

Rio Grande Citizens Forum
Doña Ana Government Center
Las Cruces, NM
June 15, 2010
Tentative Meeting Notes*

Board Members in Attendance:

Doug Echlin
Philip Partridge
Sal Masoud
John Balliew
Conrad Keyes, Jr.
Bob Todd (alternate for Mary Frances Keisling)
Louis Irwin

Board Members Absent:

John Hernandez
Mary Frances Keisling (represented by Bob Todd at the meeting)

USIBWC Staff in Attendance:

Sally Spener
Carlos Peña
Gabe Duran

MxIBWC Staff in Attendance:

Enrique Muñoz

About 35 members of the public were in attendance.

Doña Ana Flood Commission and Irrigation District Initiatives in Response to Climate Change and Flood Management

Paul Dugie, Director, Doña Ana County Flood Commission, began the presentation. The Flood Commission and Elephant Butte Irrigation District (EBID) have a Joint Powers Authority related to repair and maintenance of dams and flood control structures within the Lower Rio Grande Flood District. The Flood Commission pays 75% of maintenance costs and EBID 25%.

There are major projects in the Capital Improvement Plans, including Chaparral Road Flood Control and Wastewater for which \$250 million in flood control structures were identified. For the East Mesa Infrastructure, they will put out a RFP to update that. They want to intercept the water off the Organ Mountains and get it safely through the developed area. The Brown Farm Drainage project is a pond near Armstrong Road and El Camino Real where Sandhill Arroyo comes into the Valley.

S.W.I.M. includes several organizations involved in flood control or drainage. We are trying to change the philosophy to consider upstream and downstream impacts and relationships. A Memorandum of Understanding (MOU) is being written to include

watershed critical issues, agency needs, environmental aspects, and water conservation. The interest is to create an entity to manage and control stormwater regionally.

On Thursday, we are meeting with FEMA to start looking at the Digital Flood Insurance Rate Maps. We will not have the levees recertified before the maps are finalized so the Rio Grande Valley will be identified as high hazard for flood insurance purposes. Once the levee construction is complete, we hope to get the recertification completed quickly and into FEMA; we need to coordinate with IBWC to see if they are going to file the letter of map revision or whether it will be left to the local entities.

Gary Esslinger, Manager, Elephant Butte Irrigation District, continued the presentation. He gave some history about the development of the Rio Grande Project and the history of EBID-U.S. federal responsibility associated with the Project and climate/hydrology trends. He discussed the development of various water supply, water conveyance, drainage, and flood control projects in the region over the last century. There are over 30 flood control dams, most of which drain into EBID facilities.

In February 2008 we entered into the operating agreement with the Bureau of Reclamation and El Paso County Water Improvement District #1 to measure and account for the water leaving Caballo Reservoir. Importantly, the agreement said that if EBID could capture the stormwater, it was theirs to use whereas previously it made up part of the delivery to Texas.

He discussed EBID's Planning Scenarios for Climate Change. Snowpack historically accounts for 80% of project water supply. As snowmelt runoff decreases, so do water allocations. An increase in the severity of severe storm events is another impact of climate change. There is interest in taking advantage of this floodwater before it gets into the river and we lose it downstream. El Paso and Mexico support this because we can pace the stormwater going downstream, which is good during flood events. We want to capture and reuse the stormwater. There are various strategies related to this. If you can use stormwater for irrigation, then you can shut down the releases from Caballo Dam and conserve water there. Some of the identified strategies are:

Advance Warning System Real-time Monitoring – Satellite and radar monitoring to understand the trajectory and intensity of storms in real time for flood response. Then water can be retained or released based on water projected to come in. Seven stations from Caballo Dam to the Texas state line measure storm flows, with data transmitted every 20 minutes via radio telemetry so we can see storm surges coming down the river to aid in management and flood response.

Watershed Instrumentation Arroyo Metering (ACE) -- We developed our own weather stations and we can also measure flow on arroyos that are normally dry. This provides early warning from rain gauges in upper watersheds, flumes for metering flow into the Rio Grande. There were five organizations that deal with drainage or floodwaters. We inventoried our dams and the work group/task force developed a map of Placitas Arroyo. We have a weather station there that can give Hatch some notice if something is going to happen there.

Reservoir Instrumentation – When a flood control dam/reservoir fills, they can shut down releases from Caballo Dam and irrigate from the flood control dams. With dam instrumentation, they have reliable information on storage and discharge status. This also helps us know if we're going to have a potential emergency due to water over the spillway. It also helps us track the remaining retention space.

Environmental Benefits of Drain Storage for Storm Water -- EBID has over 300 miles of drains. We started considering using drains for short-term storage of stormwater. We have received grants through the New Mexico Environment Department, Reclamation, and the State of New Mexico Water Trust Fund. We developed a drain to capture the Edwards Arroyo. The diverse depth and velocity help to support habitat for birds and other wildlife; we also think it can help mitigate e coli. It also slows down the water and helps with infiltration, benefiting groundwater.

Regulating Reservoirs - One of the regulating reservoirs is Burn Lake. We are putting in pumps so we can lift the water out and put it into our canals. There are other opportunities near Mesilla Dam, Tonuco Drain, Diez Lagos Retention Project near Sunland Park, and La Mancha Retention Project for flows from the West Mesa.

Remote Sensing – We received a grant to do satellite remote sensing to help us manage depletion changes, evapotranspiration, and water accounting.

Rio Grande Flood Control Levee Construction Update

Gabriel Duran, USIBWC Engineer Planner, gave a presentation on this subject. The Rio Grande Canalization Project was constructed in 1938-1943; it covers 106 river miles, including 130 miles of flood control levees between Percha Dam, NM and American Dam at El Paso, TX. He mentioned the Recovery Act appropriation of \$220 million to the USIBWC for Rio Grande levee projects. About half of this funding will be spent in the greater El Paso-Las Cruces area and the rest in the Lower Rio Grande Valley in South Texas.

FEMA is updating its Flood Insurance Rate Maps. We had expected to have all construction done by the end of this year but due to surveying problems, we had to go and do more surveys, which has affected the schedule. He mentioned the 2008 flood at Presidio, TX where various problems were experienced with the levees there such as water going under or through the levee, sloughing/slope failure, and levee overtopping. We used sandbags to save the town.

He showed a drawing of a levee and described FEMA's requirement to build levees with three feet of freeboard for the 100-year storm. Our levees were originally built with two feet of freeboard and they were built with porous material. So the new design is to add extra material on top of the levee and some plating on the riverside slope to prevent water from going through the levee. We are engineering materials to protect the levee from high velocity and seepage. He then discussed the status of levee improvements at various locations:

Hatch Area -- We are improving the west levee from Hatch Siphon to Bignell Arroyo. Construction is about 8% complete. Substantial completion is expected March 2011.

Mesilla West Phase 1 - West levee from Shalem Bridge to Vado Bridge. Construction is at 15% complete. Substantial completion is expected March 2011. We are making structure improvements because FEMA required a closure device on every structure through the levee.

Mesilla East -- Mesilla Dam to Vado Bridge. Construction is at 15% complete. Substantial completion is expected March 2011.

Mesilla East Phase 2 -- Leasburg Bridge to Mesilla Dam. We did some work with in-house crews and subsequently determined the levees were not compacted to

proper compaction. We are designing that area again to identify weak spots. We will have final design by July 2010, award a construction contract in September 2010, and have substantial completion by August 2011.

Canutillo Phase 1 and Canutillo West Levee Phase 2 -- East levee, Vado Bridge to Vinton Bridge. West levee, Vado to Borderland. Construction is just beginning. Substantial completion is scheduled for May 2011.

Canutillo Phase 2 -- East levee, Vinton Bridge to Borderland Bridge. Design contract to be awarded by June 2010. Construction expected to start around February 2012. There are right-of-way, drainage, and permitting issues that make this reach complicated.

Sunland Park – East and west levees, Borderland Bridge to Rio Grande Power Plant area (except where there is high ground). This reach is under design right now. We expect to award a construction contract in September 2010 and complete construction by August 2011.

He showed photos of construction and a slide with links to various Recovery Act, USIBWC, and contracting sites. There were then questions and answers.

Kevin Bixby – How much of the floodway are you losing due to expanding width of the levee?

Gabriel Duran – About three to six feet.

Sal Masoud – You mentioned survey problem delays. Do the dates you gave for the projects account for those delays?

Duran -- Yes.

Masoud – Question about FEMA maps.

Paul Dugie – We will find out Thursday when the preliminary maps are coming out. You can view them for the next 60 days and then there is a six-month clock for the different boards to approve them and start enforcing them.

Masoud – FEMA told us there is a period of appeal or protest that could take another year.

Dugie – We will know soon if they will allow another appeal and protest period. There was one about a year ago. I am not expecting another appeal and protest period.

Masoud – If they go into effect, large sectors will be in high-risk floodplains.

Dugie – Communities have a six-month period to approve and start enforcing the maps. They will go into effect before IBWC gets its levees done so the flood insurance will be required for some time.

Member of the Public – There were three breaks in the Leasburg levee in the 2006 storm. Those levees were originally constructed by the farmers. Did somebody else repair those?

Duran – None of the USIBWC levees breached anywhere during the 2006 storm. It may be somebody else's levee.

There was some discussion of the haul routes for material for the Mesilla levee project. Mr. Duran showed a map of the haul routes and stated that Calle del Norte is not being used for this purpose.

Bixby – Are you going to vegetate the levees?

Duran – Yes, we will seed them. We want vegetation to help hold the material together. The construction completion dates shown in the presentation are for earthwork completion to be followed by reseeding.

Carlos Peña – The levee will be planted with native grasses; it's in the contract.

Masoud – At what point will you start certifying the levees to FEMA?

Duran – From International Dam to the old Riverside Dam in El Paso, we have applied for certification.

Masoud – What about the Country Club area?

Duran – We had a problem with compaction so we needed to revisit that. The Recovery Act construction schedules are on the agency web site and are updated regularly.

Member of the Public – Are there plans for USIBWC to assist farmers who have levees on their land? We have a levee by Radium Springs.

Duran – We are open to seeing if there are projects we can do within our project that would benefit farmers. If you write a letter to the Commission, you will get a written letter back.

2010 Rio Grande Water Supply

Lorenzo Arriaga of the Bureau of Reclamation gave a presentation on this topic. He discussed the current hydrologic conditions of the Upper Rio Grande Basin covering the headwaters to Ft. Quitman, Texas. Mountain snowpack, which accounts for the bulk of water in the project was 90-180% of average as of April 1, 2010 but by May 1, 2010, it evaporated. He showed precipitation and temperature data for the last 30-90 days showing it has been dry and hot, which has affected runoff.

Inflow to Elephant Butte Reservoir for March – June was 290,000 acre-feet, which is 69.5% of average. We had forecast 460,000 acre-feet.

For the summer monsoon season, the forecast is for a weakening El Niño climatologic pattern and the models predict a La Niña condition, which is the opposite of a wet monsoon season. The June – August forecast is for warmer temperatures and no significant trend for precipitation.

As of June 14, Elephant Butte Reservoir had 590,000 acre-feet of storage. Caballo Reservoir had more than 53,000 a/f Last year we were more than 3600 acre-feet more at Caballo and nearly 82,000 acre-feet more at Elephant Butte.

He discussed the 2010 Relinquishment of Rio Grande Compact Credit water. Under the Rio Grande Compact, New Mexico and Colorado can store over delivered water in Elephant Butte reservoir. When New Mexico exceeds its required delivery, they can store that water in the bank. If New Mexico chooses to and Texas accepts, they may relinquish that water to Texas, which allows for a balancing of scarce water resources. This relinquishment will benefit water users, especially those in Southern New Mexico. For this year, 80,000 acre-feet of credit water was relinquished. It's water that was already in the reservoir, now made available as usable Rio Grande Project water. This improves the certainty of the 2010 irrigation season surface water supply for southern New Mexico and Texas.

He showed a table of Elephant Butte storage for 1915 through 2009; the data suggest there has been a drought since 1997.

In accordance with this year's reservoir operating plan for Elephant Butte, reservoir storage will hit about 250,000 acre-feet at the end of irrigation season on Oct. 1. Caballo Reservoir will drop to 10,000 acre-feet. There is 497,926 acre-feet of usable water supply. Whenever usable project water drops below 400,000 acre-feet, the

upstream states cannot store water in their reservoirs. We are projected to be below 400,000 acre-feet again in late July. Releases from Elephant Butte began Feb. 4 and are tentatively planned to shut down on Oct. 15. Although we didn't have good snowmelt, we are projecting that we will have a total allocation of 760,812 acre-feet or 95% of a full supply.

Louis Irwin – Why does higher temperature decrease snowmelt rather than increase it because of melting?

Arriaga – This is due to evapotranspiration losses.

Philip Partridge – Is there a certain minimum level in the lake that must be maintained?

Arriaga – It's San Juan Chama water that we are not authorized to release.

Invasive Zebra and Quagga Mussels

Barbara Coulter, New Mexico Department of Game and Fish, gave a presentation on this topic. She noted that funding limitations have affected the effort to deal with the invasive mussels. One part of the effort to educate the public about potential introduction of the invasive mussels is the "Stop Aquatic Hitchhikers" billboards around the state. Zebra and quagga mussels are native to the Caspian Sea and we believe they came over in ballast water into the Great Lakes in the 1980s; since then, they have spread. Zebra and quagga mussels are similar and have similar impacts. We intercepted a boat at Navajo Lake that was infested. New Mexico is surrounded by states that have zebra or quagga mussels.

A female mussel can release over one million eggs in one spawn. In Lake Mead, they spawn year-round. They grow and reproduce quickly. They will attach to almost any surface. Overland transport of boats from other lakes is what is responsible for their spread to this region. They can be transported if you carry water from one water body to another. They can even attach to fishing line or native mollusks. They can clog intakes, cooling systems, boat parts, and water delivery systems. They like to live in pipes. Management, rather than eradication, is the strategy.

Reclamation is investigating some coatings that can be used to help resist mussel colonization. Sunfish and carp eat the mussels, but they probably don't eat enough to control them adequately. It can cost millions of dollars to combat invasive species.

In New Mexico, the mussels have the potential to impact native wildlife, reservoirs, surface water delivery systems, irrigated agriculture, recreational water use, etc. Navajo and Elephant Butte are our two highest-risk water bodies in the state. Any mussel that is attached to anything in New Mexico is not native; New Mexico's native mussels are free floating. If we find the mussels, we will flag your boat and it will be prohibited from launching in New Mexico or neighboring western states.

Rolf Hechler, New Mexico State Parks Regional Manager, then continued the presentation. He has administrative responsibility of Elephant Butte and Caballo Lakes. We know we are not going to catch every boat. We put up signs, have trained staff, and did a road block to inspect boats. We require special use permits for such things as bass tournaments, and we can screen the boats. We do education through boating classes at Elephant Butte.

Ms. Coulter added that New Mexico is currently testing major water bodies. We don't have any infestations that we know of. If we get an infestation, we will then require decontamination before that boat can go in any other water body.

Public Comment

Sally Spener, USIBWC, stated that at previous meetings attended by FEMA representatives, FEMA stated that homeowners can save money by purchasing flood insurance before the rate maps go into effect. Paul Dugie added that homeowners need to make sure it's FEMA-backed flood insurance to get the lower rate.

Suggested Future Agenda Items

The next meeting will be September 15 in El Paso.

Sal Masoud – Wants a presentation about the FEMA certification process that USIBWC will follow.

Philip Partridge – There is a growing recreational movement in the El Paso-Las Cruces area. There was a competitive event for biking, hiking, and canoeing on the Rio Grande. He has a paper about recreational issues that he wrote that he would like to submit for USIBWC to look at. El Paso Mayor Cook proposed kayak/canoe launching areas and events. He wants to know if there is some pro-active work by the entities so such events don't overlap/conflict in the future.

Calos Peña – For special events, organizations contact use and get a special use permit. Our Realty Office reviews the request to see if there are competing events.

Partridge – Is there any PR campaign that lets the public know about it? The public doesn't know to call IBWC.

Peña – We do get calls at our general number. We coordinate with organizers to provide access as may be needed.

Sally Spener – The Texas Clean Rivers Program for the Rio Grande would like to attend to give its annual update on water quality monitoring.

Conrad Keyes – Update on New Mexico Department of Agriculture's 319 program in conjunction with the Clean Rivers presentation.

*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.