

CITY OF PERHAM

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April 23, 2007

Mr. Dennis Breitzman
Red River Valley Water Supply Project
U.S. Bureau of Reclamation
P.O. Box 1017
Bismarck, ND 58502-1017

RE: City of Perham's Comments
Red River Valley Water

Dear Mr. Breitzman:

The City of Perham is opposed to any alternatives which would rely on withdrawing extensive amounts of water from the Otter Tail Surficial Aquifer to meet the drinking water requirements of the Red River Valley during a drought. The City of Perham is located in northeast Otter Tail County and draws its drinking water from this aquifer.

The baseline needs assessments continue to utilize a drought similar to the 1930's for analysis. While much information in the SDEIS and comments from various agencies and individuals continues to address flows in the various rivers, no similar detailed information is available regarding the effects of a 1930 drought on groundwater resources. All of the information we are aware of indicates the 1930's drought had severe effects on groundwater levels.

We believe this is a serious issue, the additional pressure significant new withdrawals would place on the aquifer when it is already under stress, is unknown. The aquifer is an exchange point between surface and groundwater. High volume wells have been shown to significantly alter local groundwater flow patterns. The cumulative effect of numerous such wells on the overall aquifer could be very significant.

Data gathered over the past ten years by the Perham Wellhead Protection Committee indicates there are areas of high nitrate concentrations in the groundwater. The highest nitrate concentrations are located in the upper portions of the aquifer. While some areas have shown a reduction in nitrates, other areas have increased with the overall trend being level to slightly declining.

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The combination of pollutants, drought and altered groundwater flows caused by pumping numerous well in this sand aquifer could significantly increase the potential to contaminate the City of Perham's and other drinking water supplies.

The City of Perham has already invested over \$500,000 in efforts to protect its groundwater supplies. The City will increase the investments to over \$1,200,000 by 2009. These resources have been directed at acquisition of highly sensitive agricultural lands, development of public education programs and working with the local agricultural community to improve practices that could lead to groundwater contamination. Overtime, the City's investment in these efforts will continue to grow.

The SDEIS does not adequately consider the long-term aspects of operation or continuous incremental development of an extensive well field in the Otter Tail Surficial Aquifer. Development and maintenance requirements will be significant and will have a major impact on existing land and water resources in the area. Once the wells are in place, there is no mechanism to insure the use will be limited to drought conditions.

Based upon information on the SDEIS, it appears the GDU Import to the Sheyenne River remains the best alternative. An extensive investment in this alternative has already been made. The biota treatment plant reduces the possibility of species moving from one basin to another through this project, especially when considered in relation to the other avenues such a transfer could take.

For the reasons outlined above and the comments we submitted previously, we strongly urge the alternative of drawing groundwater supplies from the Otter Tail Surficial Aquifer be dropped from consideration at this time. Quite simply, there is a great lack of data on the impact of this alternative. Adverse consequences of lowering the level in this aquifer during a severe drought will not be known until the event occurs and it is too late to mitigate the adverse impacts.

We have attached a copy of our earlier comments for your reference. We still believe most of these comments and concerns remain.

Sincerely,

A handwritten signature in blue ink that reads "Kevin Keil". The signature is written in a cursive style with a large initial 'K'.

Kevin Keil
Mayor, City of Perham

Enclosure

April 11, 2006

Red River Valley Water Supply Project
Bureau of Reclamation
P.O. Box 1017
Bismarck, ND 58502-1017

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

Dear Ladies and Gentlemen:

The City of Perham offers the following comments on the Draft Environmental Impact Statement Red River Valley Water Supply Project. The City of Perham is located in Northeastern Otter Tail County and draws its drinking water supplies from the Ottertail Outwash Aquifer. Perham's comments primarily relate to the proposed Red River Basin Alternative.

For the record it should be noted no representative of our Community and to the best of our knowledge no representative from our area participated in the process leading to development of the alternatives presented in the Draft EIS. We note several communities that will benefit from the project participated in the work groups and review teams that developed the alternatives. Citizens in our area have had a very limited time to review the Draft EIS and evaluate the information presented.

We would like to thank Mr. Johnson and Mr. Schlag for making presentations at a public information meeting attended by an estimated 125 residents of our area on March 23, 2006. Unfortunately the comments presented by citizens at that meeting will not be part of the formal record, unless those in attendance went to the added step of submitting written comments. Many area residents with interest in the project were not aware or were unable to attend the formal public hearing held on February 16, 2006.

In reviewing the Draft EIS, many of the assumptions related to the impact on water quantity are based upon the average data for the period 1931 to 2001. In measuring the impact of drought with the magnitude of the 1930's, the surface water quantity data for the Red River and Sheyenne is noted. No similar data regarding the impact of drought conditions on ground water supplies is included in the report.

We believe this is serious oversight as the effects of the additional pressure on ground water resources in the area during a severe drought are not well documented. Soil conditions in the Perham area consist primarily of coarse to fine textured loams and sands. The soils have low water hold capacity. The soil types and textures directly affect the movement and rate of water percolation.

Almost all agricultural, residential and industrial water uses in the area are from ground water sources. Surface water is primarily used for recreational purposes and ground water recharge. There is considerable ground and surface water interaction in the area.

Accounts from local residents indicate that many of the lakes and other surface waters in the area were dry or suffered significant reductions of 20, 30 or more feet below their normal high water marks for a sustained period of years during the drought of the 1930's. Given the soils conditions and interaction between ground and surface water one could reasonably expect similar drops occurred in ground water in the surrounding area.

Data gathered during preparation and implementation of the City's Wellhead Protection Plan indicates there are high nitrate concentrations in the upper portions of the aquifer in the Perham area. Pumping of high capacity wells changes the normal

flow of ground water significantly increasing the vertical exchange of water in the aquifer. This causes nitrates and other pollutants currently confined to the upper reaches of the aquifer to mix with clean water deeper in the aquifer.

The City of Perham and most rural residents of the area rely on ground water for their drinking water supplies. Most of these wells range less than 100 ft. deep. The five public water supply wells for the City of Perham range from about 75 to 120 ft. deep.

The City tests its ground water supplies quarterly to ensure they meet Safe Drinking Water Standards. During these tests, low levels of nitrates have been detected in the ground water. A combination of a lowered water table due to drought and vertical mixing of ground water from an extensive well field consisting of some 100, 150 or more wells could cause water quality in the medium to lower levels of the aquifer to become contaminated to the point it is no longer safe for domestic use without extensive treatment.

At this time ground water supplies are of sufficient quality that no additional treatment, with the exception of fluoridation and chlorination, is needed to make it safe for public use. The City has adopted an aggressive approach to protect the ground water supplies from becoming contaminated through its Wellhead Protection Program. The project involves public education and information efforts, new and innovative agricultural management practices to reduce leaching of nitrogen and other agricultural products to the ground water and acquisition of land or easements to protect lands which are considered to be especially critical to protection of its ground water supplies.

The City's Drinking Water Supply Management Area consists of over 11,000 acres of land. Over half of this land, some 7,000 acres, is used for agricultural purposes. Over half of the agricultural land is irrigated, with potatoes, corn and beans being among the primary crops grown in the area.

The City of Perham has invested over \$500,000 in various efforts to protect its ground water supplies from contamination. These include acquisition of highly sensitive agricultural lands, development of public education programs in local schools, working with the University of Minnesota, NRCS, SWCD and others to demonstrate the effect of new fertilizer such as slow or time release fertilizers, irrigation scheduler programs, annual sampling of a wells throughout the area for the past 10 years and a variety of other efforts to protect ground water supplies. The alternative would have been for the City to make a multi-million dollar investment in water treatment facilities to ensure a safe water supply for its residents.

Drilling 100, 150 or more water supply wells would multiply the negative impacts throughout a significant portion of Otter Tail and Becker County.

Otter Tail and Becker Counties are primary recreational areas having well over 1000 lakes, several state parks and numerous state and national wildlife management and water fowl productions areas. These resources would be seriously impacted by a drought of the magnitude of the 1930's. It is highly unlikely the drought would be confined to the Red River Valley and would likely have impact throughout and beyond the Red River Basin. Lowering ground water levels would further magnify the impact on a wide variety of local and migratory wildlife populations that would already be under stress.

The Draft EIS does not address the long-term impact of operational requirements on ground water resources in the supply area. Wells in the well field will need to be operated on a regular basis in order to make sure they will work properly when needed. The water pumped from the aquifers during non-drought conditions will likely become part of the "base supply" for those areas to be served by the Red River Valley Water Supply Project. This will further encourage water consumption and enlarge the water supply deficit in the future.

Further the EIS does not address the impact of having a user controlled system in place to determine when a drought occurs and the system should be placed in full operation. With a user controlled system in place and the impacts difficult to measure and see, the alternative presents a greater chance for adverse impacts when compared to the more definable and measurable impacts associated with the preferred alternative.

Based upon the information presented in the Draft Environmental Impact Statement, it appears import of water from the GDU Import to the Sheyenne River alternative is the most effective alternative. An extensive investment has already been made in some of the facilities needed to implement this alternative. The proposed biota treatment facility would reduce the probability that exotic species would be transported from the Missouri to Red River Basin to acceptable standards.

For the reasons outlined above the City of Perham would strongly urge the alternative of drawing ground water supplies from the Otter Tail Surficial Outwash and Pelican River Sand-Plain Aquifers be dropped from further consideration. Quite simply, there is a great lack of data on the impacts of this alternative and any definitive knowledge of the impact of substantially lowering the level of these aquifers during a severe drought will not be known until the event occurs and it is too late to mitigate adverse consequences.

Sincerely,

Vincent Pankonin
Mayor, City of Perham