



Water Sustainability Report

April 1, 2025

Bow Creek Watershed Project, Lewis & Clark NRD

Application # 10079

Progress up to April 1, 2025

March 30, 2025

Since the last annual report in April 2024, the Bow Creek Watershed Project (BCWP) has accomplished many tasks.

A summer field day focusing on BMPs and environmental benefits to the watershed was held in Constance, NE on July 25th. The event, attended by more than 50 people, featured Darrel Oswald from Burleigh County Conservation District, Cassidy Wessel, Nebraska Game and Parks Commission, and Jeff Steffen and Matt Kathol local producers, as speakers. One key activity to improving water quality is to get producers out into their fields with a shovel so attendees were challenged to “Soil Their Undies”. This challenge is a USDA campaign to promote soil health ([Soil Your Undies Challenge | Natural Resources Conservation Service](#)). White cotton men’s underwear were available to all attendees to bury in the field and then dig up in the fall.



Left: 2024 attendees received “undies” for the Soil Your Undies Challenge.

Right: Jason Theile’s boys were excited to dig up their undies to see how healthy their soil was.

Drone seeding of cover crops and drone field spraying demonstrations were conducted by local agronomy businesses. In addition to the classroom type meeting and drone demonstrations, a visit to Jeff Steffen’s field of mixed species forages crops turned into a pivotal moment for some local ag professionals. Soil moisture probes were given away as door prizes and one attendee asked how to use the probe while out in the field. This particular dryland field had not received excessive moisture. As Jeff Steffen demonstrated how to use the moisture probe by pushing it into the soil, where the massive forage crop had been grazed by cattle, the face of a local ag professional showed shock. The soil moisture probe sunk into the soil three feet. The ag professional proclaimed, “well that is not supposed to happen!”. As the group moved into the ungrazed forage crop where the crop was continuing to “use” moisture the soil moisture probe entered the soil even deeper. The ag professional shook his head and started pushing the probe

Middle: 2024 Field Day attendees in the forage crops field.

Right: Attendees inspect cover crop seed disbursement after the drone flew over the field with a multi-species mix.



into different areas of the field, finding the same results. The experience of producers and ag professionals being in the field taught lessons only hands-on activities could. Impressing the ag professional will have a ripple effect on the local ag community as he shares his experience.

In addition to the field day two demonstration farms conducted compost trials in the watershed. One farm planted a forage crop in the field and grazed it with livestock this winter. Corn will be planted in the field in 2025 and treatments of compost tea will be evaluated for benefits to the corn including yield, profit and nutrient content. Another farmer evaluated compost extract sprayed on the 2024 corn crop. He also used two different nitrogen application rates. Data has been collected and is in the process of statistical analysis supported by UNL professionals.

TA curriculum outline has been developed and individual lessons are being created. Input from farmers, industry and UNL personnel has been received and incorporated into the program. Once lesson maps are completed a meeting of the curriculum advisory team will be scheduled.

UNL Capstone students visited the watershed for three days in August. They visited with farmers, conducted field and pasture assessments and learned the importance of Bow Creek to the local community. In December the students returned to Hartington and presented four technical assistance reports to two local farm operations. These reports covered topics such as crop rotation, cedar management and grazing plan suggestions, equipment upgrades, and succession planning.



Above: Students learn about grassland health from Ben Beckman, UNL Extension Beef Specialist and cedar control methods from Cassidy Wessel, Conservation Biologist with Nebraska Game and Parks. Right: A student assesses cropland health.



BCWP joined with the Bazile Groundwater Management Area (BGMA) Project to host the Northeast Nebraska Ag Conference (NNAC) in Norfolk, NE. This event was held at the Northeast Community College Lifelong Learning Center. Over 340 people registered to attend the no-cost event and 281 people attended. Featured speakers included Rick Clark, Jason Mauck, Mitch Hora, Roy Thompson, Paul Jasa and other local and regional farmers, industry leaders and educators. In addition to the opening and closing

sessions, speakers conducted concurrent breakout sessions. In total the event offered 17 hours of educational content. This replaced the BCWP winter meeting's 12 hours of education content. Co-hosts were LENRD, LNNRD, and UENRD as part of the BGMA. Other agencies that helped facilitate the event by planning or taking an active role in the event included, USDA NRCS, UNL, UNL Extension, local farmers, Nebraska Game and Parks Commission, NDEE, and NeDNR. The event also received sponsorships from many ag businesses.



Above Left: Becky Ravenkamp, BCWP Coordinator and the four local farmer panelists, Jeff Steffen, LCNRD, Junior Pfanstiel, LENRD, Art Tanderup UENRD, and Curt Morrow LNNRD close out the day with a “will it work here” session. Above Right: A packed house attends the 2024 NNAC!

A mentor group meeting was held Feb. 25th at Jeff Steffen's shop. Eleven mentor group members gathered to share information they learned at winter conferences and discuss ideas they are planning on implementing this growing season. Positive feedback from the NNAC was also shared with the consensus of continuing the event. The next mentor meeting will be in March or April to look at the LCNRD grain drill.

One farmer completed a soil evaluation on his field. This information is being used in to create a Comprehensive Soil Health Management Plan with the BCWP coordinator.

Four farmers were sent order forms for BCWP conservation signs. These signs will highlight the conservation efforts of local farms and the benefits to Bow Creek.

Five Best Management Practice contracts have been executed totaling 943.05 acres for the following practices: 535 acres of cover crops, 86.45 acres of CRP and 130 acres of grazing management in the priority area and 23.6 acres of cover crops and 160 acres of grazing management in the rest of the watershed project area. Due to the IRA Act Now Funding pool many of the 2024 EQIP contracts in the BCWP area were historically underserved producers who received 90% cost-share on practices or other producers who were paid at 75% or 90% cost-share and did not qualify for BCWP payments because we cannot pay over 90% recognized rates and our current program only pays 75% on single practices. Two septic upgrade contracts have been completed.

Activities Planned from now until next Annual Report April 1, 2026

Working with the other three NRDs that hosted the NNAC, the creation of a platform to continue the conversations with NNAC attendees is being planned. The intent is to expand opportunities for farmers and ranchers to connect to each other, both with others that face similar challenges in Northeast Nebraska as well as with farmers and rancher outside of Northeast Nebraska that may use practices that would be considered novel here. Working with Bazile Groundwater Management Area Coordinator, LENRD, LNNRD, and UENRD, USDA NRCS, UNL, UNL Extension, local farmers, Nebraska Game and Parks Commission, NDEE, and NeDNR the 2025 Northeast Nebraska Ag Conference will be planned and hosted.

One soil health management plan has been initiated with a local farmer in the BCWP with an anticipated completion date of June. This plan will include corn/soybean rotation, cover crops and summer annual forages grazed by cattle. It will also include pasture management. This is one of the most complex scenarios used in the watershed. Although the plan is complex is it not out of the ordinary. This plan will be submitted to NRCS for approval and can be used for NRCS program planning by the farmer. One more SHMP will be completed in 2025.

BCWP contracts requirements will be re-evaluated and offered to eligible producers. Currently producers are required to have a contract with NRCS, FSA, NSWCP or NGPC. USDA NRCS funding and payment rates have changed and NRCS is expecting to fund a very limited amount of contracts in the BCWP area.

The UNL Capstone students will visit the Bow Creek Watershed again in August 2025.

BCWP will plan and organize a day-trip through northeast Nebraska for mentors and farmers to visit innovative farms in the area. Partners will include NeDNR, other NRDs and ag businesses.

BCWP will plan a 3-day bus trip for mentors and farmers to explore innovative conservation practices and expand personal support networks. Partners will include NeDNR, other NRDs and ag businesses.

LCNRD purchased a 30-ft CrustBuster AllPlant drill for use in the watershed for cover crops, small grain crops and other alternative crops. The drill is scheduled to be delivered March 24th. BCWP anticipates the drill to be used on 1500 acres in 2025.

The Water Quality Management Plan will be updated in 2025.

Anticipated Cashflow for remainder of the project

In year two of the grant \$24,088.55 has been expended from the grant. This is less than originally budgeted. Other grant funds were exhausted before billing to WSF started. Now that those grants are completed more expenses will be billed to the WSF. LCNRD will reevaluate and work with WSF to determine new guidelines for BMP practice payments to account for the low number of NRCS contracts being approved. A majority if not all the WSF budgeted funds are expected to be expended by the end of the grant agreement.

Updating the Water Quality Management Plan (WQMP) was originally scheduled for 2023 inventory of the watershed has started but has not been completed. The WQMP will be updated in 2025 and the \$20,000 budgeted for that will be expended.

BMP payments to support NRCS EQIP contracts are expected to be less than the \$43,333 budgeted. NSWCP contract may be an opportunity to contract conservation on additional acres.

UNL Capstone Student Visit is expected to bill between \$3,000 and \$5,000 in 2025.

Likelihood that benefits projected in application #10079 will be realized:

There is a high likelihood that benefits projected in application #10079 will be realized.

At this point the project is on track to achieve the benefits projected in the application which include:

- Increase producer knowledge about environmental and agronomic benefits of BMPs
- Increase producer confidence in successfully implementing BMPs
- Increase producer networks of knowledge, resources, and technical assistance for BMP implementation
- BCWP will continue demonstration farms and host local education events including field days and workshops
- Facilitate mentoring groups to support successful adoption of BMPs
- Meet with up to 60 producers to discuss the BCWP incentive and education program
- Develop two soil health management plans with producers in the BCWP area
- Develop a soil health training curriculum for producers, crop advisors, agronomists, and other agriculture professionals.
- Incentive and education payment contracts will be offered to increase BMP implementation on 5,000 acres.