

Lower Platte Basin Drought Contingency Plan
Consortium Workshop #1
May 16, 2017
Workshop Notes

Attendees: Kevin Tobin (MUD), Doug Whitfield (MUD), Jim Shields (MUD), Donna Garden (City of Lincoln), Eric Lee (City of Lincoln), Steve Own (LWS), Jesse Bradley (NeDNR), Chance Thayer (TFG), David Kracman (TFG), Rick Kubat (MUD), Dan Schulz (LPSNRD), Bret Schomer (LPNNRD), Russell Oakland (LPNNRD), Tom Mountford (LPNNRD), Larry Angle, Devin Biesecker (LPSNRD), Daryl Andersen (LPNNRD), Dick Ehrman (LPSNRD), Tom Riley (TFG), Marlin Petermann (P-MRNRD), John Engel (HDR), David Potter (LPSNRD), Paul Zillig (LPSNRD), Paul Woodward (P-MRNRD), John Miyoshi (LPNNRD), Amy Zoller (NeDNR), Simone Rock (HDR)

Comments on Model

- Need to evaluate alternatives using Loup Power Canal
- Need to be able to move project locations “on-the-fly”
- Interest in seeing effects at multiple locations (user-friendly output)
- There exists a need to evaluate changes in groundwater pumping (both dry year lease & wellfield operations)
- LWS would be interested in way to not only predict streamflow into the future but also project their “remaining operable volume” in their aquifer based on demand scenarios.
- Question on how projects in Elkhorn (or Loup) would impact groundwater aquifer/baseflow and travel times.

Comments on Potential Projects

- Sherman Reservoir – purchase water rights (flat fee or graduated scale depending on time of call).
- Skull Creek
- Bell Creek in Elkhorn Basin – Marlin indicated that was too costly for District
- Battle Creek in Elkhorn Basin – Discussion on how LENRD experienced local pushback to reservoir study
- Using sandpits adjacent to Platte River for quick release.
- Slurry walls to prevent migration of groundwater. Active pumping or passive recharge
- Retiming of tributary flows
- Canal recharge in Loup system
- Purchase of surface water rights (would need to consider administration and losses). Some discussion on natural flow surface water rights versus storage water. DNR discussed the conduct water permit that can be used to protect water moving downstream.
- Dry year lease of groundwater
- Opportunity to capitalize on high groundwater tables (e.g. Sherman Reservoir, Todd Valley)
- Utilizing Mead water to augment river flow (currently discharges into Clear/Wahoo Creek). No existing storage of this water. LPNNRD looked into injecting to augment aquifer but proved too costly.
- Using CNPPID/Central Platte groundwater mound to augment streamflows
- Informal discussion about LWS tapping into MUD water supply for access to MO River water (rather than LWS build direct pipeline to MO River)

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- Pipe MO River water directly into Elkhorn River

Utilities Discussion

- LWS/MUD were reactive to 2012 drought. Forecasting/Drought Manual a result of 2012 drought.
- LWS did not go to Phase 3 in 2012.
- Discussion on Cost-benefit analysis – comparing above projects against the \$0.5 billion pipeline to Missouri River. What about opportunity cost of water?
- Steve Owen noted their groundwater model has relationship between surface water and their “remaining operating volume” in the LWS aquifer.
- Kevin Tobin noted that they are just starting to evaluate aquifer volume at Platte West
- MUD does not monitor aquifer volume at Platte South
- Utilities would be interested in quantifying what effect actions taken in 2012 had on streamflow.
 - MUD reports it shifted 20 MGD from Platte West to Florence for entire month of August and into September (and even after that). Florence water is more expensive to treat and must be pumped twice as far when Platte West not in operation.
 - LWS reports that on average they were operating 20 MGD short
 - LWS indicated they can quantify shortage in demand for 2012
 - LWS/MUD both interested on what effect a call on the river would have. DNR noted that MUD would still pump for municipal demands during a call
 - MUD Platte South not as impacted by drought. Did not operate at capacity because of mechanical issues. Would expect problem here if drought lasted several months. Question if aquifer at Platte South influenced by MO River.
- For some areas (particularly in the upper portions of the Basin), does the model need to consider channel capacity?
- LWS indicates its Platte West aquifer normally “100% full” by May 1.
- LWS indicates aquifer source water is 80% from Platte River/ 20% other for collector wells. Vertical wells 100% Platte River.
- MUD indicates aquifer source of water for Platte West is 90+ % from Platte River.
- Not necessary to look into well field recharge improvements as aquifer is “sponge”