

**Rio Grande Citizens' Forum**  
**Hernandez Hall, NMSU**  
**Nov. 7, 2007**  
**\*Tentative Meeting Notes**

Board members in attendance:

Douglas Echlin  
Joe Groff  
Zay Clopton  
Lupe Garcia  
Ed Fierro  
Conrad Keyes, Jr.  
Alisa Jorgensen

USIBWC Staff in attendance:

Tony Solo  
Sally Spener  
Al Riera  
Steve Smullen  
Hayley Goodstein

MxIBWC Staff in attendance:

Enrique Muñoz

Approximately 30 additional members of the public were in attendance.

Rio Grande Canalization Collaborative Project

A presentation on this topic was given by Beth Bardwell, World Wildlife Fund, with support from Phil King, NMSU Professor/Elephant Butte Irrigation District (EBID) consultant. The presentation is an update to the presentation given at the May 2007 Citizens' Forum meeting.

Ms. Bardwell stated that the project was begun to look at opportunities to integrate water management and operations to benefit irrigation, flood control, and river ecosystem health. The current focus of the effort is to prepare a conceptual restoration plan. They are quantifying the benefits and impacts to agricultural users across a range of activities.

For the conceptual restoration plan, they are articulating what the restoration goal is, identifying restoration approaches, trying to quantify the water budget for those restoration approaches, determining the hydrological prescriptions, and hope to identify restoration sites.

The restoration goal is: To account for restoration-associated depletions and maintain flood protection while restoring a mosaic of native habits on the floodplain and in-channel with a focus on restoring breeding habitat for the Southwest Willow Flycatcher.

She described various habitat types including riparian forest, riparian forest shrub, salt grass wet meadow, and within channel habitat, especially at arroyo mouths.

The restoration approaches consider mimicking a more natural hydrograph, increasing floodplain connectivity, irrigation of habitat, and establishing a floodplain.

The natural hydrograph included a spring pulse of high water flow in late May and early June, over bank flow and floodplain inundation, which recharges the groundwater table. A question is that if they chose an approach to restore the spring pulse, who would be the beneficiary of this flow? It is a period of low irrigation demand. She discussed other restoration approaches including increasing floodplain connectivity so that the channel and floodplain are reconnected again by increasing surface water levels, shaving the banks, opening secondary channels, and lowering the floodplain. Another option is irrigation of the habitat, much like a farmer irrigates the crops; in other words, pump from the river to irrigate the floodplain.

Another approach is the inset floodplain where the goal is to create a more connected floodplain at operational flows. For this, they could work with areas where the channel is incised, remove rip rap and bank vegetation to facilitate bank erosion and sediment deposition within the channel, establish a lower elevation terrace which floods at operational flows. Potential sites for this are arroyo mouths. You can put in rock groins at the bend of the river. The benefit is it doesn't use as much water as other approaches.

They are trying to determine water budgets for the different approaches.

They have also identified criteria for selecting restoration sites such as surface water elevation, maximum water table depth, existing native vegetation, land ownership, equipment access, proximity of spoil area (if you are removing floodplain materials), soil salinity and texture, proximity to established Southwestern Willow Flycatcher territories, landscape scale factors (longitudinal connectivity and size of habitat).

Another aspect of the effort is to quantify the impacts of habitat restoration and environmental flow on agricultural uses to determine how environmental flow and riparian vegetation affect water supply, conveyance efficiency, etc.

Conrad Keyes, Jr. questioned why higher flows would be needed in June to benefit native vegetation. He pointed out that crops such as pecan trees germinate earlier, that native vegetation leafs out much earlier in the year. Ms. Bardwell responded that native vegetation disperses seeds later than human-planted crops in this area.

Doug Echlin stated that Parsons, a USIBWC consultant on the Rio Grande Canalization Project Environmental Impact Statement (EIS), conducted a lot of these studies several years ago. He stated that the EIS was completed but the agency never got to the Record of Decision. How is this collaborative project different from what USIBWC proposed in the EIS?

Ms. Bardwell responded that there are three technical differences or additions to work done under the EIS. One is that the FLO-2D two-dimensional flood routing model is being used to identify any sites where we are going to get floodplain inundation; this is a more detailed analysis than was done by Parsons. Mr. Echlin responded that the new modeling looks very much like the modeling that was previously done. Ms. Bardwell stated that the conservation community has more confidence in the new model. She continued that the other elements in the collaborative process include consideration of implications under the Endangered Species Act. What we are hoping to do is develop

agreements with U.S. Fish and Wildlife Service for a habitat conservation plan or safe harbor agreement and those agreements would be entered into at the same time any of these restoration projects would be done. Additionally, we are looking at establishing the administrative infrastructure to transfer water from agricultural users to the environment. That whole process is being developed to a greater extent in this effort. There was universal concern about the preferred alternative identified by USIBWC in the EIS and we wanted to come up with a better alternative so we did this collaborative effort.

Principal Engineer Smullen stated that there was a significant difference based on the FLO-2D model regarding the extent to which the USIBWC would have to raise the levees to meet flood protection criteria. Nonetheless, many sites would be the same as indicated in the work previously done by Parsons.

Mr. Echlin stated that the work currently being undertaken still seems to point to alternative 3 as identified in the EIS. Ms. Bardwell said that the stakeholders felt that there were opportunities to restore much more habitat than in that alternative. Our goal is to establish 1000 acres. Mr. Echlin stated that through adaptive management, the USIBWC would eventually have reached that amount. He expressed concern that the effort is no further along than three years ago when the EIS was completed. Principal Engineer Smullen noted that a new aspect is the relationship with Elephant Butte Irrigation District and World Wildlife Fund and their work to develop a framework for water rights acquisition.

Phil King stated that the irrigation district's concern with the USIBWC's preferred alternative from the EIS is that the EIS stated that water rights would be needed but there did not seem to be any protection for irrigators. There was concern that if the habitat were established ("if you build it they will come") the irrigators were worried about having to manage for the birds. The irrigation district wanted safeguards for agriculture, for their water rights. The EIS did not specify how this would be done.

#### Rio Grande Flood Control Levees, Update on FEMA and IBWC Activities

USIBWC Principal Engineers Al Riera and Steve Smullen gave presentations on this topic.

PE Riera discussed levee-raising activities that were done in El Paso County. He stated that the objectives were to provide additional freeboard on existing levees in the El Paso area. During the 2006 flood, our levees were not overtopped but to obtain FEMA certification, we needed three feet of freeboard. The objectives were to improve flood protection, protect densely populated areas, and to complete the project in 2007.

He presented a map showing the areas that were deficient and the extent that they needed to be raised. A total of 9.5 miles was raised in El Paso County for deficient segments that existed in the United States roughly between Asarco and the Zaragoza International Bridge. All the work was done in-house using USIBWC crews. The work started May 17, 2007 and was completed August 30, 2007. He provided information on the workforce, equipment, and materials required for the project. Since the levees are also used as roads by Border Patrol, IBWC placed gravel on the levee so it could be used by Border Patrol vehicles. The cost for the work was \$808,663. We saved a lot of money doing the work with in-house personnel, but our crews had to be diverted from regular operations and maintenance duties, such as mowing the floodplain. He showed

several photos of how the project was accomplished and the before and after levee conditions.

Echlin – Isn't it true that the levees never failed in 2006? There is a perception around City Hall that the IBWC wasn't doing their work. It was my understanding that your levees were threatened but not overtopped.

Riera – The U.S. Rio Grande flood control levees were not overtopped during the 2006 flood. The flooding was caused by water coming down from the mountains.

USIBWC Public Affairs Officer Sally Spener pointed out that the National Weather Service issued Rio Grande flood warnings in 2006; technically speaking, the river was in flood. This created confusion among the public because although the river was in flood stage, the flood control project worked as intended so the levees were not overtopped. When people hear that the river is in flood stage, they may assume this means that the levees were overtopped.

Jennifer Montoya of World Wildlife Fund pointed out that Mexico does not have to comply with U.S. FEMA mandates. What happens on the Mexican side?

Riera – We continuously discuss our work plans with the Mexican Section of the International Boundary and Water Commission which also has plans to raise their levees and perform other maintenance activities.

PE Riera asked Mr. Enrique Muñoz of the Mexican Section if he could provide additional information about Mexico's plans.

Enrique Muñoz of the Mexican Section stated that Mexico has begun to work in the Lower Valley of the Rio Grande in Cd. Juarez. We have three contracts and are raising the levees. In December we will work between American Dam and International Dam.

Alisa Jorgensen – What is the required width of the levees?

Riera – Our minimum requirement for width is 16 feet to allow our vehicles safe access. There are some areas where achieving the minimum width is difficult because we did not acquire additional right of way. In order to raise the levees without acquiring additional right of way, we increased the slope on the sides of the levees. In some sections we went from 3:1 slope to a 1:1 slope. This allowed us to raise the levees without having to spend additional time acquiring more right of way, but it made the levees narrower. The steeper slopes will also make mowing and maintaining the slopes more challenging for our crews.

Jorgensen – What's going to happen in the Upper Valley?

Riera – Steve Smullen will address this in his part of the presentation.

Principal Engineer Steve Smullen added that in preparation for construction in El Paso County, the USIBWC identified a population of burrowing owls in the levee embankment. There were 20 or so within a five-mile reach and we had to relocate them. We worked with a local animal rescue organization -- Chihuahuan Desert Wildlife Rescue -- to take those owls elsewhere.

He then discussed the levee certification process. According to FEMA certification criteria, the USIBWC as a federal agency can self-certify. Our policy is to provide three feet of freeboard. We have to submit a flood operations plan to ensure there is an adequate warning system and a means to address interior drainage issues. We

also need a maintenance plan. We have decertified all of our levee systems except in California. We are planning levee-raising activities.

We have an agreement with Elephant Butte Irrigation District for flood operations and are working with El Paso County Water Improvement District #1 and the City of El Paso for flood operations agreements there. We will be providing certification documents to FEMA. FEMA must agree with what we submit in order to get the levees certified. The draft Digital Flood Insurance Rate Maps (DFIRMs) were released for El Paso and Doña Ana Counties but FEMA has not released a schedule to finalize them. The appeal process for El Paso may begin in early December. There will be two public notices followed by a 90-day appeal/protest period. To resolve the protests and appeals as needed to finalize the maps can take from one month to two years.

He then discussed FEMA's methodology. Where the levee is not certified, FEMA prepares the flood maps as if the levee system did not exist at all. FEMA's simplified methodology does not take into account levees in place.

The USIBWC has prepared an Environmental Assessment (EA) for levee improvements in the Rio Grande Canalization Project. The EA comment period closed on October 30. The comments are being addressed in the Final EA, which is being prepared. Habitat enhancements are being considered in the collaborative process.

Regarding the current status of the collaborative process, the U.S. Army Corps of Engineers is modeling inundation at 30 proposed habitat restoration sites. Stakeholder meetings were held; another meeting will be held in January. Other activities were discussed in the previous presentation by Beth Bardwell.

For the Canalization Project, the USIBWC will initiate levee-raising downstream of Selden Canyon where minor amounts of fill are required, enabling certification for a large part of the Mesilla Valley. He presented information about the reaches where this work is planned. Other reaches are being looked at for alternatives to levee-raising. All work is contingent upon funding. Projection is to begin work in the spring. He showed maps of different reaches and deficient segments.

For the Canutillo area, preliminary studies have been done. There is a gap in our project there where there is no levee; this is where the railroad runs parallel the river on the east side. Our consultant, S & B, recommended construction of 13,000 feet of floodwall and 5600 feet of new railroad embankment at an estimated cost of \$16 million. Canutillo Bridge would also need to be raised. We are looking at less costly alternatives. We are revising the FLO-2D model. Another complicating factor is that there are buildings on the river side of the railroad. He showed photos of the Canutillo area.

Alternatives to the S & B recommendations have also been considered including acquiring flooding easements, possible use of alternative interior floodway (river would split, there would be two channels) to reduce flow volumes, levee in lieu of floodwall, shifting west levee farther west, increasing the floodplain width.

Ed Fierro – Is the deficiency only on the east side at Canutillo or on the west side as well?

Smullen – It's essentially on both sides. The west side levee is also low.

Ed Fierro – Why didn't it overtop last year?

Smullen – The flow was not all that high. The flow at Courchesne bridge was 8000-9000 cubic feet per second (cfs). Capacity in this area (Canutillo) is supposed to be 12,000-13,000 cfs.

Conrad Keyes – How many miles of El Paso Water Utilities pipeline are in the floodplain?

Fierro- About 5-6 miles, from Sunland Park/Anapra Bridge to UTEP.

Question - What are you doing in the Hatch and Shalem areas?

Smullen – We are looking at alternatives that might be less expensive in the less populated areas.

Mr. Lucero – I'm from Radium Springs. Our property was flooded.

Smullen – Our levee system stops a little below Leasburg Dam.

We are not looking at water that comes off-channel. We are only concerned with water that comes down the river channel. There's no levee from Leasburg up through Selden Canyon.

USIBWC Upper Rio Grande Project Manager Tony Solo stated that in Radium Springs, there are no levees.

Smullen – For the levee work, we are going to start below Selden Canyon. Any water that would have gotten out of the river upstream of Selden would go back into the river at Selden.

Mrs. Lucero – New Mexico state legislature has a lot of money allocated for Selden Canyon.

Bardwell – There was a project for New Mexico State Parks to acquire a farm at the head of the canyon.

Mr. Lucero – We should capture all that floodwater. Not enough money is going into maintaining the drains, to keep them clean to take the water to the river.

Jorgensen – Is there an agency that handles the water that comes off the mountain in that area?

Smullen – Doña Ana County Flood Commission. We have agreements with EBID about operating the structures that enter the river during flood.

Riera – Our agreements are with entities that have structures on our levees. As you move outwards from the levees, the management of storm flows becomes the responsibility of municipalities, counties, etc.

Noma Villegas, Doña Ana County Flood Commission – When will you submit paperwork for certification of levees?

Smullen – This month we will submit a draft to FEMA for certification of some levees in El Paso County. There is a structure in this reach that the irrigation district is still fixing. Until they complete that work we won't be able to certify.

Riera – Another option to expedite the process until the structures are replaced would be to show FEMA that in the event of a flood we could close unoperable structures through the establishment of Operations and Maintenance standard operating procedures.

Villegas – We have been told that the new DFIRMs for Doña Ana County will be out in 2009. Are they going to prepare maps again where they don't model the levees at all?

Smullen – The information we will be submitting this month is only for the areas where we have done work in El Paso.

Riera – Before we are able to submit paperwork for the certification of levees, we need to fix the levees that require improvements.

Greg Bloom – Senator Bingaman asked FEMA to suspend the 90-day appeal process after the DFIRMs were first released for Doña Ana County earlier this year. We hadn't heard they are going to redo them.

Villegas – We were told unofficially they were going to do a new study/mapping.

Comment – USIBWC should do more sediment removal. It would save a lot of lives and property damage. In our area, we have rodents in the levees, which is bad. Then they go and eat our crops.

Riera – We do conduct studies of the condition of our levees. We have priorities and work in areas based on condition, risk and funding availability. I'd be happy to take your name and look into the issues in your area.

Bardwell – One of the models we are looking at is the effect of sediment in the channel on conveyance efficiency and flood capacity; we will be able to quantify whether dredging would improve that. We want to bring scientific data and studies to the issue of sediment removal.

Comment – The river is full of islands already.

Bardwell – Some of the sediment came off the floodplain so it may not reduce conveyance capacity. Sediment removal is a practice done for many years and we are seeing if there is science to justify it.

Guadalupe Garcia – If you dredge, you don't need to raise the levees. The river hasn't been cleared in years and needs to be cleaned out.

#### Good Neighbor Environmental Board Tenth Report, Environmental Protection and Border Security on the U.S.-Mexico Border

USIBWC Public Affairs Officer Sally Spener gave a presentation about this topic.

The Good Neighbor Environmental Board (GNEB) advises the President and Congress on environmental quality along the U.S. border with Mexico. Local members include USIBWC Commissioner Carlos Marin (Sally Spener is his Alternate), Jennifer Montoya of World Wildlife Fund, Chris Brown of New Mexico State University, Ron Curry of New Mexico Environment Department, and Edward Elbrock of Malpai Borderlands Group.

The report noted that both environmental protection and border security are important along the U.S.-Mexico border. Undocumented migrants and smugglers crossing in large numbers along with related enforcement and security actions can damage the environment. In some cases, tighter security at the border can help protect the environment.

Some of the key findings and recommendations are to strengthen communication and collaboration between security agencies and environmental protection/land management agencies, strategically employ a mix of technology and personnel to meet security and environmental needs. Vehicle barriers and sensor technology that permit habitat connectivity and migration of species can work in rural areas with fragile habitats.

Some of the challenges include the concern that roads and foot trails used by migrants and law enforcement damage wildlife and ecosystems. It is proposed to use technology and vehicle barriers rather than new roads, to identify sensitive habitat and minimize environmental impacts there, establish a federal office to address border security and the environment.

Another challenge is lack of collaboration across agencies with security, land management, and environmental protection missions. The GNEB proposes establishing an interagency task force to address law enforcement changes affecting federal lands. The federal government should identify communications gaps and place liaison personnel in border states.

Trash and other waste left by crossers is another concern. Additional federal government support could help address sanitation and solid waste issues.

To address possible negative impacts to wildlife and the environment of impenetrable fences, the GNEB proposes holding a national conference on fencing technology to develop recommendations for prototype fences. The GNEB also recommends that the USIBWC have the opportunity to review proposed infrastructure to provide advice on ways to minimize negative transboundary impacts such as erosion or flooding.

USIBWC concerns regarding border security infrastructure include: as required by the 1970 Boundary Treaty, ensuring that infrastructure does not obstruct or deflect the normal or flood flows of the Rio Grande or Colorado River due to potential flood risk and potential to alter the international boundary; ensuring that infrastructure is built in the United States with a setback requirement; ensuring that IBWC has access to boundary monuments in order to maintain them and ensure line of sight between monuments; ensuring that stormwater flows are considered when erecting barriers on the land boundary.

The GNEB report also addressed the flow of hazardous materials through ports of entry. The GNEB recommended increasing the number of hazmat inspectors at the ports and establishing specific sites and hours for hazmat vehicles; resolving liability issues for cross-border emergency responders; establish radio frequency identification to track hazardous waste shipments; strengthen communication and collaboration among security and environmental protection personnel at ports of entry; consider the needs of smaller communities for technology and funding.

The report also provides examples of projects that balance environmental protection and border security. One example is the U.S.-Mexico Critical Infrastructure Protection Framework. The USIBWC co-chaired the water/dams working group – a bilateral group that identified critical infrastructure and resources such as Falcon and Amistad Dams on the Rio Grander in order to reduce vulnerability. Another project was the U.S. Department of Agriculture Douglas-Agua Prieta Stormwater Partnership at the Arizona-Sonora border. Border Patrol participated in this partnership which worked to control stormwater runoff and reduce erosion. The U.S. Bureau of Land Management's Southern Arizona Project worked to clean up solid waste left by border crossers.

The GNEB is currently working on the 11<sup>th</sup> Report on Natural Hazards and the Environment at the U.S.-Mexico Border to be released in March 2008. The report addresses flood issues in the U.S.-Mexico border region, among other hazards.

Echlin – Pleased to hear that IBWC is involved in environmental issues and the fence; people in Washington D.C. have proposed 700 miles of fencing along the land and the river boundary, which will affect animal habitats. Has anyone looked at the fact that U.S. territory is being ceded?



Spener – There are many different views on this matter. The public has the opportunity to offer its perspectives through the public scoping process that the Department of Homeland Security is currently undertaking for some of the fence projects.

Jennifer Montoya – DHS is doing an EIS for the Lower Rio Grande Valley area of Texas, even though Sec. Chertoff is not required to do so because of the waiver granted in the Real ID Act. The waiver from environmental laws is being applied in the San Pedro River area.

Spener – I can provide contact information for the EIS that DHS is doing.

Echlin – Are you involved in the San Pedro area?

Spener – We provide feedback about what types of barriers are appropriate to erect in the area of the river, specifically how to meet any flood-flow requirements. The GNEB sent a comment letter recommending that the waiver only be applied in rare circumstances.

Echlin – What are the setback requirements?

Riera – Regardless of where DHS constructs their fence, the fact is that the international boundary does not change. That is why IBWC is here. It's our responsibility to ensure that international boundary is properly demarcated. The minimum setback we require ranges between 2 to 3 feet. In the areas around boundary monuments, we have additional requirements for more space and gates to have the necessary access so we can conduct maintenance activities.

Comment – Sometimes there's a lot of space between the barrier posts, so it would be easy for someone to slip through.

Riera – The 4-foot posts are intended to stop vehicle crossing, drug and human trafficking, while leaving space for wildlife to get through. There's a difference in what's needed to prevent vehicle traffic vs. pedestrian traffic. The permanent vehicle barriers are put up mostly in rural areas where there is not significant numbers of people crossing on foot.

Question - How do you manage sediment removal?

Riera – We have an annual maintenance program that is implemented by the field offices, but it requires a lot of funding. This year we removed over 130,000 cubic yards of sediment.

Question - Why hasn't any sediment removal or maintenance been done in the area of Percha Dam?

Riera – We look at the areas that have the most flooding and where the water is most likely to jump the channel. But it also depends on areas where the most lives can be protected and the damage to property minimized.

Comment - But the levees there are full of rodents. They eat all the crops. They are making holes everywhere and if nothing is done, they will need to be completely rebuilt.

Riera – Eventually all levees will be evaluated to determine whether the levees in the area need rebuilding.

Comment – I hope so because this area doesn't seem to be given much importance; it would be great if you could get out there more often.

Public Comment/Board Discussion/Suggested Future Agenda Items

Zay Clopton – Adjudication of water rights in the Lower Rio Grande is an issue. The Office of the State Engineer is currently trying to join everyone in the lawsuit. They are sending out packets and it would be imprudent to ignore that packet. The Utton Center at the University of New Mexico has set up a toll-free number to advise anyone with questions about the packet. They also are willing to talk to small groups if they have questions. Don't overlook opportunities to be involved. He has DVDs with information. Suggested that there be a presentation about that at the next Las Cruces meeting (which will be in six months).

Comment – You need to respond to that package. Six months will be too late. They have to notify everyone by May 2008.

Joe Groff – Why doesn't the Canalization collaborative project extend to Texas?

Smullen – It goes into Texas in the Canalization Project but does not extend to the Rectification Project, which is farther downstream in El Paso County.

Groff – Another suggested agenda item is the relationship between USIBWC and the stormwater management utility in El Paso and who manages it in New Mexico.

Keyes – A presentation about what Mexico wants to do with the levees.

Enrique Muñoz – Yes, it's possible. We will have 7 contracts. We could do it at the February meeting.

Jorgensen – Levee work update.

Keyes – Update on the Boundary Preservation Project, the Forgotten River reach.

NOTE: The next meeting will be February 4, 6:30 – 8:30 p.m. at El Paso Headquarters Building.

\*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.