Responses to Minnesota Pollution Control Agency

Comments on the Draft Report on the Red River Valley Water Supply Project Needs and Options

Minnesota Pollution Control Agency

October 3, 2005

Signe Snortland
Dakotas Area Office
Bureau of Reclamation
P.O. Box 1017
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Dear Signe:

Enclosed are comments on the Red River Valley Needs and Options Report. I've reviewed these with my supervisors, Jim Ziegler and Will Haapala.

Thanks for the consideration.

Sincerely,

Molly MacGregor

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Red River Basin Coordinator
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MM:sb

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Red River Valley Water Needs and Options Report
Comments prepared by Molly MacGregor, MPCA Red River Basin Coordinator
September 30, 2005

Comment 1

Reviewer's conclusions:
Information provided in this report is misleading and therefore not sufficient as presented to support the stated need for additional infrastructure to meet water supply needs in the Red River Valley. Specifically, the assumptions behind population projections, water quality summary and water supply issues for drinking water supplies require either a rationale or revision. .

Population projections
Population projections are based on 14 North Dakota Counties and eight Minnesota counties. The Minnesota counties are: Clay, Kittson, Marshall, Norman, Otter Tail, Polk, Traverse and Wilkin. Of these, only parts of Clay, Wilkin and Polk are likely to benefit from development of a water supply project providing western North Dakota water.

Minnesota's Otter Tail County is included in the projections; also included is a "future" golf course in Otter Tail County. The report provides no basis for considering locations outside the service area as part of the population projections. Otter Tail County is predicted by the state of MN to grow by 37 percent in the next 25 years[1], which is a greater increase than any of the other North Dakota or Minnesota counties included by Reclamation.

According to an April 2005 release by the U.S. Census Bureau[2], the population of North Dakota is expected to decline by 5.5 percent in the next 25 years (by 2030). Population of the cities of Grand Forks, East Grand Forks and Moorhead declined between 1990 and 2000; the population of the City of Fargo increased by 22 percent.

Comment: The report ought to provide a rationale or justification for the counties included in its population projections; it seems reasonable to include only those locations that are likely participants in the service. Moreover, the report ought to include some documentation that the locations referenced are actually willing to participate in the project.

Comment 2

Water Quality Summary
The report reviews water quality conditions in the service area, but concludes that these issues do not affect the water supply. Examination of the report on which Reclamation bases this conclusion suggests otherwise.

The USGS states:

> "..because the Canadian and provincial governments generally have more guidelines, standards, and criteria to protect aquatic life than the United States and state governments

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[1] McMurray , Martha; Minnesota Population Projections 2000 – 2030, , MN: Executive Summary; St. Paul, MN, State Demographic Center, October 2002, , p. 3.

[2] April 21 2005, **Florida, California and Texas to Dominate Future Population Growth, Census Bureau Reports** Press Release, and 25 year population projections by state, http://www.census.gov/Press-Release/www/releases/archives/population/004704.html

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Response to Comment 1

Only the thirteen eastern counties in North Dakota plus the Minnesota communities of Breckenridge, Moorhead, and East Grand Forks were used for calculating future water demands. Population projections for other Minnesota counties were not included in demand calculations. The MR&I systems that would actually join the Project are unknown at this time, so no analysis could be conducted. That type of analysis is usually conducted as part of a final engineering report.

Response to Comment 2

Reclamation expanded the discussion of water quality needs in the Final Needs and Options Report, chapter two, pages 2-74 through 2-83. The U.S. Geological Report was intended to provide an overview of existing water quality in the Red River Valley, and should not be construed as a rigorous examination of attainment (or lack of attainment) of water quality standards.

Water quality standards vary among the jurisdictions, and also within the jurisdictions depending upon the classification of each water body. These standards are available from the respective state and provincial regulatory agencies.

Comment 2 and because the Canadian guidelines, standards, and criteria often are stricter than those in the United States, the Canadian guidelines, standards, and criteria are given precedent in this report. Likewise, if more than one guideline, standard, or criterion exists for any constituent measured, the strictest guideline, standard, or criterion will be cited in the report. By using the Canadian guidelines, standards, and criteria to assess whether the water in the Red River Basin meets the guidelines, standards, and criteria established by either Federal entity, the level of confidence that the streams meet the needs of all stakeholders is high."

A simple review of Environment Canada standards for sediment – a constituent of concern for the Red River of the North and its tributaries – suggests otherwise. The Environment Canada has no numeric standards related to sediment (TSS, SSC or turbidity); there are narrative, which is less restrictive than the narrative standards for sediment in Minnesota, North Dakota and in the U.S. Clean Water Act .

U.S. Geological Survey's use of Environment Canada standards to evaluate water quality is not a rigorous examination of how conditions attain water quality standards.

Comment: Water quality standards – numeric and narrative – of each regulatory entity should be provided in a table so the reader can make his or her own comparison.

Comment 3

The supporting report on water quality uses a very limited data source – USGS NWIS and not STORET. This is likely to skew results. STORET is what the states use and is much more comprehensive. This is especially of concern because the report states that data is limited and therefore limits the usefulness of the summary.

Comment: Water quality assessment should be based on data in STORET, the EPA's data base since that information is what states and the federal government use to monitor attainment of state and federal water quality standards.

Comment 4

Include water quality in modeling scenarios

The report states:

> The objective of the Red River Valley Water Supply Project is to meet the MR&I water needs through year 2050 and to optimize water resources in an attempt to meet identified water quality, aquatic environment, and recreation needs. Aquatic environment need was included in hydrology modeling (chapter three). This section evaluates existing MR&I water supplies and identifies any deficiencies which should be addressed by the Red River Valley Water Supply Project.

Comment: Chapter three does not support the contention that water quality for aquatic environment was addressed in modeling; it is imply not there.

Comment 5

Drinking water issues

1. Factual errors

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Response to Comment 3

The USGS (U.S. Geological Survey) report used only NWIS data to summarize existing water quality. Other water quality data, including STORET, are included in a comprehensive water quality database developed for Reclamation by Houston Engineering, Inc. That database is being used for evaluation of water quality impacts in the DEIS (draft environmental impact statement).

Response to Comment 4

Chapter three addresses surface water quantity modeling, including minimum reservoir levels and releases, and Minnesota instream flow requirements for protection of aquatic life. Water quality modeling was conducted as part of the DEIS. The results of water quality modeling are described in chapter four of the DEIS and additional water quality modeling will be conducted as part of the FEIS.

Response to Comment 5

East Grand Forks and Grand Forks withdrawals from the Red Lake River were included in the hydrology model to assess potential shortages and effects on flows in the Red River. Both communities could be dependent on the Red River in the future during drought periods.

Comment 5

The report states repeatedly states that the Red River of the North is the source is in error about the source of drinking water for the cities of East Grand Forks, Minnesota, and Grand Forks, North Dakota:

> "During previous Red River studies by Reclamation (1998, 1999, 2000) the Minnesota cities of Breckenridge, East Grand Forks, and Moorhead were included in analyses in addition to the 13 eastern North Dakota counties. These three Minnesota cities also depend upon the Red River for water supply, and because they deplete this resource, their water demands were considered in hydrology modeling. The Minnesota cities requested inclusion in the study, so the service area was expanded to incorporate them." P. 1-3 (see also Page 3. 73):

The report does not reference source water assessments completed for these cities by the Minnesota Department of Health:

> "The water supply for the city of East Grand Forks is the Red Lake River. Two water intake lines and the water treatment plant are located on the Red Lake River in East Grand Forks approximately ¼ mile upstream from its confluence with the Red River of the North. The city of Grand Forks water intakes are located on both the Red and Red Lake Rivers. The intake on the Red Lake River is near the East Grand Forks intake (approximately ¼ mile upstream of the two river's confluence). The intake on the Red River is ½ mile upstream from the confluence." P. 2 EGF SWA

Data reported in tables and supporting documents clearly indicate the water supply source for all cities so this mistake is baffling. Most readers won't go through the tables. Naming these cities as Red River water supply users is simply misleading.

Comment: The report should accurately report information, such as the water supply source for the cities of East Grand Forks and Grand Forks.

Comment 6

2. Sediment and salts are a significant water quality issue

The report surveyed water suppliers and most surface water suppliers, as evidenced by the Bureau's own report, consider the presence of solids and salts a serious treatment issue. Reclamation inappropriately defines this as an "aesthetic complaint".

A table on pages 2-73-75 lists water quality issues of the water supply authorities. Many note problems with sediments and salts:

> MR&I systems were analyzed to determine the quality of their existing water sources compared with the Environmental Protection Agency's primary, secondary and potential future regulations under the SDWA (Safe Drinking Water Act)....
> Table 2.10.1 identifies the significant water quality concerns noted during the water system assessments... Some of the water systems have problems meeting NSDWR (National Secondary Drinking Water Regulations), TDS (Total dissolved solids), pH, and sulfate exceed NSDWR for these water systems...There are also some systems which exceed one or more NSDWR. These standards are not enforceable by the Environmental Protection Agency, but exceedances in these standards generally result in aesthetic

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Response to Comment 6

Reclamation agrees that secondary drinking water standards can be a significant issue for water systems. However, secondary standards were not considered in estimates of future water need.

Comment 6

complaints related to taste, odor, or staining of laundry or plumbing fixtures. While aesthetic water quality concerns are important, no water system was assumed to have their present water source changed based on NSDWR.

However, the U.S. Geological Survey reported in its report (pp. 8-9):

> "Many constituent concentrations for the below Fargo site exceeded water-quality guidelines, standards, and criteria. The maximum sulfate concentration of 330 mg/L (appendix 1) was more than the 250-mg/L USEPA (2005) drinking-water standard. Other exceedances, including cadmium, copper, lead, and selenium concentrations, generally occurred during the 1970's or before and could be natural or could be related to pollution or sample contamination. Large cadmium concentrations of 26 and 45 µg/L (appendix 1) were measured in samples collected at the Halstad site in 1983 and 1988, respectively. The concentrations were much larger than the Environment Canada (2002) freshwater aquatic-life guideline of 0.017 µg/L and the USEPA (2005) aquatic-life criterion of 0.25 µg/L."

Furthermore, the source water assessments for the cities of East Grand Forks (which included Grand Forks), and Moorhead found that source water was "highly susceptible" to contamination due to the presence of salts and sediments.

> *East Grand Forks/Grand Forks Source Water Assessment*, p.3: "The contaminants of concern are the contaminants regulated under the federal SDWA. They are divided into organic chemicals, inorganic chemicals, radionuclides, and microorganisms. A listing can be found at: *http://www.epa.gov/safewater*. Of greatest concern are naturally occurring organics, sediment, free ammonia, microorganisms, and turbidity. The cities of East Grand Forks and Grand Forks have also identified pharmaceuticals and endocrine disrupting chemicals as emerging issues. These types of potential contaminants are not well understood at this time."

> *East Grand Forks/Grand Forks Source Water Assessment*, p.6: "Susceptibility is defined as the likelihood that a contaminant will enter a public water supply at a level that may result in an adverse human heath impact. The determination of susceptibility is on a scale of low, medium, and high. The overall susceptibility of any surface water is determined to be high because there is no practical means of preventing all potential contaminant releases into surface waters. Based on a comparison of the sensitivity of the surface-water intake to the presence of potential contaminant sources, **the susceptibility of the cities of East Grand Forks and Grand Forks is considered to be high for a surface-water based public water supply system.** *While it has been determined that the cities of East Grand Forks and Grand Forks source water is highly susceptible to the source water's potential contaminant sources, it is noted that historically the cities of East Grand Forks and Grand Forks have effectively treated this source water to meet drinking water standards."*

> *Moorhead Source Water Assessment* p. 5: "For the cities of Moorhead and Fargo, the most important contaminants of concern include organics (total organic carbon), turbidity/sediment (total suspended solids), chemicals resulting from spills, and microbial contaminants. Emerging issues for future potential contaminants of concern include pharmaceuticals and endocrine-disrupting substances. These types of potential contaminants are not well understood at this time."

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Comment 6

Moorhead Source Water Assessment, p. 9: "The susceptibility of any surface-water source is determined to be high because there is no practical means of preventing all potential contaminant releases into surface waters. The federal SDWA recognizes the susceptibility of surface waters and requires filtration to remove pathogens and particulate contaminants. The susceptibility of the Moorhead surface-water intake is considered to be high for a surface-based public water supply system. While it has been determined that the Moorhead source water is highly susceptible to contaminants found in the river, it is noted that historically the Moorhead Public Service Water Division has effectively treated this source water to continually meet safe drinking water standards."

Comment 7

Comment: Water supply planning is important

Red River basin planning entities should consider Minnesota's approach to anticipating future water demands for the Twin Cities metropolitan area, where governmental entities are considering the impacts of population growth, industrial development, limitations of existing sources, potential drought, and homeland security. This approach is based on the Metropolitan Council's organization of a Metropolitan Region Water Supply Advisory Committee. This committee is organized to:

- Advise the Metropolitan Council on regional water supply issues, technical studies, plans and related recommendations
- Serve as a liaison with communities and the public on water supply matters
- The board would consist of representatives from water suppliers, local governments, state agencies and other parties with interest in water supply.

The committee will prepare a water supply master plan would guide the future development of water supplies for the Twin Cities area. In preparing the plan, the Council would invite participation of communities outside the metropolitan area along with state agencies to explore issues of mutual interest and opportunities of mutual benefit. The plan would address the need for managing water security and demand, and include a process for streamlining approval of water appropriation permits.

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Response to Comment 7

Reclamation agrees that planning is important, and believes that the approach used for the Red River Valley Water Supply Project is appropriate. Stakeholders, including local governments and rural water systems, have been consulted throughout the process of identifying future water needs and potential options to meet those needs. Two teams of stakeholders (Technical Team and Study Review Team) were formed to incorporate public involvement in study planning. Gubernatorial designees from states that could be affected by the Project and other representatives of federal, state, local agencies, tribes, and environmental groups were invited to serve on the teams. In 2003, the Study Review Team was combined with the Technical Team. Technical Team members reviewed and commented on plans of study and draft reports. Organizations and agencies whose representatives attended Technical Team meetings are listed in table 1.3.1. of the Final Needs and Options Report. The Draft Needs and Options Report was distributed to the Technical Team, the public, federal agencies, and potentially affected States for a 120-day review. Comments received from reviewers were given serious consideration and were used in preparing the Final Needs and Options Report.

Public involvement extended beyond the Technical and Study Review Teams. Reclamation, with the assistance of the North Dakota State Water Commission, conducted water users meetings in eight communities in the Red River Valley during October 2002. The purpose of these meetings was to present information about the studies being conducted for the Needs and Options Report and solicit the assistance of local communities in these efforts. This also gave the water users an opportunity to learn about previous Reclamation Red River Valley studies and to provide comments. Comments received during these meetings and during public scoping of the DEIS were taken into consideration and assisted Reclamation in developing the options described in the Final Needs and Options Report.

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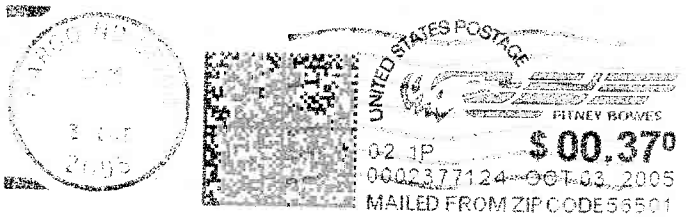

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