

Draft Notes
Meeting to Provide Input to the Nebraska Representation
to the
Missouri River Association of States and Tribes
March 12, 2010
Board Room, Papio-Missouri River NRD Offices

Attendance

Mike Olson, Consolidated Blenders, Inc.
Duane Hovorka, Nebraska Wildlife Federation
Jim Becic, Papio-Missouri River NRD
Gerry Bowen, Papio-Missouri River NRD
Marlin Petermann, Papio-Missouri River NRD
Brian Henkel, Papio-Missouri River NRD
Jim Shields, Metropolitan Utilities District, Omaha
Joel Christensen, Metropolitan Utilities District, Omaha
Dan Schulz, Lower Platte South NRD
Bob Hilske, Nemaha NRD
Larry Cieslik, HDR Engineering
Russ Baker, Omaha Public Power District
Rocky Plettner, Nebraska Public Power District
Jeff Shafer, Nebraska Public Power District
Nick Weander, Metropolitan Area Planning Agency
Mike Swenson, US Army Corps of Engineers
Lynn Heng, US Army Corps of Engineers
Elizabeth Esseks, Nebraska Department of Health and Human Services
Pat Rice, Nebraska Department of Environmental Quality
John Bender, Nebraska Department of Environmental Quality
Kirk Nelson, Nebraska Game and Parks Commission
Gene Zuerlein, Nebraska Game and Parks Commission
Frank Albrecht, Nebraska Game and Parks Commission
Eric Fowler, Nebraska Game and Parks Commission
Justin Lavene, Nebraska Attorney General's Office
Brian Dunnigan, Nebraska Department of Natural Resources
Jim Schneider, Nebraska Department of Natural Resources
Susan France, Nebraska Department of Natural Resources
Brandi Flyr, Nebraska Department of Natural Resources
Steve Gaul, Nebraska Department of Natural Resources

Call to Order / Introductions

Marlin Petermann and Brian Dunnigan welcomed the group. Dunnigan indicated that he and Kirk Nelson were Nebraska representatives to the Missouri River Association of

States and Tribes (MORAST). He said information and comments from this meeting would be used to help them understand Nebraska interests and prepare for meetings of that group. He also indicated that he hoped those attending the meeting could see that needed information could reach their interest group. Dunnigan reported that MORAST would be meeting Tuesday March 16 in Nebraska City and that questions and issues related to the Missouri River Authorized Purposes Study would be a major agenda item.

Report on Missouri River Recovery Implementation Committee Meetings

Susan France, Nebraska Department of Natural Resources, reported on the February 2-4, 2010 meetings of the Missouri River Recovery Implementation Committee (MRRIC) in St. Louis. A draft meeting summary is included on the Missouri River Activities portion of the NDNR webpage at <http://dnr.ne.gov/MissouriRiverStakeholders/>.

Report on Missouri River Ecosystem Restoration Plan

Gene Zuerlein, Nebraska Game and Parks Commission, reported on ongoing efforts on the Missouri River Ecosystem Restoration Plan. He noted that the timeline for the effort extends from 2008 to 2016 and discussed the relationship of the plan to the Missouri River Recovery Implementation Committee. He referred to the high cost of the 1993 flood and suggested that the 1994 Galloway *Report "Sharing the Challenge: Floodplain Management into the 21st Century"* had some solutions. Zuerlein indicated that flooding and high flows are nature's way of rejuvenating a river.

Corps Update on Missouri River Operations

Mike Swenson, US Army Corps of Engineers reported on current Corps Missouri River operation. A copy of Swenson's presentation is available on the Missouri River Activities portion of the NDNR webpage. Swenson noted that the reservoir system was now just under desired system storage and that Fort Peck was the only reservoir where storage levels were not completely recovered. He noted that the water content of mountain snowpack was only running 70% of normal but that plains snows were well above normal. Higher than normal March and April runoff and relatively lower June and July runoff can be expected. Swenson said navigation was expected to have full service for the full season. He also noted that with minimal releases, Fort Peck could also be expected to rise this year, but likely not to the point it is back in balance.

Corps Update on Missouri River Authorized Purposes Study

Lynn Heng, US Army Corps of Engineers, reported on the Missouri River Authorized Purposes Study. A copy of Heng's presentation is available on the Missouri River Activities portion of the NDNR webpage. Heng reported that the study will determine if changes to the authorized project purposes and existing federal water resources infrastructure are needed. The study is to be funded fully at federal expense and \$25 million has been authorized. Heng indicated that the effects of Missouri River alternatives on the Mississippi River will be examined. The study will include an

inventory of existing conditions, a forecast of future conditions, an evaluation of alternative measures, a feasibility report and an environmental impact statement for a report to Congress. Heng noted that 29 scoping meetings are anticipated and that they would be organized under the eight authorized purposes with an open house format.

Power Industry Issues / Perspective

Russ Baker, Omaha Public Power District, reported on electrical power industry perspectives on Missouri River issues. A copy of Baker's presentation is available on the Missouri River Activities portion of the NDNR webpage. Baker reported that there are nearly 1600 intakes on the upper mainstem reservoir system and Lower Missouri reaches of which 26 are for coal fired and nuclear electrical generation plants, four of which are in Nebraska. Baker noted that the monetary benefits of electrical power production plants may exceed the benefits of other uses combined. Baker reported that the power plants use water for once through cooling and don't use more than 5% of the water flowing by at any one time. However, they are required to meet ambient temperature requirements. Lower summer flows can contribute to both less water at intakes and higher water temperatures. Water temperatures at summer peak temperature times at the intake can rise to around 87° F, would leave 3° in which to dissipate temperature. However, higher temperatures can cause problems. If plants have to derate to meet temperature requirements, earlier studies showed the cost to Iowa and Nebraska power plants could be \$9 million to \$78 million annually. Baker indicated there was a derating in the late 1980s and there have been other times when plants came close.

Baker also reported that barges provide a cost effective method of shipping large equipment to power plants on the river. There was discussion of the potential for use of groundwater or cooling towers as alternate methods of providing cooling water as well as other potential technical fixes. It was noted that the Cooper nuclear plant needs a river source of water. There was discussion indicating that although groundwater was a possibility for some plants, it would need to be discharged and facilities would need to be built. Baker noted that consideration had been given to tunneling under the river and taking water from beneath the river as an alternative to wells and cooling towers. Baker also indicated power industry concerns about water rights issues and moratoriums on new water uses and how those could affect industry water needs. He noted that public power districts are keeping active in those discussions.

Public Water Supply Issues / Perspectives

Joel Christensen, Metropolitan Utilities District, provided public water supply interest perspectives on Missouri River Issues. Christensen noted that his main point was that the Missouri River provides drinking water to millions of people from Saint Louis to Montana and that if tributaries are considered, there are millions more.

Christensen provided notes that characterized major drinking water supply issues as:

1. Low flows in the winter, especially during ice formation. Christensen said the Corps has been responsive on that issue, and that needs to continue.
2. A stable channel is needed at the intakes. Don't let the river meander across from the intakes and watch for degradation.
3. Agricultural chemicals such as nitrates and atrazine are detectable in the river. The quantities are very small but don't underestimate the consequences of a loss of confidence in the safety of drinking water supplies. As a community, we can spend a lot unnecessarily, if that confidence is shaken. Buffer strips are a good practice that should be made permanent.
4. Dredging - although is significant in quantity, it has no apparent water quality effect at the Florence plant, although monitoring is necessary.

Christensen noted some areas of interdependence with other uses. He indicated that electrical power runs through their drinking water plants and pump stations even though they have fuel powered backup for emergencies. He also noted that navigation flows provide good flow during peak consumption and give a predictable calendar for maintenance work, but do potentially take away water that could be used for greater winter flows.

Christensen reported that ice jams have provided significant challenges and that in 1989 they nearly temporarily lost the Florence plant during ice jam conditions. He later noted that if something did happen to the Florence plant, drinking water needs could still be met through the other two MUD plants on the Platte River.

Water Quality Issues / Perspectives

John Bender, Nebraska Department of Environmental Quality, provided water quality perspectives on Missouri River flows. Bender reported that upstream of Plattsmouth, Missouri River water quality is generally supportive of uses but that downstream of Plattsmouth there were water quality problems related to coliform. He said that overall the river is in fairly good shape in terms of water quality. Bender noted that anytime someone wants to discharge to the river they model for water quality and that it is surprising how much mixing isn't there, with only about 7% mixing within 5,000 feet downstream.

Bender indicated that powerplants can comply with water quality requirements so long as the ambient river temperature at the intakes does not rise above 87° F. However, when temperatures rise, there can be problems. He noted that tributary inflows may contribute to elevated temperatures. Bender said he had been asked about the potential for regulatory relief from temperature requirements. He said the answer is that there would be no regulatory relief and that if temperature requirements were to be revisited, they may end up with even lower temperature requirements.

Bender also reported that nutrient criteria may be one of the biggest questions in the future. Given the potential benchmarks for total phosphorous; habitat restoration, dredging, and the need to get sediment back in the river could all be affected.

Finally, Bender noted that while once through cooling is often considered a non-consumptive use of water; it involves more consumption than many suspect. He said that instead of evaporating through cooling towers, the water that returns to the river evaporates as it cools in the river.

Navigation Issues / Perspectives

Mike Olson, President, Consolidated Blenders, provided navigation perspectives on the river. Olson noted that he had previously operated an alfalfa dehydration plant at Lyons for 26 years and that his business involved production and shipping of alfalfa dehydrated pellets. Olson reported that a river terminal was built in Nebraska City in 1956 for loading and another terminal in Guntersville, Alabama for unloading. In the early 1970s a terminal was built in Blair and the Nebraska City terminal was gradually phased out. He said they now have four producing plant and the terminals in Blair and Guntersville. They have their own land and cut hay and ship and market the product, with half going by rail and the other half via the Blair navigation terminal. The business harvests about 20,000 acres.

Olson described the challenges associated with the drought, including shallow drafts and shortened seasons. He said that eight years of drought had cost them a great deal of money. Olson indicated that they are excited about the prospect of going back to full service, because it means other people will get back into river shipping. Having traffic in both directions can help lower costs. In response to a question Olson indicated that barge shipping costs were about \$18 a ton if there was also a north bound shipment and about \$27 a ton with no northbound shipment. He said that rail costs were about \$30 to \$34 per ton from Cozad plus \$3 a ton for any transfers. He noted there was a setup cost for the barge shipping but noted the long distance potential and fuel efficiency of this form of shipping.

Flood Control Issues / Perspectives

Marlin Petermann, Assistant General Manager, Papio-Missouri River Natural Resources District, reported on Missouri River floodplain management and flood prevention. A copy of Petermann's presentation is available on the Missouri River Activities portion of the NDNR webpage. Petermann noted that Papio-Missouri River floodplain strategies included: Missouri River levees, drainage districts, a floodway purchase program and improved floodplain management and mapping. He also reported on historic flooding, including the 1952 flood of record for Omaha (river stage 40.2 feet, flood stage 29 feet). Petermann noted that in a floodway purchase program riverward to the Missouri River levee the NRD has purchased 107 of 164 properties. He also noted that the Papio-Missouri River NRD's flood damage reduction strategies are integral with and dependent upon the Missouri River mainstem dams and channel.

Conclusions / Future Activity

Kirk Nelson, Assistant Director, Nebraska Game and Parks Commission, indicated his appreciation for the input and suggested that it may be worthwhile to hold meetings more frequently and to add action items to the agenda. There was a brief discussion of future meeting frequency. Brian Dunnigan, Director of the Nebraska Department of Natural Resources also thanked the group for their input and the meeting adjourned shortly after noon.