



"VARIETY IN HUNTING AND FISHING"

NORTH DAKOTA GAME AND FISH DEPARTMENT

100 NORTH BISMARCK EXPRESSWAY BISMARCK, NORTH DAKOTA 58501-5095 PHONE 701-328-6300 FAX 701-328-6352

April 6, 2006

Mr. Dennis Breitzman, Area Manager
Dakota Area Office- U.S. Bureau of Reclamation
P.O. Box 1017
Bismarck, North Dakota 58502-1017

Re: Red River Valley Water Supply Project Draft EIS Comments

Dear Mr. Breitzman:

The North Dakota Game and Fish Department has received a copy of the Draft Environmental Impact Statement (DEIS) for the Red River Valley Water Supply Project. The Dakota Water Resource Act (DWRA) of 2000 states under Section 8(a) that the feature or features shall be designed and constructed to meet only the following water supply requirements as identified in the report prepared pursuant to subsection (b) of this section; Municipal, rural and industrial water supply needs: ground water recharge; and stream flow augmentation. The DWRA continues in Section 8(b) stating that the Secretary of the Interior shall conduct a comprehensive study of the water quality and quantity needs of the Red River Valley in North Dakota and possible options for meeting those needs. The needs addressed in the report shall include such needs as:

1. municipal, rural, and industrial water supplies
2. water quality
3. aquatic environment
4. recreation
5. water conservation measures

The document entitled "Report on Red River Valley Water Supply Project Needs and Options, Aquatic Needs Assessment, Instream Flows for Aquatic Life and Riparian Maintenance, Final Report" (BOR, 2003a) was designed to identify hydrologic and geomorphologic conditions on the Red River and Sheyenne River that would maintain ecological function for both the short (the present) and long-term (within the next 50 years), given the existing anthropogenic influences (e.g., Baldhill Dam). The recommended aquatic needs and bankfull flows are intended to provide a means to protect the basic needs of aquatic life in the Sheyenne and Red Rivers and maintain the existing floodplain forest community in its present status. This information will be useful for comparing the effects of various flow alternatives on aquatic resources. The report concludes by stating that the seasonal instream flow regime is recommended for consideration by decision makers and resource

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managers as a means to protect the basic needs of aquatic life in the Sheyenne and Red Rivers. Maintaining the hydrologic and geomorphologic needs of aquatic resources requires the protection of natural flow regimes.

As stated in past correspondence with your agency, your analysis failed to consider or incorporate flow regimes which closely mimic the natural hydrograph into the design of the options. Instead, the BOR incorporated aquatic needs into the options by including a minimum fish and wildlife conservation pool of 28,000 acre-feet in Lake Ashtabula and by maintaining a minimum release of 13 cfs from Baldhill. There was no minimum instream flow identified in the modeling for the Red River, which we believe is biologically short sighted. The Department's preference regarding flow augmentation was to mimic the natural hydrograph to minimize project impacts. The Department has also stated that minimum in-stream flows for the Red River and its tributaries should be established and maintained. If the selected alternative utilizes the Sheyenne River as a conveyance feature, we recommend the BOR either supplement flows or maintain minimum instream flows to meet the following recommendations for both the Red River and the Sheyenne River:

1. A minimum release of 23 cfs from Bald Hill Dam year round.
2. A minimum spring flush of 215 cfs for a period of 48-72 hours from the 6-10th of April. (Note: This value was not derived by the Tennant method but rather was developed by taking the median unregulated April flow during the 1931-1940 time frame.)
3. April flows shall average a minimum of 69 cfs below Baldhill Dam.
4. Year round instream flows of 68 cfs at Fargo on the Red River.
5. Year round instream flows of 23 cfs below the Fargo intake on the Sheyenne River.

It is important to recognize that minimum instream flows are necessary for aquatic needs within the river itself, and for maintaining the riparian forest communities. Dr. Richard Schultz from Iowa State University references the importance of the vadose zone where the majority of riparian vegetation roots occur in maintaining the health and function of the riparian zone. By definition, vadose is "of, relating to, or being water that is located in the zone of aeration in the earth's crust above the ground water level". The vadose zone acts like a sponge in capturing water from storm events and releasing this water for many years after major storms. Therefore, mimicking the natural hydrograph for spring time releases is beneficial by recharging the vadose zone which provides natural storage for later release. Additionally, without maintaining instream flows, especially during drought conditions, the riparian vegetation will be negatively impacted.

Project impacts are likely to occur with any selected alternative requiring some type of mitigation. Mitigation proposals that would benefit aquatic communities include acquiring tracts of land along the Sheyenne and Red Rivers to maintain and re-establish riparian corridors, developing instream flows for tributaries to the Red River, developing riparian buffers, restoring oxbow habitat and modifying low head dams to allow fish passage. In recent years a considerable amount of progress has been made on Red River low-head dams by installing fish passages on 5 of the 8 low-head dams.

These low head dams have historically acted as migration barriers for numerous aquatic species, trapped sediments, altered riffle/pool habitat as well as creating human safety factors. The Department encourages project sponsors to continue the progress of modifying the remaining low-head dams on the Red River and to start evaluating the potential to modify or remove low-head dams on the Sheyenne River. Construction of additional dams as project features should not be pursued.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael G. McKenna".

Michael G. McKenna

Chief

Conservation & Communication Division