REPUBLICAN RIVER COMPACT ARBITRATION

Pursuant to Section VII, Final Settlement Stipulation (December 15, 2002)

NEBRASKA'S ALTERNATIVE WATER SHORT YEAR PLAN and NEBRASKA'S ROCK CREEK AUGMENTATION PLAN

BEFORE MR. JEFFREY C. FEREDAY, ARBITRATOR

DIRECT TESTIMONY OF THOMAS E. RILEY, RE: NEBRASKA'S ROCK CREEK AUGMENTATION PROJECT

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1 1. Q: Please state your name for the record. A: I, Thomas E. Riley, P.E., hereby offer the following as my Direct Testimony in this 2 3 matter. 2. Q: What is the purpose of your testimony? 4 5 A: The purpose of my Direct Testimony is to provide factual information related to the 6 development and operation of the Rock Creek Augmentation Project ("Project"). 7 EDUCATIONAL AND PROFESSIONAL BACKGROUND 8 3. Q: Please describe your professional and educational background. 9 A: I have practiced as a research or water resources and environmental engineer for over 10 20 years. I am presently serving as the President of The Flatwater Group, Inc. ("TFG") a 11 water resources and environmental engineering firm I founded in 2000. I received a B.S. in Civil Engineering from the University of Nebraska in 1986 and a M.S. in Civil 12 13 Engineering from the same institution in 1988. I am presently working on acquiring my 14 Ph.D. in engineering. I am a licensed professional engineer in the states of Nebraska, Missouri, Kansas, and South Dakota. A true and accurate copy of my latest curriculum 15 16 vitae is found at Exhibit N20011. 4. Q: Please explain your familiarity with Rock Creek, Dundy County, Nebraska. 17 18 A: I have extensive personal and professional experience in the Republican River basin 19 and the Rock Creek Watershed in particular. While I first visited the Rock Creek 20 watershed to fish and camp nearly three decades ago, I later had the opportunity to work 21 professionally in the watershed over the last 13 years. This work has related to Nebraska 22 Compact obligations and compliance in addition to a restoration of Rock Creek Lake for 23 which I oversaw the design and sealed the plans and specifications for construction.

Through my many visits to the watershed and working with flow records and other data I

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have established a good understanding of the watershed characteristics. I also assisted the Upper Republican Natural Resource District ("URNRD") with the design and construction of the Project. While not the design engineer of record for the Project, I was consulted by the URNRD and the design engineer, Miller and Associates, Inc. during the Project development and construction.

5. O: How valuable was your experience in the basin and Rock Creek watershed in

Q: How valuable was your experience in the basin and Rock Creek watershed in developing your views on the Project?

A: Invaluable. I try to personally review and observe all the projects on which I work. I don't believe you can really understand a project fully without putting boots on the ground. Mere review of data and model results just don't tell the whole story. Here, at Rock Creek my visits have occurred at differing times of the year providing me a temporal understanding about the Rock Creek baseflow, runoff responses, and watershed infrastructure. This background knowledge allowed me to share my experience with other members of the Nebraska team, for example Dr. Schneider and others.

- 6. Q: Please describe generally the work you performed relevant to this proceeding.

 A: I assisted the URNRD and its sister NRDs in the Republican River watershed in examining the site selection and feasibility of stream augmentation projects. This project was initiated in 2006 using funding provided through Nebraska's Interrelated Water Management Plan Program ("IWMPP"). When land in the Rock Creek Watershed became available for purchase I assisted the URNRD in evaluating the development of an augmentation site on those lands. The URNRD retained Miller and Associates to design and oversee the construction of the plant and equipment for the Project.
- 7. Q: Please describe the nature of Rock Creek.
 - A: Rock Creek is a baseflow dominated stream that gains streamflow from near the outlet of the Project to the U.S. Geological Survey gaging station 06824000 located at

1	Parks, Nebraska. In my experience and review of the record, it appears to me that there
2	are minimal if any losses from this stream. A review of the gaging station information at
3	Parks supports that observation.
4	8. Q: Please describe generally the Project.
5	A: The Projects' plant and equipment generally includes ten groundwater pumping
6	wells, a buried pipe conveyance system that transports water to the outlet, and control and
7	management appurtenances. The facility has the capacity to pump approximately 20,000
8	acre-feet discharging to Rock Creek. The pipeline outlet is located just upstream of the
9	Rock Creek Fish Hatchery.
10	9. Q: Can you elaborate on the Project's components and its effect on Rock Creek
11	and the Republican River?
12	A: I believe the best way to evaluate the project is through a visual overview. I have
13	developed a narrated video (N20012) that provides an overview of the Project and the
14	Rock Creek Watershed. At my direction, and with my review, Mr. David Kracman of
15	TFG created the presentation using video and photographs I collected in May of 2013
16	while hosting a recent visit to the facilities. This information was coupled with a flyover
17	of the Project in June 2013 and Google Earth imagery. For convenience, I have included
18	the narrative of the video as part of my testimony in this instance. See Exhibit N20013.
19	10. Q: To the best of your knowledge, do N20012 and N20013 represent a true and
20	accurate portrayal of the Project and its interaction with Rock Creek and the
21	Republican River?
22	A: Yes.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 19th day of August, 2013.

Manage & Riley Thomas E. Riley, P.E. Respectfully submitted this 21st day of August, 2013.

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CERTIFICATE OF SERVICE

I, Justin D. Lavene, Assistant Attorney General for the State of Nebraska in the above-captioned matter, hereby certify that on August 21, 2013, I made service of the **DIRECT TESTIMONY OF THOMAS E. RILEY, RE: NEBRASKA'S ROCK CREEK AUGMENTATION PROJECT,** 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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