

Rio Grande Citizens Forum  
October 16, 2012  
International Boundary and Water Commission  
El Paso, TX  
\*Meeting Notes

Board Members in Attendance:

Danny Chavez, Hudspeth County Conservation and Reclamation District  
Travis Johnson, Travis Johnson Law Firm  
Sal Masoud, Del Rio Engineering  
Dale Reinhardt, Town of Clint  
John Balliew, El Paso Water Utilities  
Valerie Beversdorf, Elephant Butte Irrigation District  
Conrad Keyes, Jr., Paso del Norte Watershed Council  
Kevin Von Finger, El Paso Ecotourism Committee

USIBWC staff in attendance:

Carlos Peña  
Hayley Goodstein  
Tony Solo  
Sally Spener  
Andrea Glover  
Guillermo Martinez  
Padinare Unnikrishna  
Delbert Humberson  
Elizabeth Verdecchia

MxIBWC staff in attendance:

Enrique Muñoz

Members of the Public in Attendance:

Woody Irving, Bureau of Reclamation  
Larry Nance, Upper Valley Improvement  
Beth Bardwell, Audubon New Mexico  
Kevin Bixby, Southwest Environmental Center  
Jim Jamison  
Juana Jamison  
Alberto Urueta, Zia Engineering  
Zack Libbin, Elephant Butte Irrigation District (EBID)  
Sarah Williamson  
Kareem Dallo, City of El Paso  
Dennis Roark  
Joe Fernandez  
Juda Chicka

Jose Unzueta, City of El Paso  
Sanaan Villalobos, Arcadis  
Marci Tuck, City of El Paso Parks and Recreation

### **Rio Grande Canalization Water Budget Study**

Dr. Padinare Unnikrishna, USIBWC Hydraulic Engineer, gave a presentation on this topic. This is a project USIBWC is doing along with the U.S. Bureau of Reclamation that covers the 105 miles of the Rio Grande Canalization Project from Caballo Dam, New Mexico to American Dam in El Paso, TX. The study divides the study area into four reaches. During normal years, the irrigation release occurs between March and September. Because of the drought, this year the U.S. irrigators wanted a delayed release starting in May but Mexico wanted the release as usual in March. So we had stakeholders with different release dates. To understand how to manage this type of scenario in the future, we are conducting this water budget study.

We hired a consultant, Tetra Tech, to work on this study.

One year ago, the U.S. drought monitor showed extreme drought along the Rio Grande Canalization Project. This year, it is between moderate to severe drought. There are low water elevations at Elephant Butte and Caballo Reservoirs.

A water budget study calculates inflows to the study area. Then the outflows from the study area are considered and you take the difference between the two to determine the change in storage. Change in storage means the water surface elevation in the river channel or water table in the aquifer would increase or decrease.

The time period for the study is January 1, 2010 to June 30, 2012 and the time step is daily.

It considers upstream flow, irrigation return flow, precipitation inflow, groundwater inflow. Outflows include floodplain recharge, channel seepage, authorized irrigation diversions, unauthorized diversions, evapo-transpiration loss and channel flow at the downstream end. We do not expect floodplain recharge to be a major part of the study as irrigation flow is contained in the channel but we have included it.

The study looked at different water releases at different times of the year then analyzed the impact on inflow and outflow.

There is a local basin scale water budget covering Jan 1, 2010 to June 30, 2012 with a daily time step. This takes into consideration such things as inflow from upstream precipitation, groundwater inflow, pumping, and return flow. Outflows are groundwater recharge, evapo-transpiration, and outflow from the downstream end.

The study considers pre-existing studies of channel seepage, evaporation, and models of surface water and groundwater.

The study began in July 2012. The data collection is complete. The models have been updated and we have initial water budget calculations. We are trying to analyze the results.

The 60% report was received this week and it has been distributed to stakeholders (primarily irrigation districts, state agencies, and the Mexican Section of the International Boundary and Water Commission). The final report is due December 7, 2012.

There are various expected benefits from the study. It is going to show how the water released from upstream goes into channel seepage, evapo-transpiration, how much is diverted, and how much is passed on to the downstream end. The study will show the implications of

different times of release such as a single release from March to September, a delayed release, or if releases start and stop then start up again. Those issues will be explained. The consultant will make recommendations for best release scenarios for future years.

Kevin Bixby – How do you calculate evapo-transpiration?

Padinare Unnikrishna – The consultant will look at it up to the levee and will consider the different crop types.

Larry Nance – Will you consider seepage out of Caballo Dam?

Padinare Unnikrishna – The end date of the analysis was June 30, 2012 but it is a question we can pose to our Water Accounting Division.

Carlos Peña – Once it is finished, we will have it on our web site.

### **Construction Update of Levee Projects in Doña Ana County and El Paso County**

Andrea Glover, USIBWC Civil Engineer, gave a presentation on Rio Grande flood control levee construction and design projects. The current projects are:

**Mesilla Phase 2** on the east side from near Leasburg to Mesilla Dam is 85-90% complete. They will be completed with embankment soon and completely finished in December 2012. We consider a project to be finished when all of the embankment and structure work is completed. We have Mesilla Dam access closed for another week or two due to construction impacts

**Sunland Park** – Borderland Bridge to the El Paso Electric power plant on the east and west side of the river. This project is almost done except for a segment on the east side. After that, they need to put on top soil and gravel. The gates will be up and locked this week. We are getting close to close out on this one.

**Vado levee design** – The design is complete. It is 1.1 miles of levee on the east side near the Vado Bridge. We expect it to go into construction next year.

**Canutillo levee design, phase 2** – 5.7 miles of levee on the east side of the Rio Grande from Vinton Bridge to Borderland Bridge. Current estimate is 2014-2017 for construction.

**Courchesne and Nemexas Design** – West side of the river south of Country Club Road and from El Paso Electric power plant on the east side down to American Dam. It includes Anapra area on the west side and a short stretch on the west side upstream from American Dam. Design is 60% complete. Possible construction 2018-2020.

**American Canal Relining Design** – We will be replacing the concrete lining in the American Canal. The design is well on its way. Construction could occur in 2013-2014.

**Paisano Design** – American Dam to International Dam on the left bank of the river is conceptual at this point.

**Ysleta to Fabens Design** – This design contract should be awarded soon.

Public – When will work on the Country Club area be complete?

Andrea Glover – Country Club should be complete next month.

Public – You mentioned another project is subject to funding?

Andrea Glover – It is a small design project in the Nemexas area.

Guillermo Martinez – We have wetlands in that area, which has affected the schedule.

Public – Does your punch list include taking care of the sound issues, the noise at Country Club?

Andrea Glover – We have been working with the manufacturers. Their representatives inspected the bridge. He thought it was full of dirt, more than expected, perhaps from the haul trucks, but was performing within standards. We are going to see about getting the bridge cleaned out at the end of construction. He will try to put some shims in there to try to stabilize it to see if that helps. Otherwise, we have not come up with other things we can do about the sound. Taking it out means we cannot certify it. We would have to shut the bridge down to open the bridge up to clean it out. If we are able to do something, it would be six weeks. We would have to shut the bridge down for several hours and could schedule it when it is not peak traffic.

Public – We should not continue if we have that noise issue. It is affecting our foundations.

Andrea Glover – I would not agree and engineers would not agree that this would affect the foundations.

Public – It seems like the flood gate is too low and was not installed properly.

Andrea Glover – The construction contractor installed it in accordance with the plans. We could look at the design.

Public - A few neighbors expressed concern about the noise caused by the flood gates at Country Club Bridge. They are interested in a noise study and action taken to reduce the noise.

Sal Masoud – Could you install a barrier wall to dissipate the noise?

Andrea Glover – We looked at that briefly and determined our funds could not be used for that purpose.

Carlos Peña – Our Engineering Department could put together the information gathered to date and try to identify a plan of action. We understand the concerns and it has been brought up before. We will follow up with the affected neighborhood.

Public – So the cleaning will help?

Andrea Glover – The manufacturer checked it and said it was installed properly. A resident told us that the noise changed dramatically and I was concerned that maybe something broke. When he inspected it, he said it is installed correctly but there is more dirt in there than he would like to see. When you get the contractor to clean it, you have to shut the bridge to open the gate and then try to install shims to see if it will help.

### **Update on the USIBWC's Levee Certification Efforts in El Paso County and Doña Ana County**

Guillermo Martinez, Civil Engineer, USIBWC, gave a presentation on this topic, covering levee certification efforts for levees along the Rio Grande from Hatch, New Mexico to American Dam in El Paso, Texas.

After the levee construction is completed, we assemble levee certification packages for the Federal Emergency Management Agency (FEMA). Anticipated dates for certification packages to FEMA are:

- West Hatch levee reach – late May 2013
- Mesilla Phase 1 – late January 2013
- Canutillo Phase 1 – late April 2013
- Mesilla Phase 2 – late May 2013
- Sunland Park – late August 2013

We have had some delays because we need to receive the “as built” from our levee construction contractors. Once the IBWC submits to FEMA, FEMA takes 90-180 days to respond. When they do provide a response, they are going to say that it is accredited, or they need more time, or they need additional information from USIBWC.

The accreditation challenges are : Interior drainage. FEMA requires an interior drainage analysis. To date, no analysis exists. The other challenge is that there are segments of the levee that are currently under design. Construction of these respective levee segments will be required to complete the levee system.

To explain the interior drainage issue, he showed a diagram. Every culvert or structure through or underneath the levee requires a gate on it. This would be so that water would not spill from the Rio Grande to the land side of the levee. We have a responsibility to contain the floodwater between the levees. The problem is that water that is coming from the arroyos would not be able to enter the Rio Grande because the gate would be closed. So there needs to be an analysis of how much water is going to pond on the land side of the levee and what infrastructure is needed so that this water can be handled or pumped over the levee. To date, we do not have an interior drainage analysis. The USIBWC only has authority to work in our right-of-way. Many of these issues are a county issue or a city issue outside of our right-of-way. Even if the analysis recommends construction of ponds or pumps, the Commission does not have the authority to build such structures outside of our right-of-way.

Stakeholders in the region are aware as we have had our personnel meet with county and city officials in Doña Ana and El Paso Counties and other stakeholders. FEMA is working with stakeholders to establish responsibility for the interior drainage analysis. The lack of an interior drainage analysis will affect the accreditation of the Hatch West Levee, Mesilla Phase 1, Mesilla Phase 2, Canutillo Phase 1, and Sunland Park projects. But we will be submitting our certification packages.

He then recapped the areas that are still in the design phase so that in the short term there will be gaps in the areas where construction has been completed and certified that will affect levee accreditation by FEMA.

FEMA is changing the way it maps levees and they have some new draft guidelines about levees that are constructed in segments. The handout has detail about where you can download information about this from FEMA. For example, under the new criteria FEMA could consider that a lack of a rehabilitated levee in a small segment in certain areas may not negatively impact the rest of the flood protection system.

FEMA’s Flood Insurance Rate Maps are on hold until FEMA completes revising its levee analysis and mapping approach. FEMA has not provided USIBWC with a date when they will do this.

Dale Reinhardt – You mentioned you have met with the city. Are they doing anything about it?

Guillermo Martinez – We met with the City of El Paso and FEMA is working with USIBWC and the City about responsibilities.

John Balliew – How many gates are there in El Paso County?

Guillermo Martinez – From the Texas-New Mexico border to American Dam, there are approximately 20.

John Balliew - In the event you have high flow, someone has to close those valves. Who closes the structure?

Guillermo Martinez – It depends on who owns the structure and in accordance with the flood operations manual.

Carlos Peña – In the Lower Rio Grande Flood Control Project during the 2010 flood, we closed the gates. The problem there was people reopened the gates.

Guillermo Martinez – We monitor storms and gage the river. When the river reaches a certain flow capacity, we start our alert process and then we have a process for deploying staff to close the gates. We have Memorandums of Understanding with the local entities for the operation of gates.

Kevin Von Finger – Is Canutillo Phase 2 funded yet?

Andrea Glover – We are hoping 2014-2017 based on current funding estimates.

Larry Nance – For the Nemexas reach the one-third mile, is it being delayed because of an environmental issue?

Guillermo Martinez – Yes. We are working on design.

Larry Nance – For the interior drainage, is it just the design that has to be in place or pumping?

Guillermo Martinez – FEMA requires an analysis, a flood emergency manual, and an operations manual. I understand FEMA will accredit the levees if the interior drainage analysis has been performed and infrastructure needs identified, not necessarily that they are constructed.

John Balliew – I can see it is difficult for USIBWC to fund things outside of its right-of-way. But this is a study that needs to be funded and it seems that this study is integrally related to your structures.

Carlos Peña – Studies are something we can do. The actual construction would be something else.

Zack Libbin (EBID) – Is IBWC willing to help get funding for those studies?

Carlos Peña – I don't know what kind of funding is available. We will look into this.

Public – Does this affect both sides of the levees?

Guillermo Martinez – Yes, both east and west.

### **Suggested Future Agenda Items**

Kevin Von Finger – Update on status of Rio Grande trail from Anthony to Sunland Park.

Public – Answer about the bridge noise at Country Club.

Carlos Peña – We will put FEMA levee certification information on our web page.

Conrad Keyes – Final report on the *E. coli study*. Update on interior drainage.

If there are other issues/projects you would like to hear, please email the International Boundary and Water Commission at [sally.spener@ibwc.gov](mailto:sally.spener@ibwc.gov)

Next meeting scheduled for January 16, 2013 in Las Cruces, New Mexico.

\*Meeting notes are tentative and summarize, in draft, the contents and discussion of Citizens Forum Meetings. While these notes are intended to provide a general overview of Citizens Forum Meetings, they may not necessarily be accurate or complete, and may not be representative of USIBWC policy or positions.