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TRIBAL HISTORIC PRESERVATION OFFICE
STANDING ROCK SIOUX TRIBE

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Climatic Modeling in the RRVWSP SDEIS.

Climatic modeling plays a pivotal role in the EIS. Modeling of deficits in the Red River Valley provides the essential rationale for constructing the project. Effects of the RRVWSP on the Missouri River system are based upon climatic modeling by the Corps. Modeling of population growth in the Red River Valley is predicated on implicit climatic assumptions.

The climatic modeling used by the BOR and the Corps in the *Master Manual* is based upon the 71 year-long period from 1930 to 2002. It is easy to get seduced into thinking that these models provide accurate forecasts because of the science and technical expertise that is employed. But no model is better than the underlying assumptions upon which it is predicated. One of these in both the BOR and the Corps models is that climate to the year 2050 can be predicted from the limited sample represented by the historic records. There are reasons to be highly suspicious of this assumption. First, the paleoclimatic record indicates that the northern Great Plains has experienced periods of drought that have lasted hundred of years, much longer than any drought in the historic record. Second, data from the Greenland ice cap indicates that Holocene climatic changes have occurred abruptly, requiring less than a decade to occur, far less than the projections to 2050 used in the SDEIS. Third, there is an emerging body of data that indicate that global warming will cause serious climatic changes in the coming decades. Changes forced by global warming, especially when placed in the context of the lessons from the paleoclimatic data, indicate that there is far more uncertainty in the BOR and Corps models than is acknowledged.

This level of uncertainty is noted by one of BOR's consultants, Meridian Environmental Technology, Inc. Their supporting report in the SDEIS addresses climate in the Red River valley, only peripherally touching on the upper Missouri basin, but does state the following:

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“This [lack of detail in modeling global climatic change] leaves uncertainty as to whether climate change will produce a greater or less likelihood of extreme drought across the northern Great Plains. Should climate change produce more frequent extreme droughts across the Northern Plains, the recurrence interval of droughts similar to the “dust bowl” drought of the 1930s would be shortened and would likely lead to dramatic sustainability issues” [p. 20 (emphasis added)].

This passage should be placed in the main body of the SDEIS and highlighted in the Executive Summary rather than hidden in a supplementary report that few will read. There is far more uncertainty in the SDEIS climate predictions than is acknowledged. In layman’s terms, the passage simply says that if global warming causes increased drought on the northern Plains, all bets are off.

In a personal conversation with Ms. Signe Snortland of the BOR, she indicated that the BOR is currently investigating some of the global warming models. The problem seems to be that none of the global warming models have the same specificity as the historic data. But this is a problem only if one believes that computer models using quantifiable data are the only or even the best model. For starters, one could reverse the process – integrate the historic data into the global warming models. Whatever approach is used, **the SDEI must more directly incorporate global warming**. If not, the SDEIS is playing make believe that global climatic change will have no impact.

The Standing Rock Sioux Tribe is concerned with climatic effects in the upper Missouri Basin cannot afford to rely on make believe climatic modeling. In a meeting on March 1, 2007 at Prairie Knights Casino, Ms. Signe Snortland reported that over the last 300 year period there have been only two to three droughts as severe as that which occurred in the 1930s. The attempt to include some paleoclimatic data should be applauded but if this projection is mean to assure the Tribe, it falls far short of the mark. Tribal people only need look out their door at the Oahe reservoir. Over the past eight years drought conditions have prevailed over the upper Missouri basin. None of these years was as severe as the 1930s but during this eight year period the level of water in Oahe Reservoir has fallen fifty feet. At Fort Yates there is no reservoir – only weed choked mud flats and the old river channel. Lake Sakakawea has been similarly depleted. System storage in the upper basin has dropped from 65 MA to 35 MA, a loss of 30 MA. Obviously, it does not take 1930s style droughts to severely impact the reservoirs, only a continuation of the current conditions. These conditions, as thoughtfully observed by Mr. Jay Taken Alive, councilman for the Standing Rock Sioux Tribe, may be the new normal.

Given the scale of uncertainties, planning has to be made for a scenario where changes in the Missouri River system exceed those predicted in the current modeling. Whether the worst case will actually occur is unknown but a risk management plan must be developed that identifies the steps that will be taken to manage the risk, including the risk to Tribal water intakes.

Such a risk management plan is one of the glaring omissions in the Master Manual. The Corps does not have a drought emergency plan: “... no separate Drought Contingency

Plan is needed or required for the System, as it is included in the CWCP [Current Water Control Plan] presented in this Master Manual” [*Missouri River Master Manual* (Revised March 2006)] Section 7-15, p. VII-54). The only active steps that are proposed in the CWCP is a navigation preclude if the system storage falls below 31 MA and a Spring Rise preclude.

Adverse Effects of the RRVWSP on Standing Rock Intakes.

In the supplemental SDEIS report titled, Red River Valley Water Supply Project Analysis of Missouri River Effects, the Corps (2006) notes that, “As reservoir levels drop, some intakes are more likely to loose their access to water from the lake” but then adds, “This analysis found that only one intake would loose its access, and this access was lost under Current Conditions and all of the 2050 [RRVWSP] alternatives” (p.22). There are at least three problems in this analysis. First, the basis for this statement is modeling of Missouri River flows during historic droughts. Although the Corps asserts that it is not attempting to “forecast the future” (4-39), the SDEIS uses the data as if it is climatic modeling.

Second, the one intake identified by the Corps as lost is that serving Parshal, ND. Apparently the Corps has changed their analysis between 2006 and 2007 since in testimony given by the Corps before Senator Byron Dorgan on February 20, 2007, their 2007 projection is that the Parshal intake will “barely scrape by” and that the intake at Wakpala, SD on the Standing Rock Indian Reservation will be lost. Why was the Wakpala intake not mentioned in the Corps 2006 report? Doubt is cast on the accuracy of the analysis when it takes only one year for a substantive change in the analysis.

Third, the Corps finding that “access was lost under Current Conditions and all of the 2050 [RRVWSP] alternatives,” does not mean that the RRVWSP has no effect. Any withdrawal through the RRVWSP will accelerate intake loss. **That accelerated loss is an adverse effect. The SDEIS has not proposed any steps to remedy that adverse effect.**

In their public presentations, the BOR has stated that the RRVWSP will cause the water level of Lake Sacagawea to drop only six inches, as if to say that drop in reservoir level is so minimal that no one has to worry about it. In a case such as Parshal’s current situation, that six inch drop could be the difference between a functioning intake and one that has failed. Moreover, absolute reservoir levels are not the only measure of danger. Sediment mobilization, a secondary effect of falling reservoir levels, can cause intakes to fail. A case in point is the Fort Yates intake on the Standing Rock Indian Reservation which was plugged in 2003 when delta deposits were mobilized by falling reservoir levels.

The RRVWSP and Trust Resources

“One aspect of retaining this respect [for tribal sovereignty] is for federal agencies to ensure that their activities protect and, when appropriate, promote and enhance ITAs [Indian trust assets]” (SDEIS Appendix J).

The effect of the Red River Valley Water Supply Project on the water rights of the Standing Rock Sioux Tribe is inextricably tied to Corps’ management practices as specified in the *Master Manual*. Unfortunately, the Tribe is placed in a bureaucratic “Catch 22” position created by the Corps and the BOR, with each agency pointing the finger at the other when it comes to protecting Tribal water rights.

Both the BOR and the Corps acknowledge that the Standing Rock Sioux Tribe has reserve water rights to the Missouri River water under the Winters Doctrine. It is recognized that these water rights are Indian trust assets that are managed by the federal government for the benefit of the Tribe. However, there is a failure to apply this general recognition to specific cases, in particular, to the water intakes of the Standing Rock Sioux Tribe.

The SDEIS discussion on water rights (3-105) cites the Corps’ *Master Manual*:

“When a Tribe exercises its water rights, these consumptive uses will then be incorporated as an existing depletion. Unless specifically provided for by law, these rights do not entail an allocation for storage. Accordingly, water must actually be diverted to have an impact on the operation of the System. Further modifications to System operation, in accordance with pertinent legal requirements, will be considered as Tribal water rights are exercised in accordance with applicable law” (E-60.3).

This passage conflates two separate issues: 1) quantification of the Tribe’s total water rights and 2) water rights that the Tribe is currently exercising through existing intakes. The BOR makes the same mistake when they state that the effects of the RRVWSP actions on Indian surface water rights are “undetermined” because “Most Tribes have not quantified these rights within the Missouri River Basin.” (Table J.3). **It is not necessary for a Tribe to quantify its water rights for a federal agency, be it the Corps or the BOR, to protect existing Tribal trust uses.**

In quoting the *Master Manual* the BOR is also implicitly asserting that protection of Tribal water rights is the Corps’ responsibility. However, the logic of the above passage leads to the opposite conclusion, at least in regard to those alternatives in RRVWSP that withdraw Missouri River water:

1. According to the Corps, Tribal water rights “do not entail an allocation for storage” in the main stem reservoirs.
2. The BOR is clearly aware of this Corps policy.

3. The RRVWSP alternatives that use Missouri River water will impose a new and additional withdrawal of Missouri River water.
4. This withdrawal will affect both Lake Sakakawea and the Oahe Reservoir (acknowledged in SDEIS 3-15).
5. Water flowing past the Standing Rock Indian Reservation in the Oahe Reservoir is an Indian trust asset of the Standing Rock Sioux Tribe.
6. The RRVWSP will have potentially adverse effects on existing Tribal water uses because of the withdrawal.
7. Since the BOR is initiating the RRVWSP, the federal responsibility for protecting existing Tribal trust uses devolves from the Corps to the BOR.

The SDEIS states that “The Department of Interior’s Manual and Reclamations ITA [Indian trust assets] policy require that potential impacts to ITAs need to be identified, considered and addressed when planning and implementing federal actions” (Appendix J). The existing Tribal municipal and irrigation water intakes on Standing Rock Indian Reservation are the physical expression of the Tribe’s right to Missouri River water. These intakes occur at specific locations and elevations and pump quantifiable amounts of water. **If the BOR is actually committed to a policy of addressing potential impacts to ITAs, impacts to the intakes on the Standing Rock can and must be addressed.**

The Bureaucratic “Catch 22”

The Corps asserts in the *Master Manual*:

“However, the intake access problems are the responsibility of the intake owner and the Corps will not guarantee access, only that the supply of water in the Missouri River is adequate to meet this purpose” (E-05).

The Corps evades their trust responsibility by refusing to ensure access to Missouri River water. The BOR evades their trust responsibility by pointing to the Corps’ responsibility for managing the main stem system. The BOR is saying, in effect, “We’ve got a project that will potentially impact Tribal intakes, but we are going to ignore that and go ahead with the project because we have no control over the Corps.” However, the BOR is legally obligated by their own internal procedures to address the adverse effects of their project on Indian trust assets. The RRVWSP project is a BOR, not a Corps project. The BOR cannot ignore the effects of their own project, even if these effects are manifested through the Corps’ management practices. **If the BOR cannot resolve the adverse effects either on their own or jointly with the Corps, they should not proceed with the RRVWSP.**

As a first step the BOR must make explicit statements in the SDEIS to the effect that:

- 1. Existing Tribal water intakes on the Missouri River are Indian trust assets.**
- 2. The BOR will take the necessary steps needed to protect Tribal intakes from all potentially adverse effects of the RRVWSP.**

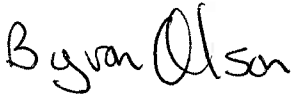
Environmental Justice

The RRVWSP will benefit non-Tribal entities in eastern North Dakota and adjoining portions of Minnesota. The adverse effects of those action alternatives of the RRVWSP that use Missouri River water are born by Missouri River communities on Lake Oahe and Lake Sacagawea, prominently including the reservations of the Standing Rock Sioux Tribe, the Cheyenne River Sioux Tribe, and the Three Affiliated Tribes. All potential adverse effects and none of the benefits of the RRVWSP are born these minority populations.

The BOR should implement federal actions mandated in Executive Order 12898. Specifically, **the SDEIS should include a summary of the disproportionate effects on minority populations and should present remedies for these disproportionate effects. Such remedies should include timely funding for Tribal MR&I projects as presented by Ron His Horse Is Thunder, Chairman, Standing Rock Sioux Tribe, in a letter dated March 1, 2007, to the BOR.**

Sincerely,

STANDING ROCK SIOUX TRIBE



Byron Olson
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