



April 17, 2006

Red River Valley Water Supply Project
Attn. Signe Snortland
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Dear Ms. Snortland;

Re: Draft Environmental Impact Statement Red River Valley Water Supply Project

We are writing to provide comments on the Draft Environmental Impact Statement for the Red River Valley Water Supply Project (the 'DEIS'), prepared by the Dakotas Area Office of the Bureau of Reclamation, U.S. Department of the Interior and the State of North Dakota Garrison Diversion Conservancy District.

We are fully supportive of comments being submitted by Glen Koroluk & Gary L. Pearson, a representative of the National Wildlife on the Red River Valley Water Supply Study Technical Team, and we also support many aspects of the positions of the Manitoba Department of Water Stewardship and the Government of Canada.

Manitoba Wildlands provided comments on the Draft Report on the Red River Valley Water Needs and Options. We wish to reiterate those comments and indicate that many of the deficiencies noted in our October 3, 2005 submission have been carried forward into the DEIS. Although responses to public comments have been posted, the DEIS reiterates, reinforces and relies on some unsupported assumptions and information contained in the Red River Valley Water Needs and Options report and the DEIS content does not reflect substantive changes to assumptions or information that address our concerns.

Our position is that in-basin solutions to meet future water supply needs in the Red River Valley are the only acceptable options. Inter-basin solutions are unequivocally unacceptable for ecological reasons, and economic concerns further reinforce a rejection of inter-basin options. A reference to the International Joint Commission (IJC) is needed in this instance; the nature, scale and international impacts of the proposed project demand a reference and it is a fair and equitable way to resolve the concerns of all parties. Canadians and Manitobans in particular are not just stakeholders for this proposed project.

Manitoba Wildlands continues the work of WWF Canada and Nature Canada for new Manitoba Protected Areas.



Manitoba Wildlands also contends that the DEIS is deeply flawed in its assumptions. We firmly contend that there are creative in-basin solutions involving more aggressive conservation measures, sustainable water management techniques and a comprehensive drought management plan that are available for application in the Red River Valley.

Below we outline the reasons for our continued rejection of inter-basin options for meeting future water needs in the Red River Valley. We also point out some of the main concerns we have regarding the DEIS, drawing upon and supporting comments that have been made by other groups, stakeholders and governments.

Inter-basin Options – Unacceptable Risks

The Red River Valley Water Supply project has seven options. Four of the options involve plans similar to the Garrison Diversion Project, which would involve moving water from the Missouri into the Red River. These inter-basin options are unacceptable and should be removed from consideration entirely because of the risk of invasion by foreign biota, and lack of a precautionary approach regarding level of risk and unknown consequences.

Once the invasion of foreign biota in an ecosystem occurs, it is irreversible. The best preventative measure is to eliminate the potential for this to occur entirely. The IJC recognized this back in 1977 when they studied the Garrison Diversion project. One of their key recommendations acknowledged that moving water across the Continental Divide brings the risk of potential harmful effects from pollutants. It has been widely acknowledged that species invasion is the second leading factor in our worldwide loss of species. A white paper on invasive species prepared by IJC in 1999 identified invasion of foreign species as the second leading cause of species extinctions on the planet.

This is a very real risk for the Hudson Bay drainage basin; the introduction of new/increased pollutants, harmful biota and invasive species into the basin would contribute to the loss of original species and habitat. The Missouri River Basin and Hudson Bay Basin have been separated from each other for over 10,000 years and the biological community is significantly different in each basin. Further, the Mississippi River Basin, which contains the Missouri River Basin, has been invaded by foreign species originating from the Great Lakes Basin via the Illinois Canal. As a result, there is the added potential risk for the invasion of species from the Great Lakes associated with the inter-basin options for the Red River Water Supply project.

We know that flocculation, sedimentation, coagulation, combined with UV disinfectant does not adequately treat many pathogens. Biota such as Whirling disease protozoa (a fish parasite) are resistant to chlorine and UV disinfection. There are other organisms that are similarly resistant to treatment. Indeed, the DEIS itself acknowledges the fact that eliminating the risk transfer of foreign biota is not feasible. “Elimination of all risks of species invasion associated with inter basin transfers may be a management goal, but **attaining zero risk is highly unlikely within the context of pathways and**



competing risks (e.g., water diversion pathway v. all other pathways)” (DEIS, p. 201, emphasis added).

Such admissions can be found elsewhere in the DEIS as well:

“This application of HEA [habitat equivalency analysis] . . . indicated potentially significant consequences for Lake Winnipeg if Project-related pathways result in the introduction of invasive species. **Whether appropriate restoration measures are feasible and available either now or in the future is uncertain and is not addressed in this analysis.**” (DEIS, p. 207, emphasis added)

These are compelling arguments against any option that would transfer water between drainage basins. The ecological consequences are high, and it is not feasible to eliminate risk. A precautionary approach must be adopted. The arguments against inter-basin options are even more compelling, given that feasible, cost effective in-basin options exist. There is no good reason to pursue inter-basin options to meet future water supply needs in the Red River Valley.

DEIS Deficiencies , Faulty Assumptions and Exaggerations

Along with Glen Koroluk and G. L. Pearson, Manitoba Wildlands contends that the DEIS is seriously deficient in a number of areas. Many of the assumptions that are the basis for justifying the project are flawed and unsupported. Some of these assumptions originate from the ‘Needs and Options Report’ and have been erroneously incorporated into the DEIS. Information regarding the hydrology of the Missouri River system is inadequate and there is no way of confidently stating that water will be available to meet Red River Valley needs in the event of future drought. Surely analysis regarding risk of drought in the Missouri River basin is material and even essential to the DEIS. In addition, water conservation predictions are underestimated, there are no comprehensive drought contingency plans, and a proper water budget is absent from the EIS.

Inflated Population Projections

Population projections are fundamental to the projection of future water supply needs for the Red River Valley and essential to the justification for this project. Oddly, there is little to justify the population projections used in the DEIS. The US Census Bureau data projects that the population of the Red River Valley region of North Dakota and Minnesota will grow from 446,2235 in 2000 to 502,792 in 2050, an increase of 56,557, or 12.7%. This data is not used or cited in the DEIS. The Bureau of Reclamation contracted “an independent population projection analysis for the Red River Valley”, which projected population growth of 27.7% (Draft Report, p. 2-24). Despite these ostensibly reliable population projections, the Bureau of Reclamation’s DEIS rejects both and instead uses population projections of 43.2% (a significant inflation) for ‘Scenario One’ from the *Draft Report on Red River Valley Water Needs and Options* (also authored by the Bureau of Reclamation). ‘Scenario Two’ uses population projections from municipalities (not an unbiased source) that project growth of an astonishing 104% (Draft Report, p. 2-25).



Ignoring population data from credible sources and instead justifying a project by using data that better suits project purposes raises questions regarding the overall assumptions about future water supply needs in the Red River Valley. At a minimum, the Bureau of Reclamation must be required to supply information to justify the rejection of US Census Bureau data and data provided by its own consultants.

Per-Capita Water Use – Compounding Faulty Assumptions

Assumptions in the DEIS regarding per capita water use are also questionable. Per capita water use is calculated using only peak demands and 15-year averaging and doesn't take into account efficiencies gained over the last 15 years. Further, the DEIS states that its projections of future water needs in the Red River Valley were based on the 'Scenario One' and 'Scenario Two' population projections multiplied by the per-capita municipal and rural water demands (DEIS pp. 13-14). This means that two assumptions that were over-estimated have been multiplied together to form the primary justification for this project. This is unacceptable and in fact, it is surprising that this project is being considered, given the obvious flaws and blatant disregard for its own consultants' reports.

Forecasted Water Needs and Disregard for Increases in Water Use Efficiency

The industrial growth forecasts and associated overall water needs are also exaggerated. It appears that technological innovation and/or public policy changes (such as tiered water rates to discourage excessive use) that would increase the efficiency of water use are not considered in the DEIS. Technology for industrial water users regarding recycling of re use of water supply are being adopted widely. It is odd that these are not taken into account in the EIS projections of water use. Not only is it unlikely that there will be no gains in water use efficiency in the next 50 years, but this improbable assumption again contributes to the over-inflation of projected future water supply needs in the Red River Valley and further diminishes credibility of the Bureau of Reclamation justification for proceeding with this project at such a scale.

Underestimation of Water Conservation

In the same spirit, water conservation and demand side management techniques content in the DEIS is underestimated and inadequate. The DEIS relies on the *Water Conservation Potential Assessment Final Report* (Bureau of Reclamation 2004) for its conservation predictions in terms of conservation and DSM measures. Yet, according to Pearson, the Bureau's own independent consultant reviewed the *Water Conservation Potential Assessment Final Report* and estimated conservation potential to be in the range of 15% or more, a large portion of which would be due to the plumbing code (Pearson cites Maddaus, 2004). The DEIS uses water conservation savings of half that 15% estimation – and does not mention the report of its independent consultant or even list it in the Literature Cited.

In addition, the Bureau's *Water Conservation Potential Assessment Final Report* acknowledges that 'Very few water systems in the Red River Valley have a formal water conservation program in place.' This alone is grounds for a more thorough exploration of conservation potential for water usage in the Red River Valley. The under-estimation of conservation potential is one more element contributing to the overall inflation of future water supply needs and also further undermines the arguments to justify the scale of the Red River Valley Water Supply project.

Manitoba Wildlands continues the work of WWF Canada and Nature Canada for new Manitoba Protected Areas.



All of the proponents' assumptions noted above and the nature of the project itself are grounds for suspending further decisions regarding the Red River Valley Water Supply project so that a review of the project's justification can be conducted on an independent, joint basis, through the International Joint Commission.

Missouri River Water Allocations and Project Impacts

Despite the fact that four of the seven options identified in the DEIS are based on delivering Missouri River water to the Red River Valley, the DEIS does not provide an analysis to confirm (or reject) the capacity for the Missouri River to deliver water in the event that the projected year 2050 Red River Valley 'Scenario One' or 'Scenario Two' shortages come to pass. Missing from the DEIS is information on existing and future water use allocations for the Missouri River. As Pearson points out, the DEIS "simply assumes the water will be there." (Pearson, 2005c, Appendix 1, pp. 63-64) This is an important consideration, given that it would be highly risky for the Red River Valley Water Supply project to be based on water withdrawals from an already highly taxed and potentially over-committed river basin. (This comment does not negate our early comments regarding the inappropriateness of inter basin transfers.)

The problems with the analysis run even deeper than a lack of baseline information for the Missouri River and its basin. Assumptions regarding projected impacts of the project on Missouri River flows are also flawed; the DEIS evaluates the impacts of project options, not in terms of Missouri River flows during droughts, but in terms of average flows (DEIS, pp. 153, 156). This logic is difficult to follow and also raises concerns about project viability for options involving the diversion of Missouri River water.

Inadequate Drought Planning and Water Budget

We are also concerned that there are no drought contingency plans incorporated into the water model and that a proper water budget hasn't been performed (i.e. a water budget that takes a more holistic approach to watershed planning). As noted by Glen Koroluk in his March 2006 brief as part of the DEIS public hearings, such a water budget would include the following:

- a more thorough investigation of other larger aquifers in the basin such as the Page, Galesburg, and Sheyenne Delta aquifers
- investigation of irrigation in the Red River Valley to see where efficiencies can be gained in irrigation practices, and that would free up water for other uses
- performing a thorough investigation of water appropriations in the Valley (understand that under the century old water code, if a water license holder doesn't use water for three consecutive years, the state can take back that water right; thereby freeing up water for other use)

As a final general comment on the DEIS, Manitoba Wildlands notes that the 50-year planning horizon is unrealistic and ill-conceived, particularly when considered in combination with the fact that the Manitoba Wildlands continues the work of WWF Canada and Nature Canada for new Manitoba Protected Areas.



project is a massive infrastructure undertaking. Predictions concerning population growth and water use become substantially more uncertain beyond more than a couple of decades. Thus a prudent approach to managing water supply and use over the next several decades would involve devising a project that is first and foremost ecologically sound (as well as cost effective), but that is also flexible, could be altered in response to future emerging water needs, and could be developed incrementally.

Boundary Waters Treaty and International Joint Commission (IJC) Involvement

Article 4 of the 1909 Boundary Waters Treaty between the United States and Canada states "The waters herein defined as boundary waters and waters flowing across the Boundary shall not be polluted on either side to the injury of health or property of the other." The treaty also grants downstream residents suffering injury the same rights as those that are upstream.

Both countries committed to this treaty and it has served and benefited both countries in a fair and equitable manner for a hundred years. There is every reason to ensure it continues to work for both countries, as water issues are going to become ever increasingly important not only in North America, but world-wide.

Some of the options under consideration as part of the Red River Valley Water Supply project would result in harm to the ecological health of the Hudson Bay drainage basin and Lake Winnipeg. This is not in dispute and as noted above is acknowledged in the DEIS. These options must be dropped from further consideration. Accordingly, the Red River Valley Water Supply project also must be referred to the IJC so as to ensure that the Boundary Waters Treaty is not contravened.

In fact, because of the nature of the Red River Valley Water Supply project, from the very start the project should have been considered in the context of the Boundary Waters Treaty. Independent scientific study through the IJC should have been undertaken prior to this EIS being drafted. Because of Canadians' interest and stake in the health of the Hudson Bay drainage basin, and the rest of the Red River Valley and Red River basin, independent analysis still should be the basis for identification of ecologically valid and sustainable in-basin water supply options.

Manitoba Water Stewardship and Government of Canada Positions

Manitoba Wildlands also wishes to call attention to, reiterate and support certain elements of the Government of Manitoba (Department of Water Stewardship) and the Government of Canada positions regarding the Red River Valley Water Supply project.

We support the Manitoba Water Stewardship Department's comments regarding population projections, planning timeframes, water conservation measures, and risks regarding foreign biota transfer. We also wholeheartedly endorse their preference for an in-basin solution to meeting future water needs in the Red River Valley.



Manitoba Water Stewardship has noted that the economic analysis in the DEIS of impacts on Lake Winnipeg does not adequately estimate the consequences of impacts to the lake. Manitoba Wildlands also places great value on Lake Winnipeg, the world's tenth largest freshwater lake and Canada's Sixth Great Lake. The lake boasts the largest inland fishery in Canada and a significant number of First Nation individuals and communities rely on a healthy Lake Winnipeg for their livelihood. For many First Nations peoples, the lake is essential to continued practice of cultural traditions. The DEIS' economic analysis of impacts on Lake Winnipeg also does not adequately consider the ecological functioning of the lake due to possible biota transfer, or risks to the fishery.

We also commend the Manitoba Water Stewardship's suggested approach to developing solutions that are in the interest of parties on both sides of the border. Emphasis on the shared interests of Manitoba and North Dakota, South Dakota and Minnesota in the Red River basin and working together collectively to manage these waters for the benefit of the basin as a whole are sound principles for problem solving. The offer to share expertise in the development of a proper drought management plan is critical to this approach and we understand that the Red River Basin Commission (of which North Dakota is a member) has agreed to work with Manitoba and collaborate on a basin wide approach.

Manitoba Wildlands also supports Manitoba Water Stewardship's proposal to explore in-basin options that are consistent with sustainable water management principles, that are respectful of natural systems and that are based on a commitment to live within the basin's water availability means. Water conservation is a central part of this approach, which would also avoid the importation of water from an adjacent basin and from neighbours who may need the same water during periods of future drought

Many aspects of the Government of Canada position on the proposed Red River Valley Water Supply project are the same as the Government of Manitoba position. Manitoba Wildlands endorses the Government of Canada's view that water conservation and in-basin alternatives need to be fully studied and considered to determine whether they can meet the area's water needs. We share their concerns regarding assumptions underpinning water demand, hydrological calculations, and the risk of biota transfer associated with the contemplated inter-basin transfer options. We note that the Government of Canada has also expressed concerns similar to Manitoba Wildlands' regarding compliance with Article IV of the Boundary Waters Treaty and the recommendations set out by the International Joint Commissions 1977 report to the Governments of the United States and Canada on the Garrison Diversion Unit.

Water is fundamental to all life. Future generations of Canadians and Manitobans as well as future generations of North and South Dakotans and Minnesotans are all equally entitled to a reasonable supply of water that will meet and sustain their needs. However, that water also should be free of biota that would alter the ecosystems that sustain them. Together we need to find ways to conserve water supply, and avoid pollution of shared waters. The future generations who will rely on the Red River Basin expect this of us all.

Manitoba Wildlands continues the work of WWF Canada and Nature Canada for new Manitoba Protected Areas.



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We appreciate the opportunity to provide comments on the Draft Environmental Impact Statement for the Red River Valley Water Supply project. We trust that our comments will be carefully considered, responded to, posted publicly, and reflected in the final EIS document.

Yours truly,

Gaile Whelan Enns
Director, Manitoba Wildlands

cc.
Hon. Steve Ashton, Minister, Manitoba Water Stewardship