

# Summary of Public Response to 2014 Proposed Rule Change

For the Determination of Fully Appropriated Basins, Subbasins, or Reaches

Prepared for the Nebraska Department of Natural  
Resources

March 2015

**UNIVERSITY OF NEBRASKA PUBLIC POLICY CENTER**

Nancy Shank, Ph.D., M.B.A.  
Acting Director

# Summary of Public Response to 2014 Proposed Rule Change

---

## For the Determination of Fully Appropriated Basins, Subbasins, or Reaches

### Background

The Nebraska Department of Natural Resources (DNR) has been working, over the past several years, to develop revisions to Rules Related to Determination of Fully Appropriated Basins, Subbasins, or Reaches. Public feedback about the 2013 revision was detailed in the June 2013 *Report of Public Response: Potential Modification of Rules Related to Determination of Fully Appropriated Basins, Subbasins, or Reaches*. Subsequent to those meetings, DNR held a public hearing, made use and supply data widely available through INSIGHT, and conducted an online survey of stakeholders' opinions about the current rules and desired future rules. DNR released a revised version of a proposed rules change dated October 7, 2014 (Appendix).

DNR gathered public input about the proposed rules change through:

- Verbal comments noted at six (6) public meetings held throughout Nebraska in December 2014 (Norfolk and Valentine, December 10; Scottsbluff and Kearney, December 11; and Beatrice and Lincoln, December 15). Approximately 62 persons attended the meetings.
- A survey distributed at the public meetings. Surveys were completed by 47 persons.
- Invitation to stakeholders by letter and email, and at the public meetings to provide written feedback by December 31, 2014. Written feedback was provided by eight individuals or organizations.

This report first presents results of the online survey of stakeholders, comparing opinions of the current rule and a desirable future rule. Survey results of meeting participants' opinions of the revised rule are then presented. Next, combined and summarized verbal and written comments about the rule and the INSIGHT (DNR's water supply and demand database, available online).

### Stakeholder Opinions about the Rules (Current, Desired, Proposed)

#### Stakeholder Online Survey about the Current and Desirable Future Revision

DNR has compiled a contact list of 86 persons who have expressed interest in the Rules process, have attended meetings, made written comment, or represent a known stakeholder organization. In June 2014, DNR emailed all persons on the list to invite them to complete an online survey, a follow-up reminder was sent two weeks later. Of those contacted, 26 individuals completed the survey (31% response rate).

The survey asked respondents to rate the extent to which the current rules satisfy certain criteria and to which they want future rules to satisfy these same criteria. In general stakeholders reported dissatisfaction with the current rule

and identified priorities for a future rule (Table 1). Ratings of the current rule evidenced dissatisfaction (less than 3.0). In comparison, ratings indicate that these same criteria would be preferred in a future rule (greater than 3.0).

TABLE 1, COMPARISON OF RESPONSE MEANS OF CURRENT RULES TO DESIRED RULES

	Current Rules	Desired Rules	Difference
Use the best available hydrologic science to determine water availability	2.58	4.48	1.90
Address critical supply and demand issues	2.42	4.20	1.78
Support water planners and guide future actions	2.68	4.36	1.68
Address water supply problems before they are critical	2.77	4.40	1.63
Are unambiguous	2.75	4.32	1.57
Initiate water planning processes to prevent conflicts	2.62	4.16	1.54
Prevent conflicts between ground and surface water users	2.27	3.78	1.51
Appropriately balance downstream and upstream demands	2.48	3.96	1.48
Protect existing water users from future encroachment	2.73	4.16	1.43
Provide detail about methodologies that will be used to determine appropriation status	2.88	4.29	1.42
Support timely findings of full-appropriation	2.88	4.25	1.37
Recognize water supplies and demands using a basinwide approach	2.88	4.17	1.29
Adequately define terms	3.13	4.40	1.28
Recognize variability of water availability and demands in appropriation determination	2.84	4.08	1.24
Complement Integrated Water Management planning processes	3.00	4.20	1.20
Recognize public water suppliers' full water right amounts	2.90	3.78	0.88
Meet constitutional and statutory requirements	3.50	4.32	0.82
Adequately protect water resources for fish and wildlife	3.04	3.48	0.44
Account for instream flow requirements	3.32	3.76	0.44
Adequately protect water resources for recreation	3.00	3.42	0.42

(1=Strongly Disagree, 2=Disagree, 3=Neither Agree nor Disagree, 4=Agree, 5=Strongly Agree)

## Stakeholder Survey from Meetings about the Fall 2014 Proposed Revisions

Individuals who attended the December 2015 meetings across Nebraska were invited to complete a survey of their opinions about the proposed revisions to the rule. Of the 62 individuals who attended the meetings, 47 returned surveys (76% response rate). The survey items were similar to those of the online survey (with some slight rewording and one item inadvertently dropped). Meeting respondents were positive (greater than 3.0) about the proposed rule's ability to meet the stated criteria about the proposed rule (Table 2, bolded column). When compared to the online responses, the proposed rule scored higher than the current rule on every item but lower than a desired rule on most items (Table 2). The far right column of Table 2 shows the extent to which the proposed rule fulfills the desired rule for each item:

$$(Proposed Rule - Current Rule) \div (Desired Rule - Current Rule)$$

TABLE 2. COMPARISON OF RESPONSE MEANS OF PROPOSED RULES TO CURRENT AND DESIRED RULES

	Current Rules	Proposed Rules	Desired Rules	Proposed Fulfillment of Desired
Use the best available hydrological science to determine water availability	2.58	<b>3.75</b>	4.48	62%
Address critical supply and demand issues	2.42	<b>3.44</b>	4.20	57%
Support water planning to guide future actions	2.68	<b>4.02</b>	4.36	80%
Address water supply problems before they are critical	2.77	<b>3.49</b>	4.40	44%
Are unambiguous	2.75	<b>3.51</b>	4.32	49%
Initiate water planning processes to prevent conflicts	2.62	<b>3.75</b>	4.16	73%
Prevent conflicts between ground and surface water users	2.27	<b>3.13</b>	3.78	57%
Appropriately balance downstream and upstream demands	2.48	<b>3.67</b>	3.96	80%
Protect existing water users from future encroachment	2.73	<b>3.82</b>	4.16	76%
Provide appropriate level of detail about methodologies used to determine appropriation status	2.88	<b>3.44</b>	4.29	40%
Support timely findings of full-appropriation	2.88	<b>3.55</b>	4.25	48%
Recognize water supplies and demands using a basin wide approach	2.88	<b>4.10</b>	4.17	94%
Adequately define terms	3.13	<b>3.86</b>	4.40	58%
Recognize variability of water availability and demands in appropriation determination	2.84	<b>3.63</b>	4.08	64%
Complement Integrated Water Management planning processes	3.00	<b>3.89</b>	4.20	74%
Adequately protect water resources for public water suppliers	2.90	<b>3.76</b>	3.78	97%
Meet constitutional and statutory requirements	3.50	<b>3.75</b>	4.32	30%
Adequately protect water resources for fish and wildlife	3.04	<b>3.63</b>	3.48	134%
Account for instream flow requirements	3.32	<b>3.82</b>	3.76	113%
The current rules adequately protect water resources for recreation	3.00		3.42	

(1=Strongly Disagree, 2=Disagree, 3=Neither Agree nor Disagree, 4=Agree, 5=Strongly Agree)

## Public Comments and Questions

Public comments were made verbally at the public meetings, in written form on the survey, and in written form in communication to DNR. In some cases, primarily written comment, individuals referred to previous communications sent to DNR about previous versions of rules changes. This summary, however, does not attempt to integrate previous comments and rather summarizes only comments received from the time the latest version of the rules was released to the end of the calendar year (October through December 2014). Responses are summarized below.

## Comments About the Proposed Rule

The written and verbal comments have been reviewed and aggregated. In general, comments ranged from those that preferred greater stringency in the determination process to those that preferred less stringency in the determination process. Also noteworthy is the contrast between those that preferred greater specificity in the rules about the methodology to be used in the determination and those who did not believe that specificity was appropriate. Commenters also differed on other aspects of the proposed rule, such as whether determinations should be based on historical use and supply or projected use and supply, whether the rules recognized existing rights and

responsibilities, and whether roles and timeframes were appropriate. For ease of reviewing feedback, comments are presented based upon the section of the proposed rules to which they refer.

1. Overall Comments

- a. All criteria and methodology the Department intends to implement must be included in the rules adopted by the Department. By not including a method to look into the future, it appears that the Department is not meeting its statutory requirement.
- b. The rule fails to recognize standing priorities, priorities, and responsibilities, such as:
  - i. The Rule fails to recognize one of the basic findings of the United States Supreme Court's Nebraska vs. Wyoming Decree governing the North Platte River, that during the irrigation season no natural flow passes the Nebraska/Wyoming state line.
  - ii. The Rule fails to recognize and address Nebraska's preference of domestic use and irrigation use. Not to do so would be inconsistent with and contrary to NDNR's statutory enabling authority.
  - iii. Department should recognize hydropower, instream flows, and other non-consumptive uses, which are needed to satisfy the Nebraska Supreme Court rulings.
  - iv. There is no required adherence to or consideration of the constitutional and statutory priority system for surface water, and the preference systems applied to both surface water and ground water. For example, a junior downstream hydro-demand could be given equal weight and consideration with upstream senior irrigation rights and ground water irrigation uses in applying the Rule. This fails to recognize several controlling constitutional and statutory provisions in Nebraska, including Article XV, Section 4; Article XV, Section 6; Article XV, Section 7 of our Constitution and Neb. Rev. Stat. §§46-201 , 46-204 and 46-613.
  - v. The proposed rule provides that a portion of upstream basin's or reach's water supply be provided to downstream basins (or reaches) based on the proportionate share of the whole basin's demands. This rule ignores the reality that the state constitution provides that among surface water users, the priority system shall determine the order of use and that the priority system, especially during the peak use period, will determine how much water flows from one basin to the downstream basin (except for downstream gains). The rule should be changed from a proportion of Total Demands to a required supply based on surface water priority.
  - vi. The rules do not provide for analyses of aquifers dependent on streamflow for recharge or whether existing uses will cause the state to be in non-compliance with a state agreement or compact. The methodology for those analyses must be added to the draft rules.
- c. The State should be willing to make equitable short term and long term adjustments to avoid water user damages when water is insufficient and/or is taken for compliance with an interstate agreement or compact. If the State is unable or unwilling to equally and equitably avoid water shortages they should have a framework for the payment of damages. Recognize and address priority and preference requirements.
- d. Department should focus its efforts on identifying the circumstances under which an incremental new use in a watershed, whether surface or groundwater, will have an impact on existing uses in

the watershed. At that point where conflict occurs, the watershed should be declared 'fully appropriated', temporary moratoriums should be put in place, and the Natural Resource District and Department of Natural Resources should embark on the integrated watershed management plans needed to allow additional development to occur only in ways that adequately protect those existing uses. The Department does not have the statutory authority to find a basin, sub-basin, or reach not fully appropriated when the rest of the rules would dictate that it must be fully appropriated. Further, the ability of the Department to do so may delay the determination of fully appropriated status and prevent needed protections for existing uses. The result could easily be critical shortages and an eventual determination of over-appropriation.

## 2. 001 DEFINITIONS

- a. All "Demand" terms used in the rule should be included in the definitions.
- b. (Basin Water Supply). The rule understates the significance of actual shortages by creating a maximum five-percent exceedance on streamflow depletions. The rule should only count supplies to the extent they match a demand in time, and not cumulate any unused supplies to offset demands at other times.
- c. (Basin Water Supply). The calculation of Basin Water Supply should include small water uses (less than 50 GPM and domestic and beyond the 10-50) for this to be a holistic approach.
- d. (Basin Water Supply, Long Term Demands, Near Term Demands, and Representative Period). The proposed rule does not explain how the use of storage water, as it differs from natural flow, will be analyzed. Add definitions of the proposed process that provide the detailed methodology for calculating each component of the *Basin Water Supply*, *Near Term* and *Long Term Demands*, and the *Representative Period*.
- e. (Non-Tributary Downstream Demand). The rule outlines an approach in which downstream river flows (which likely have occurred from rain, groundwater gains or tributaries) can supply upstream groundwater use or surface water appropriations: this is a physical impossibility.

## 3. 002.01

- a. Entire Section
  - i. The proposed rule does not define at what point a Basin is to be declared fully appropriated due to the lack of description of methodology and the lack of a 'catch point' such as 001.01A in the present rules provides.
  - ii. The proposed rules inappropriately truncate surface water natural flow for hydropower and irrigation demands.
  - iii. The rule makes no evaluation of impacts to appropriations, or what the cause of those impacts might be. Instead, the rule evaluates a supposed collective "demand" that does not include all parts of appropriations. The rule should be written to evaluate impacts to individual appropriations.
  - iv. Upstream NRDs should not be responsible for downstream ground water demands.
- b. 002.01A,B,C.
  - i. Future demand will be greater than that from the past 25 years. That should somehow be reflected in the methodology.

- ii. Frequency of years in which use exceed supply may be a preferable way to determine cumulative Near-Term and Long-Term Total Demand than the using cumulative balances.
- iii. The stream flow calculations using the two proposed sub-periods underestimates the total Basin Water Supply. Broaden the June through August subperiod to May through October.
- iv. The stream flow calculations using the two sub-periods overestimates the total Basin Water Supply and will erode the protection that §46-713 should provide current users. Time periods that are used for these calculations should focus on those time frames when existing water users are in their most dependent need of supply. The sub-period of June 1 through August 31 is of most concern because it combines June (in which there have rarely been precipitation issues) with the two months that have the most precipitation issues (July and August).
- v. The irrigation season sub-period is defined in the proposed rules as June 1st through August 31st. Flows which occur in June will be gone and useless to meet the natural flow irrigation demands in July and August. To correct this timing issue, flows used in the calculation for the water supply should be capped daily at the maximum potential diversion of the surface water users in the basin. The effect of this change would be to help the rules more closely match the reality of the system.
- vi. The proposed rules fall short of eliminating, or at least substantially reducing, the potential for divisive conflicts between water users in the future due to the overdevelopment of water (LB 962). Conflicts occur well before the point where the 'water balance' has turned negative. Comparing the total water supply with the current water use is not a valid indicator of whether or not conflicts are occurring, or are likely to occur should new water rights or permits be granted.
- vii. The proposed rules misconstrue the timing of flows that are available to water users or appropriators because they require the summing of multiple years to determine the supply. The determination finds that water flowing out of the basin at any time during the period can meet the demands which occur at any time during the period which is a physical impossibility. The same flaw occurs when supplies are cumulated within a sub-period.
- viii. Rules misconstrue reality because of the duplications within the calculation of the Basin Water Supply and Total Demands. Both surface water consumptive use and high capacity well depletions are part of each side of the supply and demand side of the calculation. The effect of this is that the terms are cancelled out and will not ultimately factor in the determination of whether a basin is fully appropriated or not.
- ix. The proposed rules compare total historical water supplies to historical demands, rather than complying with Nebraska Revised Statute 46-713(3) which mandates the evaluation of impacts to supplies from hydrologically connected surface water or groundwater uses, which is then applied to impact to the supply to existing appropriations, groundwater users, or state agreements.

- x. Neither the definitions nor rules provide how consumptive water demands or additional water for consumptive demands will be determined.
  - c. 002.01E.
    - i. The 30-day public response period for feedback to DNR's annual evaluation should be extended. A sixty day comment period is recommended.
    - ii. All criteria and methodology the Department intends to implement must be included in the rules adopted by the Department. By not including in the rules a method to look into the future, it appears that the Department is not meeting its statutory requirement and will result in the Department applying the rules differently for each annual evaluation. The rules also allow for a different methodology if the determination is deemed unsatisfactory. This exceeds the statutory authority of the Department. More specificity is needed about the methodologies that will be used every year, specifically in the definition and descriptions of *best available data*, *best scientific data*, *information and methodologies*, *information and methodologies readily available*, *information readily available*, and *representative period*.
- 4. 002.02
  - a. 002.02A. In the first line, the language *basin*, *subbasin*, or *reach* should be revised to read *river basin*, *subbasin*, or *reach*.
  - b. 002.02A. The internal references are incorrect.
  - c. 002.02A. There should be limits to reasons the Director may determine that final designation of fully appropriated is not warranted.
    - i. The evidence the Director may use should be limited to prevent consideration of information and analyses far beyond that set forth for a determination under statute or regulation.
    - ii. Strike the phrase *at that time* which adds nothing.
    - iii. It is seldom beneficial to remove all of a Director's discretion. However, past experience has shown that open ended unilateral discretion to act, or not to act by a public official is not always in the public interest.
  - d. 002.02A, B, C. The role of the Director in relation to the Department is unclear. In some sections it is the Department that makes a final determination and in others it is the Department. Does the Department act through the Director, and in doing so makes preliminary determinations of fully appropriated? If this is the case, this action by the Department (Director?) is thwarted by the Director acting in a separate capacity as one who finds fully appropriated to be unwarranted, which action by the Director apparently precedes the action by the Department.
  - e. 002.02B. The length of time it takes to complete an IMP should not be included as an avenue to void a scientific finding.
  - f. 002.02B, C. The proposed process that allows the Director to declare a basin NOT fully appropriated (if all NRD's in the basin have an IMP in place and 'monitoring' water uses is ongoing, regardless of what the chosen methodology indicates) should be utilized to 'side step' the 85% basin wide IMP requirements contained in recently passed legislation.

5. 002.03

- a. Should go beyond 10/50 to include a tributary effect to recognize that a lot of development occurred in the 1970s.

### Comments About INSIGHT (a DNR Data Source For Water Supplies and Demands)

1. According to data on INSIGHT, the Elkhorn River has downstream demands but the Loup does not. The terminology in INSIGHT should be improved to better explain the calculation and which value is used when.
2. There are rivers that go dry and/or have seen significantly reduced flow, yet INSIGHT models do not show that they are over appropriated. That does not make sense.
3. Nonconsumptive use should be figured differently in the INSIGHT calculations.
4. In the summer of 2012 the Lower Platte was extremely dry, dramatically impacted by upstream well pumping, and insufficient to meet the needs of appropriations. Yet, the rules 2012 in the Lower Platte to be a problem. It is assumed that a repeat of those conditions year-after-year would likewise fail to identify the Lower Platte as fully appropriated. The rule must be fundamentally flawed to produce such a result. It would be valuable to know whether similar results would occur in other basins. INSIGHT should be updated for all basins and make the results available for review and consideration in advance of adopting the proposed rule.
5. INSIGHT treats water appropriations and ground water unequally. The methodology shows that ground water uses are assumed to have a full demand met, but surface water appropriations are assumed to have only received the water which was available to them. The fact is that surface water users would have used the additional water had it been in the river. Surface water appropriation demands should not be truncated based on water supply, but instead be based on the beneficial use for which they were granted.
6. INSIGHT water use information in the Niobrara watershed for the Sparks to Spencer reach shows a substantial volume of water use for hydroelectric power, but the Gordon to Sparks reach upstream of that does not show any water needed for 'downstream demands.' That water should be protected by the water right downstream at Spencer Dam, and thus should be reflected by the water demands of the watersheds upstream.
7. INSIGHT should be updated and the results of the intended methodology for all basins made available for review and consideration prior to adoption of the Draft Rule.
8. DNR should apply the proposed new method for determining which watersheds are "fully appropriated" on watersheds in the Nebraska that have already been designated as "fully appropriated" prior to making a final decision about the proposed rules. The results should be published on the DNR 's INSIGHT web site, for other fully appropriated watersheds in Nebraska, including at a minimum the central and upper Platte, the lower Republican, and the upper Niobrara River.

## APPENDIX

## NEBRASKA ADMINISTRATIVE CODE

Title 457 - DEPARTMENT OF NATURAL RESOURCES  
RULES FOR SURFACE WATERChapter 24 - DETERMINATION OF FULLY APPROPRIATED BASINS,  
SUBBASINS OR REACHES001 DEFINITIONS.

Basin Water Supply- The Basin Water Supply (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 will utilize the Most Recently Available Data and is calculated by combining the following for each sub-period: gaged streamflows truncated at the 5% exceedence flow probability value plus streamflow depletions due to high capacity (greater than 50 gallons per minute) well groundwater pumping plus consumptive surface water uses minus the BWS originating upstream of the basin, subbasin, or reach.

Most Recently Available Data- The most recent period of years of best available data that will be utilized in an annual evaluation to represent long-term water supplies for a basin, sub-basin, or reach. The data shall be updated at least once every five years.

Representative Period- The number of years utilized to capture both wet and dry components of precipitation variability. The period will be determined through time series statistical analyses of the annual Basin Water Supply using the Most Recently Available Data.

Near-Term Total Demand- The then-current uses of hydrologically connected surface water and groundwater in a river basin, sub-basin, or reach that will be utilized to evaluate whether those uses cause the conditions set forth in *Neb. Rev. Stat. § 46-713(3) (a)(b)(c)*.

Long-Term Total Demand- The then-current uses of hydrologically connected surface water and groundwater in a river basin, sub-basin, or reach that will be utilized to evaluate whether those uses will in the reasonable foreseeable future cause the conditions set forth in *Neb. Rev. Stat. § 46-713(3) (a)(b)(c)*.

Non-Tributary Downstream Demand- The then-current uses of surface water capable of making use of streamflow that exits an upstream basin, sub-basin, or reach through streams located in a basin, sub-basin, or reach downstream. Additionally, this includes groundwater consumption that is hydrologically connected to those same streams located downstream.

002 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.

002.01A For purposes of *Neb. Rev. Stat. § 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 Demand of hydrologically connected groundwater and surface water exceeds the cumulative Basin Water Supplies (BWSs) that occur 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 June 1 through August 31, inclusive and September 1 through May 31, inclusive. 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.

002.01B For purposes of 001.01A, the cumulative Near-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: (1) streamflow depletions due to high capacity (greater than 50 gallons per minute) well groundwater 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 Downstream Demands. The Non-Tributary Downstream Demands of a subbasin or reach will be proportioned in accordance with the BWS of that subbasin or reach relative to the BWS of the total basin. 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. Demands for non-consumptive uses (i.e., instream flow demands and hydropower demands) will be truncated when those demands overlap in the same basin, sub-basin, or reach. This truncation will occur to the extent necessary to ensure that those overlapping demands able to utilize the same BWS are only included once in the Near-Term Total Demand.

002.01C 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: (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) streamflow demands for hydropower operations; and (6) the BWS necessary to meet the proportionate amount of Non-Tributary Downstream Demands. The Non-Tributary Downstream Demands of a subbasin or reach will be proportioned in accordance with the BWS of that subbasin or reach relative to the BWS of the total basin. 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. Demands for non-consumptive uses (i.e., instream flow demands and hydropower demands) will be truncated when those demands overlap in the same basin, sub-basin, or reach. This truncation will occur to the extent necessary to ensure that those overlapping demands able to use the same BWS are only included once in the Long-Term Total Demand.

002.01D In the event that water 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 methodology to incorporate such demand into any relevant analysis.

002.01E 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.

002.01F 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 June 1<sup>st</sup> of each year, the Department shall provide sufficient documentation of the data, information, and methodologies that will be used to reach its conclusions in that years

evaluation. 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 such that those conclusions could be independently replicated and assessed. Prior to July 1<sup>st</sup> of each year, any person may provide data, information, or suggested methodology changes to incorporate such data or information into that year's evaluation. The Department will determine if such data and information will or will not be utilized. If the Department does not utilize the data or information, a written description as to why the data or information was not utilized will be included in the annual evaluation.

002.02A For purposes of *Neb. Rev. Stat. § 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. § 46-714* does not indicate that the criteria set forth in 001.02B or 001.02C apply or unless the Director finds based on written or oral testimony and evidence concerning the appropriation status for the river basin, subbasin, or reach, that a final designation of fully appropriated is not warranted at that time.

002.02B 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.

002.02C 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 001.01A-G. 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.

002.03 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. § 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.

DRAFT

October 7, 2014

003 INFORMATION CONSIDERED. For making preliminary determinations required by *Neb. Rev. Stat. § 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 publications subject to Department peer review;
7. Department reviewed groundwater models and resulting model outputs;
8. Certified irrigated acres provided by the natural resources districts;
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. Any other information deemed appropriate by the Department for the purpose of conducting the determination

EFFECTIVE DATE: DATE, 2015



It is the policy of the University of Nebraska–Lincoln not to discriminate based upon age, race, ethnicity, color, national origin, gender, sex, pregnancy, disability, sexual orientation, genetic information, veteran’s status, marital status, religion or political affiliation.