Peak and talk about our schedule versus their timeline. He mentioned how the Westside Creeks project fits in with other projects. He said there were things that we can do to integrate with their process as they move forward to select projects for future funding. Mr. Garza also said there was a lot of great feedback on the work that has been done. He said he thinks the Westside creeks are certainly capable of having potential funding identified. He added that he talked to Ramiro Cavazos with the Housing Authority and also met with Lourdes Castro, the new Director of the Housing Authority. Mr. Garza also mentioned this to the School District in terms of reuse or re-purpose of buildings, particularly those along the creeks. Joanne Walsh added that one of the subcommittee reports mentioned the new Federal Courthouse and asked if they could please add them to the list.

Ms. Lizcano then asked if we are working on getting the project into the process for future bond funding. Mr. Garza said that is the purpose of these meetings with the city and the county, to advise them of the project and how it can be incorporated into future bond schedules.

Ms. Lizcano said that the Linear Creeks had been worked on for about 15 years. She said that Howard Peak basically reminded everyone of the process and his point was that this group is way ahead of where they started 15 years ago. She said it is his hope that it will not take as long, but to also be patient in moving forward. Ms. Lizcano then asked if purchasing property took a long time and is that something that we are going to have to do. Mr. Garza replied and said we will be presenting several options and you will have to weigh those options.

Ms. Kinnison asked if former Mayor Peak talked about the next sales tax referendum. Mr. Garza said their goal is to be prepared for that, but that the city and county both have 4 to 5 year cycles. He said Mayor Peak felt that our timeline would fit within that cycle to have projects to propose for inclusion, looking at the next 2-3 years on short end.

Ms. Walsh said that on the San Pedro Creek tour there was a board member from the casa Navarro site who talked about wishes to expand back to the original reach which would place them back on the creek. Mr. Garza said it is a land issue and that evidently they are trying to get some funding to buy some of the adjacent land.

## **7.0 Museum Reach Grand Opening**

Gloria Rodriguez, SARA, stated that she wanted to give a brief overview of the Museum Reach grand opening. She said the grand opening was a wonderful event. Ms. Rodriguez said that all of the stakeholders along that area were involved in this process. She mentioned that they all had their own events and it was estimated that over 30,000 people showed up that Saturday. She pointed out that the MPO held their bike and ride event on Sunday and had 41 exhibitors. Ms. Rodriguez informed the committee that 300 to 400 cyclists and walkers were at the event, which exceeded what the MPO thought they would receive that day. She said that they have heard nothing but good things and wanted to share that with the committee. Ms. Rodriguez said that they are continuing with the river improvements projects and are starting sections of the Eagleland portion. She also said there was a groundbreaking at Constance Pocket Park in the King William area at 10 a.m. on Saturday. Ms. Scott added that the stakeholders, the people who live along the river, are so excited to make this happen. She said that is what makes it special and that for this event, the King William District has put \$50,000 into creating this pocket park. She mentioned that it is building the excitement that you need to have that synergy. Ms. Scott said that the more you can get other stakeholders to buy into what they are doing, the faster the project will move.

Ms Vela mentioned the Mexican bat colony that has become an attraction underneath IH 35 near the Camden Street bridge.

Ms. Lizcano said that she feels there is a lot of energy in this room.

## **8.0 Miscellaneous Items**

Ms. Vela announced there would be a change in location for the next Alazán Creek Subcommittee meeting. The new location will be the meeting room at the Bazan Library. She added that the flyers sent out for the upcoming meetings would include this change. Mr. Farias added that anyone who would like a tour would just

need to contact him to set it up. He added that he learned the river improvements project is giving tours of the Mission Reach area on Fridays. There is a meeting already scheduled for June 26, 2009 but they will schedule a tour for any group. At 9 a.m. they meet at the trailers off of Mitchell Street and you can RSVP by calling Russell Persyn (210) 302-3615.

## **9.0 Public Comments**

Ms. Kinnison said that she assumed that at the next meeting the discussion would be about hydraulics/hydrology. She asked if they would report any findings to the Oversight Committee. Ms. Vela said it would definitely be in the final report that comes out for this project.

Mr. Radle added that he wanted to thank those who joined us at upper Apache Creek. He said Lee Marlow, with SARA, did a very good job cataloging the native vegetation.

## **10.0 Adjourn**

Ms. Kinnison moved to adjourn the meeting. Mr. Lopez seconded the motion and the meeting was adjourned.

## **Attachments**

- Sign-in Sheets

## **Distribution**

- WCROC
- SARA Staff
- Consultant Team