

**RIO GRANDE CITIZENS FORUM**  
**City of Las Cruces Council Chambers**  
**Las Cruces, NM**  
**April 11, 2019**  
**\* Tentative Meeting Notes**

**Board Members in attendance:**

Walton Low, Retired, U.S. Geological Survey  
Danny Chavez, Hudspeth County Conservation and Reclamation  
Mark Calamia, National Park Service  
John Unruh, Retired, U.S. Geological Survey  
Philip Partridge, Outdoor recreation enthusiast  
Jim Maxfield, Mid-West Textile

**USIBWC Staff in attendance:**

Rosie Montes, Upper Rio Grande Area Operations Manager  
Lori Kuczanski, Public Affairs Officer, USIBWC

**Members of the public in attendance:**

8 members of the public were in attendance.

**Welcoming Remarks:**

At 6:30 PM, Rosie Montes made opening remarks. The meeting began with the first presentation by Ruben Rodriguez, Water Supply Manager, El Paso Water.

**Water Quality in the Desert: Supply Challenges and Treatment Solutions—Ruben Rodriguez, Water Supply Manager, El Paso Water**

Statistics:

El Paso is growing, and the population is steadily increasing. El Paso County has a population of about 850,000 and 200,000 water service connections are El Paso Water owned. The average demand is 100 mgd, and varies throughout the year, and the peak is the 3<sup>rd</sup> week in June at about 160 million gallons per day (mgd). Average rainfall in El Paso is about 9-11 inches per year, so water conservation is essential. Our recent drought conditions have presented new challenges each year, so that is something we must deal with each year.

He showed NASA images of Elephant Butte Reservoir, showing how much the lake has receded from 1994-2013. The reservoir provides Rio Grande water to El Paso and the region's other communities. The recent drought conditions at Elephant Butte present new challenges not seen in recent memory. The levels are alarmingly low, about 3% of capacity in 2013 and again in Oct. of 2018. Today we are at 11.5%. The low levels in the Butte mean challenges in water quality due to algae and decomposing organics on the lake floor.

Water Conservation

Water consumption in El Paso is 128 gallons per capita per day (GPCD). An aggressive water conservation program started in the 80s and 90s by our Public Relations team. In 1985, we were at 205 GPCD and in 2018 we were at 35% reduction of the GPCD. Our target is 125 GPCD, and hopefully we

can hit that goal in 2030. We are proud our customers answered the call to conserve water. We have great customers and we like to give a “shout out” as much as we can for our customers.

El Paso Water has a very diversified Water Resource—the river, underground water, desalination, our water re-use program, conservation, and future resources. This provides redundancy, and as a water treatment operator, I rely on redundancy to operate my plant in the most efficient and dependable way. This is also a testament of our leadership in the past and present years.

#### Regional Water Resources

There are two aquifers that are used year-round—the Mesilla Bolson in west El Paso and the Hueco Bolson in east El Paso. The Rio Grande River is a seasonable water source and is available during the irrigation season. The west Texas aquifers are future resources.

#### El Paso Water Well Sites

There are approximately 150 wells throughout El Paso and Canutillo. Hueco Bolson provides water for the airport, Fort Bliss, and the Northeast. Some wells run throughout the year, but some are seasonal when no surface water is available.

#### Kay Bailey Hutchison Desalination Plant

There are two groundwater plants that run year-round—the Kay B. Hutchison Desalination Plant (KBHDP) and the Upper Valley Water Treatment Plant. The KBHDP can process 27.5 mgd. Its primary purpose is to desalinate high TDS (salts) well water from the Hueco Bolson to safe drinking water standards. This state-of-the-art desalination facility applies an innovative reverse osmosis technology to convert brackish groundwater to high quality drinking water. There are two source water plants—they are seasonal plants and the source is the Rio Grande River. The plants are the Robertson/Umbenhauer (Canal) Water Treatment Plant in Central El Paso, and the Jonathan Rogers Water Treatment Plant in southeast El Paso.

The KBHDP treats brackish groundwater from the Hueco Bolson. It’s the largest inland desalination plant in the world. It’s a joint project with Fort Bliss and serves east El Paso. It’s used as needed since it’s an expensive source of water due to high power consumption.

#### Upper Valley Wastewater Treatment Plant

The Primary purpose is to remove arsenic and produce water to safe drinking water standards with a finished water with an arsenic concentration of 8 parts per billion or less. This plant serves west El Paso. Future expansion plans in the works to treat surface water.

#### Canal Water Treatment Plant

This plant treats 40 mgd and is the oldest water treatment plant in El Paso at 75 years old. This plant serves central El Paso, part of central west, and central east El Paso. It’s a conventional source water treatment plant and the source is the Rio Grande River. There are treatment challenges—quick changes in water quality and turbidity and sand. Also of concern is algae. Jonathan Rogers Water Treatment Plant This plant treats 60 mgd. It was built in the 90s and is about 25 years old. This plant treats surface water from the Rio Grande River to drinking water standards. It’s a conventional surface water treatment plant using ferric chloride as coagulant. It removes TOC (organics), sand, silt, and debris. Ozone and chlorine are used as disinfectants. This plant serves the Lower Valley, east, and northeast El Paso.

There are four wastewater treatment plants in El Paso. They can be seen as a water source since they contribute reuse water that can be used in place of potable drinking water for the irrigation of parks, golf courses, etc.

The Fred Hervey Water Reclamation Plant design capacity is 12 mgd, but on average treats approximately 5.7 mgd. The plant sends on average approximately 2.7 MGD of water to injection wells and infiltration basins. Effluent from the plant is sent to the injection wells and infiltration basins daily, but will vary in amount depending on the time of year and depending on what is available as a surplus that is not used by our major users

The plant further treats reclaimed water to drinking water standards and uses it to replenish the aquifer through injection wells and infiltration basins.

#### Reclaimed Water Distribution

We call this the Purple Pipe. Reclaimed water is used for irrigation. The project is currently not being expanded due to cost of adding infrastructure and contractual obligations to the irrigation district. There are future plans to use reclaimed water from the Bustamante Wastewater Treatment Plant for direct potable reuse.

El Paso Water Production. During the 2013 drought, 9% of the city's water came from the Rio Grande and 84% from groundwater as compared to 2010, when 50% came from the river and 47% from groundwater.

This is used as comparison of a full surface water allotment year to a drought year allotment year. Increased use of groundwater is not sustainable.

#### Non-Drought Year

Abundance of surface water provides half of water needed to meet the demand. It can easily meet the demand throughout the increased demand months and especially during peak demand.

#### Peak Demand during a Drought Year

Surface water is available during the high demand period. Water received at just the right time needed. Although not ideal situation, the demand is still met without issues.

#### Drought Year Without River Water

It is challenging to meet peak demand if there is no river water available. We would need to implement drought contingency measures and mandatory watering restrictions.

#### Advanced Purified Water Treatment Plant Concept

Currently the Roberto Bustamante Wastewater Treatment Plant (RBWWTP) has contractual obligations to return a portion of its effluent water to the El Paso County Water Improvement District #1 (EPCWID#1) through the Riverside Canal. After taking another portion of the RBWWTP effluent for water reuse, there is still some effluent water available to be used for Advanced Water Purification. This will add another source of water to El Paso Water's water source portfolio.

#### El Paso Water Typical Water Distribution Supply Pattern

El Paso has many water resources. The resources will change during the two water seasons (irrigation

season and non-irrigation season). El Pasoans will get a blend of water sources depending on their location.

He presented a Chemical Analysis Table identifying levels of various parameters (such as salinity, fluorides, nitrates, and iron) at various water source locations.

#### Blending Water Sources

El Paso Water uses various sources of blended water supplies. There are two water seasons. There is a gradual changeover of supply to decrease system “upsets”. There is a gradual introduction of different sources, especially during two seasons, to decrease dirty water, and change of direction. And lastly, corrosion control is a must, so a Flint Michigan situation doesn’t occur.

#### Corrosion Control Treatment

Poly/Orthophosphate is added to drinking water at four treatment plants and throughout the system. This inhibits corrosion and leaching of lead and copper by forming protective coating in pipes. Sodium hydroxide is used as needed for pH control and to balance water chemistry.

#### El Paso Water Sampling Analysis

El Paso Water operators analyze some process control samples at each plant: turbidity, pH, Temperature, chlorine residual, TDS (salinity), conductivity alkalinity, total hardness, orthophosphate, arsenic, total organic carbon, chlorite. Tens of thousands of yearly samples analyzed at El Paso Water’s International Water Quality Laboratory, which is accredited. Specialized regulatory samples are sent to accredited contract laboratories.

He showed a table of the date ranges of when the water samples were taken, how many samples were collected, and the results. As you can see, the results of the El Paso drinking water are very good. El Paso Water is very proud of the results. There was 1 testing result in 2017 that tested positive for lead. The one infraction was immediately re-sampled, corrected and resulted in a non-detect on that.

#### 2017 El Paso Water LCR Lead Results

He showed a slide of lead analysis results of the 100 samples collected in distribution for Lead and Copper Rule (LCR) regulatory purposes in 2017. Most samples are below the 90<sup>th</sup> percentile result of 0.0023 mg/L. One sample was above the action level for lead but was from a sample location that had not been used for a few weeks. It was quickly resampled and was found to be non-detect. It is important to point out that there is no lead in our source water and the source of lead is from customers’ plumbing whenever lead is found.

#### El Paso Water Lead and Copper Sampling at Various El Paso Schools

Various schools were tested proactively and not part of required LCR sampling. Many more samples are collected throughout the distribution system for these and other constituents, but I focused my presentation on lead sampling and corrosion control since this has been the issue of recent concern.

Q: How clean is the Rio Grande River?

A: There are 17 sites in the Clean Rivers Program that does monitoring and testing. The Texas Commission on Environmental Quality (TCEQ) and the Clean Rivers Program can give you more information. There will be a presentation at the July 11 Citizens Forum meeting on the Clean Rivers Program.

Q: What is the population growth for the next 20 years?

A: I do not know. I would have to get back to you.

Q: The reduction of 35% GPCD in El Paso, can you give the factors for that?

A: There was a public relations campaign and freebies were given out to the public, such as water conservation shower heads, as well as letting our customers know the situation we were in was important to be very honest with our customers.

Q: If you have a well in El Paso or Las Cruces, based on the number of wells that you have here how is the water table going to change by the draw rate?

A: To keep our aquifers sustainable, we can't draw more than about 60,000 acre-feet per year, so we try to keep it below that.

Let me re-phrase the question:

If I have a 60-foot well on my property and the water table is currently at 40 feet where I hit water, at what rate are you drawing that down so that I have to go deeper and deeper?

A: I don't know.

Q: Your sustainability is 60,000 acre-feet per year? Are you saying that's the recharge rate also?

A: Yes

**USIBWC De-Silting Activities for Fiscal Year 2019—Rosie Montes, Area Operations Manager, Upper Rio Grande Field Office, USIBWC**

Ms. Montes gave a presentation overview. She also covered the USIBWC mission.

**Canalization and Rectification Projects**

She e showed a map of the Commission's Upper Rio Grande region. It starts at, Caballo Dam, New Mexico and it goes to an area past Fort Quitman, Texas, which is known as the Boundary Preservation. The flood control mission in this area involves maintenance of the levees, responding to flood operations at Caballo Dam, , and sediment control dams. The USIBWC maintains five sediment-control dams in the New Mexico area, in partnership with Elephant Butte Irrigation District and Caballo Natural Resource Conservation Service District. Part of our other mission in the Upper Rio Grande area is the water delivery to Mexico. At American Dam, Rio Grande water is diverted into the American Canal for irrigation. At the International Dam, water is diverted to Mexico via the Acequia Madre Inlet. We also have gaging stations that we monitor. Environmental restoration up and down the river is also a part of our mission.

She noted that sediment is a major concern. There was a study that was done, and it identified nine problem locations. This was a presentation that Dr. Borah presented at the October Citizens Forum meeting. Due to a glitch at that meeting, his slides weren't available to be shown. The presentation is available on our website. It is estimated that 450,000 cubic yards of silt enters the Canalization reach of the Rio Grande annually. The reach is from the Caballo Dam down to American Dam. American Dam is in the El Paso area. When we have sediment in the river, it causes problems such as: sediment plugs, island formations, raising of the riverbed, increase in water surface elevations, increased flooding risks to adjoining communities, and sediment accumulation prevents draining of irrigation flows.

The Rio Grande Canalization Project Channel Maintenance Alternative and Sediment Transportation Study identified nine problem locations.

In fiscal year 2018 the de-silting efforts were as follows: removed 500,000 cubic yards within the Canalization and Rectification reaches (Rectification is downstream of Canalization, from El Paso to Fort Quitman, Texas) of the Rio Grande. Canalization 182,521 cubic yards (13 bridge crossings and Montoya Drain intersection. In the Rectification areas, 320,111 cubic yards (Alamo and Guayuco Arroyos, Fort Quitman and downstream).

As part of the sediment basins in New Mexico, the five sediment dams maintained were: Green Arroyo, Crow Canyon, Jalarosa Arroyo 1&2, Broad Canyon, and Berrenda.

We also do levee and mowing maintenance throughout the Canalization and Rectification area. We operate and maintain American and International Diversion Dams.

She showed pictures of the progress of the de-silting at Sunland Park, Mesquite Bridge, Courchesne Bridge, and Canutillo Bridge.

The Guayuco Arroyo photos showed the progress before and after de-silting. This area always seems to be a problem because no matter how often you go out there, once you leave it here comes the silt again.

#### 2019 Desilting Efforts

She also showed photos at the Canutillo Bridge and Shalem Colony Bridge.

The concrete-lined Rio Grande in Central El Paso-Ciudad Juarez, known as the Chamizal Channel, is about 5-miles long. Once the concrete lining ends, there seems to be an area where the water sits, with sediment and vegetation.

At American Dam at El Paso, de-silting in the area is just about done. There were 13 islands in the area. Desilting was also done in the Rio Grande by I-10 in Las Cruces, or the Pichacho area.

#### 2019 De-silting statistics

Canalization total area is 142,974 cubic yards, and that covers from Shalem to upstream of Shalem Bridge. At I-10 Las Cruces, there were 7,274 cubic yards removed. Canutillo to upstream of Canutillo Bridge was 6,008 cubic yards, and Courchesne to American Dam and the 13 islands there were 114,000 cubic yards removed. For a total of 142,974 cubic yards removed.

At the Chamizal project the total removed is 13,833 cubic yards. This covers the areas between Chamizal Channel/Chihuahuita to 800 ft past the end of the lined channel.

Rectification total is 80,469 cubic yards. This includes the area from Ft. Quitman to Neely's and the Guayuco Arroyo mouth.

The Boundary Preservation area was 300 cubic yards and that covered the Frailes Arroyo area

The grand total of sediment/silt removed is 237,576 cubic years. These statistics are as of April 4, 2019. We are still working on de-silting until the irrigation water arrives around June 4, 2019. The Rectification

Project officially starts at the Chamizal area where we concentrated our efforts. We also focused on a big blockage at the Guayuco area.

#### Channel Maintenance Alternatives

In 2018, a contract was awarded for a pilot project: the Thurman Arroyo 1 and 2 sediment basins in the Hatch area. The project is to catch the sediment that comes down the arroyos before it gets to the river. It was awarded in September of 2018 and is under construction now. It is being monitored by our Construction Division Ms. Montes toured it two days ago to see the progress, and it's going very well. This is a pilot program and we are hoping that if it is very successful, we can have more projects like this.

The 2<sup>nd</sup> pilot program that did not go through was the Placitas area. We didn't receive any bids for this project. The 3<sup>rd</sup> project was the Rincon to Bignell Arroyo, but the bid exceeded our budget. We are hoping we can pursue both projects in the future.

She showed recent photos of Thurman I and II , depicting fine grading being done and the end wall that is being steel reinforced. By the end of March 2019, approximately 125,000 cubic yards of sediment was removed. Not only are they doing sediment basins to catch the sediment, but in the immediate area of the river they are also doing de-silting and environmental mitigation. There are some areas where birds nest. Our Environmental Management Division is very proactive in identifying those areas. Instead of having IBWC or any contractor take out the islands where the birds are known to nest, there is a mitigation process that, before removing them, we re-plant vegetation in another area so when the birds come back, they will find the trees and the vegetation and nest there. In this contract they are doing that.

#### Future Projects:

Rincon

Hatch Area

Salem Bridge Crossing—in the Canalization area

Neely's Arroyo

Other Areas requiring immediate attention

The I-10 Pichacho area required immediate attention. We did not have this scheduled at the time but because it was brought to our attention in one of our other meetings, we looked at it and became proactive. The area is just about cleaned out.

#### Water Delivery Mission Convention of 1906:

This is the distribution of water between Mexico and the United States of the Rio Grande in the El Paso-Juarez area. The U.S. delivers 60,000 acre-feet per year to Mexico. The 2019 irrigation season is about to begin. Water will be released from Caballo Dam on May 31, 2019 and we should see water coming to the El Paso #1 irrigation district, Elephant Butte Irrigation District, and Mexico around June 5, 2019.

#### Canalization River Management Plan

The River Management Plan (RMP) was updated in November 2018 and distributed to stakeholders for review. The target date to have it finalized is in the Spring of 2019. The RMP covers the future floodplain management, endangered species management, and channel maintenance because USIBWC's 2009 Record of Decision (ROD) expires in June 2019. Comments are incorporated in the RMP. It also covers the Environmental Assessment in progress, the RMP and EA supersede the ROD. The USIBWC

Operations and Maintenance Division and Environmental Management Division work closely together on environmental issues during the sediment removal process.

#### Ongoing Projects

American Canal Upper Reach—construction is in progress. The contract is scheduled to be completed in May 2019. The canal is being lined with concrete.

The American Canal Lower Reach is under design, which is estimated to be completed June 2019. We estimate the solicitation for construction will be in 2020.

Sunland Park Levee—there are two levee designs, one of the west side and one on the east side of the river. On the west, it's from Borderland Bridge to Nemexus Drain. The design is scheduled to be completed in May.

The east side is from Borderland Bridge to El Paso Electric Plant, the design is scheduled to be completed this summer.

At Riverside Wasteway 2, which is in the Rectification area close to Riverside, the construction was completed in summer of 2018, and we are pending minor close out items at this point. El Paso County Water Improvement District #1 plans to extend the Waste way #2 structure and work on the check structure.

At the Vado Levee in the Canalization area, the west levee is an in-house design for erosion repairs. It is proposed to go out for construction solicitation at the end of this fiscal year, which is during September 2019. Vado east has been completed.

#### 30-day public comment

The two Environmental Assessments (EA) for the Rio Grande Canalization Project are in progress:

1. Evaluation of possible aquatic habitat restoration areas including assessing feasibility of establishing areas for wetlands and fish habitat. Public review and comments are available from approximately May 11 to June 11.
2. The continued implementation of the River Management Plan, covering aspects such as channel maintenance, habitat restoration, and recreation. Comments will be accepted from May 3-June 3

Information will be posted on our website or you may contact Elizabeth Verdecchia at 915-832-4701 or [elizabeth.verdecchia@ibwc.gov](mailto:elizabeth.verdecchia@ibwc.gov)

Q: Where does the silt that you remove from American Dam get deposited??

A: Adjacent to the Rio Grande. We have a no-cost option to deliver the silt to your site. One location is the Sheriff's posse. Contact Rosie Montes for more information.

#### **Public Comment:**

None

#### **Board Discussion/Suggested Future Agenda Items**

Citizen Forum notices can now be emailed to you rather than mailed. Send your request to Lori (lori.kuczanski@ibwc.gov). This will save the agency money on mailing and expedite receiving notices.

**Suggested Future Agenda Items:**

Environmental Issues along the river such as water quality, river channel, banks, vegetation, threatened and endangered species, habitats due to climate change.

The second presentation will be on the Clean Rivers Program and their water quality testing.

The next meeting will be July 11, 2019 at USIBWC Headquarters in El Paso, Texas.

8:30 meeting adjourned.

\*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.