



North Dakota State Water Commission

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March 26, 2008

Northwest Area Water Supply Project EIS
Bureau of Reclamation
PO Box 1017
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Subject: Comments Draft NAWS EIS

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INTRODUCTION

The Northwest Area Water Supply (NAWS) Project is an essential public health and water supply project for communities in the Northwest area of North Dakota. As you are well aware, the project would carry treated lake water 45 miles through a closed pipeline, the last 21 miles of which is across the Hudson Bay Drainage Basin to the Minot treatment plant.

The original Environmental Assessment for this project was challenged in Federal Court by the province of Manitoba. The Court ordered that the agency perform additional analysis focused on the potential impacts associated with the risk of the transfer of invasive species across the continental divide. The Court also suggested that the agency explore in detail a wider range of treatment alternatives.

The State Water Commission believes the Draft Environmental Impact Statement (EIS) fulfills the Court's order and goes beyond that mandate to provide the public with extensive information on the NAWS project. Specifically, the federal agency decision maker and the public have been provided updated and accurate information concerning the issues of invasive species, existing interbasin transfers, primary pathways for invasive species, and risks related to various levels of treatment for biota. This comment letter, (1) reviews the key areas of the Draft EIS that have addressed the judicial order, (2) sets forth the State's main concerns as the agency proceeds to a Final EIS and Record of Decision, and (3) clarifies certain minor points that should be addressed in the Final EIS.

DISCUSSION

A. The Draft EIS Successfully Addresses a Full Range of Alternatives and Those Alternatives' Potential Impacts

The Draft EIS considers in detail four different treatment options for water transferred from Lake Sakakawea. The "No Action" Alternative is the equivalent of the preferred alternative from the original NAWS EA. Using No Action as a baseline alternative, the Draft EIS properly analyzes several treatment options, including one that reflected the suggestions provided by Manitoba during the scoping process. The alternatives present a wide range of projected costs and were evaluated in full to determine the varying degrees of expected treatment efficacy for potential invasive species. Unlike what the Court concluded on the EA, the Draft EIS gives a complete review of the different treatment options and a comparison between each alternative.

The Draft EIS also places the potential for transfer of invasive species in its proper context. The document describes the numerous interbasin transfers of water both in the United States and Canada. As noted on page 3-13, two of the Canadian projects, Long Lake and Ogoki River, transfer a combined average of about 4.1 million acre-ft of untreated water per year from the Hudson Bay Basin to the Great Lakes Basin. And the Great Lakes Basin has an average 2.3 million acre-ft transfer of untreated water into the Mississippi River Basin. In comparison, NAWS is a 0.015 million acre-ft project.

International shipping is noted in the Draft EIS as the pathway through which some of the most damaging invasive species have become established in North America. The Draft EIS describes the current Coast Guard regulations, the United Nations International Maritime Organization's unratified treaty, and the proposed US legislation to address this pathway. International shipping is a significant pathway between continents that will continue to pose a higher risk for biological invasions than existing or proposed water transfers. The No Action Alternative in the NAWS Draft EIS has a significantly higher level of treatment and protection from invasive species than any proposed treatment for the shipping pathway.

One important untreated natural connection between the Mississippi and Hudson Bay drainage basins was not mentioned in the Draft EIS. This natural connection is in Minnesota and 10 year flood events move water and biota between the basins. We have enclosed photographs from 2001 and 2007 showing the recent flooding events, and a short report from the U.S. Army Corps of Engineers documenting the connection and historic recognition back to the 1830's recognizing the movement of biota at this connection.

The Draft EIS concludes the risk of transferring invasive species through the NAWS project, regardless of the type of treatment, is lower than the risk of invasive species moving through other pathways. With the multiple barriers in each of the four alternatives evaluated, the additional risk of invasive species posed by the NAWS project is negligible.

B. Consideration of a "Hybrid" Treatment Alternative

A body of information concerning UV treatment has developed since the EA was completed in 2001. Reclamation is well aware of this information and compiled a summary in Appendix A.4 of the Red River Final Environmental Impact Statement. This data shows that UV treatment is effective even with turbidities at 11 NTUs and some studies show UV effectiveness up to 34 NTUs. Separate from the summary, wastewater applications are effectively using UV on water with transmissivities down to 40 percent. Adding a UV process on the raw water could effectively address the chlorine resistant organisms represented by cryptosporidium and whirling disease.

The State Water Commission completed a year long pilot plant study at Lake Sakakawea last year. The study collected raw water quality information and evaluated the effectiveness of a flocculation-sedimentation process as pretreatment for UV, prior to the basin divide. The raw water quality remained below 10 NTUs throughout the year, and UV transmissivity of the raw water was on the order of 70 to 80 percent. The study showed the flocculation-sedimentation process reduced the turbidity levels below 3 NTUs, and that UV can be effective with or without the reduced turbidity levels provided by the flocculation-sedimentation option. The report is enclosed.

Cost estimates provide a relative difference in cost at a point in time. We have estimated the direct application of UV on the raw water source with chlorine and chloramines and the No Action Alternative, along with the other alternatives. We believe the relative costs (2008 dollars) are \$12 million for the No Action with chlorine/chloramines, \$18 million for the UV and chlorine/chloramines on the raw water, \$49 million for the flocculation-sedimentation with UV and chlorine/chloramines, \$78 million for the conventional treatment/DAF, and \$90 million for microfiltration.

As noted above, the State Water Commission believes there is a greater cost difference between the flocculation-sedimentation treatment option and the conventional treatment option presented in the Draft EIS. Our estimates indicate the flocculation-sedimentation treatment to be about \$19 million lower than the \$68 million presented and the conventional treatment about \$5 million higher than the \$73 million presented. This information was provided to Reclamation earlier and is already included in comments on the Draft EIS. Building size accounts for the main difference between our own estimates and those in the Draft EIS. The Draft EIS used a similar facility size for the alternatives, whereas our estimates recognized the flocculation-sedimentation process could use a smaller facility than the conventional/DAF process.

C. Miscellaneous Concerns To Address in a Final EIS

The discussion of the No Action alternative in the EIS should include discussion on the pipeline safeguards. The Missouri River water would travel from the biota treatment plant another 30 miles through a closed pipeline to the Minot water treatment plant. The last 21 miles of the trip would cross the Hudson Bay Drainage Basin. The pipeline is buried seven and a half

feet below the ground surface, and includes restrained joint pipe below the three coulees it crosses between the divide and the Minot treatment plant. The coulees only have intermittent stream flows and are dry most of the year. The pipeline will have telemetry and automatic controls, valves and isolation vaults to shut down the system and contain water prior to the coulees if there are any problems or loss of pressure in the pipeline.

The table on Page 3-6 should be updated on which organisms evaluated are in both the Hudson Bay Drainage Basin and the Missouri Drainage Basin. Through the narrative, it appears that everything in the Missouri Drainage Basin, except Whirling Disease (*Myxosoma cerebralis*), is already in the Hudson Bay Drainage Basin. And as noted in the Draft EIS, Whirling Disease had not yet been identified in North Dakota and is highly unlikely to complete its life cycle and cause significant impact through the project.

CONCLUSION

On March 18, 2008 the Federal Court ordered the project could continue on design and construction of the project between Minot and the northern communities. There were specific needs to address water quality concerns such as the level of arsenic in Kenmare's water supply. The Court found this work would not affect the ultimate decision on treatment, and Manitoba did not oppose the continuance of the project.

We are pleased you are continuing to collect and analyze all pertinent information on feasible treatment options. We look forward to working together cooperatively as Reclamation responds to all public and agency comments and works toward a decision on a final treatment for the NAWS project. Thank you for the opportunity to comment on the Draft NAWS Environmental Impact Statement.

Sincerely,



Dale Frink, PE
State Engineer

Enclosures
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