

DIRECT TESTIMONY OF JAMES C. SCHNEIDER, PH.D., RE: NEBRASKA'S ALTERNATIVE WATER-SHORT YEAR PLAN

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-	1. Q. Thouse state your nume for the record.
2	A: James C. Schneider, Ph.D.
3	2. Q: Please summarize the scope of your testimony
4	A: I am the primary author of Nebraska's Plan for Reduction of Computed Beneficial
5	Consumptive Uses under Alternative Water-Short Year Administration ("Appendix M
6	Plan"), designated as Exhibit N25001. I have also authored a responsive expert report on
7	this matter, which is entitled Response to the Kansas Report on the Nebraska Plan for
8	Alternative Water-Short Year Administration ("Response Report"). A copy of that report
9	is Exhibit N25002. That report and the Appendix M Plan constitute the bulk of my
10	Direct Testimony. The remainder of my Direct Testimony is intended to summarize my
11	conclusions and provide some background on the Appendix M Plan.
12	PROFESSIONAL BACKGROUND
13	3. Q: Is your professional and educational background set forth in testimony
13 14	3. Q: Is your professional and educational background set forth in testimony elsewhere?
14	elsewhere?
14 15	elsewhere? A: Yes. The relevant discussion of my background is set forth in my concurrently filed
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Q: Please state your name for the record.

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1 in Harlan County Lake. Water-Short conditions trigger additional compliance tests. For Nebraska, this generally requires water uses and water supplies be balanced in a two-vear 2 3 average (as opposed to the normal five-year average) and that these water supplies and uses be assessed for the Basin above Guide Rock.¹ 4 5 5. Q: Please describe the concept of Alternative Water-Short Year ("AWSY") 6 Administration. 7 The FSS provides that "as an alternative, Nebraska may submit an AWSY A: 8 Administration Plan to the RRCA in accordance with the procedures set forth in Appendix M."² The RRCA Accounting Procedures and Reporting Requirements 9 ("Accounting Procedures"), Section III.J, provide that under AWSY Administration: 10 11 Nebraska's compliance with the Compact will be determined in the same manner as Nebraska's Above Guide Rock compliance except that 12 13 compliance will be based on a three-year running average of the current 14 year and previous two year calculations. In addition, Table 5 D. will 15 display the sum of the previous two-year difference in Allocations above 16 Guide Rock and Computed Beneficial Consumptive Uses above Guide 17 Rock minus any Imported Water Credits and compare the result with the 18 Alternative Water-Short-Year Administration Plan's expected decrease in 19 Computed Beneficial Consumptive Use above Guide Rock. Nebraska will 20 be within compliance with the Compact as long as the three-year running 21 average difference in Column 8 is positive and the sum of the previous 22 year and current year deficits above Guide Rock are not greater than the 23 expected decrease in Computed Beneficial Consumptive Use under the 24 plan. 25 26 6. Q: So, in your view, is Appendix M all about Compact compliance? 27 A: Yes. The FSS affords Nebraska this alternative compliance mechanism and 28 Appendix M is simply the procedural vehicle that Nebraska must utilize to formalize the

¹ There is also what is known as a tributary compliance test for Nebraska during Water-Short Year Administration. This test is not relevant to this proceeding and therefore will not be discussed.

² FSS Section V.B.2.e.ii

1	management activities to be carried out and ultimately quantify their effect for utilization
2	in this alternate, two-part compliance test. The first part of this test requires that the
3	three-year average for Nebraska's annual compliance balances is positive. These three
4	years will be referred to as Year ₀ , Year ₋₁ , and Year ₋₂ , consistent with the Appendix M
5	Plan terminology, with Year 0 being the year in which AWSY Administration would be
6	invoked. The second part of this test requires that the two-year sum for Year $_0$ and Year $_{-1}$
7	cannot be negative by more than the reductions in Computed Beneficial Consumptive
8	Use ("CBCU") undertaken in Year $_0$. ³ The Appendix M Plan is designed to ensure that
9	Nebraska's management activities address both of the test components outlined above.
10	In other words, the Appendix M Plan is designed such that the reductions in CBCU will
11	actually be of sufficient quantity to result in compliance with the AWSY compliance
12	tests.
13	7. Q: How do you envision the Appendix M Plan ensuring Compact compliance?
14	A: First, the Appendix M Plan utilizes the forecasting mechanisms that Nebraska has
15	developed and implemented through its Integrated Management Plans.
16	8. Q: Wait a minute. What is an Integrated Management Plan?
17	A: Well, an Integrated Management Plan ("IMP") is the vehicle Nebraska uses to ensure
18	Compact compliance, as described more directly in my Rock Creek Augmentation Plan
19	testimony. The IMPs for the Basin are included in N25001.
20	9. Q: Thank you. You were saying that Appendix M relates to the IMPs?

³ Note that there is some confusion between the language in the Accounting Procedures and the language in Appendix M of the FSS regarding which of the three years are to be used in this two year comparison. The Accounting Procedures refers to the "previous two-year difference" which would seem to refer to Year ₋₁ and Year ₋₂ given the language used to define the three year period. Appendix M (Paragraph 4), however, refers explicitly to the "current and previous year's" for the two-year sum. Therefore, Nebraska interprets the two years to be Year ₀ and Year ₋₁.

1 A: Yes. The IMPs provide a prescribed process to obtain a preliminary accounting for 2 Year ₋₁ and a dry year forecast for Year ₀ by December 31 of Year ₋₁. No other 3 mechanism currently exists to provide for these determinations at any earlier date. 4 Nebraska's Compact balances for these two years are then summed and if this value is 5 negative and Nebraska decides to invoke the Appendix M Plan, the Appendix M Plan 6 prescribes that Nebraska would implement reductions in CBCU that are equivalent to one 7 half of this negative sum. This process is referred to as Test One in the Appendix M 8 Plan. See N25001, Pages 6-7 of 88.

9 10. Q: Is that all?

A: No. Next, the Appendix M Plan compares the sum of Year ₀ and Year ₋₁, including the improvement in the Year ₀ balance that will occur as a result of the management activities determined in Test One, with the then known Compact balance for Year ₋₂. This process is referred to as Test Two in the Appendix M Plan. See N25001, Pages 7-8 of 90.

15 11. Q: How does Test Two operate?

A: If the Year ₋₂ Compact balance is not sufficiently positive to balance the Year ₀ and Year ₋₁ negative balance that remains after incorporating the reductions in CBCU prescribed by Test One, Test Two then prescribes additional reductions in CBCU designed to ensure that the three year average will not be negative. Therefore, the Appendix M Plan provides a prescriptive process to determine the quantity of expected reductions in CBCU that is required if the Appendix M Plan is invoked.

22 12. Q: How will the RRCA know what Nebraska is doing to achieve those23 reductions?

1 A: The Appendix M Plan provides that Nebraska would curtail groundwater use in the 2 Rapid Response Region as described in the IMPs in order to achieve the required 3 reductions in CBCU, or implement one or more management activities that are 4 hydrologically equivalent (i.e., they achieve identical reductions in CBCU) to such a 5 curtailment. Nebraska commits to informing the RRCA by April 1 what alternative 6 management activities will be undertaken if Nebraska elects to invoke the Appendix M 7 Plan. See N25001, Page 4 of 88. In fact Nebraska provided just such a notification to the 8 RRCA invoking the Appendix M Plan in March of 2013. See N25004. 9 13. Q: Does Kansas agree with that interpretation of Appendix M? 10 A: I don't believe so. Kansas indicated that this approach is not consistent with 11 Appendix M because the RRCA would not know exactly what Nebraska intended to do if 12 the Appendix M Plan was invoked until some later date (i.e., after an AWSY Plan is 13 required to be submitted to the RRCA, which is before August 1 of any year before it is

to be implemented). As I fully articulate in my Response Report, such a requirement
would have the significant potential to render any AWSY Plan effectively meaningless.
See N25002, Pages 4-5 of 88.

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14. Q: Is that very productive?

A: Well, it's not. This is because it would in no way ensure that Nebraska is actually in compliance with the AWSY Administration compliance tests. Conversely, it could render an AWSY Plan meaningless in that Nebraska would be forced to meet the normal Water-Short Year compliance test anyway. While such outcomes may be preferred by Kansas, they should not be allowed given the clear provision for AWSY Administration granted to Nebraska by the FSS.

1	NEBRASKA'S PLAN IS FULLY CONSISTENT WITH APPENDIX M
2	15. Q: In your view, does Nebraska's Appendix M Plan, which is directed in part at
3	offsetting CBCU, comply with the FSS?
4	A: Yes. Appendix M requires Nebraska to submit a plan to reduce its CBCU. Kansas
5	reads this requirement to mean that any management actions contemplated under an
6	AWSY Plan must involve the elimination of some activity that would otherwise cause
7	CBCU. While it is true that this is one way to reduce CBCU, it is also possible to reduce
8	CBCU by providing an offset to some portion of the CBCU. See N25002, Pages 6-7 of
9	150. Appendix M does not specifically require the former.
10	16. Q: Is this concept of offsetting CBCU unique?
11	A: Actually, the accounting that is done under AWSY Administration specifically
12	provides for one offset already, namely the Imported Water Supply (IWS) Credit.
13	Appendix M, Paragraph 4 requires:
14 15 16 17 18 19	Notwithstanding compliance under a three year running average, the two year sum of Nebraska's current and previous year's Computed Beneficial Consumptive Use in excess of its Allocation above Guide Rock, pursuant to Subsection V.B.2., of the Stipulation shall not exceed the amount of Computed Beneficial Consumptive Use that the Plan was designed to reduce above Guide Rock.
20	In referring to the current and previous year's CBCU, no mention is made of the fact that
21	this is the CBCU offset by any IWS Credit above Guide Rock. However, the Accounting
22	Procedures implements this provision in exactly this fashion. In fact, the IWS Credit is
23	defined as an offset to CBCU in the Accounting Procedures. Therefore, any other
24	offsetting activity intended to reduce CBCU should be viewed in a consistent manner, as
25	a reduction to CBCU.

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17. Q: Is there any material difference in the accounting between reducing CBCU and offsetting CBCU?

3 A: No.

4 18. Q: Does the Appendix M Plan contain a process for determining the amount of
5 CBCU reduction that would be expected?

6 A: As discussed previously, the Appendix M Plan contains a prescribed process for 7 determining the amount of CBCU reduction, and it also prescribes that this will be 8 accomplished through a curtailment of groundwater pumping or a hydrologic equivalent. 9 The purpose of quantifying the expected reduction in CBCU is clearly so that it can be 10 incorporated into the AWSY compliance test, as there is no other purpose specified (e.g., 11 some minimum threshold). The Appendix M Plan would clearly allow for this 12 quantification regardless of the specific activity undertaken reducing CBCU or the 13 magnitude of that management activity. As required by Appendix M Paragraph 2, this 14 would be done "using methods consistent with the RRCA Accounting Procedures and the 15 RRCA Groundwater Model."

16 19. Q: Why did you elect to submit a plan that contains a range of potential CBCU17 reductions?

A: Appendix M allows Nebraska to submit multiple plans to the RRCA for approval. Under the Kansas interpretation of the requirements of Appendix M, Nebraska would be required to submit at least thousands of plans for individual review and approval by the RRCA. See N25002, Page 8 of 150. The Appendix M Plan covers potential implementation of AWSY Administration by Nebraska for an amount up to 15,089 acrefeet of reductions in CBCU for the first year it is invoked an up to 38,515 acre-feet of CBCU reductions in a subsequent second year. Kansas appears interested in seeing only a limited number of plans. Appendix M contains no such limit, and for reasons stated
 above, such plans may not actually lead to compliance for Nebraska or they may be of no
 use whatsoever.

4 20. Q: Please explain the history of the Appendix M Plan before the RRCA.

A: Nebraska submitted its Appendix M Plan on July 30, 2012. Kansas rejected the Appendix M Plan by letter dated October 4, 2012, before the scheduled discussions before the RRCA. See J2. A working session was held prior to the RRCA Annual Meeting in an effort to resolve Kansas' concerns, but that was unproductive. During the subsequent RRCA meeting, Nebraska offered a resolution for adoption of the Appendix M Plan by the RRCA. See N25005. Colorado voted in favor, Kansas voted against (again). We invoked Dispute Resolution on February 8, 2013. See N25001.

12 21. Q: Why did Nebraska elect to move forward with its Appendix M Plan through
13 Dispute Resolution, instead of pursuing "a more productive path" as Kansas suggested?

14 A: Kansas has indicated that it would be more productive for Nebraska to simply set the 15 Appendix M Plan aside and work with them on an AWSY Plan that would be in line with 16 the Kansas interpretation of Appendix M. First of all, such a plan would be of no use to 17 Nebraska until some distant year in the future due to the provisions of Paragraph 6 of 18 Appendix M. In addition, this would apparently require Nebraska to agree with every 19 one of Kansas' positions with regard to Appendix M, regardless of their merit. Finally, 20 having observed multiple depositions, I am convinced Kansas's interpretation of 21 Appendix M is in flux and incomplete.

22 Q: What advantage would Kansas derive from approving the Appendix M Plan?
23 A: It would have a positive benefit for Kansas' own water users. See N25002, Pages 924 10 of 150. If providing more water to their water users at the times when that water is

1	needed is not sufficient motivation for Kansas to approve an AWSY Plan, it is unclear
2	whether they would ever agree to a plan. It is much more likely that Kansas will follow
3	its previous pattern of simply finding new (or even the exact opposite) reasons to reject a
4	proposal.
5	CONCLUSIONS
6	23. Q: Please summarize your conclusions.
7	A: The Appendix M Plan as submitted to the RRCA fulfills all requirements set forth in
8	Appendix M and the FSS as a whole. As Nebraska properly invoked the Appendix M
9	Plan in 2013 (See N25004) despite the objections of Kansas, Nebraska should be allowed
10	to compute its compliance with the FSS and the Compact for 2013 in accordance with the
11	AWSY Administration provisions of the FSS in a manner consistent with the
12	Appendix M Plan. Finally, the Appendix M Plan should be in place for 2013-2015.

I declare under penalty of perjury that the foregoing is true and correct. DATED this $\frac{\partial f}{\partial t}$ day of August 2013.

James Q. Schneider, Ph.D.

Respectfully submitted this 21st day of August 2013.

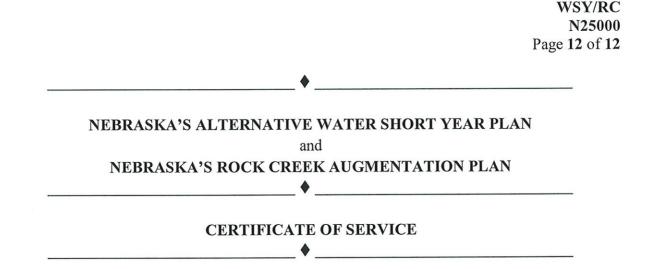
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I, Justin D. Lavene, Assistant Attorney General for the State of Nebraska in the abovecaptioned matter, hereby certify that on August 21, 2013, I made service of the **DIRECT TESTIMONY OF JAMES C. SCHNEIDER, PH.D., RE: NEBRASKA'S ALTERNATIVE WATER SHORT YEAR PLAN**, by causing a paper copy and an electronic copy to be delivered by UPS Overnight Mail and/or electronic mail pursuant to Section E of the Arbitration Agreement and Paragraph 8 of the Arbitrator's Pre-Hearing Order on the following:

Jeffrey C. Fereday, Arbitrator

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