

## 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) a river basin, subbasin, or reach shall be deemed fully appropriated if the Department of Natural Resources (Department) determines based upon its annual evaluation and information presented at hearings subsequent to a preliminary determination of fully appropriated that then-current uses of hydrologically connected surface water and groundwater 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 For purposes of *Neb. Rev. Stat. § Section* 46-713(1)-(b), the Department shall reach a preliminary conclusion that a river basin, subbasin, or reach is fully appropriated if based on the Department's annual evaluation, it is determined that the cumulative near-term Total Demand and/or the cumulative long-term Total DemandUse of hydrologically connected groundwater and surface water exceeds the cumulative basin water supplies (BWS) that occur for in either of the two sub-periods within the year when summed over the representative period of record used in the annual evaluation. The two sub-periods within the year are the period of June 1 through August 31, inclusive, or the period of and September 1 through May 31, inclusive, over the representative period of record. The length of the representative period of record will be determined through statistical analyses of the annual BWS as the set of years, extending back in time from the most recently available data, which captures long-term wet and dry cycles that may exist.

~~, which the Department determines is most appropriate for this purpose and thereafter utilized by the Department to conduct the analysis.~~

001.01B For purposes of 001.01A, the BWS is the streamflow water supply estimated to be available without the initiation of groundwater pumping from high capacity wells and surface water uses of natural flow and storage. The BWS is calculated by combining the summing the following for each sub-period: (1) gaged streamflows truncated at the 5% exceedence flow probability value plus; (2) streamflow depletions due to high capacity

(greater than 50 gallons per minute) well groundwater pumping plus; and (3) consumptive surface water uses minus the BWS originating upstream of the basin, subbasin, or reach.

001.01C For purposes of 001.01A, the cumulative near-term Total DemandUse of groundwater and surface water is calculated by summing the water demands associated with the following activities for each sub-period within a basin, subbasin, or reach that have not previously been represented as a non-tributary downstream demand: (1) streamflow depletions due to high capacity (greater than 50 gallons per minute) well groundwater pumping; (2) consumptive water demands for hydrologically connected high capacity (greater than 50 gallons per minute) groundwater well pumping; (2) consumptive water demands for surface water uses, inclusive of consumptive uses associated with storage appropriations and the use of such stored water; (3) the any net additional water (accounting for return flows) determined to be necessary to deliver streamflows to meet consumptive surface water demands; (4) streamflow available to meet instream flow appropriations at the time the appropriation was granted (accounting for all development in place at such time the appropriation was granted); (5) any additional streamflow demands for hydropower operations not accounted for in the instream flow water demands; and (6) the proportionate amount of BWS necessary to meet the proportionate amount of non-tributary demands downstream of a basin, subbasin, or reach. The non-tributary downstream demands of a basin, subbasin, or reach will be proportioned in accordance with that basin, subbasin, or reaches BWS relative to the total basin BWS. that are not already reflected in the first five water demands within this section. — In calculating the cumulative near-term Total Demand no water uses developed subsequent to a fully appropriated designation or overappropriated designation shall be assigned to those fully appropriated or overappropriated basins as non-tributary downstream demands.

001.01D For purposes of 001.01A, the cumulative long-term Total Demand of groundwater and surface water is calculated by summing the water demands associated with the following activities for each sub-period within a basin, subbasin, or reach that have not previously been represented as a non-tributary downstream demand: (1) consumptive water demands for hydrologically connected high capacity (greater than 50 gallons per minute) groundwater well pumping; (2) consumptive water demands for surface water uses, inclusive of consumptive uses associated with storage appropriations and the use of such stored water; (3) any additional water (accounting for return flows) determined to be necessary to deliver streamflows to meet consumptive surface water demands; (4) streamflow available to meet instream flow appropriations (accounting for all development in place at such time the appropriation was granted); (5) any additional streamflow demands for hydropower operations not accounted for in the instream flow water demands; and (6) the BWS necessary to meet the proportionate amount of non-tributary demands downstream of a basin, subbasin, or reach. The non-tributary downstream demands of a basin, subbasin, or reach will be proportioned in accordance with that basin, subbasin, or reaches BWS relative to the total basin BWS. In calculating the cumulative long-term Total Demand no water uses developed subsequent to a fully

appropriated designation or overappropriated designation shall be assigned to those fully appropriated or overappropriated basins as non-tributary downstream demands.

001.01ED In the event that water ~~rights-demands~~ are for a beneficial use other than irrigation, municipal, industrial, instream flow, or hydropower, (for example aquifers dependent on recharge from streamflow, induced recharge, flood control, aquaculture, etc.) the Department will evaluate such use and if necessary determine a standard methodology to incorporate such right demand into any relevant analysis, ~~taking into account the purpose for which the appropriation was granted.~~

001.01F 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. Further, nothing in this section is intended to express or imply a priority of use between surface water uses and groundwater uses.

001.01G Pursuant to *Neb. Rev. Stat.* §46-713(1)(d) the Department shall rely on the best scientific data, information, and methodologies readily available to ensure that the conclusions and results contained in the annual evaluation are reliable. Prior to the release of the annual evaluation the Department shall provide sufficient documentation of the data, information, and methodologies used to reach its conclusions such that those conclusions could be independently replicated and assessed. The documentation will specify the specific data, information, and methodologies utilized in the annual evaluation to represent the BWS, near-term Total Demand, and long-term Total Demand.

001.02A For purposes of *Neb. Rev. Stat.* § ~~Section~~ 46-713(3), the Department shall deem a basin, subbasin, or reach as fully appropriated if such preliminary determination is reached pursuant to 001.01A-G and if information provided at a subsequent hearing pursuant to subsection (4) of *Neb. Rev. Stat.* § ~~section~~ 46-714 does not indicate that the criteria set forth in 001.02B or 001.02C apply or unless the Director finds or that based on written or oral testimony and evidence concerning the appropriation status for the river basin, subbasin, or reach, additional information relevant to its annual evaluation has been identified and if utilized that a final designation of fully appropriated is not warranted at that time. ~~would result in a different conclusion than that reached pursuant to 001.01A.~~

001.02B For any basin, subbasin, or reach preliminarily determined to be fully appropriated pursuant to 001.01A-G in which integrated management plan(s) have been initiated by all Natural Resources Districts within the hydrologically connected area, the Natural Resources Districts within that same hydrologically connected area have designated a management area for which a purpose is the integrated management of hydrologically connected groundwater and surface water, and the Natural Resources Districts and Department have not taken more than three years to complete such integrated management plan(s) the Department may reach a final determination that such basin, subbasin, or reach is not fully appropriated at that time.

001.02C For any basin, subbasin, or reach preliminarily determined to be fully appropriated pursuant to 001.01A-~~G~~ in which integrated management plan(s) have been completed by all Natural Resources Districts within the hydrologically connected area the Department will review the contents of such integrated management plan(s) to ensure that appropriate limitations on new water uses are included in such integrated management plan (s), inclusive of controls on such new uses pursuant to Neb. Rev. Stat. § 46-739 (6)(b), and such integrated management plan(s) includes a plan to monitor water uses in a manner consistent with ~~rule-001.01A-GD~~. Upon the Department completing this review the Department may reach a final determination that such basin, subbasin, or reach is not fully appropriated at that time.

001.03 The geographic area within which the Department preliminarily considers surface water and groundwater to be hydrologically connected for the purpose prescribed in Neb. Rev. Stat. § ~~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 ten (10) percent of the amount pumped in that time.

002 INFORMATION CONSIDERED. For making preliminary determinations required by Neb. Rev. Stat. ~~§ Section~~ 46-713 the Department will use the best scientific data and information readily available to the Department at the time of the determination. Information to be considered will include:

1. Department records on the regulation of surface water appropriations;
2. Department databases and maps of surface water appropriations;
3. Department Hydrographic Reports;
4. Department and United States Geologic Survey stream gage records;
5. Department's registered well data base;
6. Technical hydrogeological reports and pPublications subject to Department peer review;
7. Department reviewed groundwater models and resulting model outputs;
8. Certified irrigated acres provided by the nNatural rResources dDistricts;
9. Water use information provided by other state agencies, natural resources districts, irrigation districts, reclamation districts, public power and irrigation districts, mutual irrigation companies, canal companies, municipalities, and other water users; and
10. and ny other information deemed appropriate by the Department for the purpose of conducting the determination

EFFECTIVE DATE: DATE, 2013