Pecos River 2nd Restoration Project Meeting/Site Visit

Bitter Lake National Wildlife Refuge (BLNWR) Roswell, NM – September 21, 22, 2010

Attendees:

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1. Introductions

The meeting began approximately 10:15 AM. Introductions were made by each individual in attendance. A call-in line was set up but there were no remote participants.

2. Presentation

Paul Tashjian presented a PowerPoint presentation on BLNWR restoration projects beginning in January 2009. Oxbow 4 was reconnected in June 2009 in a project conducted by Reclamation. The Service removed saltcedar and lowered banks on portions of two reaches above Oxbow 4. The refuge also initiated another project in the Salt Creek Wilderness to remove saltcedar.

Highlights of the presentation and discussion:

- The bluntnose shiner (shiner) is a pelagic spawner, dependent on summer storms and block releases.

- In general, the river channel north of BLNWR below Sumner Dam was more subject to drying and is wider, sandier and more dynamic than the river south to Brantley Reservoir. There is more age diversity and community structure among the shiner present.

- The southern reach has continuous flows due to springs beginning in the BLNWR area, but the channel is more constrained and sediment inflows from tributaries are limited. Shiner populations do not show good numbers of shiner in all age classes.

- Historically (pre-dams and extensive withdrawals) there were much larger floods, larger less-incised channels and more wetlands all along the Pecos.

- The Pecos River is less regulated by dams at this reach than the Rio Grande and has a somewhat more natural hydrograph. There are still considerable inflows from summer storms and tributaries, but less water overall and smaller high flow events than there were historically.

- Initial responses of the river and the shiner to the restoration look good. Project requires monitoring, maintenance and adaptive management.

- Brush piles will be burned. Some revegetation has been done, more planned.

- Historic vegetation probably was much more open. There may be old National Wetlands Inventory Maps that would be a possible source for understanding historic vegetation.

- Coyote willow will grow in shallow water and is less likely to armor shorelines than saltcedar.

- Cottonwoods are not present along the river. Large cottonwood stumps were found in the Salt Creek Wilderness. In early 1900s, there was an extreme freeze that killed many species of trees. Locally adapted cottonwoods have been found and should be explored as source for revegetation stock.

- Aside from the benefits to the river and fish, the project also contributes to community relations, ecotourism, water salvage and flood control.

3. Discussion of Restoration Sites

For the second part of the meeting, Yvette Paroz with the assistance of Tim Frey and Dan Baggao briefed the group on site visits planned for the following day and possible restoration locations that she had been looking into. Emphasis was on the BLM property south of Bottomless State Park and an aerial photo was projected to aid in the discussion.

Highlights of the discussion:

- Federal land along the river is limited. The potential BLM site is not far south of the Bitter Lake restoration and would extend improved habitat.

- Saltcedar was removed from a portion of this area a few years ago. Treatment of resprouts and new growth has been completed this summer. This habitat could be

enhanced by leveling a dike, lowering banks, removing more saltcedar, and creating more area for the channel to overbank and wander.

- Two fish barriers protect the BLM Area of Critical Environmental Concern (ACEC) Overflow Wetlands from unwanted river fish. This ACEC is fed by Lea Lake. The concern is that restoration will encroach on fish barriers that were constructed to keep a non-native species of fish from entering the wetlands (not the lake) and hybridizing with Pecos pupfish. The barriers could be reconstructed farther upstream on the outlet channels that flow from the wetlands to the river.

- There is adjacent private and State Trust land that could be considered for part of the project and extend the size and value of the habitat. The BLM has a good relationship with the adjacent landowner who is also the permittee for the State Trust Land. State Trust Land are not considered public lands, but are designated for income generation. The first step is to work through the permittee before approaching the State Land Office. Dan Baggao will make contact with him to determine his level of interest.

- Other sites were not discussed in detail as we would not have time or access to most of them. The idea of preparing a geomorphic overview of the river below Bitter Lakes was again raised with the idea that there should be a comprehensive look at where potential restoration sites may exist, regardless of ownership. Further screening based on biological needs and other factors could follow.

- Any site chosen would probably need more detailed mapping and cross-sections to plan the restoration actions. At Bitter Lake NWR the local geomorphology determined the particular actions that were planned in each area and helped determine where there were opportunities to work with the river and where more earth had to be moved. Mike McGee stated that there would be value to BLM to have cross-sections of their reach, regardless of whether this project would be sited there.

4. Adjourned Meeting

The formal meeting adjourned for lunch. No follow-up meeting was scheduled.

5. Bitter Lake Site Visits

After lunch the group consolidated in Service vehicles to visit last year's restoration sites in the Bitter Lake Middle Unit. The first and northernmost stop was the Scout Camp where the Service contractor had removed saltcedar and other nonnative vegetation from bank levees and bars and lowered the banks. These actions are helping the river to develop a more active and dynamic floodplain at the lower flows. Banks were lowered an average of 2-3 feet and saltcedar was removed from a large bar paralleling river on the east side that had created a natural levee. Traveling south stops were made to observe other locations where restoration actions were conducted including a former oxbow that is now reconnected at higher flows. At each stop the group was able to access and wade in the river. The group observed the heavy equipment still on the refuge site that was modified to efficiently remove the roots and crowns of the saltcedar. Jeff

Sanchez also showed the group how to distinguish the Pecos sunflower from the common Plains sunflower.

The final stops of the day were at Reclamation's Oxbow 4 project. In June 2009 the Pecos River was diverted into a new channel cut into a former oxbow and a manmade channel cut in the 1940s was closed off. To prepare the oxbow a substantial amount of vegetation was removed and earth moved. The group stopped at the opening to the oxbow and observed the changes to the river that had occurred and the backwaters areas near the former channel. Proceeding further to the loop road, the group entered and walked a few hundred yards of new channel before returning to the visitor center, completing the day.

6. BLM Site Visits

The group met on September 22 at the Lea Lake Overlook at Bottomless Lakes State Park. Dan Baggao, Tim Frey and Mike McGee of the BLM provided maps and an overview of the area. Lea Lake is fed from springs. An outlet from the lake feeds into wetlands in the state park and then to wetlands on BLM land to the west. This overflow is unregulated and by agreement with the State Engineer must be allowed to flow to the Pecos. There are two fish barriers that keep the sheepshead minnows from traveling upstream from the Pecos in to the overflow wetlands. The northern fish barrier was recently replaced and replacement of the southern barrier is planned.

The group proceeded to a USGS gage location where the Pecos River meets the BLM property line. The BLM had conducted mechanical saltcedar removal on its lands a few years previous and this summer had come back using approved herbicide to remove and treat regrowth. The difference in the river channel between the BLM land and adjacent private land on the river where saltcedar had not been removed was very dramatic. The mechanical removal also lowered banks. The BLM lands were much more open with a wider river channel and more diverse plant life. The additional water from springs is also evident in this reach when compared with the river within Bitter Lake NWR.

The group walked upstream approximately ½ mile discussing possible restoration actions and observing the response of the river to previous work. The intent would be to create more floodplain and backwaters on the east side of the river by bank lowering and removing a dike. There is the possibility of reopening some old channels on the west side of the river as well. There is a point where the river makes a sharp turn to the south and there was some discussion of perhaps exploring whether there was bedrock causing this. Any actions on the river would need to ensure that the USGS gage would still function.

The group proceeded to a location east of the river where a sinkhole had opened up. The small lake is supporting an impressive stand of Pecos sunflowers. From there the group traveled to a spot where an old channel from Lea Lake has recently dried up – perhaps related to wetland restoration at Bottomless Lakes State Park.

The final stop was near the outlet of a channel from Lea Lake into the Pecos. The saltcedar at the outlet area had been treated but not yet removed. Up the channel the old north fish barrier was observed – it does not function, having been bypassed by the active channel. The new barrier was placed further upstream. The site visit concluded about noon.