



PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM  
Choke Point Workgroup Call  
Conference Call Meeting Notes

July 26, 2012

Attendance (all by phone)

Steve Smith, Beorn Courtney, Jerry Kenny – ED Office  
Cory Steinke and Kevin Boyd (Gothenburg) – CNPPID  
Jeff Shafer - NPPD  
Tom Econopouly – U.S. Fish and Wildlife Service  
Kent Miller – TPNRD  
Bill Taddicken – National Audubon Society  
Michelle Martin – Anderson Consulting Engineers (joined meeting after flood-proofing discussion)  
Chester Watson – Biedenhorn Group (joined meeting after flood-proofing discussion)

**1. Flood-Proofing Engineering, Surveying, and Permitting Selection Panel**

- Jerry – Applegate’s proposal not well done, no specifics, repetitive, costs not organized. Ayres nice proposal, but over thinking the problem. EA had a balance of solid engineering with good permitting approach/experience. GEI had a bigger team than needed, ERO big guns for small stuff, optional LiDAR was not clear why it was necessary. WWC proposal was sparse with lack detail and ignored permitting (only line item in cost table).
- Cory – Applegate and WWC had inexperienced folks. Ayres’ proposal was over the top.
- Bill – confused on ranking (thought maximum score for a given category was equal to the weight). Bill redid after version we saw, and EA came out on top. Ayres came in second. Bill will send revised scores to Steve.
- Tom – Ayres little higher since more thought, but if rest of group thinks over thought he’s ok with selecting EA.
- Cory – can we get City and County on board? Fork up money and equipment to clean out ditches, provide culverts. Jerry – County maybe, but outside of City jurisdiction so might not be able to. PRIPP would also be happy to factor in money or in-kind contributions from TPNRD as well. Steve will follow up with County on in-kind culverts.
- Tom – what about NEMA funding mentioned during last WAC meeting. Steve explained that he contacted NEMA and found out that the application process would be lengthy enough to stall the choke point flood-proofing projects. Several side studies and phases would be required for the application. As a result, NEMA funding was not considered to be a viable option. Tom suggested that we could potentially apply for NEMA funding for the second round of activities (e.g., institutional and/or engineering options).
- Steve - the EDO has discussed project sponsorship with TPNRD, and Kent Miller



suggested an EDO presentation to the TPNRD board of directors to ask for support. Jerry and Steve will likely meet with the TPNRD board in October 2012 for this discussion.

## **2. Easements Buy Outs (Smith)**

- Tom asked whether FEMA money has been provided for mitigation from flooding during the summer of 2011. Steve reported that no FEMA funds have been distributed because damage wasn't bad enough (i.e., requires condemnation of a structure). Tom asked whether the issue is more of a nuisance, and suggested this might make sellers less motivated to get out of the impacted area. Kent reported that it wasn't just a nuisance, and that people had to move out of homes during 2011 high water. Most homes don't have basements. Furniture was put up on blocks, and residents then left the home. Kent provided perspective that until last summer water was only a nuisance. Tom asked whether people are still allowed to build in the floodplain? Kent said yes. Steve will follow up with Floodplain administrator.
- Tom requested that easements and buyouts not be removed from the list until we know whether the 19 people want to move out. Steve to follow up with individual landowners. Tom will talk with FEMA and Mike George to see if they have any input based on previous experience in Rapid City greenway.
- Tom commented that easements/buyouts assumptions in the workgroup memorandum seemed reasonable per Mike George. Mike George suggested (via Tom) that we suggest North Platte City officials go see Rapid City to see how buyouts/easements have worked there.

## **3. Sutherland East**

- Kent indicated that TPNRD would be interested in pursuing this project.
- Jerry said that a Water Action Plan tie-in would make this project more interesting to PRRIP.
- Jeff will follow up with Kent, Brian Barels, and Jerry to set up a meeting to discuss benefits of a Sutherland East project.

## **4. NPR to SPR canals/wasteways**

- Steve noted high loss to ground water by running water through NPR canals/wasteways. But suggested that this is still low hanging fruit since capacity is largely the limiting issue.
- Tom compared the 30-40% loss via NPR-to-SPR canals to the 11% loss between Keystone and Maxwell during the 2009 test flow release.
- Kent – TPNRD is also in discussion with irrigation districts for diverting to these canals for offsets related to LB962. We might be talking about same water. PRRIP could potentially run water for capacity issues, and TPNRD or PRRIP could capitalize on losses and use for recharge. Already have experience moving water in off season based on



spring 2011 recharge for NDNR. The irrigation companies were easy to work with. Kent would like Ann Dimmit (TPNRD) to be in on any discussions with ditch companies. Kent would like all of us to meet with ditch company boards so we know we're not competing for the same water/capacity.

- Jerry commented that we could use ditches for capacity for SDHFs, and also potentially for target flows during other times of the year.
- Kent said that the Suburban Ditch might not actually have SPR return any more. Keith-Lincoln Ditch might be the only one with an existing return to the SPR.
- Bill asked how PRRIP would be assured that our water in NPR ditches wouldn't be diverted by irrigators. Jerry explained that a PRRIP agreement would require them not to divert our water.
- Kent mentioned the potential to convert surface irrigated lands to ground water irrigation, and PRRIP could use the remaining surface flows in irrigation season.
- Kent will email Jerry with potential meeting dates to discuss options for using NPR ditches to divert to SPR.

## 5. New Pipeline NPR to SPR

- Steve explained that headgate wells would limit the potential rate of diversion to a pipeline from the NPR to SPR. Even with 10 wells, total flow would be limited to about 20-25 cfs. Cost of headgate wells for such a low flow rate would be prohibitive.
- The group agreed this alternative should not be considered further.

## 6. Jetties or bendway weirs, levees

- Steve explained that the EDO and Anderson Consulting Engineers have modeled several variations of jetties and bendway weirs (BW's) with and without dredging in an attempt to find an optimal configuration for maintaining hydraulic capacity. Bottom line is that jetties and BW's would increase water surface elevation (WSEL) because of their orientation perpendicular to flow. The small benefit of increased flow velocities at low flows would be outweighed by the counter-productive increase in WSEL due to added roughness from the structures. The ED Office contacted Don Baker with Water Resources Solutions, the contractor working on the design of BW's for the WY/NE stateline monitoring project. Don agreed that BW's are appropriate for reducing bank erosion, but are not appropriate for application on the North Platte for reducing sedimentation.
- Don Baker had also suggested we consider Iowa Vanes (parallel to flow, and may help increase low flow velocities and sediment transport). But Chester Watson indicated that Iowa Vanes have not been successfully implemented in many locations, and very little has been written about them since about 2005. Chester suggested more research and successful practical application is needed before having PRRIP consider for the North Platte River. The group agreed to shelve Iowa Vanes concept for now.



- Steve explained that the ED Office and Anderson Consulting Engineers have considered levees as a possible solution. However, levees would increase river stage by confining flows to a smaller area. Higher river stage would increase ground water levels, potentially leading to more flooding. Additionally, the current Flood Insurance Study (FIS) is based on a hydraulic model with 1977 topography. As a result, the 6-foot stage in the current FIS corresponds to a flow rate (4,900 cfs) that is currently equivalent to the 100-year recurrence peak flow WSEL (stage of 7.7 feet). This would require any levee to be FEMA certified, which would result in permitting challenges and excessive levee height blocking property owners views of the NPR.
- Michelle Martin indicated that PRRIP would be responsible for resetting the baseline FIS study. It would be difficult to build levee in designated floodway (right now wide and extends almost whole floodplain to N River Rd). Levee may be designed for 3,000 cfs, but longevity might be issue (aggradation might be an issue).
- Tom indicated that levees are not a preferred FWS alternative anyway.
- The group agreed levees should not be considered further.

## 7. Recommendation

- Bill asked about the option of widening the Highway 83 bridge opening. Steve indicated that modeling completed by HDR, EDO, and ACE all indicated reduced velocities and increased deposition would result from similar options of widening flow areas. Steve will add this alternative to the upcoming Choke Point summary memorandum.
- Kevin asked about the option of phragmites treatment. Jerry indicated that PRRIP has spent \$250k over the last 3 years for spraying/chopping/tilling. This will be documented in the upcoming Choke Point summary memorandum.
- Cory suggested that we're going to have to dredge if we want to achieve 3,000 cfs capacity. Next best option is probably a new reservoir with a new large return. Beorn mentioned that this will not be a quick solution.
- Cory said that NPR canals are worth looking into, but the capacities in the workgroup memorandum are optimistic. Refurbishing canals may be worthwhile, particularly if TPNRD wants to participate.
- Tom will discuss internally within the FWS the option for dredging during the First Increment.
- Jerry suggested that we should not wait for flood-proofing projects to be complete. We should start the permitting process for dredging now. This would need to go through GC. Dredging is probably the only way to 3,000 cfs capacity. It's not a great alternative, but it's the only option.
- Jerry suggested we should communicate these results to the TAC, and soon thereafter elevate to the GC. Permitting takes time. Actual dredging could be done quickly. Be prepared to dredge twice in First Increment.

## 8. Next Steps and Action Items



- Bill will send his revised flood-proofing proposal scores to Steve.
- Steve will contact individual landowners to explain flood-proofing projects, and to get input on buyouts/easements or other preferred options.
- Steve will contact Lincoln County Roads to determine whether they'd be willing to provide in-kind money and/or equipment to clean out ditches. Maybe County could provide culverts.
- Tom will contact FEMA and Mike George for input on easements/buyouts cost and feasibility, and will send information to Steve.
- Steve follow up with North Platte floodplain administrator regarding flood impacts from summer 2011, and to determine whether future development in the floodplain south of North River Road will be allowed.
- Jeff will follow up with Kent, Brian Barels, and Jerry to set up a meeting to discuss Sutherland East project benefits, and determine the potential to initiate a feasibility study if TPNRD, NPPD, and PRRIP are all interested in pursuing the project.
- Kent will email Jerry with potential meeting dates to discuss options for using NPR ditches to divert water to the SPR.
- Steve will write summary memo of problem and solutions considered. Should include documentation of vegetation treatment, and also considered option of widening Hwy 83 Bridge.
- Tom will discuss internally within FWS whether they'd be open to dredging during the First Increment.
- Recommendation to WAC on August 14<sup>th</sup> –
  - Continue with flood-proofing projects.
  - Pursue low hanging fruit (NPR to SPR canals/wasteways, including potential to increase existing capacities).
  - Meet with local landowners to get their reaction for the potential for buyouts/easements.
  - Start permitting process for dredging.
  - Communicate this recommendation to the TAC, and shortly thereafter to the GC.