Appendix A

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DATE....10-30-06.....

NEBRASKA ADMINISTRATIVE CODE

Title 457 - DEPARTMENT OF NATURAL RESOURCES
RULES FOR SURFACE WATER

Chapter 24 - DETERMINATION OF FULLY APPROPRIATED BASINS, SUB-BASINS OR REACHES

001 FULLY APPROPRIATED. Pursuant to Neb. Rev. Stat. § 46-713(3) (Reissue 2004, as amended), a river basin, subbasin, or reach shall be deemed fully appropriated if the Department of Natural Resources determines that then-current uses of hydrologically connected surface water and ground water in the river basin, subbasin, or reach cause or will in the reasonably foreseeable future cause (a) the surface water supply to be insufficient to sustain over the long term the beneficial or useful purposes for which existing natural flow or storage appropriations were granted and the beneficial or useful purposes for which, at the time of approval, any existing instream appropriation was granted, (b) the streamflow to be insufficient to sustain over the long term the beneficial uses from wells constructed in aquifers dependent on recharge from the river or stream involved, or (c) reduction in the flow of a river or stream sufficient to cause noncompliance by Nebraska with an interstate compact or decree, other formal state contract or agreement, or applicable state or federal laws.

001.01A Except as provided in 001.01C below, for purposes of Section 46-713(3)(a), the surface water supply for a river basin, subbasin, or reach shall be deemed insufficient, if, after considering the impact of the lag effect from existing groundwater pumping in the hydrologically connected area that will deplete the water supply within the next 25 years, it is projected that during the period of May 1 through September 30, inclusive, the most junior irrigation right will be unable to divert sufficient surface water to meet on average eighty-five percent of the annual crop irrigation requirement, or, during the period of July 1 through August 31, inclusive, will be unable to divert sufficient surface water to meet at least sixty-five percent of the annual crop irrigation requirement.

For purposes of this rule, the "annual crop irrigation requirement" will be determined by the annual irrigation requirement for corn. This requirement is based on the average evapotranspiration of corn that is fully watered to achieve the maximum yield and the average amount of precipitation that is effective in meeting the crop water requirements for the area.

The inability to divert will be based on stream flow data and diversion records, if such records are available for the most junior surface water appropriator. If these records are not available, the inability to divert will be based on the average number of days within each time period (May 1 to September 30 and July 1 to August 31) that the most junior surface water appropriation for irrigation would have been closed by the Department and therefore could not have diverted during the previous 20 year period. In making this

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calculation, if sufficient stream flow data and diversion data are not available, it will be assumed that if the appropriator was not closed, the appropriator could have diverted at the full permitted diversion rate. In addition the historical record will be adjusted to include the impacts of all currently existing surface water appropriations and the projected future impacts from currently existing ground water wells. The projected future impacts from ground water wells to be included shall be the impacts from ground water wells located in the hydrologically connected area that will impact the water supply over the next 25 year period.

001.01B In the event that the junior water rights are not irrigation rights, the Department will utilize a standard of interference appropriate for the use, taking into account the purpose for which the appropriation was granted.

001.01C If, at the time of the priority date of the most junior appropriation, the surface water appropriation could not have diverted surface water a sufficient number of days on average for the previous 20 years to satisfy the requirements of 001.01A, the surface water supply for a river basin, subbasin, or reach in which that surface water appropriation is located shall be deemed insufficient only if the average number of days surface water could have been diverted over the previous 20 years is less than the average number of days surface water could have been diverted for the 20 years previous to the time of the priority date of the appropriation.

When making this comparison, the calculations will follow the same procedures as described in 001.01A. When calculating the number of days an appropriator could have diverted at the time of the priority date of the appropriation, the impacts of all appropriations existing on the priority date of the appropriation and the impacts of wells existing on the priority date of the appropriation shall be applied in the same manner as in 001.01A. As in 001.01A above, in making this calculation, if sufficient stream flow data and diversion data are not available, it will be assumed that if the appropriator was not closed, the appropriator could have diverted at the full permitted diversion rate.

Use of the method described in this rule is not intended to express or imply any mandate or requirement that the method used herein must be included in the goals and objectives of any integrated management plan adopted for a river basin, subbasin or reach determined to be fully appropriated under this rule. Further, nothing in this section is intended to express or imply a priority of use between surface water uses and ground water uses.

001.02 The geographic area within which the Department preliminarily considers surface water and ground water to be hydrologically connected for the purpose prescribed in Section 46-713(3) is the area within which pumping of a well for 50 years will deplete the river or a base flow tributary thereof by at least 10% of the amount pumped in that time.

002 INFORMATION CONSIDERED. For making preliminary determinations required by Neb. Rev. Stat. Section 46-713 (Reissue 2004, as amended) the Department will use the best

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scientific data and information readily available to the Department at the time of the determination. Information to be considered will include:

Surface water administrative records
Department Hydrographic Reports
Department and United States Geological Survey stream gage records
Department's registered well data base
Water level records and maps from Natural Resources Districts, the Department, the University of Nebraska, the United States Geological Survey or other publications subject to peer review
Technical hydrogeological reports from the University of Nebraska, the United States Geological Survey or other publications subject to peer review
Ground water models
Current rules and regulations of the Natural Resources Districts

The Department shall review this list periodically, and will propose amendments to this rule as necessary to incorporate scientific data and information that qualifies for inclusion in this rule, but was not available at the time this rule was adopted.

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