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2023

Nebraska Water Leaders Academy

Final Report

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School of Natural Resources
Conservation & Survey Division

December 31, 2023

Open-File Report (OFR) 247

Nebraska Water Leaders Academy

Water Futures Partnership-Nebraska

waterleadersacademy.org

Partner

University of Nebraska-Lincoln *This work was supported by the USDA National Institute of Food and Agriculture, Hatch/Evans-Allen/McIntire Stennis project 1011420.*

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Contributing:

- Raoul Johnson, Jr. R. A. Johnson, Inc.
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- Frank Kwapnioski
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2023 Nebraska Water Leaders Academy class

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Acknowledgements

We are extremely grateful for the support of our sponsors, which makes the Academy possible. We couldn't do it without you! We greatly appreciate the assistance of Brooke Mott, Jodi Delozier, Ann Briggs, Dakota Staggs, and JoLeisa Cramer, past Graduate Research Assistants at UNL, for their contributions. We are indebted to all the Academy presenters listed in the Appendix who shared their time and wisdom. Finally, we thank Academy alumni who are truly water leaders!

Executive Summary

Eighteen participants completed the 2023 Water Leaders Academy bringing the total number of graduates to 186 since the inception of the program in 2011. Assessments of participants' transformational leadership skills, champion of innovation skills, water knowledge, engagement with water issues, civic capacity, entrepreneurial leadership behaviors, boundary spanning skills, and curiosity increased significantly over the course of the year, according to both the participants and their raters. Feedback from the participants was highly positive and constructive. Academy planners are addressing participant concerns. Results of the program assessment indicate that the curriculum is meeting the Academy's objectives. Therefore, only minor changes are planned for the 2024 Academy curriculum. The continued emergence of Academy alumni as leaders worldwide attests to its ongoing success.

2023 Nebraska Water Leaders Academy - Final Report

Introduction

Effective management of Nebraska’s water resources is evermore challenged by weather, climate, technology, socioeconomic trends, and regulation. Anthropogenic climate change, declining water tables and stream flows, increasing demands on freshwater, aging infrastructure, fiscal constraints, and impacts on water-dependent habitats are particularly imminent water challenges in Nebraska and elsewhere (Pahl-Wostl et al., 2013; Pittock et al., 2008). Sustaining freshwater ecosystem services in the face of emerging environmental threats is widely recognized as a pressing global challenge (Pittock et al., 2013; Rockström et al., 2009, Millennium Ecosystem Assessment, 2005).

Changes in Nebraska’s water-resource conditions, as well as a pervasive public desire for sound policies, starkly underscore the need for knowledgeable and skilled leaders (Burbach & Reimers-Hild, 2019; Lincklaen Arriëns & Wehn de Montalvo, 2013; Morton & Brown, 2011). Leadership capacity is an essential driver of water management changes (Brasier et al., 2011; Burbach & Reimers-Hild, 2019; Pahl-Wostl et al., 2011; Taylor et al., 2012). Moreover, leadership capacity enables innovation, shared visions of a more sustainable water future, and collective success (McIntosh & Taylor, 2013).

The Nebraska State Irrigation Association (NSIA), the state’s oldest water association, and its Executive Director Lee Orton addressed the need for such leadership by establishing the Nebraska Water Leaders Academy (hereafter “Academy”) and the nonprofit Water Futures Partnership-Nebraska in 2011 in partnership with the University of Nebraska-Lincoln (UNL). Since that time, NSIA has served as the primary sponsor and has successfully garnered funding support for the Academy from water-related businesses, private citizens, and other interests. Founding partner Diamond Plastics



Academy participants explore a waterfall in the Niobrara National Scenic River.

Corporation sponsored the first Academy and the Nebraska Environmental Trust once provided major funding support for the Academy. Sponsors listed on page i provide on-going support.

The Academy is a year-long program consisting of six two-day sessions held in different communities across the state. There are three curricular components of the Academy: leadership, policy/law, and natural resources. Dr. Mark Burbach developed the leadership component of the Academy with major contributions from accomplished faculty and staff at UNL and other leadership development professionals (See Appendix I). Leading experts in Nebraska water policy, law, and natural resources from UNL; federal, state, and local agencies; NGOs; and other entities developed curriculum in their respective fields. Academy alumni serve on the planning committee.

Every year, the Academy has achieved its goal of including statewide participants with diverse backgrounds and interests. Moreover, the water leadership capacity in Nebraska has



Academy participants learn about an irrigation canal and return flows near Scottsbluff from Mike Jess.

grown for more than 12 years through coordinated educational and developmental experiences. These experiences are provided by experts from various disciplines (Appendix I). The Academy employs a process-based curriculum with developmental experiences and opportunities to learn from experiences (Barbuto & Etling, 2002; McCauley et al., 2010; Newman et al., 2007; Popper

& Mayselless, 2007) to develop Nebraska's future water leaders, and to trigger lasting change in their abilities (Geller, 1992; McCauley et al., 2010).

The objectives of the Nebraska Water Leaders Academy are to:

- Develop scientific, social, and political knowledge about water and related natural resources.
- Provide training, professional presentations, and experiential learning activities that instill sound and comprehensive knowledge about efficient, economic, and beneficial uses of Nebraska's water resources.
- Develop and enhance critical thinking and leadership skills through process-based educational activities.
- Encourage and assist participants toward active involvement in water-policy issues at all levels of governance.
- Integrate multi-disciplinary educational and leadership programs to provide life-long leaders in water resources management.
- Challenge traditional paradigms about water resources and facilitate creative solutions to water-resources problems.
- Increase civic capacity and community engagement.

The Academy has graduated a total of 186 participants with a wide range of professional, geographic, and water resources backgrounds. Eighteen individuals completed the 2023 Academy. Table 1 lists the curriculum topics covered in the 2023 Academy.

Table 1: Curriculum topics presented by experts at the 2023 Nebraska Water Leaders Academy (¹ = Session)

| Leadership | Policy/Law | Resource |
|--|---|--|
| Transformational Leadership ^{1,2,6} | Nebraska Water Law ¹ | Nebraska Climate/Weather ¹ |
| Gallup Strengths ¹ | Briefing on Legislative Process ¹ | Nebraska Geology ¹ |
| Communicating Strategically ¹ | Ag and Environmental Sciences Communication ¹ | Nebraska Groundwater Hydrology ¹ |
| Boundary Spanning Behavior ² | Compacts & Interstate Obligations ² | Water Efficiency Technology ² |
| Communicating across Differences ² | Platte/Republican Interface ² | Ecology of the Platte River & Sandhills ² |
| Collaborative Water Management ² | Protecting Environmental Priorities on the Platte | Nebraska Climate/Weather ² |
| Curiosity ² | Nebraska's Integrated Water Resource Management ³ | Omaha's Combined Sewer Separation Project ³ |
| Testing Ag Performance Solutions ² | Loup River to Loup Power District ³ | PMNRD Flood Control & Water Quality Projects ³ |
| Risk Communication ³ | | Omaha Wastewater Treatment & Water Production ³ |
| Leading Innovation ³ | Water, Climate, and Health in Nebraska ³ | |
| Common Pool Resource Management ³ | Panhandle NRD Projects & Programs ⁴ | |
| Community Capitals Framework ⁴ | North Platte Basin Integrated Water System ⁴ | North Platte Irrigation Infrastructure ⁴ |
| NRD Public & Youth Education ⁵ | Nebraska's Public Power & Irrigation Districts History ⁴ | Panhandle Groundwater Modeling Projects ⁴ |
| Creative Collaboration Exercises for Nat. Res. Mngt ⁵ | Water Markets ⁴ | Niobrara River Valley Geology and Ecology ⁵ |
| Your Future as Leaders ⁶ | History of NRDs ⁴ | Niobrara Scenic River ORVs ⁵ |
| Empowerment ⁶ | Bazile Groundwater Mngt Prog ⁵ | |
| Tapping into Your Motivation to Serve ⁶ | Middle Niobrara Tourism ⁵ | Water's Relationship with Public Health ⁵ |
| Niobrara River Valley – Past, Present, Future | | |
| Next Steps – Engaging Your Leadership Capacity ⁶ | NRC Funding Programs ⁵ | |
| Community Involvement & Leadership Opportunities ⁶ | | |
| | Missouri River-Past, Present, Future ⁶ | |

This report summarizes the evaluation of the 2023 Academy as well as the cumulative evaluation of the Academy since its inception. These results assess the effectiveness of the Academy in meeting its objectives and they will inform planning the thirteenth Academy class in 2024.

Program Evaluation

Program evaluation is an essential component of the Academy because it: (1) assesses the development of participants' leadership knowledge, skills, and behaviors; (2) evaluates the instructional methods used in the Academy; and (3) provides constructive feedback from participants to guide the development of future sessions. The 2023 class evaluation consisted of session evaluations and an empirical analysis using leadership assessments performed before and after attendance (Figure 1). Participants also completed a Gallup CliftonStrengths assessment (Gallup, 2023) prior to their attendance for self-awareness purposes only. The six session evaluations gauged participants' change in knowledge levels in the areas of leadership, policy, and water issues. Participants also provided subjective feedback about the major points they learned from each session, a summary of the session experience, and other important comments to the Academy planners. Evaluations enable session planners to modify and adjust future sessions, particularly with regard to topics and presenters. Feedback from 2023 participants and preceding classes is also being used to plan the 2024 Academy.



Sean Guinzy giving a tour of the Platte West Water Production Facility.

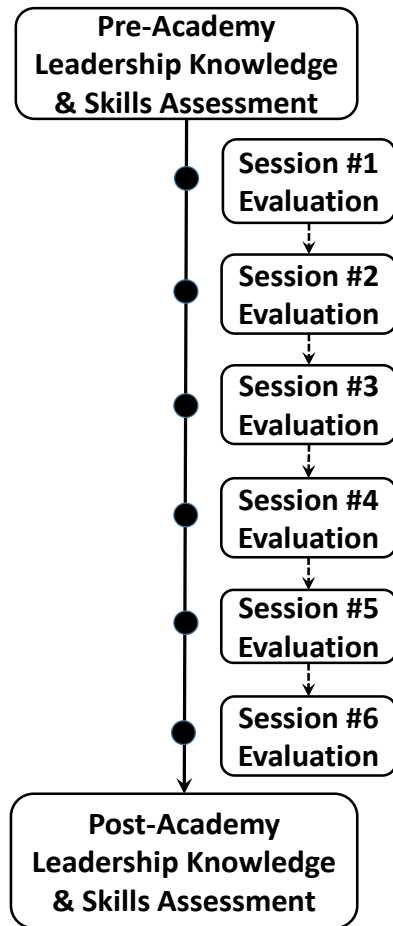


Figure 1: Flow chart of the Nebraska Water Leaders Academy program evaluation.

The empirical analysis measures the participants' change in leadership knowledge, skills, and behavior throughout the 2023 Academy. This analysis gauges the effectiveness of the curriculum by evaluating the participants' research-based transformational leadership behaviors, their capacity to engage in civic issues, their innovation behaviors associated with positive individual and organizational outcomes, and their abilities in boundary spanning. Curiosity, a facet of Openness to Experience, is a major personality dimension that we assessed for the second time in 2023. This dimension may reflect a person's motivation to engage in water policy and/or management. Participants' change in knowledge of, and engagement with, water issues in Nebraska is also assessed. Finally, a participant's level of entrepreneurial leadership behavior is assessed. This analysis is ongoing because it includes the cumulative results from all classes (2011-2023).

Methodology

Participants

All eighteen 2023 participants completed the pre- and post-Academy assessments. There were five females and 13 males. The participants' ages ranged from 23 to 52 years with a median age of 40 years.



Academy participants collaborating to solve a problem.

Procedures

UNL Institutional Review Board (IRB) approved the research prior to the assessment. A research-based questionnaire was employed to assess changes in leadership skills among participants about, and behaviors with respect to Nebraska's water issues. Items were also developed to measure participants' knowledge and behavior. The survey was administered online using Qualtrics™ software.

Academy participants were notified of the online questionnaire three weeks prior to the first Academy session in January 2023 and given instructions for its completion. This process was repeated three weeks prior to the final session in November 2023. Participants were also asked to invite others with whom they have a professional relationship to rate their leadership behaviors. Raters have included supervisors, peers, close colleagues, and those with whom

participants work closely outside of their organizations. Participants sent these raters an e-mail invitation that included the link to the online questionnaire.

Measures

The online questionnaire consisted of six research-based leadership assessments and an additional section that assesses participants' knowledge about, and behaviors with respect to, Nebraska's water issues. All the instruments used in the questionnaire have satisfactory reliability and validity; thus, they consistently and accurately measure the targeted skills and behaviors.

The first assessment was the Multifactor Leadership Questionnaire (MLQ-5) developed by Bass and Avolio (1995). The MLQ-5 (leader version and rater version) is a 45-item, 5-point Likert-type scale that is used to evaluate an individual's leadership style. The MLQ-5 measures characteristics of transformational and transactional leadership. Only the transformational elements were used in the evaluation.

Transformational leadership comprises four dimensions (Antonakis et al., 2003). *Idealized Influence* refers to the charisma of the leader, whether the leader is perceived as being confident and powerful, whether the leader is viewed as focusing on higher-order ideals and ethics, and whether actions are centered on values, beliefs, and a sense of mission. *Inspirational Motivation* refers to the ways leaders energize others by viewing the future with optimism, stressing ambitious goals, projecting an idealized vision, and communicating to others that the vision is achievable. *Intellectual Stimulation* refers to leader actions that appeal to others' sense of logic and analysis by challenging others to think creatively and find solutions to difficult problems. *Individualized Consideration* refers to leader behavior that contributes to others' satisfaction by advising, supporting, and paying attention to the present and potential individual needs of others, and thus allowing them to develop and self-actualize.

The second assessment was a modified Champions of Innovation scale developed by Howell et al. (2005). It is a 14-item, 5-point Likert-type scale that measures characteristics of champions of innovation. The scale was modified by eliminating one or two items from each of the three subscales for a total of 10 items. The constructs' three subscales are: *enthusiasm and confidence in what innovation can do*, *persisting under adversity*, and *getting the right people involved*.

A third assessment measures characteristics of civic capacity. The civic capacity scale was developed by Cramer (2015). Nine items of the 5-point Likert-type scale were used. Civic capacity is “the combination of interest and motivation to be engaged in public service and the ability to foster collaborations through the use of one's social connections and through the pragmatic use of processes and structures” (Sun & Anderson, 2012, p. 317). Civic capacity is composed of three dimensions. *Civic Drive* refers to the desire and motivation to be involved with social issues. *Civic Connections* refers to the social capital found in the leader's internal and external social networks that specifically enables and promotes the success of collaboration. *Civic Pragmatism* refers to the ability to translate social opportunities, by leveraging structures and mechanisms for collaboration.

A fourth assessment asks participants about their *entrepreneurial leadership behaviors* before and after the Academy. Five items were used to measure entrepreneurial leadership behavior. An entrepreneurial individual is described as an innovative person who is open to change and recognizes and pursues opportunities irrespective of existing resources, such as time, money, personal support and/or technology. Entrepreneurial leaders are noted for their ability to develop a compelling vision, recognize opportunities where others do not, operate in a highly unpredictable atmosphere, influence others (both followers and a larger constituency), absorb uncertainty and risk, build commitment, and overcome barriers (e.g., Renko et al., 2015).

A fifth assessment of boundary spanning abilities was added in 2021. Boundary spanners are individuals who reach across organizational borders to build relationships, interconnections, and interdependencies in the management of complex problems. Often referred to a “inter-agency ambassadors” or “gate keepers”, they actively work toward collaboration, attempting to link diverse stakeholders, processes, and information from multiple perspectives (Coleman & Stern, 2018; Delozier & Burbach, 2021; Poblete & Bengston, 2020). A 21-item, 5-point Likert-type scale was developed to measure six dimensions of boundary spanning. The six dimensions are.... Authentic Leadership, Trustworthiness, Autonomy, Perspective-taking, Relationship Developer, and Effective Science Communication. *Authentic Leadership* is the ability to lead by example but also motivate others to seek a shared vision. *Trustworthiness* is the ability to be authentic, honest, and transparent, and to act in the best interests of others. *Autonomy* is the ability to act on behalf of one’s home organization yet still work toward a common goal, the inner conviction to encourage “outside-the-box thinking,” and an ability to apply multiple

perspectives to a situation. *Perspective taking* is the ability to recognize, respect, and manage diversity in thought and opinion particularly when working across multi-disciplinary boundaries. *Relationship developer* is the ability to develop and maintain relationships across internal and external borders; using their personal network may increase their ability to perform and move through the various domains, levels, and scales inherent in natural resources management. *Effective Science Communication* is the ability to interpret complex and/or technical information, provide constructive feedback, encourage a two-way exchange of information, and adeptly reframe issues.

Curiosity, a facet of Openness to Experience, is a major personality trait that was added to the questionnaire in 2022. Curiosity, along with other personal characteristics like innovativeness (measured with the Champions of Innovation scale) captures features of a person's openness to intellectual engagement. Moreover, curiosity may reflect a person's motivation to engage in water policy and/or management.

The questionnaire also asks participants about their Nebraska water issues knowledge and engagement. The knowledge and behavior scale is an 8-item, 5-point Likert-type scale that measures *awareness* of water issues in Nebraska and *engagement* in water issues in Nebraska.

The internal reliability for all the scales was 0.70 or greater. Nunnally and Bernstein (1994) concluded that acceptable minimum reliability (Cronbach's alpha) for measurement scales should be 0.70.

Results from 2023 Nebraska Water Leaders Academy

Leadership Knowledge, Skills, and Behaviors – Participants' Perspectives

The pre- and post-Academy transformational leadership behaviors of participants were assessed through a paired-samples *t*-test. Participants' transformational leadership behaviors significantly increased from pre-Academy ($M = 2.94, SD = 0.33$) to post-Academy ($M = 3.18, SD = 0.35$); $t(17) = 3.14, p = 0.006, d = .33$. Results are summarized in Table 2. All four of the transformational leadership behaviors were significantly higher at the end of the Academy.

Table 2. Results of Paired-Samples *t*-Tests Comparing Participants' Transformational Leadership Behaviors Before and After the Academy ($N = 18$)

| Transformational Leadership Behavior | Pre-Academy | | Post-Academy | | Diff. | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|--------------------------------------|-------------|------|--------------|------|-------|----------|----|--------|------------------|
| | M | SD | M | SD | | | | | |
| Idealized Influence | 2.79 | 0.36 | 3.03 | 0.39 | 0.24 | 2.49 | 17 | .024* | 0.40 |
| Inspirational Motivation | 3.01 | 0.44 | 3.26 | 0.49 | 0.25 | 2.19 | 17 | .043* | 0.49 |
| Intellectual Stimulation | 2.93 | 0.66 | 3.18 | 0.53 | 0.25 | 2.43 | 17 | .027* | 0.44 |
| Individual Consideration | 3.01 | 0.50 | 3.26 | 0.52 | 0.25 | 3.00 | 17 | .008** | 0.35 |
| Total Trans. Leadership | 2.94 | 0.33 | 3.18 | 0.35 | 0.24 | 3.14 | 17 | .006** | 0.33 |

* $p < .05$. ** $p < .01$.

A paired-samples *t*-test compared 2023 participants' pre-Academy and post-Academy champion of innovation behaviors. Participants' innovation behavior scores significantly increased from pre-Academy ($M = 3.04$, $SD = 0.28$) to post-Academy ($M = 3.28$, $SD = 0.29$); $t(17) = 5.65$, $p < 0.001$, $d = .18$. Results are summarized in Table 3. There was a significant increase in all three champions of innovation dimensions.

Table 3. Results of Paired-Samples *t*-Tests Comparing Participants' Champion of Innovation Behaviors Before and After the Academy ($N = 18$)

| Champion of Innovation Behavior | Pre-Academy | | Post-Academy | | Diff. | <i>t</i> | df | Sig. | Cohen's <i>D</i> |
|---|-------------|------|--------------|------|-------|----------|----|---------|------------------|
| | M | SD | M | SD | | | | | |
| Expresses Enthusiasm and Confidence in Innovation | 2.85 | 0.52 | 3.06 | 0.43 | 0.21 | 2.64 | 17 | .017* | 0.33 |
| Persistence under Adversity | 3.20 | 0.36 | 3.35 | 0.43 | 0.15 | 2.40 | 17 | .028* | 0.26 |
| Get Right People Involved | 3.07 | 0.37 | 3.44 | 0.46 | 0.37 | 3.99 | 17 | .001*** | 0.39 |
| Total Champ. of Innov. | 3.04 | 0.28 | 3.28 | 0.29 | 0.24 | 5.65 | 17 | .001** | 0.18 |

** $p < .01$.

A paired-samples *t*-test was conducted to compare 2023 participants' pre-Academy and post-Academy Nebraska water issues knowledge and engagement in water issues. Participants' awareness of water issues significantly increased from pre-Academy ($M = 2.53$, $SD = 0.79$) to post-Academy ($M = 3.26$, $SD = 0.59$; $t(17) = 4.76$, $p < 0.001$, $d = .66$). Results are summarized in Table 4. There was a significant increase in participants engagement in water policy issues from

pre-Academy ($M = 2.67$, $SD = 0.83$) to post-Academy ($M = 3.21$, $SD = 0.89$); $t(17) = 4.79$, $p < 0.001$, $d = .48$.

Table 4. Results of Paired-Samples *t*-Tests Comparing Participants' Nebraska Water Knowledge and Engagement Before and After the Academy ($N = 18$)

| Water Knowledge & Engagement | Pre-Academy | | Post-Academy | | Diff. | <i>t</i> | df | Sig. | Cohen's |
|------------------------------|-------------|------|--------------|------|-------|----------|----|---------|----------|
| | M | SD | M | SD | | | | | <i>d</i> |
| Awareness | 2.53 | 0.79 | 3.26 | 0.59 | 0.73 | 4.76 | 17 | .001*** | 0.66 |
| Engagement | 2.67 | 0.83 | 3.21 | 0.89 | 0.54 | 4.79 | 17 | .001*** | 0.48 |

*** $p < .001$.

A paired-samples *t*-test was conducted to compare 2023 participants' pre-Academy and post-Academy civic capacity. Participants' civic capacity significantly increased from pre-Academy ($M = 2.35$, $SD = 0.88$) to post-Academy ($M = 3.03$, $SD = 0.82$; $t(17) = 5.94$, $p < 0.001$, $d = .49$). Results are summarized in Table 5. There was a significant increase in all three civic capacity dimensions.

Table 5. Results of Paired-Samples *t*-Tests Comparing Participants' Civic Capacity Before and After the Academy ($N = 18$)

| Civic Capacity | Pre-Academy | | Post-Academy | | Diff. | <i>t</i> | df | Sig. | Cohen's |
|----------------------|-------------|------|--------------|------|-------|----------|----|---------|----------|
| | M | SD | M | SD | | | | | <i>d</i> |
| Drive | 2.69 | 0.97 | 3.03 | 0.96 | 0.34 | 2.75 | 17 | .014* | 0.54 |
| Connections | 2.28 | 1.11 | 3.20 | 0.84 | 0.92 | 4.28 | 17 | .001*** | 0.92 |
| Pragmatism | 2.10 | 0.93 | 2.85 | 0.86 | 0.75 | 5.12 | 17 | .001*** | 0.62 |
| Total Civic Capacity | 2.35 | 0.88 | 3.03 | 0.82 | 0.68 | 5.94 | 17 | .001*** | 0.48 |

* ** $p < .001$

A paired-samples *t*-test was conducted to compare 2023 participants' pre-Academy and post-Academy entrepreneurial leadership behavior. Participants' entrepreneurial leadership behavior significantly increased from pre-Academy ($M = 2.87$, $SD = 0.61$) to post-Academy ($M = 3.30$, $SD = 0.59$; $t(17) = 3.37$, $p = 0.004$, $d = 0.54$). Results are summarized in Table 6.

Table 6. Results of Paired-Samples *t*-Test Comparing Participants' Entrepreneurial Leadership Behavior Before and After the Academy ($N = 18$)

| | Pre-Academy | | Post-Academy | | Diff. | <i>t</i> | df | Sig. | Cohen's |
|------------------------|-------------|------|--------------|------|-------|----------|----|--------|----------|
| | M | SD | M | SD | | | | | <i>d</i> |
| Entrepreneurial Behav. | 2.87 | 0.61 | 3.30 | 0.59 | 0.43 | 3.37 | 17 | .004** | 0.54 |

** $p < .01$.

A paired-samples *t*-test was conducted to compare 2023 participants' pre-Academy and post-Academy boundary behavior. Participants' boundary spanner behavior significantly increased from pre-Academy ($M = 2.83$, $SD = 0.37$) to post-Academy ($M = 3.17$, $SD = 0.33$; $t(17) = 6.33$, $p = 0.001$, $d = 0.23$). Results are summarized in Table 7. There was a significant increase in all six boundary spanning dimensions.

Table 7. Results of Paired-Samples *t*-Tests Comparing Participants' Boundary Spanner Behaviors Before and After the Academy ($N = 18$)

| Boundary Spanner Behavior | Pre-Academy | | Post-Academy | | Diff. | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|---------------------------|-------------|------|--------------|------|-------|----------|----|---------|------------------|
| | M | SD | M | SD | | | | | |
| Trustworthiness | 3.31 | 0.40 | 3.63 | 0.39 | 0.31 | 4.59 | 17 | .001*** | 0.29 |
| Autonomy | 2.56 | 0.58 | 3.00 | 0.34 | 0.44 | 3.60 | 17 | .002** | 0.52 |
| Authentic Leadership | 2.85 | 0.35 | 3.03 | 0.37 | 0.18 | 3.42 | 17 | .003** | 0.22 |
| Perspective Taking | 2.94 | 0.59 | 3.18 | 0.54 | 0.24 | 3.61 | 17 | .002** | 0.28 |
| Relationship Building | 2.50 | 0.72 | 3.07 | 0.61 | 0.57 | 4.91 | 17 | .001*** | 0.50 |
| Effective Sci. Comm. | 2.81 | 0.79 | 3.11 | 0.66 | 0.30 | 2.93 | 17 | .009* | 0.44 |
| Total Boundary Spanner | 2.83 | 0.37 | 3.17 | 0.33 | 0.34 | 6.33 | 17 | .001*** | 0.23 |

* $p < .05$. ** $p < .01$. *** $p < .001$.

Trait curiosity was assessed for the second time in 2023. A paired-samples *t*-test was conducted to compare 2023 participants' pre-Academy and post-Academy curiosity. Participants' curiosity significantly increased from pre-Academy ($M = 3.40$, $SD = 0.61$) to post-Academy ($M = 3.59$, $SD = 0.66$; $t(17) = 3.80$, $p = 0.001$, $d = 0.21$). Results are summarized in Table 8.

Table 8. Results of Paired-Samples *t*-Test Comparing Participants' Curiosity Behavior Before and After the Academy ($N = 18$)

| | Pre-Academy | | Post-Academy | | Diff. | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|-----------|-------------|------|--------------|------|-------|----------|----|--------|------------------|
| | M | SD | M | SD | | | | | |
| Curiosity | 3.40 | 0.61 | 3.59 | 0.66 | 0.19 | 3.80 | 17 | .001** | 0.21 |

** $p < .01$.

Leadership Knowledge, Skills, and Behaviors – Raters' Perspectives

The effects of self-report bias and social desirability issues are minimized if multiple data sources are used to assess leadership behaviors (Donaldson & Grant-Vallone, 2002).

Accordingly, feedback from multiple raters on Academy participants' leadership behaviors is

another way of gauging the impact of the Academy on participants, and another means of assessing the achievement of Academy objectives. Forty-eight individuals responded to invitations from 2023 Academy participants to rate their leadership behaviors prior to the Academy and 48 individuals rated participants at the end of the Academy. The number of raters for each participant ranged from 0 to 4 on the pre-Academy questionnaire and 0 to 6 on the post-Academy questionnaire. Two people did not have raters on the pre-Academy questionnaire and three people did not have raters on the post-Academy questionnaire. Excluding the participants that did not have raters, the average number of raters was 3.0 for the pre-Academy questionnaire and 3.2 for the post-Academy questionnaire.

An independent samples *t*-test comparing raters' perspectives on participants' transformational leadership increased significantly from pre-Academy ($M = 3.18$, $SD = 0.48$) to post-Academy ($M = 3.38$, $SD = 0.38$); $t(94) = 2.43$, $p = 0.017$, $d = .41$. Results are summarized in Table 9. Raters assessed a significant increase in two of the four transformational leadership behaviors.

Table 9. Results of Independent Samples *t*-Tests Comparing Raters' Perceptions of Participants' Transformational Leadership Behaviors Before and After the Academy

| Transformational Leadership Behavior | N | M | SD | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|---|----|------|-----|----------|----|--------|------------------|
| Idealized Influence – Pre-Academy | 48 | 3.10 | .48 | 1.43 | 94 | .155 | 0.48 |
| Idealized Influence – Post-Academy | 48 | 3.24 | .47 | | | | |
| Inspirational Motivation – Pre-Academy | 48 | 3.22 | .57 | 1.51 | 94 | .136 | 0.56 |
| Inspirational Motivation – Post-Academy | 48 | 3.39 | .55 | | | | |
| Intellectual Stimulation – Pre-Academy | 48 | 3.16 | .49 | 2.04 | 94 | .044* | 0.47 |
| Intellectual Stimulation – Post-Academy | 48 | 3.36 | .44 | | | | |
| Individual Consideration – Pre-Academy | 48 | 3.23 | .48 | 3.39 | 94 | .001** | 0.44 |
| Individual Consideration – Post-Academy | 48 | 3.53 | .39 | | | | |
| Total Trans. Leadership – Pre-Academy | 48 | 3.18 | .44 | 2.43 | 94 | .017* | 0.41 |
| Total Trans. Leadership – Post-Academy | 48 | 3.38 | .38 | | | | |

* $p < .05$. ** $p < .01$.

An independent samples *t*-test comparing raters' perspectives on participants' champion of innovation behavior showed a significant increase from pre-Academy ($M = 3.23$, $SD = 0.48$) to post-Academy ($M = 3.48$, $SD = 0.45$); $t(94) = 2.61$, $p = 0.010$, $d = .47$. Results are

summarized in Table 10. Raters assessed a significant increase in two of the three champions of innovation dimensions.

Table 10. *Results of Independent Samples t-Tests Comparing Raters' Perceptions of Participants' Champion of Innovation Behaviors Before and After the Academy*

| Champion of Innovation Behavior | N | M | SD | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|---|----|------|-----|----------|----|--------|------------------|
| Enthusiasm & Confidence – Pre-Academy | 48 | 3.14 | .66 | 1.55 | 94 | .062 | 0.62 |
| Enthusiasm & Confidence – Post-Academy | 48 | 3.33 | .59 | | | | |
| Persistence – Pre-Academy | 48 | 3.20 | .54 | 2.38 | 94 | .019* | 0.56 |
| Persistence – Post-Academy | 48 | 3.47 | .58 | | | | |
| Right People Involved – Pre-Academy | 48 | 3.35 | .40 | 3.20 | 94 | .002** | 0.43 |
| Right People Involved – Post-Academy | 48 | 3.59 | .41 | | | | |
| Total Champ. of Innovation – Pre-Academy | 48 | 3.23 | .48 | 2.61 | 94 | .010* | 0.47 |
| Total Champ. of Innovation – Post-Academy | 48 | 3.48 | .45 | | | | |

* $p < .05$. ** $p < .01$.

An independent samples *t*-test comparing raters' perspectives on participants' awareness of water issues in Nebraska showed a significant increase from pre-Academy ($M = 2.90$, $SD = 0.70$) to post-Academy ($M = 3.52$, $SD = 0.46$); $t(94) = 5.18$, $p < 0.001$, $d = 0.59$. Raters also assessed a significant increase in participants' engagement in Nebraska water issues from pre-Academy ($M = 3.01$, $SD = 0.66$) to post-Academy ($M = 3.50$, $SD = 0.54$); $t(94) = 3.99$, $p < 0.001$, $d = .61$. Results are summarized in Table 11.

Table 11. *Results of Independent Samples t-Tests Comparing Raters' Perceptions of Participants' Nebraska Water Knowledge and Engagement Before and After the Academy*

| Water Knowledge & Engagement | N | M | SD | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|------------------------------|----|------|-----|----------|----|---------|------------------|
| Awareness – Pre-Academy | 48 | 2.90 | .70 | 5.18 | 94 | .001*** | 0.59 |
| Awareness – Post-Academy | 48 | 3.52 | .46 | | | | |
| Engagement – Pre-Academy | 48 | 3.01 | .66 | 3.99 | 94 | .001*** | 0.61 |
| Engagement – Post-Academy | 48 | 3.50 | .54 | | | | |

*** $p < .001$.

An independent samples *t*-test comparing raters' perspectives on participants' civic capacity showed a significant increase from pre-Academy ($M = 2.98$, $SD = 0.65$) to post-Academy ($M = 3.35$, $SD = 0.63$); $t(94) = 2.82$, $p = 0.006$, $d = 0.68$. Results are summarized in Table 12. Raters assessed a significant increase in all three dimensions of civic capacity from pre-Academy to post-Academy.

Table 12. *Results of Independent Samples t-Tests Comparing Raters' Perceptions of Participants' Civic Capacity Before and After the Academy*

| Civic Capacity | N | M | SD | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|-------------------------------------|----|------|-----|----------|----|--------|------------------|
| Drive – Pre-Academy | 48 | 3.08 | .63 | 2.01 | 94 | .047* | 0.66 |
| Drive – Post-Academy | 48 | 3.35 | .69 | | | | |
| Connections – Pre-Academy | 48 | 2.92 | .71 | 3.21 | 94 | .002** | 0.72 |
| Connections – Post-Academy | 48 | 3.36 | .62 | | | | |
| Pragmatism – Pre-Academy | 48 | 2.94 | .72 | 2.82 | 94 | .006** | 0.69 |
| Pragmatism – Post-Academy | 48 | 3.33 | .66 | | | | |
| Total Civic Capacity – Pre-Academy | 48 | 2.98 | .65 | 2.82 | 93 | .006** | 0.64 |
| Total Civic Capacity – Post-Academy | 48 | 3.35 | .63 | | | | |

** $p < .01$. *** $p < .001$.

An independent samples *t*-test comparing raters' perspectives on participants' entrepreneurial leadership behavior showed a significant increase from pre-Academy ($M = 3.24$, $SD = 0.47$) to post-Academy ($M = 3.45$, $SD = 0.52$); $t(94) = 2.06$, $p = 0.021$, $d = 0.49$. Results are summarized in Table 13.

Table 13. *Results of Independent Samples t-Test Comparing Raters' Perceptions of Participants' Entrepreneurial Behavior Before and After the Academy*

| Entrepreneurial Behavior | N | M | SD | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|---|----|------|-----|----------|----|-------|------------------|
| Entrepreneurial Behavior – Pre-Academy | 48 | 3.24 | .47 | 2.06 | 94 | .021* | 0.49 |
| Entrepreneurial Behavior – Post-Academy | 48 | 3.45 | .52 | | | | |

* $p < .05$.

An independent samples *t*-test comparing raters' perspectives on participants' boundary spanner behavior showed a significant increase from pre-Academy ($M = 3.21$, $SD = 0.42$) to post-Academy ($M = 3.42$, $SD = 0.40$); $t(94) = 2.46$, $p = 0.016$, $d = 0.41$. Results are summarized in Table 14. There was a significant increase in four of the six boundary spanning dimensions.

Table 14. *Results of Independent Samples t-Tests Comparing Raters' Perceptions of Participants' Boundary Spanning Behaviors Before and After the Academy*

| Transformational Leadership Behavior | N | M | SD | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|---------------------------------------|----|------|-----|----------|----|-------|------------------|
| Trustworthiness – Pre-Academy | 48 | 3.43 | .37 | 2.19 | 94 | .031* | 0.42 |
| Trustworthiness – Post-Academy | 48 | 3.63 | .46 | | | | |
| Autonomy – Pre-Academy | 48 | 3.08 | .56 | 1.78 | 94 | .078 | 0.53 |
| Autonomy – Post-Academy | 48 | 3.28 | .50 | | | | |
| Authentic Leadership – Pre-Academy | 48 | 3.24 | .48 | 2.12 | 94 | .036* | 0.47 |
| Authentic Leadership – Post-Academy | 48 | 3.44 | .49 | | | | |
| Perspective Taking – Pre-Academy | 48 | 3.26 | .46 | 1.61 | 94 | .111 | 0.48 |
| Perspective Taking – Post-Academy | 48 | 3.42 | .49 | | | | |
| Relationship Builder – Pre-Academy | 48 | 3.15 | .55 | 2.30 | 94 | .023* | 0.53 |
| Relationship Builder – Post-Academy | 48 | 3.40 | .44 | | | | |
| Effective Sci. Comm. – Pre-Academy | 48 | 3.12 | .60 | 2.15 | 94 | .035* | 0.55 |
| Effective Sci. Comm. – Post-Academy | 48 | 3.36 | .49 | | | | |
| Total Boundary Spanner – Pre-Academy | 48 | 3.21 | .42 | 2.46 | 94 | .016* | 0.41 |
| Total Boundary Spanner – Post-Academy | 48 | 3.42 | .40 | | | | |

* $p < .05$.

An independent samples *t*-test comparing raters' perspectives on participants' curiosity showed a significant increase from pre-Academy ($M = 3.46$, $SD = 0.39$) to post-Academy ($M = 3.63$, $SD = 0.46$); $t(94) = 2.01$, $p = 0.048$, $d = 0.43$. Results are summarized in Table 15.

Table 15. *Results of Independent Samples t-Test Comparing Raters' Perceptions of Participants' Curiosity Before and After the Academy*

| Curiosity | N | M | SD | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|--------------------------|----|------|-----|----------|----|-------|------------------|
| Curiosity – Pre-Academy | 48 | 3.46 | .39 | 2.01 | 94 | .048* | 0.43 |
| Curiosity – Post-Academy | 48 | 3.63 | .46 | | | | |

* $p < .05$.

Results of the 2023 Academy participants' assessments show a significant change in transformational leadership behaviors, innovation behaviors, awareness of Nebraska water issues, engagement in water issues, civic capacity, entrepreneurial leadership behavior, and curiosity. These changes are evidence that the curriculum is meeting the objectives of the Academy.

The overall results were statistically significant from both the participants' and raters' perspectives. However, consistent with previous assessments, the participants consistently scored

themselves lower than the raters on all skills, abilities, personality traits. Participants tend to be more critical of their leadership skills and abilities than raters.

2023 Session Evaluations

Session evaluations covered the specific topics addressed during each session. Participants concluded that their knowledge and understanding increased substantially after each session (Appendix II). Results provide strong support for the Academy's objectives. Participants' feedback was incorporated into session planning. Organizers adjusted subsequent sessions based on the feedback. For example, participants expressed wanting more time to question panelists.

The participants' feedback is used to plan the 2024 Academy. Presenters that were commended by participants are being retained and new presenters will be invited. New leadership and water-related topics are being investigated. Field trip destinations, presenters, group projects, and recruitment may be adjusted.

Post session evaluations are a valuable tool for gauging participants' experience with the Academy. Feedback from participants will continue to guide the development and delivery of the Academy.

Cumulative Nebraska Water Leaders Academy Results

Leadership Knowledge, Skills, and Behaviors – Participants' Perspectives

Cumulative Participants

One hundred eighty-four of the 186 total Academy participants have completed the pre- and post-Academy assessment of transformational leadership behaviors, champion of innovation behaviors, Nebraska water issues knowledge and engagement, and entrepreneurial leadership behavior since 2011. Fifty-two females and 132 males have completed the pre- and post-assessment (53 females and 133 males have completed the Academy). Respondents' ages range from 21 to 68 years with a median of 37 years.

A paired-samples *t*-test showed there has been a significant cumulative increase in the cumulative participants' transformational leadership behaviors from pre-Academy ($M = 2.77$, $SD = 0.45$) to post-Academy ($M = 3.07$, $SD = 0.38$); $t(183) = 13.21$, $p < 0.001$, $d = .30$. Results are summarized in Table 16. There has been a significant increase in all four transformational leadership behaviors for Academy participants of twelve classes of the Academy from pre-

Academy to post-Academy.

Table 16. Results of Paired-Samples *t*-Tests Comparing Cumulative Participants' Transformational Leadership Behavior Before and After the Academy ($N = 184$)

| Transformational Leadership Behavior | Pre-Academy | | Post-Academy | | Diff. | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|--------------------------------------|-------------|------|--------------|------|-------|----------|-----|---------|------------------|
| | M | SD | M | SD | | | | | |
| Idealized Influence | 2.70 | 0.49 | 2.99 | 0.43 | 0.29 | 10.70 | 183 | .001*** | 0.37 |
| Inspirational Motivation | 2.79 | 0.60 | 3.09 | 0.53 | 0.30 | 9.56 | 183 | .001*** | 0.43 |
| Intellectual Stimulation | 2.76 | 0.57 | 3.09 | 0.48 | 0.33 | 11.04 | 183 | .001*** | 0.40 |
| Individual Consideration | 2.86 | 0.53 | 3.12 | 0.41 | 0.26 | 9.17 | 183 | .001*** | 0.40 |
| Total Trans. Leadership | 2.77 | 0.45 | 3.07 | 0.38 | 0.30 | 13.21 | 183 | .001*** | 0.30 |

*** $p < .001$.

A paired-samples *t*-test showed there has been a significant increase in cumulative participants' champions of innovation behaviors from pre-Academy ($M = 2.95$, $SD = 0.50$) to post-Academy ($M = 3.23$, $SD = 0.43$); $t(183) = 12.28$ $p < 0.001$, $d = .31$. Results are summarized in Table 17. Twelve classes of Academy participants have demonstrated a significant increase in all three champions of innovation dimensions from pre-Academy to post-Academy.

Table 17. Results of Paired-Samples *t*-Tests Comparing Cumulative Participants' Champion of Innovation Behaviors Before and After the Academy ($N = 184$)

| Champion of Innovation Behavior | Pre-Academy | | Post-Academy | | Diff. | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|---|-------------|------|--------------|------|-------|----------|-----|---------|------------------|
| | M | SD | M | SD | | | | | |
| Expresses Enthusiasm and Confidence in Innovation | 2.83 | 0.68 | 3.13 | 0.56 | 0.30 | 9.43 | 183 | .000*** | 0.45 |
| Persistence under Adversity | 2.95 | 0.59 | 3.21 | 0.54 | 0.26 | 8.53 | 183 | .000*** | 0.41 |
| Get Right People Involved | 3.09 | 0.56 | 3.36 | 0.50 | 0.27 | 9.53 | 183 | .000*** | 0.39 |
| Total Champ. of Innov. | 2.95 | 0.50 | 3.23 | 0.43 | 0.28 | 12.28 | 183 | .000*** | 0.31 |

*** $p < .001$.

A paired-samples *t*-test showed there has been a significant increase in awareness of Nebraska water policy issues for Academy participants from twelve classes of the Academy from pre-Academy ($M = 2.70$, $SD = 0.81$) to post-Academy ($M = 3.38$, $SD = 0.53$); $t(183) = 14.04$, $p < 0.001$, $d = .67$. Results are summarized in Table 18. There has been a significant

increase in engagement in water policy issues for twelve classes of participants from pre-Academy ($M = 2.53$, $SD = 0.90$) to post-Academy ($M = 3.08$, $SD = 0.74$); $t(183) = 12.41$, $p < 0.001$, $d = .61$.

Table 18. *Results of Paired Samples t-Tests Comparing Cumulative Participants' Nebraska Water Knowledge and Engagement Before and After the Academy (N = 184)*

| Water Knowledge & Engagement | Pre-Academy | | Post-Academy | | Diff. | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|------------------------------|-------------|------|--------------|------|-------|----------|-----|---------|------------------|
| | M | SD | M | SD | | | | | |
| Awareness | 2.70 | 0.81 | 3.38 | 0.52 | 0.68 | 14.04 | 183 | .000*** | 0.67 |
| Engagement | 2.53 | 0.90 | 3.08 | 0.74 | 0.55 | 12.41 | 183 | .000*** | 0.61 |

*** $p < .001$.

Civic capacity has been assessed since 2016. Thus, cumulative results for civic capacity represent the past seven Academy classes. Results of a paired-samples *t*-test showed a significant increase in cumulative participants' civic capacity from pre-Academy ($M = 2.28$, $SD = 0.84$) to post-Academy ($M = 2.83$, $SD = 0.67$); $t(119) = 11.78$, $p < 0.001$, $d = .51$. Results are summarized in Table 19. There was a significant increase in all three civic capacity dimensions from pre-Academy to post-Academy.

Table 19. *Results of Paired-Samples t-Tests Comparing Cumulative Participants' Civic Capacity Before and After the Academy (N = 120)*

| Civic Capacity | Pre-Academy | | Post-Academy | | Diff. | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|----------------------|-------------|------|--------------|------|-------|----------|-----|---------|------------------|
| | M | SD | M | SD | | | | | |
| Drive | 2.41 | 0.93 | 2.79 | 0.79 | 0.38 | 7.33 | 119 | .000*** | 0.57 |
| Connections | 2.36 | 0.96 | 3.03 | 0.74 | 0.67 | 10.63 | 119 | .000*** | 0.69 |
| Pragmatism | 2.07 | 0.92 | 2.68 | 0.76 | 0.61 | 10.18 | 119 | .000*** | 0.65 |
| Total Civic Capacity | 2.28 | 0.84 | 2.83 | 0.67 | 0.55 | 11.78 | 119 | .000*** | 0.51 |

*** $p < .001$.

A paired-samples *t*-test of entrepreneurial leadership behavior showed there has been a significant increase in twelve Academy classes from pre-Academy ($M = 2.70$, $SD = 0.68$) to post-Academy ($M = 3.03$, $SD = 0.59$); $t(183) = 9.42$, $p < 0.001$, $d = 0.47$. Results are summarized in Table 20.

Table 20. Results of Paired-Samples *t*-Test Comparing Cumulative Participants' Entrepreneurial Leadership Behavior Before and After the Academy ($N = 184$)

| | Pre-Academy | | Post-Academy | | Diff. | <i>t</i> | df | Sig. | Cohen's |
|------------------------|-------------|------|--------------|------|-------|----------|-----|---------|----------|
| | M | SD | M | SD | | | | | <i>d</i> |
| Entrepreneurial Behav. | 2.70 | 0.68 | 3.03 | 0.59 | 0.33 | 9.42 | 183 | .000*** | 0.47 |

*** $p < .001$.

Boundary spanning was assessed for the first time in 2021. A paired-samples *t*-test of boundary spanning behavior showed there has been a significant increase in three Academy classes from pre-Academy ($M = 2.73$, $SD = 0.42$) to post-Academy ($M = 3.08$, $SD = 0.37$; $t(49) = 10.11$, $p < 0.001$, $d = 0.25$). Results are summarized in Table 21. There was a significant increase in all six boundary spanning dimensions from pre-Academy to post-Academy.

Table 21. Results of Paired-Samples *t*-Tests Comparing Cumulative Participants' Boundary Spanning Behavior Before and After the Academy ($N = 50$)

| Boundary Spanning Behavior | Pre-Academy | | Post-Academy | | Diff. | <i>t</i> | df | Sig. | Cohen's |
|----------------------------|-------------|------|--------------|------|-------|----------|----|---------|----------|
| | M | SD | M | SD | | | | | <i>d</i> |
| Trustworthiness | 3.18 | 0.44 | 3.49 | 0.40 | 0.31 | 7.89 | 49 | .000*** | 0.28 |
| Autonomy | 2.44 | 0.66 | 2.80 | 0.53 | 0.36 | 5.35 | 49 | .000*** | 0.48 |
| Authentic Leadership | 2.72 | 0.51 | 3.03 | 0.41 | 0.31 | 5.10 | 49 | .000*** | 0.44 |
| Perspective Taking | 2.74 | 0.58 | 3.07 | 0.50 | 0.43 | 7.01 | 49 | .000*** | 0.33 |
| Relationship Building | 2.64 | 0.62 | 3.07 | 0.55 | 0.43 | 7.36 | 49 | .000*** | 0.41 |
| Science Communication | 2.64 | 0.66 | 3.00 | 0.63 | 0.36 | 5.82 | 49 | .000*** | 0.44 |
| Total Boundary Spanning | 2.73 | 0.42 | 3.08 | 0.39 | 0.35 | 10.11 | 49 | .000*** | 0.25 |

*** $p < .001$.

Curiosity was first measured in 2022. Results of a paired-samples *t*-test showed a significant increase in cumulative participants' curiosity from pre-Academy ($M = 3.27$, $SD = 0.63$) to post-Academy ($M = 3.50$, $SD = 0.65$); $t(32) = 4.72$, $p < 0.001$, $d = 0.27$. Results are summarized in Table 22.

Table 22. Results of Independent Samples *t*-Test Comparing Cumulative Raters' Perceptions of Participants' Curiosity Before and After the Academy (33)

| | Pre-Academy | | Post-Academy | | Diff. | <i>t</i> | df | Sig. | Cohen's |
|------------|-------------|------|--------------|------|-------|----------|----|---------|----------|
| | M | SD | M | SD | | | | | <i>d</i> |
| Curiosity. | 3.27 | 0.63 | 3.50 | 0.65 | 0.23 | 4.72 | 32 | .000*** | 0.27 |

*** $p < .001$.

Leadership Knowledge, Skills, and Behaviors – Raters’ Perspectives

Cumulative Results of External Raters

A series of independent samples *t*-tests were conducted to compare the cumulative raters’ perspective on Academy participants’ transformational leadership behaviors. Five hundred four raters have completed pre-Academy assessments and 461 raters have completed post-Academy assessments. Results showed a significant increase from pre-Academy ($M = 3.07$, $SD = 0.49$) to post-Academy ($M = 3.31$, $SD = 0.42$); $t(963) = 8.39$, $p < 0.001$, $d = .46$. Results are summarized in Table 23. The cumulated raters assessed a significant increase in all four transformational leadership behaviors.

Table 23. *Results of Independent Samples t-Tests Comparing Cumulative Raters’ Perspectives of Participants’ Transformational Leadership Behaviors Before and After the Academy*

| Transformational Leadership Behavior | N | M | SD | <i>t</i> | df | Sig. | Cohen’s <i>d</i> |
|---|-----|------|-----|----------|-----|---------|------------------|
| Idealized Influence – Pre-Academy | 504 | 3.06 | .52 | 7.67 | 963 | .001*** | 0.48 |
| Idealized Influence – Post-Academy | 461 | 3.30 | .44 | | | | |
| Inspirational Motivation – Pre-Academy | 504 | 3.10 | .58 | 6.61 | 963 | .001*** | 0.55 |
| Inspirational Motivation – Post-Academy | 461 | 3.33 | .53 | | | | |
| Intellectual Stimulation – Pre-Academy | 504 | 3.02 | .56 | 8.10 | 963 | .001*** | 0.53 |
| Intellectual Stimulation – Post-Academy | 461 | 3.30 | .49 | | | | |
| Individual Consideration – Pre-Academy | 504 | 3.08 | .57 | 6.73 | 963 | .001*** | 0.54 |
| Individual Consideration – Post-Academy | 461 | 3.29 | .51 | | | | |
| Total Trans. Leadership – Pre-Academy | 504 | 3.07 | .49 | 8.39 | 963 | .001*** | 0.46 |
| Total Trans. Leadership – Post-Academy | 461 | 3.31 | .42 | | | | |

*** $p < .001$.

An independent samples *t*-test comparing cumulative raters’ perspectives of participants’ innovation behaviors showed a significant increase from pre-Academy ($M = 3.18$, $SD = 0.49$) to post-Academy ($M = 3.46$, $SD = 0.44$); $t(963) = 9.39$, $p < 0.001$, $d = .46$. Results are summarized in Table 24. The cumulated raters assessed a significant increase in all three champions of innovation behaviors from pre-Academy to post-Academy.

Table 24. *Results of Independent Samples t-Tests Comparing Cumulative Raters' Perspective of Participants' Champion of Innovation Behaviors Before and After the Academy*

| Champion of Innovation Behavior | N | M | SD | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|--|-----|------|-----|----------|-----|---------|------------------|
| Enthusiasm & Confidence – Pre-Academy | 504 | 3.06 | .67 | 7.46 | 963 | .001*** | 0.61 |
| Enthusiasm & Confidence – Post-Academy | 461 | 3.36 | .54 | | | | |
| Persistence – Pre-Academy | 504 | 3.23 | .51 | 7.62 | 963 | .001*** | 0.50 |
| Persistence – Post-Academy | 461 | 3.48 | .50 | | | | |
| Right People Involved – Pre-Academy | 504 | 3.26 | .51 | 9.64 | 963 | .001*** | 0.49 |
| Right People Involved – Post-Academy | 461 | 3.56 | .46 | | | | |
| Total Champ. of Innov. – Pre-Academy | 504 | 3.18 | .49 | 9.00 | 963 | .001*** | 0.46 |
| Total Champ. of Innov. – Post-Academy | 461 | 3.46 | .43 | | | | |

*** $p < .001$.

An independent samples *t*-test comparing raters' perspectives on water issues knowledge showed a significant increase pre-Academy ($M = 3.19$, $SD = 0.65$) to post-Academy ($M = 3.56$, $SD = 0.49$); $t(963) = 9.97$, $p < 0.001$, $d = .58$. Results are summarized in Table 25. Raters also assessed a significant increase in cumulative participants' engagement with Nebraska water policy issues from pre-Academy ($M = 3.04$, $SD = 0.75$) to post-Academy ($M = 3.43$, $SD = 0.60$); $t(963) = 8.92$, $p < 0.001$, $d = .68$.

Table 25. *Results of Independent Samples t-Tests Comparing Cumulative Raters' Perspective of Participants' Nebraska Water Knowledge and Engagement Before and After the Academy*

| Water Knowledge & Engagement | N | M | SD | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|------------------------------|-----|------|-----|----------|-----|---------|------------------|
| Awareness – Pre-Academy | 504 | 3.19 | .65 | 9.97 | 963 | .001*** | 0.58 |
| Awareness – Post-Academy | 461 | 3.56 | .49 | | | | |
| Engagement – Pre-Academy | 504 | 3.04 | .75 | 8.92 | 963 | .001*** | 0.68 |
| Engagement – Post-Academy | 461 | 3.43 | .60 | | | | |

*** $p < .001$.

Civic Capacity was assessed for the first time in 2016. Thus, cumulative results for civic capacity from the raters' perspective represent the past seven Academy classes. Results of an independent *t*-test showed a significant increase in civic capacity from pre-Academy ($M = 2.99$, $SD = 0.63$) to post-Academy ($M = 3.34$, $SD = 0.61$); $t(668) = 7.23$, $p < 0.001$, $d = .62$. Results are summarized in Table 26. The cumulated raters assessed a significant increase in all three dimensions of civic capacity from pre-Academy to post-Academy.

Table 26. *Results of Independent Samples t-Tests Comparing Cumulative Raters' Perspective of Participants' Civic Capacity Before and After the Academy*

| Civic Capacity | N | M | SD | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|-------------------------------------|-----|------|-----|----------|-----|---------|------------------|
| Drive – Pre-Academy | 350 | 2.99 | .69 | 6.42 | 668 | .001*** | 0.68 |
| Drive – Post-Academy | 320 | 3.33 | .66 | | | | |
| Connections – Pre-Academy | 350 | 3.00 | .67 | 7.64 | 668 | .001*** | 0.64 |
| Connections – Post-Academy | 320 | 3.38 | .62 | | | | |
| Pragmatism – Pre-Academy | 350 | 2.98 | .66 | 6.34 | 668 | .001*** | 0.66 |
| Pragmatism – Post-Academy | 320 | 3.30 | .65 | | | | |
| Total Civic Capacity – Pre-Academy | 350 | 2.99 | .63 | 7.23 | 668 | .001*** | 0.62 |
| Total Civic Capacity – Post-Academy | 320 | 3.34 | .61 | | | | |

*** $p < .001$.

An independent-samples *t*-test comparing cumulative raters' perspectives of participants' entrepreneurial leadership behavior showed a significant increase from pre-Academy ($M = 3.15$, $SD = 0.57$) to post-Academy ($M = 3.38$, $SD = 0.56$; $t(962) = 6.13$, $p < 0.001$, $d = 0.57$). Results are summarized in Table 27.

Table 27. *Results of Independent Samples t-Test Comparing Cumulative Raters' Perspective of Participants' Entrepreneurial Leadership Behavior Before and After the Academy*

| Entrepreneurial Behavior | N | M | SD | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|--------------------------|-----|------|-----|----------|-----|---------|------------------|
| Pre-Academy | 503 | 3.15 | .57 | 6.13 | 962 | .001*** | 0.57 |
| Post-Academy | 461 | 3.38 | .56 | | | | |

*** $p < .001$.

Boundary spanning was assessed for the first time in 2021. Thus, cumulative results for boundary spanning from the raters' perspective represent the past three Academy classes. An independent-samples *t*-test comparing cumulative raters' perspectives of participants' boundary spanning behavior showed a significant increase from pre-Academy ($M = 3.14$, $SD = 0.44$) to post-Academy ($M = 3.45$, $SD = 0.37$; $t(293) = 6.65$, $p < 0.001$, $d = 0.41$). Results are summarized in Table 28. There was a significant increase in all six boundary spanning dimensions from pre-Academy to post-Academy.

Table 28. *Results of Independent Samples t-Tests Comparing Cumulative Raters' Perspective of Participants' Boundary Spanning Behavior Before and After the Academy*

| Civic Capacity | N | M | SD | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|--------------------------------------|-----|------|-----|----------|-----|---------|------------------|
| Trustworthiness – Pre-Academy | 149 | 3.39 | .37 | 5.65 | 293 | .001*** | 0.38 |
| Trustworthiness – Post-Academy | 146 | 3.64 | .38 | | | | |
| Autonomy – Pre-Academy | 149 | 3.01 | .58 | 5.50 | 293 | .001*** | 0.53 |
| Autonomy – Post-Academy | 146 | 3.36 | .48 | | | | |
| Authentic Leadership – Pre-Academy | 149 | 3.14 | .53 | 5.63 | 293 | .001*** | 0.49 |
| Authentic Leadership – Post-Academy | 146 | 3.45 | .44 | | | | |
| Perspective Taking – Pre-Academy | 149 | 3.13 | .52 | 5.26 | 293 | .001*** | 0.49 |
| Perspective Taking – Post-Academy | 146 | 3.43 | .46 | | | | |
| Relationship Building – Pre-Academy | 149 | 3.09 | .58 | 5.72 | 293 | .001*** | 0.55 |
| Relationship Building – Post-Academy | 146 | 3.45 | .51 | | | | |
| Science Comm – Pre-Academy | 149 | 3.07 | .60 | 4.89 | 293 | .001*** | 0.57 |
| Science Comm. – Post-Academy | 146 | 3.39 | .53 | | | | |
| Total Boundary Spanning – Pre-Acad. | 149 | 3.14 | .44 | 6.65 | 293 | .001*** | 0.41 |
| Total boundary Spanning – Post-Acad. | 146 | 3.45 | .37 | | | | |

*** $p < .001$.

Curiosity was assessed for the first time in 2022. An independent-samples *t*-test comparing cumulative raters' perspectives of participants' curiosity showed a significant increase from pre-Academy ($M = 3.44$, $SD = 0.50$) to post-Academy ($M = 3.65$, $SD = 0.42$; $t(189) = 3.19$, $p = 0.002$, $d = 0.47$). Results are summarized in Table 29.

Table 29. *Results of Independent Samples t-Test Comparing Cumulative Raters' Perspective of Participants' Curiosity Before and After the Academy*

| Curiosity | N | M | SD | <i>t</i> | df | Sig. | Cohen's <i>d</i> |
|--------------|----|------|-----|----------|-----|--------|------------------|
| Pre-Academy | 97 | 3.44 | .50 | 3.19 | 189 | .002** | 0.47 |
| Post-Academy | 94 | 3.65 | .42 | | | | |

*** $p < .001$.

Discussion

The results of the empirical analysis and the review of the session evaluations demonstrate that the Academy is meeting its objectives and is successfully developing future water leaders. Academy participants demonstrated a significant increase in their leadership knowledge, skills, and behaviors as well as the personality trait curiosity. A series of educational modules was created in 2021 to increase participants' boundary spanning abilities. An

educational module was created in 2022 to increase participants' curiosity and subsequently motivate them to engage in water policy and management. The empirical analysis showed that participants significantly increased their boundary spanning abilities. Participants also provided constructive and highly positive feedback overall. Moreover, participant concerns were addressed in subsequent sessions, and minor changes are planned for the 2023 Academy curriculum based on participants' feedback. The changes include a few new topics and presenters.

Multi-rater feedback demonstrates that others have observed an increase in Academy participants' leadership knowledge, skills, and behaviors. Results of raters' perceptions of 2023 participants' leadership knowledge, skills, and behaviors were statistically significant. Likewise, results from the cumulative perspective of raters of all 12 Academy classes were statistically significant.

Team Projects

2023 Class Projects

The goal of the class projects is interesting and inspiring projects with real-world applications. Several Academy alumni were approached for potential topics that could have real world implications for water management or education. Three topics with descriptive information were compiled and presented to Academy participants. Participants ranked topics by preference. Subsequently, three teams were formed comprised of participants who had ranked the topic as their first or second choice. The first team identified possible additional opportunities beyond dredging Lake Babcock to rehabilitate the lake. This information will be shared with Loup Power District. The second team prioritized areas in Nebraska that should have wellhead protection delineation. This information will be shared with the Nebraska Department of Environment and Energy. The third team compiled climate data resources on the Platte River watershed. This information will be shared with Audubon Great Plains and other stakeholders.

Academy Alumni

Academy alumni are serving as water leaders in local, national, and global arenas. Several alumni have been elected to the boards of multiple Natural Resources Districts in Nebraska. Several others are planning or preparing to run for election to the boards of directors of multiple Natural Resources Districts. Other alumni are involved in local water boards and

planning committees. Academy alumni are also members of other community boards or organizations ranging from planning, community involvement, education, and church groups. Numerous alumni are engaged in local political and community organizations as employees or volunteers. Many alumni have assumed supervisory roles in their workplaces, and they credit the Academy for instilling the skills, confidence, networks, and experience they needed to advance. Examples of leadership include, but are not limited to, alumni serving as:

- Special Advisor to the Secretary of the U.S. Department of Agriculture
- State Executive Director, U.S. Department of Agriculture
- Assistant State Conservationist, U.S. Department of Agriculture
- General Manager, Natural Resources District (4)
- General Manager, Irrigation District (4)
- Assistant Manager, Natural Resources District (6)
- University Professor (2)
- University Extension (6)
- Division Head, State Department of Natural Resources (2)
- Nebraska Natural Resources Commission member (2)
- Nebraska Environmental Trust board member
- Nebraska State Irrigation Association member
- City council member
- Foundation board members (alumni are serving on a variety of non-profit boards)
- State Coordinator for a state senator
- Water round-table discussion participants and committee members who work within a Nebraska-focused water task force
- Director of a nature preserve (2)

Additionally, an Academy alumnus is an adjunct instructor of geography and water resources course at the University of Nebraska-Omaha, using knowledge gained from his experience in the Academy. Several alumni have begun volunteering at their local elementary school and at science fairs. One Academy alumnus is engaged in international water management. He facilitates resolutions to transboundary water conflict in Afghanistan, Tajikistan, and Pakistan.

The success of alumni in leadership roles demonstrates that the Academy is fulfilling its specified goals while also facilitating individual achievement. Advances in science and technology, combined with uncertain policy modifications, political challenges, population growth, and a massive evolution in consumer behaviors and expectations, have created a need for both incremental and radical innovation at local to global scales. The increasingly rapid rate of change calls for entrepreneurial leaders who can serve as champions of innovation with a focus on the future. The Academy teaches and measures these skills and abilities. Alumni are working, serving, and leading locally and globally. They are leading innovation to create change and a more positive future in areas ranging from politics to education and international water management.

Future Plans

Our analyses indicate that only minor changes in the Academy curriculum are necessary. The instructional methods are successful, and the session topics and instructors/presenters have been generally well received. The Academy planners will consider replacing a few instructors or presenters in response to numerous constructive criticisms expressed by 2023 participants. The Academy planners are also considering how to include more discussion opportunities with leadership and water experts. The rapid evolution of water issues in Nebraska requires the Academy to be proactive in the development of curriculum and the choice of instructors and presenters in future Academy programs, as well as consideration of instructors/presenters who understand principles of adult learning.

Alumni are strongly encouraged to maintain active involvement with the Academy. To wit, many alumni have served on the Academy planning team. Alumni have presented at Academy sessions and follow current activities on-line. Academy alumni are asked to update the Academy organizers about their involvement in water issues and are included in announcements from the Academy planners. The Academy has a regular newsletter and maintains a Facebook page to communicate with alumni. Furthermore, alumni are invited to attend each session in 2023. The success of the 2015 and 2018 alumni reunions and alumni feedback indicate that alumni reunions are attractive and more should be planned. Accordingly, discussions of a potential alumni reunion continue.

Summary

Eighteen participants successfully completed the 2023 Academy, bringing the total number of graduates to 186 since the inception of the program in 2011. Academy graduates have demonstrated increased transformational leadership behaviors, champion of innovation skills, water knowledge and engagement, civic capacity, entrepreneurial leadership behaviors, boundary spanning abilities, and curiosity. Alumni have emerged as leaders in their communities and beyond. The Academy continues to meet its objectives. It also continues to expand and evolve based on participant feedback and the research being conducted with participants. The success of the 12 classes of the Academy has provided a firm foundation on which to build and expand. The blending of water science and policy with leadership will continue to be of tremendous importance in the sustainable use of Nebraska's water resources and community capacity.

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Appendix I

Contributors to the 2023 Nebraska Water Leaders Academy

| Instructor | Organization | Program Title | Session |
|-----------------------|---|---|----------------|
| Brooke Mott | UNL School of Natural Resources (SNR) | Icebreaker | #1 Lincoln |
| Heather Akin | UNL Department of Agricultural Leadership, Education and Communication (ALEC) | Communicating Strategically with Public Audiences and Stakeholders | #1 Lincoln |
| Megan Burda | Nebraska Extension | Gallup Strengths Finders | #1 Lincoln |
| Frm Sen. Curt Friesen | Nebraska Unicameral | NARD involvement and broadband bill | #1 Lincoln |
| Mark Burbach | UNL School of Natural Resources (SNR) Conservation & Survey Division (CSD) | Full Range Leadership (i.e., Transformational Leadership) | #1 Lincoln |
| Mark Burbach | UNL SNR CSD | Pre-Academy Leadership Skills Assessment | #1 Lincoln |
| LeRoy Sievers | Nebraska Dept. of Natural Resources | Water Law Primer | #1 Lincoln |
| J. Michael Jess | Water Resources Engineer (former director NDNR) | River Basin Compacts & Decrees | #1 Lincoln |
| Lee Orton | Nebraska State Irrigation Association (NSIA) | Agricultural and Environmental Sciences Communication | #1 Lincoln |
| Matt Joeckel | UNL SNR CSD | Geology of Nebraska | #1 Lincoln |
| Jesse Korus | UNL SNR CSD | Hydrology of Nebraska | #1 Lincoln |
| Al Dutcher | UNL SNR | Nebraska Climate/Weather | #1 Lincoln |
| Donette Noble | Fort Hays State University | Communicating Across Diverse Perspectives | #2 Kearney |
| Brad Edgerton | Frenchman Cambridge Irrigation District | Panel – Platte/Republican Interface | #2 Kearney |
| Jason Farnsworth | Platte River Recovery Implementation Project | Panel – Platte/Republican Interface | #2 Kearney |
| Devin Brundage | Central Nebraska Public Power & Irrigation Dist. | Panel – Platte/Republican Interface | #2 Kearney |
| Malinda Henry | Platte River Recovery Implementation Project | Panel – Platte/Republican Interface | #2 Kearney |
| Ann Dimmitt | Twin Platte NRD | Panel – Platte/Republican Interface | #2 Kearney |
| Kyle Shepard | NCORPE | Panel – Platte/Republican Interface | #2 Kearney |
| Melissa Mosier | Audubon Great Plains | Panel – Platte/Republican Interface | #2 Kearney |
| Brooke Mott | UNL SNR | The Curious Leader | #2 Kearney |
| Mark Burbach | UNL SNR CSD | Boundary Spanning Skills for Effective Stakeholder Engagement | #2 Kearney |
| Chuck Burr | Nebraska Extension | Testing Ag Production Solutions | #2 Kearney |
| Korey Hobza | Loup Power District | Loup River to Loup Power District | #2 Kearney |
| Mike Zelensky | City of Omaha | Omaha’s Combined Sewer Overflow Project | #3 Omaha |
| Jake Hansen | City of Omaha | Omaha’s Combined Sewer Overflow Project | #3 Omaha |
| Sean Guinzy | Metropolitan Utilities District, Directot | Platte West Water Production Facility | #3 Omaha |
| Roger Groen | Metropolitan Utilities District, Plant Foreman | Platte West Water Production Facility | #3 Omaha |
| Ray Hutzell | City of Omaha | Missouri River Wastewater Treatment Plant | #3 Omaha |
| Paul Woodward | Papio-Missouri NRD | Water Quality Projects and Flood Control Levees | #3 Omaha |
| Jin Theiler | City of Omaha | | |
| Jesse Bell | UNMC | <i>Water, Climate, and Health in Nebraska</i> | #3 Omaha |
| Connie Reimers-Hild | Wild Innovation | Leading Like a Futurist | #3 Omaha |
| Jennifer Schellpeper | Nebraska Department of Natural Resources | Legislation Supporting Integrated Water Resource Management in Nebraska: Bringing Together Prior Appropriation and Correlative Water Rights | #3 Omaha |
| Steven Wolf | Fides Munusque Fidele | Risk Communication | #3 Omaha |

| | | | |
|-------------------------|--|---|------------------|
| Cheryl Burkhart-Kriesel | Nebraska Extension, Panhandle Research & Extension Center (PREC) | Understanding the Community Context | #4 Scottsbluff |
| Mark Burbach | UNL SNR CSD | Exploring How the Community Capitals Framework Can be Utilized by a Community – The Case of the Gering-Ft. Laramie Irrigation Tunnel Collapse | #4 Scottsbluff |
| Lee Orton | Nebraska State Irrigation Association (NSIA) | Nebraska’s Public Power & Irrigation Districts History | #4 Scottsbluff |
| J. Michael Jess | Water Resources Engineer (former director NDNR) | Historical Development of Integrated Water System (Newlands projects) and Political Structures in the North Platte River Valley | #4 Scottsbluff |
| Rick Miller | Pathfinder Irrigation District | North Platte Reservoir & Irrigation System | #4 Scottsbluff |
| Kevin Adams | Farmers Irrigation District | North Platte Reservoir & Irrigation System | #4 Scottsbluff |
| Renata Rimšaitė | Daugherty Water for Food Global Institute | Water Markets in Practice: Lessons from the Customers | #4 Scottsbluff |
| Pat O’Brien | Upper Niobrara-White NRD | Nebraska’s Natural Resources Districts – A History and Examination of Programs and Projects/Upper Niobrara White NRD Projects & Programs | #4 Scottsbluff |
| Galen Wittrock | South Platte NRD | South Platte NRD Projects and Programs | #4 Scottsbluff |
| Scott Schaneman | North Platte NRD | North Platte NRD Projects and Programs | #4 Scottsbluff |
| Thad Kuntz | Adaptive Resources, Inc. | Nebraska Panhandle Water Policy Research and Modeling Projects | #4 Scottsbluff |
| Mike Murphy | Middle Niobrara NRD | NRD Public and Youth Education | #5 Valentine |
| Megan Grimes | Nebraska Association of Resources Districts | NRD Public and Youth Education | #5 Valentine |
| Scott Snell | Orton Management | Panel Moderator | #5 Valentine |
| Mike Murphy | Middle Niobrara NRD | Panel - The Niobrara River Valley, The Past, The Present, The Future | #5 Valentine |
| Travis Connot | National Park Service, Niobrara National Scenic River | Panel - The Niobrara River Valley, The Past, The Present, The Future | #5 Valentine |
| Wade Ellwanger | Lower Niobrara-White NRD | Panel - The Niobrara River Valley, The Past, The Present, The Future | #5 Valentine |
| Jen Corman | Northern Prairies Land Trust | Panel - The Niobrara River Valley, The Past, The Present, The Future | #5 Valentine |
| Megan Grimes | Nebraska Association of Resources Districts | Panel - The Niobrara River Valley, The Past, The Present, The Future | #5 Valentine |
| Scott Snell | Orton Management | Panel Moderator | #5 Valentine |
| LeRoy Sievers | Nebraska Dept. of Natural Resources | Nebraska Natural Resources Commission Funding Programs | #5 Valentine |
| Mark Burbach | UNL SNR CSD | Niobrara National Wild & Scenic River – Outstanding Remarkable Values | #5 Valentine |
| Matt Joeckel | UNL SNR CSD | Niobrara River Valley Geology | #5 Valentine |
| Regina Osburn | Cherry County Tourism & Valentine Visitor’s Center | Tourism in the Middle Niobrara River Region | #5 Valentine |
| Laura Nagengast | Nebraska Extension | Water’s Relationship to Public Health | #5 Valentine |
| Annette Sudbeck | Lewis & Clark NRD | Panel - Bazile Groundwater Management Area Program | #5 Valentine |
| Amy Timmerman | Nebraska Extension | Panel - Bazile Groundwater Management Area Program | #5 Valentine |
| Wade Ellwanger | Lower Niobrara-White NRD | Panel - Bazile Groundwater Management Area Program | #5 Valentine |
| Mark Burbach | UNL SNR CSD | Post-Academy Leadership Assessment | #6 Nebraska City |
| Mark Burbach | UNL SNR CSD | Personal Empowerment – Engaging Your Leadership Capacity | #6 Nebraska City |
| Joan Scheel | USDA Rural Development | Panel - Your Future as Leaders | #6 Nebraska City |
| Matt Lukasiewicz | Loup Basin Reclamation District | Panel - Your Future as Leaders | #6 Nebraska City |
| Marie Krausnick | Upper Big Blue NRD | Panel - Your Future as Leaders | #6 Nebraska City |
| Scott Snell | Orton Management | Panel Moderator | #6 Nebraska City |
| Gerald Mestl | Nebraska Game & Parks Commission | The Missouri River | #6 Nebraska City |

| | | | |
|--------------|---|--|------------------|
| Susan Burton | UNL Department of Agricultural Leadership, Education and Communication (ALEC) | Tapping Your Motivation to Serve | #6 Kearney |
| John Chapo | Lincoln Children's Zoo | Community Involvement and Leadership Opportunities | #6 Nebraska City |
| Tom Knutson | Loup Basin Reclamation District (Formerly) | Post-Academy Opportunities | #6 Nebraska City |
| Mark Burbach | UNL SNR CSD | Post-Academy Leadership Assessment | #6 Nebraska City |
| Mark Burbach | UNL SNR CSD | Session Facilitation | All Sessions |

Appendix II

Session Evaluations

Nebraska Water Leaders Academy

January 19 & 20, 2023

Lincoln, NE

15 Responses

Please provide two responses for each statement below. In the section labeled “BEFORE this Academy Session” circle the answer that best describes you BEFORE this session of the Water Leaders Academy.

Then, in the shaded section labeled “Now, at the END of this Academy Session” circle the answer that best describes you NOW that you finished this session of the Water Leaders Academy.

| BEFORE this Academy Session | | | | | | Now, at the END of this Academy Session | | | | | End Mean | % Change |
|-----------------------------|----------|-----------|-----------|------------|---|---|----------|-----------|-----------|------------|----------|----------|
| Not at all | A little | Some what | Very Much | Completely | | Not at all | A little | Some what | Very Much | Completely | | |
| 1(1) | 2(4) | 3(7) | 4(3) | 5 | 1) I understand how to communicate strategically with public audiences and stakeholders | 1 | 2 | 3(5) | 4(10) | 5 | 3.67 | 31 |
| 1(2) | 2(6) | 3(6) | 4(1) | 5 | 2) I understand how to apply my Strengths to be a better leader | 1 | 2 | 3(8) | 4(7) | 5 | 3.47 | 44 |
| 1(3) | 2(5) | 3(5) | 4(1) | 5 | 3) I understand Nebraska’s legislature and how it works | 1 | 2 | 3(8) | 4(6) | 5 | 3.43 | 50 |
| 1(5) | 2(7) | 3(3) | 4 | 5 | 4) I understand Full Range Leadership | 1 | 2 | 3(6) | 4(9) | 5 | 3.60 | 93 |
| 1(3) | 2(4) | 3(6) | 4(2) | 5 | 5) I understand Nebraska’s water laws | 1 | 2(2) | 3(3) | 4(9) | 5(1) | 3.40 | 38 |
| 1(6) | 2(2) | 3(5) | 4(2) | 5 | 6) I understand Nebraska’s compacts and interstate obligations | 1 | 2(2) | 3(3) | 4(9) | 5(1) | 3.33 | 52 |
| 1(2) | 2(2) | 3(4) | 4(8) | 5 | 7) I understand the importance of agricultural and environmental sciences communication | 1 | 2 | 3(1) | 4(12) | 5(2) | 4.07 | 22 |
| 1(1) | 2(6) | 3(8) | 4 | 5 | 8) I understand Nebraska’s geology | 1 | 2 | 3(6) | 4(9) | 5 | 3.60 | 46 |
| 1(1) | 2(4) | 3(9) | 4(1) | 5 | 9) I understand Nebraska’s groundwater hydrology | 1 | 2 | 3(8) | 4(7) | 5 | 3.47 | 30 |
| 1 | 2(7) | 3(7) | 4(1) | 5 | 10) I understand Nebraska’s climate and weather | 1 | 2(2) | 3(6) | 4(7) | 5 | 3.33 | 28 |

(Please turn over...)

10) What is Your Main Takeaway from the first session of the Nebraska Water Leaders Academy?

- Great foundation for Nebraska's Natural resources. Good work with leadership/strengths. Always good to self reflect.
- I'm honestly reassured w/ my management/ leadership skills. I learned a lot too but it seems I was implementing @ least "good" practices already. That's good news cause then I can see the mental space to focus on improving knowledge base.
- I really enjoyed Matt's talk. I feel like I learned that most useful content from it. As a person who relatively lacks knowledge about aquifers, it really helped. Great presentation!
- Water/water producers cross all boundaries. Solutions will require input & cooperation from all parties.
- We have a real good diversity of smart people working on the issues of water.
- We need to educate the public more about the basics. I'm finding that even members of our own industry aren't aware of all the issues, all stakeholders, etc.
- Water issues are complicated.
(Water) it's all interconnected & takes many different people/professionals to address the issues.
- There are many unique characteristics to Nebraska's Natural Resources, its legislature and its policies governing the usage. And, management of its Natural Resources. These Natural Resource problems in the state must be approached w/ these characteristics in mind.
- Water is connected. Water is people.
- Issues are complex; progress will take team work.
- Water is a People issue. Water in NE is Complex.
- Just how complicated Nebraska's water systems are and how much cooperation is going to be needed to protect it.
- Water is a people issue, and a critical specially for public/environmental health & safety.
- How H2O impacts all levels of society and must not take it for granted.
- Communication Strategies to be effective messenger (sic).
Leadership types and qualities to benefit staff.
- The 4 I's of leadership and how to communicate better with my desired audience.

11) List one specific skill or concept that you learned during this session, and describe how you will apply it in your work.

- Different leadership styles.
- The "strengths." – cause I went to focus on the opposite and - improving my weaknesses.
- The strengths session was really applicable & something I can begin utilizing immediately. 😊
- Define your 'public', determine your goal, define your message, pick an appropriate channel.
A large part of my job is educating 'the public' so these guidelines will be applied daily. This talk re-energized my brain towards public education.
- The subtle differences of very good leadership.

- The climate factors that are influencing our precip & temp. It's good to see because it's easy to think of trends based on 1-5 year observations. Will be considering this when making estimate @ work.
- Learning more about hydraulic head & groundwater moves was helpful & informative. Important information for and NRD employee.
- The interrelation between surface & groundwater.
- Full range leadership was a new concept with familiar components. Definitely applies to managing a team.
- Communication-
 - Farmers are looking for concrete information, delivered simply; make your story relevant to your audience-
 - Don't restate misinformation in your refutation (sic)
- I will refocus on the importance of Geology with regards to Nebraska's Water.
- The different leadership styles and how to more effectly (sic) lead by using them.
- How best to utilize my top 5 strengths for effective presentation and public speaking.
- Communication to our customers for conservation and sustainability issues. Using audience, goal, message, and media.
- Better communication. I will use science communication to target my audience (farmers or board members) and try to get them more involved in the decisions that affect them.

12) Additional Ideas, Comments, Suggestions, or Questions.

- Slightly longer breaks. If we have to grab a drink. Use the RR, then there's no time to visit w/ presenters.
- To be honest, the water laws/compacts presentations were less straight forward then the others. Maybe it was because it was the end of the day, but was somewhat difficult to understand. I'm definitely going to need to review the slides.
- In the legislative presentation, the man seemed to give a lot of his political opinions. And some of the data he claimed (like 98% of farms aren't contributing to nitrate problems) just isn't true.
- Appreciated the hard sciences on the 2nd day, great information for more in-depth understanding.
- More collaboration/involved discussion surrounding the presentation. Interaction would maintain engagement and cut down on some of the time spent just listening. It would also help identify how these topics can be identified and applied in specific areas.
 - Loved the hummus.
 - I learned a lot from Mike Jess and Matt Joeckel.
- Well organized, and put together presentation. Enjoyed All of it!
- I wouldn't mind an additional 10 to 15 min. for a walk break. The breaks were nice, but they were times/limited to bathroom and engaging w/ the group.
- Very good program and well presented information.

Nebraska Water Leaders Academy

March 23 & 24, 2023

Kearney, NE

18 Responses

Please provide two responses for each statement below. In the section labeled “BEFORE this Academy Session” circle the answer that best describes you BEFORE this session of the Water Leaders Academy.

Then, in the shaded section labeled “Now, at the END of this Academy Session” circle the answer that best describes you NOW that you finished this session of the Water Leaders Academy.

| BEFORE this Academy Session | | | | | | Now, at the END of this Academy Session | | | | | End Mean | % Change |
|-----------------------------|----------|-----------|-----------|------------|--|---|----------|-----------|-----------|------------|----------|----------|
| Not at all | A little | Some what | Very Much | Completely | | Not at all | A little | Some what | Very Much | Completely | | |
| 1(1) | 2(5) | 3(10) | 4(2) | 5 | 1) I understand how to communicate across diverse perspectives. | 1 | 2 | 3(4) | 4(13) | 5(1) | 3.83 | 41 |
| 1(10) | 2(4) | 3(2) | 4(1) | 5(1) | 2) I understand Audubon’s protecting environmental priorities on the Platte River. | 1 | 2(1) | 3(8) | 4(8) | 5(1) | 3.50 | 91 |
| 1(6) | 2(4) | 3(7) | 4(1) | 5 | 3) I understand issues surrounding the Platte/Republican interface. | 1 | 2(2) | 3(7) | 4(9) | 5 | 3.39 | 56 |
| 1(2) | 2(4) | 3(8) | 4(4) | 5 | 4) I understand how to be a curious leader | 1 | 2 | 3(1) | 4(13) | 5(4) | 4.17 | 50 |
| 1(7) | 2(3) | 3(6) | 4(2) | 5 | 5) I can recognize and apply boundary spanner skills in collaborative resource management. | 1 | 2 | 3(2) | 4(12) | 5(4) | 4.17 | 92 |
| 1(9) | 2(4) | 3(3) | 4(2) | 5 | 6) I understand the Nebraska TAPS program. | 1 | 2 | 3(2) | 4(12) | 5(4) | 4.16 | 118 |
| 1(10) | 2(4) | 3(3) | 4(1) | 5 | 7) I understand Loup Power District’s hydropower operation. | 1 | 2 | 3(7) | 4(11) | 5 | 3.61 | 110 |

(Please turn over...)

8) What is Your Main Takeaway from this session of the Nebraska Water Leaders Academy?

- The leadership inventory's (sic) "all" indicate I'd be the best leader ever? It doesn't work out that way in practicality - particularly inter-personally. I'm wondering what I'm missing. 😊
- Diff players work w water from diff. angles (power, quantity, supply, quality Ag, urban, recreation, habitat, endangered species) flood hazard mitigation. i.e., stakeholders.
- TAPS was interesting & Loup Power.
- Boundary Spanning is an excellent tool for leadership.
- I really liked boundary spanning discussion.
- The multifaceted nature of many existing & future issues in natural resources.
- Conflict can open a space for conversation that can lead to win-win solutions.
- The importance of working with different stakeholders & keeping different perspectives in mind.
- The UNL TAPS program is a hidden gem. Didn't know about it before but it's great.
- Highlighted the different issues of water across the Platte & Republican "farmers' needs w/ water.
- Being curious is a good thing and helps make you a better leader.
- I really enjoyed the leadership training by all presenters. TAPS and Loup River.
- Really enjoyed and gained a lot of knowledge from the panel discussion issues facing our water leaders Central & Western NE with "compacts", etc.

9) List one specific skill or concept that you learned during this session, and describe how you will apply it in your work.

- Boundary Scanning – internally first. Test, then apply ext.
- Trustworthiness linking w Perspective Taking, as a transplant who has moved around central NE for 10 yrs – building trusting is demonstrated by honesty, transparency, integrity, & being dependable & reliable.
- Boundary Spanning – Apply to my Team & Try to Include multiple techniques.
- Going to work w/ Melissa on VESPR.
- Landscape design process & use it to churn out & approach problems.
- Ask questions – this is important for leaders and boundary spanners. Asking questions shows your (sic) are open to new ideas, willing to be vulnerable, and care about other's input.
- I really like the boundary spanner discussion.
I feel like I can be a better leader/ communicator moving forward.
- Communicating across diverse perspectives & how we can use that to leverage diversity. Will be using it during wide ranging stakeholder meetings.
- Embrace curiosity as a tool to build relationships across all aspects of professional life.

- Boundary Spanning. I will use this to become a more effective communicator.
- Curious – leadership/Boundary Spanning.
- Diversity and conflict make us unique and allow for compromise in all our Leadership roles. I will also take my curiosity as a positive quality for both myself and my co-workers.

10) Additional Ideas, Comments, Suggestions, or Questions.

- Have dinner before cranes.
Have lunch last day!
- Thank you! I am really enjoying this experience.
- Great Session!
- Learning from other states & counties sounds like an excellent element for water leaders 2.0.
- Be curious. Not judgemental (sic) ... Barbeque Sauce.
- With the panel – a map with locations or a background in the biography page would increase understanding of the relationships of the panelists and the issue(s) they face. Why is it remarkable that people working on the Platte will work with the Republican?
- Really liked the panel format to compare various backgrounds and interests in our profession.
Enjoyed the crane viewing, thanks for the opportunity!

Nebraska Water Leaders Academy

May 18-19, 2023

Omaha, NE

16 Responses

Please provide two responses for each statement below. In the section labeled “BEFORE this Academy Session” circle the answer that best describes you BEFORE this session of the Water Leaders Academy.

Then, in the shaded section labeled “Now, at the END of this Academy Session” circle the answer that best describes you NOW that you finished this session of the Water Leaders Academy.

| BEFORE this Academy Session | | | | | | Now, at the END of this Academy Session | | | | | End Mean | % Change |
|-----------------------------|----------|-----------|-----------|------------|--|---|----------|-----------|-----------|------------|----------|----------|
| Not at all | A little | Some what | Very Much | Completely | | Not at all | A little | Some what | Very Much | Completely | | |
| 1(9) | 2(4) | 3(1) | 4(1) | 5(1) | 1) I understand Metropolitan Utilities District (MUD) drinking water treatment plants in Omaha. | 1 | 2 | 3(2) | 4(13) | 5(1) | 3.94 | 117 |
| 1(6) | 2(3) | 3(4) | 4(3) | 5 | 2) I understand Papio-Missouri NRD flood control projects (Reservoirs & Levees) in the Omaha metro area | 1 | 2 | 3(7) | 4(8) | 5(1) | 3.63 | 61 |
| 1(6) | 2(7) | 3 | 4(3) | 5 | 3) I understand the City of Omaha’s wastewater treatment plants in Omaha. | 1 | 2(1) | 3(7) | 4(7) | 5(1) | 3.50 | 75 |
| 1(8) | 2(5) | 3(2) | 4(1) | 5 | 4) I understand Omaha’s CSO Program | 1 | 2 | 3(8) | 4(7) | 5(1) | 3.56 | 104 |
| 1(1) | 2(6) | 3(6) | 4(3) | 5 | 5) I understand the relationship btn water, climate, and health in Nebraska | 1 | 2 | 3(4) | 4(10) | 5(2) | 3.88 | 44 |
| 1(1) | 2(7) | 3(7) | 4 | 5 | 6) I understand how to lead innovation for personal and organizational change | 1 | 2 | 3(5) | 4(10) | 5(1) | 3.75 | 67 |
| 1(1) | 2(5) | 3(9) | 4(1) | 5 | 7) I understand Integrated Water Resource Management in Nebraska, bringing together prior appropriation and correlative water rights | 1 | 2 | 3(4) | 4(11) | 5(1) | 3.81 | 45 |
| 1(3) | 2(2) | 3(9) | 4(2) | 5 | 8) I understand risk communication | 1 | 2(1) | 3 | 4(14) | 5(1) | 3.94 | 50 |

(Please turn over...)

9) What is Your Main Takeaway from this session of the Nebraska Water Leaders Academy?

- 1% of MUD West H2O is for consumption.
- Inmates run the asylum.
- We have massively missed the mark in communicating w/ the public about the world of H2O.
- MUD treatment plant was impressively maintained. Despite being 15 years old, many parts looked like they were new. That's good to see considering people consume their product.
- Vast water resources closer to the MS river – overlapping needs (recreation, flood control, water quality).
- An incredible amount of planning and infrastructure is necessary to manage water resources for a big city. I was especially impressed with the waste water system.
- Water in a metropolitan area has many challenging facets to consider. Great perspective on water and the journey it takes here in Omaha.
- Water is an issue for everybody, all the time. Urban, rural. Intake, outake, etc.
- We are the ones who can make changes needed to protect groundwater for the future. We need to change our mind set in order to change the future.
- Innovation does not need to wait for necessity.
- Being on the LPR drought consortium, it was WILDLY beneficial to see/hear about MUD.
- Pleased to learn of the future planning that went into Omaha water treatment (expected to handle capacity increases to 2090). The CSO project is enormous!
- Want to use risk communication to collaborate with consumers on conservation.
- I really enjoyed the tours of Omaha facilities & the futurist & risk communication talks were great.
- I should focus on being, thinking like, & managing like a futurist.

10) List one specific skill or concept that you learned during this session, and describe how you will apply it in your work.

- When looking at a study – look at how the data was acquired & how its being used to portray conclusion.
- Risk communication – we deal with infrastructure that always has an associated risk. Communicating that to the public can be difficult, so I'll always take advice on how to do better.
- The compassionate, technical approach – the G4!
- The session on leading like a futurist was new and interesting to me. I will pay more attention to trends and think about how they might impact natural resources management.
- Futuristic leading/thinking – I am going to utilize these concepts in my work/home/family life. There are opportunities everywhere!
- Risk communication is a great concept! A great presentation.
- Risk communication. This can be used to better communicate the risks & health effects of nitrates. I can use it to better understand & deliver the message to the intended audience.

- Use graphics to communicate. Boil communication down to 3 key points.
- Taking the worksheet about futurism to my team
- I'll keep proper risk communication in mind.
- Nitrate health concerns, concentrate efforts to investigate, educate, control, monitor, and remove these contaminants.
- How to communicate more effectively when presenting sensitive or controversial information. I'll dive into this more on my own & incorporate into future communications with my board & public.
- Risk communication – Dealing with NRD's & constituents.

11) Additional Ideas, Comments, Suggestions, or Questions.

- Have dinner at dinner time! Snacks & coffee in morning, not pop & chips.
- It seems reasonable that our tuition include a box lunch on Fridays! Moreover, one complimentary beverage on Thursday instead of two would cover a box lunch. Long drive home for many of us and lunch is a reasonable expectation.
- Follow Platte West Plant tour by going to Florence to show difference in how you produce the same product by different practices.
- Thank you!
- This was a great session. Thank you.
- Jennifer's presentation was like drinking from a fire hose.
- Would love to hear more from Connie on Futurists.
- Very curious to learn more from Jesse.
- Loved the MUD tour, have implementation questions for flood control projects.
- Steven's presentation was hard to follow.
- Earlier dinner, longer breaks.
- Lunch on Fridays. Is anybody listening?
- Great session on both tour and presentations.
- Everything was pretty great!
- Thanks for the steak dinner!
- I really enjoyed the talk on risk communication & the tour.

Nebraska Water Leaders Academy

July 13 & 14, 2023

Scottsbluff, NE

15 Responses

Please provide two responses for each statement below. In the section labeled “BEFORE this Academy Session” circle the answer that best describes you BEFORE this session of the Water Leaders Academy.

Then, in the shaded section labeled “Now, at the END of this Academy Session” circle the answer that best describes you NOW that you finished this session of the Water Leaders Academy.

| BEFORE this Academy Session | | | | | | Now, at the END of this Academy Session | | | | | End Mean | % Change |
|-----------------------------|----------|-----------|-----------|------------|--|---|----------|-----------|-----------|------------|----------|----------|
| Not at all | A little | Some what | Very Much | Completely | | Not at all | A little | Some what | Very Much | Completely | | |
| 1(8) | 2(3) | 3(4) | 4 | 5 | 1) I understand the community capitals framework. | 1 | 2 | 3(7) | 4(8) | 5 | 3.53 | 104 |
| 1(1) | 2(8) | 3(4) | 4(1) | 5 | 2) I understand the history of Nebraska’s irrigation and public power districts | 1 | 2 | 3(6) | 4(9) | 5 | 3.60 | 64 |
| 1(5) | 2(9) | 3 | 4(1) | 5 | 3) I understand the development of the integrated water system in the North Platte River Basin. | 1 | 2 | 3(7) | 4(8) | 5 | 3.53 | 96 |
| 1(6) | 2(5) | 3(4) | 4 | 5 | 4) I understand water markets. | 1 | 2 | 3(2) | 4(9) | 5(4) | 3.13 | 68 |
| 1 | 2(8) | 3(4) | 4(3) | 5 | 5) I understand the history of the NRD system. | 1 | 2 | 3(2) | 4(12) | 5(1) | 3.93 | 48 |
| 1(4) | 2(8) | 3(2) | 4(1) | 5 | 6) I understand current NRD programs and projects in the Panhandle. | 1 | 2(1) | 3(5) | 4(8) | 5(1) | 3.47 | 73 |
| 1(10) | 2(4) | 3(1) | 4 | 5 | 7) I understand modeling projects that Thad Kuntz & Adaptive Resources have been involved with in the Panhandle. | 1 | 2 | 3(9) | 4(6) | 5 | 3.40 | 143 |

(Please turn over...)

8) What is Your Main Takeaway from this session of the Nebraska Water Leaders Academy?

- The surface water infrastructure is incredible for its age, and vital to the local economy and communities.
- Surface water & ground water are regulated separately.
- There are many different types of capital (social, political, etc.).
- How important surface water is & the roll (sic) it plays to western Nebraska.
- Water is life! It's economic, cultural, environmental & more. Without water, communities disappear.
- That our irrigation infrastructure is very old, & some of it has not been maintained as well as it should have been.
- Surface water is very interesting & critical to the Valley – need to conserve the system.
- The need for return flows. It impedes willingness to improve system efficiency but is perceived as necessary. It suggests a need for updated compacts/legislation.
- I'm finding different perspectives interesting. Also finding out how some just worry about me than (sic) looking at the whole picture to make their decisions.
- Water issues in the west are much more focused on quantity & quality groundwater with a dependence on surface water from Wyoming/Colorado.
- Very great session, knowledge of western NE surface & groundwater impacts, strategies, projects, and resources was amazing to be educated and immersed in throughout session. NRD history was very enlightening. Tour was also well thought out and put together!
- I appreciated the information on different kinds of capital. When trying to accomplish a project, we tend to focus on whether or not there is sufficient financial capital but do not consider if there is enough social capital to complete the project.
- I really enjoyed the educational content of this session. I knew little about irrigation, especially out here. So, I learned a lot & speakers were great. So my main takeaway are all we learned about irrigation.
- The surface water system needs to be more efficient but compacts, decrees, laws, regulations, multi-state and multi-agency issues, etc. are major obstructions.

9) List one specific skill or concept that you learned during this session, and describe how you will apply it in your work.

- Tying the various types of capital to advance ideas, projects, and goals.
- Water market – how is it set up in an area, how has it been utilized, what does the NRD foresee in the future, what value could be realized for municipality, NRD, and conservation efforts.
- Water markets are very Complex. I'm going to learn a lot more about water transfers.
- I learned more about the complexity of groundwater transfers & water markets. During our current rule & regulation review at XXNRD, I'll incorporate this information when discussing the rules with my Board of Directors.
- Interactions btwn people – social capital to more projects.
- The underlying needs (or sometimes wants) of water markets. Ultimately it impacts all of us & the industry as a whole.

- My job is making sure the water is able to be delivered so probably won't change much.
- Cooperation management between multiple entities.
- Really look at water quantity and quality in my area and job, along with more coordination w/ my local NRD.
- I learned that water management is essential to life (and livelihood) in the western area of Nebraska. Water is valuable and therefore political. The history of water management in this area is complex and has racial overtones.
- I learned about water markets that I also had no idea about. It's nice to get some basic foundational knowledge. She was a great presenter. I don't know exactly how I'll apply it but it's good to have that in my back pocket in case it comes up which I'm assuming it eventually will.

10) Additional Ideas, Comments, Suggestions, or Questions.

- The tour was excellent!
- Loved the tour & talks from Dr. Rimsaite & the NRD managers. I made plans earlier for lunch on Friday but good to know lunch will be provided on Fridays!
- The length of some presentations makes it difficult to stay engaged – small group work, discussions, breaks, reading would help w/ this.
- Keep up the great work w/ this session, topics, etc. Would like more insight into water markets.
- Some speakers were hard to hear in this room (Lee, Dr. Rimsaite) and would have benefitted from a microphone. I would have appreciated more information about the impact of tribal groups/native peoples of this constructed irrigation system. I liked visiting the top of Scotts bluff and the NRD greenhouse very much.
- I loved being able to go out and have a field trip but the bus rides did get pretty long. After so much driving here/home all the time on the bus was a struggle for me and others too. Perhaps somehow you could structure the trip w/ a little less driving (maybe take out a visit or something). I'd really like to see a Native American perspective (speaker) for this Academy.
- Thanks for lunch on Friday!
- The tour was very informative.
- Thanks for the snacks and lunches.

Nebraska Water Leaders Academy

September 14-15, 2023

Valentine, NE

15 Responses

Please provide two responses for each statement below. In the section labeled “BEFORE this Academy Session” circle the answer that best describes you BEFORE this session of the Water Leaders Academy.

Then, in the shaded section labeled “Now, at the END of this Academy Session” circle the answer that best describes you NOW that you finished this session of the Water Leaders Academy.

| BEFORE this Academy Session | | | | | | Now, at the END of this Academy Session | | | | | End Mean | % Change |
|-----------------------------|----------|-----------|-----------|------------|--|---|----------|-----------|-----------|------------|----------|----------|
| Not at all | A little | Some what | Very Much | Completely | | Not at all | A little | Some what | Very Much | Completely | | |
| 1 | 2(6) | 3(6) | 4(2) | 5(1) | 1) I understand NRD public and youth education | 1 | 2 | 3(5) | 4(9) | 5(1) | 3.73 | 30 |
| 1(7) | 2(5) | 3(3) | 4 | 5 | 2) I understand management issues associated with Niobrara River stakeholders (panel discussion) | 1 | 2(1) | 3(8) | 4(6) | 5 | 3.33 | 92 |
| 1(6) | 2(5) | 3(3) | 4(1) | 5 | 3) I understand Natural Resources Commission funding programs | 1 | 2(3) | 3(6) | 4(6) | 5 | 3.20 | 66 |
| 1(6) | 2(6) | 3(3) | 4 | 5 | 4) I can identify several ‘Outstanding Remarkable Values’ associated with the Niobrara River | 1 | 2(1) | 3(2) | 4(9) | 5(3) | 3.93 | 119 |
| 1(6) | 2(9) | 3 | 4 | 5 | 5) I understand the Niobrara River Valley Geology | 1 | 2(1) | 3(8) | 4(6) | 5 | 3.33 | 108 |
| 1(6) | 2(6) | 3(3) | 4 | 5 | 6) I understand water-related tourism in the Middle Niobrara River Region | 1 | 2 | 3(7) | 4(7) | 5(1) | 3.60 | 100 |
| 1 | 2(1) | 3(5) | 4(7) | 5(1) | 7) I understand water’s relationship with public health | 1 | 2 | 3(1) | 4(10) | 5(4) | 4.20 | 26 |
| 1(6) | 2(3) | 3(3) | 4(2) | 5(1) | 8) I understand the Bazile Groundwater Management Area Project (panel discussion) | 1 | 2(1) | 3(7) | 4(6) | 5(1) | 3.47 | 53 |
| 1(7) | 2(7) | 3 | 4 | 5(1) | 9) I understand creative collaboration exercises for natural resources management | 1 | 2(2) | 3(7) | 4(5) | 5(1) | 3.33 | 92 |

(Please turn over)

10) What is Your Main Takeaway from this session of the Nebraska Water Leaders Academy?

- Loved the float down the river & learning more about the geology of the area.
- Water related qualities (stream geomorphology, quality, sed. Transport) can all be tied to rel. simple laws that have complex and variable expression.
- The importance of natural resources to the economy.
- Combatting high nitrate problems isn't easy as people may think with new technology a solution may be found but in the mean time a course to eliminate pollution needs to be worked on.
- The future is bleak, change is hard, keep asking the hard questions.
- Loved the geology section & it's relationship to the unique boreal ecosystem in Cherry Co. Love that Cherry Co., is growing in popularity & tourism. The Bazile presentation was very informative. Great to keep focusing on nitrates. Would like to see soil C, topsoil, more NE expert conversations/presentations.
- We need to address the nitrate problems in ground water.
- Nebraska and specially the Niobrara River valley is so diverse and amazing and should be protected and conserved by all.
- The Niobrara River is much more diverse & attractive for tourism than I previously anticipated. Also, the non-ag economic benefit is surprisingly large.
- Knowledge for the river ecology – amazing place having only been to the Platte River.
- How important the Nio (sic) River is.
- All of the demands on the Niobrara River and Sandhills area – competing needs and so many suggested solutions.
- The Niobrara is an amazing treasure in Neb.
- The interactive nature of the float trip was awesome. Excellent way to learn about ORVs and geology of the Scenic River!

11) List one specific skill or concept that you learned during this session, and describe how you will apply it in your work.

- I Learned more about funding sources & mechanisms, allowing me to utilize these funding sources in my own NRD.
- Basic concepts – wide ranging application – keep these in mind in my job.
- The geology of the Niobrara Basin. It will help me in management decisions regarding the river.
- How to think outside the box. Find new ways to approach old problems.
- Unplug. Slow down. Listen.
- Utilizing the panel discussion of colleagues who have history w/ one another creates a balanced conversation and models how charged/controversial conversations take place. Will employ in stakeholder engagement w/ community, town council, and internally with public works.
- Definitely will review and leverage all funding mechanisms available and learned during this session to update, upgrade, and protect our plant & wellfield water resources.

- How to kayak. May never use it at work, but it could be a fun hobby.
- The NRD edu. Programs.
- Creative collaboration with colleagues to generate new ideas.
- The 10 essentials of Public Health Svcs.

12) Additional Ideas, Comments, Suggestions, or Questions.

- I think the interactive presentations like the public health one are much more engaging. I really feel it is difficult to maintain focus though 1-1.5 hour presentations where you are being talked at. Also, the interactive ones give us a chance to learn from other water leaders.
- It was a good week. Thank You.
- Long drive home with a late start and still having to stop to eat.
- My room was great at Harmony Inn, love that we could walk to the sessions @ NRD.
- Really enjoyed the panel discussion and their openness and honesty in discussing this area and their passion to protect it for generations to come.
- Be on River for a day & do some session on a sandbar. Same as before – need a lunch on the last day or dismiss an hour earlier!
- I would've liked to be on the river a little longer.
- Truly a Great Session!
- What's up with Friday lunches? Can we get a refund on tuition for having to buy Friday lunches? Or, end before noon! I guess I will take that into consideration with all the recruiting I' expected to do.

Nebraska Water Leaders Academy

November 16-17, 2023

Nebraska City, NE (16 responses)

Please provide two responses for each statement below. In the sections labeled “BEFORE this Academy Session” and “BEFORE the Academy” circle the answer that best describes you BEFORE you participated in this session of the Academy and the Water Leaders Academy. Then, in the sections labeled “Now, at the END of the Academy Session” and “Now, at the END of this Academy Session” circle the answer that best describes you NOW that we have finished this session and the entire Academy.

Congratulations on your accomplishment!

| BEFORE this Academy Session | | | | | | Now, at the END of this Academy Session | | | | | End Mean | % Change |
|-----------------------------|----------|-----------|-----------|------------|---|---|----------|-----------|-----------|------------|----------|----------|
| Not at all | A little | Some what | Very Much | Completely | | Not at all | A little | Some what | Very Much | Completely | | |
| 1 | 2(8) | 3(5) | 4(3) | 5 | 1) I understand my future as a leader - getting involved with or serving on public boards or service organizations (panel discussion) | 1 | 2 | 3(4) | 4(10) | 5(2) | 3.88 | 44 |
| 1(8) | 2(6) | 3(2) | 4 | 5 | 2) I understand the management history of the Missouri River | 1 | 2 | 3(5) | 4(11) | 5 | 3.69 | 127 |
| 1(3) | 2(5) | 3(5) | 4(3) | 5 | 3) I understand how to remain motivated and influence others to effectively implement lessons learned in the Academy | 1 | 2 | 3(4) | 4(11) | 5(1) | 3.81 | 53 |
| 1(3) | 2(3) | 3(9) | 4(1) | 5 | 4) I understand how to get involved in community leadership opportunities | 1 | 2 | 3(5) | 4(10) | 5(1) | 3.75 | 50 |
| 1(3) | 2(5) | 3(7) | 4(1) | 5 | 5) I understand how to engage my leadership capacity to leverage what I learned and the networks I developed in the Academy | 1 | 2 | 3(1) | 4(12) | 5(3) | 4.13 | 74 |
| BEFORE the Academy | | | | | | Now, at the END of the Academy | | | | | | |
| 1(2) | 2(8) | 3(6) | 4 | 5 | 6) I use my boundary spanner skills in collaborations | 1 | 2(1) | 3(3) | 4(11) | 5(1) | 3.63 | 61 |
| 1(3) | 2(7) | 3(4) | 4(2) | 5 | 7) I practice transformational leadership in my life | 1 | 2 | 3(4) | 4(11) | 5(1) | 3.81 | 65 |
| 1(1) | 2(5) | 3(6) | 4(4) | 5 | 8) I can participate well in conversations that include differing perspectives or viewpoints | 1 | 2 | 3(5) | 4(9) | 5(2) | 3.81 | 36 |
| 1(1) | 2(6) | 3(6) | 4(3) | 5 | 9) I can lead personal or organizational innovation | 1 | 2 | 3(5) | 4(9) | 5(2) | 3.81 | 42 |
| 1 | 2(8) | 3(5) | 4(2) | 5(1) | 10) I am involved in water policy issues | 1 | 2 | 3(1) | 4(11) | 5(1) | 3.81 | 36 |
| 1(1) | 2(5) | 3(10) | 4 | 5 | 11) I am a water leader | 1 | 2 | 3(1) | 4(8) | 5(7) | 4.38 | 71 |

(Please turn over)

12) What is Your Main Takeaway from this session?

- Maintain relationships developed.
- Leadership can take many forms. Though I don't have a staff, I am a thought leader. I can empower others with information through my work.
- Knowing the whole story makes a big difference in how you view a problem.
- Susan, talk on leadership expectations & styles.
- We are all leaders in many different ways and will continue to grow in these roles. History of the Missouri River was very informative and eye opening as well as information on serving on boards.
- NE species, biodiversity. The importance of mentoring/having a mentor. Teamwork/group project execution. Relationships.
- Learning how boards function & the necessity of them.
- Learning about board membership to how to get involved.
- Needing to get involved in other leadership opportunities outside of my work. Community boards, volunteering, etc.
- What drives my motivation and how to keep that motivation.
- We have covered a large amount of content over the past year.
- The board session was really interesting.
- I need to be proactive in my leadership.
- Learning about different aspects of water and issues with those.

13) List one specific skill or concept that you learned during this session, and describe how you will apply it in your life/work.

- The importance of mentorship – will continue to work on this as a Team Leader
- The session on the Missouri River was fascinating. It makes me wonder where else we masters of the universe think we have the answer to how we can “fix” nature and tame it to our will and instead create Huge problems for ourselves and other species. Mother Nature Always Wins.
- Motivation – what motivates me, those around me. If they're arguing they care.
- Leadership fundamentals: motivation goals.
- I will seek opportunities to serve on boards.
- To appreciate those that I work and collaborate with.
- I learned how to serve on a board & what is expected as a board member, TBD if I'll serve on a board in the future, but I believe I will.
- To be creative when trying to motivate individuals.
- Channelization of the Mo. River and its impact on the surrounding area and flood risk will change the way I look at my work and future projects.
- The affiliation concept in Susan's talk. Knowing what I need/want in my job.
- To listen before judgement (sic).

14) What is Your Main Takeaway from the overall Nebraska Water Leaders Academy?

- The networking was excellent, the learning opportunity related to both water resources and leadership was tremendous. I would highly recommend.

- I didn't realize Nebraska's natural resources concerns were so varied across the state. There are some amazing and unusual landscapes in this state - - it's not just all corn. Working for an NRD means / tends to get tunnel vision about the issues of our district. This program has been a great opportunity to get a bigger picture view of this work.
- The big picture. You took me out of my comfort zone, area of expertise, and brought real people to discuss their perspectives. Each decision has far-reaching impacts and we are all more connected than we realize.
- Great opportunity to learn history on decision making regarding water resources.
- Really appreciate the overall view of the state and its water quality and quantity challenges! The relationships built are not only networking professionally but I consider them friendships.
- To continue recognizing what energizes me w/in.
- Wholistic, well planned overview of how important it is to be motivated & take a real interest in issues facing our state.
- How many organizations are involved in different aspects of H₂O that are trying to meet the same goals – clean H₂O & sustainable environment.
- Leaders are needed throughout the state to champion water & natural resources issues. Learned a lot about different projects across the state.
- Water is a very complex system. Leadership skills take time to develop.
- The power of connections and collaboration combined w/vision.
- The network I've built.
- It's incredibly important to be a water leader, and to help shape & influence future water leaders.
- Glad to see people concerned about water issues.

15) Suggestions to the Academy for Future Consideration (i.e., topics, presenters, activities, information to share, etc.)?

- Flood risk reduction, modeling for flood risk reduction, dam safety, Upper Prairie Silver Moores (JEO) – CPNRD, NPPD's system, NRCS WFPO program (Allen Gehring)
- Scott – The word 'grooming' has a negative connotation that makes it uncomfortable to use. I think supported, guided, or mentored would be better word choices. I presented the creativity exercise in Valentine. If the exercise is deemed beneficial, I recommend getting Elizabeth Magilton to come present it to the group, as it is her area of specialty. The MUD tour was really cool! The irrigation bus tour in Wyoming & Scottsbluff was not very interesting/could have been much shorter.
- Tour wastewater (Omaha was under construction). Speak to Leadership Tomorrow – Jessica Hendricks for possible presentations.
- Focal point: How can the Cohort of future WLA help create/provide change to water efforts? Need for vision for water resources in NE.
- Wetland protection, restoration, and implementation.
- NE Endangered Species work (Chadron, Game & Parks) (aquatic, wetland, upland, mammals, birds). "Creating Allies"/existing allies – Ag + Climate
Δ
- There should be a unit or field trip to the Republican basin. Talking about the compact & history of these issues.
- Focus the content for each day to one theme i.e., leadership, contaminants, water qual., etc. Sometimes the days feel scattered. Also more discussion & engagement.
- Indigenous perspective.
- More public involvement/participation. Try to leverage political opportunities.

