

## **Methods and Resources**

### **Goal 1: Ensure nitrogen fertilizer recommendations are agronomically, economically, and environmentally appropriate for Nebraska producers.**

Nitrogen fertilizer recommendations aim to balance crop needs with responsible resource management. Ensuring that those who provide nitrogen recommendations are properly educated is essential for making fertilizer decisions that are agronomically sound, economically efficient, and environmentally appropriate, especially in high NRD phase areas and Wellhead Protection Areas.

#### **Action Item:**

- Create a nitrogen management ~~certification~~ education program for fertilizer salespersons or advisors who make nitrogen fertilizer recommendations within two years.
- Include nitrogen management training for Nebraska certified crop advisors (CCAs) as continuing education units (CEUs) within two years.
- Incentivize producers applying commercial nitrogen within NRD Phase II, III, or IV areas and Wellhead Protection Areas to submit a nitrogen application plan to the local NRD. The plan must be created with a certified nitrogen advisor. Consider whether nitrogen application plans shall be required.

#### **Metrics for Success:**

- Number of certified advisors.
- Number of nitrogen management plans signed off on by a certified advisor.
- All fields using commercial nitrogen in an NRD Phase II, III, or IV, or Wellhead Protection Area have a certified nitrogen management plan submitted to the NRD before nitrogen is applied.

### **Goal 2: Incentivize producers to increase the percentage of nitrogen that is applied in season versus out of season to improve overall nitrogen use efficiency.**

Increasing the percentage of nitrogen applied in-season, rather than out of seasons is critical for improving overall nitrogen use efficiency. This targeted timing not only supports better crop growth and higher yield potential but also lowers input costs by reducing the

need for excess application. Shifting a greater share of nitrogen applications to in-season strengthens both farm profitability and soil and water health.

**Action Items:**

- Increase the number of pivots outfitted for fertigation by offering cost share dollars to producers in NRD Phase II, III, or IV areas and Wellhead Protection Areas within five years. Cost considerations include pumps, tanks, and controls.
- ~~Limit~~ **Promote reduction of** fall application of commercial nitrogen considering current UNL nitrogen recommendations (UNL Extension [NebGuide G2365](#), Dec. 2024) **and opportunities for reducing overall input cost**. Start with NRD Phase II, III, or IV areas and Wellhead Protection Areas. ~~Short term 100% compliance starting January 1, 2028.~~
- Encourage NRD boards to review their current requirements for fall nitrogen recommendations, particularly in phase areas with increasing nitrate levels.

**Metrics for Success:**

- Ten percent increase in pivots outfitted for fertigation by January 1, 2028.
- Twenty percent increase in pivots outfitted for fertigation by January 1, 2030.
- Percent of producers in NRD Phase II, III, or IV, and Wellhead Protection Areas applying commercial fertilizer in accordance with UNL recommendations.

**Goal 3: Increase adoption of sensor- and model-based nitrogen recommendation technology, such as Sentinel Ag, Adapt-N, or similar technologies.**

Adopting sensor- and model-based nitrogen recommendation technologies provide real-time or field-specific insights into crop nitrogen status, soil conditions, and expected yield potential, enabling producers to tailor applications more precisely. By improving timing and placement, producers can enhance nitrogen use efficiency and reduce losses to groundwater and surface water.

**Action Items:**

- Incentivize producers to use these technologies in at least one field in any NRD Phase II, III, or IV area or Wellhead Protection Area.

**Metrics for Success:**

- Numbers of new adopters.

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- Document use of these technologies in NRD Phase II, III, or IV areas and Wellhead Protection Areas and see 25% annual growth.

### **Goal 4: Increase adoption of soil health practices which will allow producers to increase nutrient cycling and reduce overall nitrogen application rates over time. Improved soil health will also maximize water infiltration and crop utilization while limiting runoff.**

Promoting the adoption of soil health practices enables producers to enhance nutrient cycling, reducing the need for high nitrogen application rates. Healthier soils improve water infiltration, optimize nutrient availability for crops, and minimize nutrient runoff and leaching. By investing in healthy soil practices, producers can achieve more efficient and sustainable crop production.

#### **Action Items:**

- Create incentives to promote soil health practices. Soil health practices are meant to accomplish one or more of four core principles for improving soil health: (1) minimize soil disturbance, (2) maximize the presence of a living root system, (3) maximize soil cover, (4) maximize biodiversity. For more information see: <https://www.farmers.gov/conservation/soil-health>.
- ~~<https://nebraskastrategicagcoalition.org/>~~ ~~Add soil health website link~~

#### **Metrics for Success:**

- Increase in acres with cover crops.
- Decrease in acres with full or conservation tillage.
- Increase in acres with sampled manure or compost applied.
- Number of producer to producer engagement opportunities.

### **Goal 5: Educate Nebraska producers on nitrogen fertilizer and irrigation best management practices to limit nitrate leaching to groundwater.**

Continued education for Nebraska producers on nitrogen fertilizer and irrigation best management practices is important in protecting groundwater quality, specifically in NRD phase areas and Wellhead Protection Areas with increasing nitrate levels. By increasing awareness and understanding of proper nitrogen application rates, timing, and methods,

as well as efficient irrigation strategies, producers can minimize nitrate leaching into groundwater.

**Action Items:**

- Within three years, provide all producers in NRD Phase II, III, or IV areas and Wellhead Protection Areas with education on nitrogen best management practices including: Use of inhibitors, in season application, reduced rates, technology-based recommendations (models & remote sensing).
- Within three years, provide all producers in NRD Phase II, III, or IV areas and Wellhead Protection Areas with education on irrigation best management practices including: water meters; soil moisture probes (incorporate incentives e.g., incentive paid to the grower for up to 2 soil moisture probes); irrigation modeling, ET monitoring, and other options.

**Metrics for Success:**

- Number of producers educated.
- Number of irrigation improvements made including number of added water meters, soil moisture probes, modeling or ET monitoring tools.
- Percentage of nitrogen management plan acres including the following: Nitrification inhibitor, in season application, lower application rates than in prior years, advanced technology-based recommendation.

## **Nitrate Legacy and Drinking Water Access**

### **Goal 6: Develop consistent education, marketing, and outreach materials related to water quality, quantity, and public health for use across the state.**

Developing a consistent, statewide education, marketing, and outreach materials will help Nebraskans understand key issues related to water quality, quantity, and public health, including nitrate contamination. Uniform materials and messaging ensure that communities receive clear, accurate information about safe water practices, potential health risks, and strategies to reduce nitrate levels in drinking water. This coordinated approach supports public awareness, encourages responsible water use and nutrient management, and leverages ongoing statewide efforts to protect both water resources and public health for the near and long term.

#### **Action Items:**

- Within six months, develop strategy for education materials to ensure consistent messaging is used throughout the state.
- Within 12 months, develop marketing and outreach materials for water quality, quantity, and public health with an emphasis on vulnerable areas and populations including but not limited to rural areas, newborns, children, and older populations. Public awareness activities may include public service announcements, ads, information kits and brochures, and promoted social media campaigns.
- Coordinate efforts with health care providers, schools, [banks](#), home health practitioners, UNMC, UNL, NRDs, DHHS, community water systems, etc.

#### **Metrics for Success:**

- Number of materials distributed.
- Review materials, distribution lists, and list of agency partners no less than annually.

### **Goal 7: Provide support and resources to public and privately owned drinking water wells to ensure safe and reliable drinking water for Nebraskans.**

Ensuring safe and reliable drinking water for all Nebraskans requires a coordinated, proactive approach that supports both public and privately owned wells. By integrating

existing water planning efforts, strengthening community engagement, and expanding technical assistance, the state can better identify risks, address contamination concerns, and improve long-term water reliability. Enhanced data use and stronger partnerships with nutrient management staff will help protect vulnerable recharge areas and support informed decision-making. Continued efforts to connect well owners, communities, NRDs, and state agencies with resources will safeguard public health and promote sustainable drinking water management practices across the state.

**Action Items:**

- Leverage and integrate existing water planning efforts (source water, wellhead protection, integrated management plans, and watershed plans) to create community driven stakeholder groups that inform and educate residents on the connection between drinking water quality and public health.
- Provide resources for ongoing annual sample collection, analysis, and interpretation of lab results for domestic well users.
- Utilize data and tools to proactively support community water systems.
- Build upon existing state and federal resources to establish Source Water Protection and Wellhead Protection Area Coordinator positions (nutrient management) that collaborate with NRDs and DWEE to provide technical assistance and guidance on working agricultural lands that intersect with areas of recharge for public water supply wells.
- Identify NRDs with budgeted and hired nutrient management staff and support continued funding of these positions. Develop a report on NRDs without nutrient management staff, including estimated funding needs and opportunities for shared staffing across adjacent NRDs.
- Provide funding for NRDs nutrient management staff, with targeted support for community Wellhead Protection Areas. Annually report nutrient management practices adopted by producers and the associated acres, and review findings with community leaders and the public.
- Implement nutrient management plans for every producer, ~~with and summarize the plans for annual reporting to communities on the locations, acres, and conservation practices being implemented through such plans.~~

**Metrics for Success:**

- Number of communities engaged in water planning efforts.
- Number of domestic wells sampled annually.
- Number of communities with established Wellhead Protection Areas.
- Number of NRD nutrient management staff.

**Goal 8: Expand rural water systems and regionalization of water systems.**

Regionalization of water systems is a tool for those communities that do not have enough resources to build and maintain water treatment systems. By combining water systems economy in scale can be realized and management efforts can be focused on maintaining high quality source water for those communities. The development of regional water system will likely be a foundation for the expansion/development of future rural water systems.

**Action Items:**

- DWEE shall identify potential water system regionalization opportunities and report on findings. Survey all Nebraska communities and NRDs for potential water system regionalization. Include identification of communities needing support and identify potential water systems that could potentially provide potable water.
- Evaluate regionalization opportunities for potential State Revolving Loan Funds and other funding opportunities. Identify loan and loan forgiveness conditions.
- Evaluate opportunities for sustainable funding for drinking water regionalization, including assistance with collecting water quality data and understanding regional water quality trends.

**Metrics for Success:**

- Complete survey and reporting by DWEE within 24 months.
- Complete annual survey of communities and NRDs identified to have potential water system regionalization to determine status and needs.
- Completion of water system regionalization for those communities requesting financial support.

## Water Conservation and Quantity

### **Goal 9: Expand water measurement across the state for groundwater and surface water.**

Expanding water measurement is important for sustainable water management in Nebraska. The Task Force recommends beginning with voluntary participation supported by cost-share incentives, followed by mandatory requirements if desired outcomes are not met. Equally as important is educating water users on how to interpret and apply this measurement data, including benchmarking and informed decision-making to optimize water use. Existing measurement efforts will be leveraged to maximize efficiency, collaboration, and informed decision-making.

#### **Action Items:**

- Establish a tiered cost-share program that incentivizes voluntary **metering measurement** for both groundwater and surface water, ~~followed by mandatory requirements if desired behavioral changes are not achieved and defined metrics are not met by 2030~~. The program should offer higher cost-share rates initially, with the share decreasing over time. Address surface water **metering measurement** separately, considering differences in how surface water is measured.
- Create a recommendation for best management practices for measurement programs. This may include a list of approved devices and may consider installation and maintenance details. Such specifications could be modeled after existing rules and policy documents from NRDs who have metering requirements in place.
- The Task Force recommends integrating measurement data within the benchmarking capability of Producer Connect ~~or similar NRD databases~~. The water use data should be reported at the NRD level for meaningful local insights, while the State (DWEE) should receive only aggregate information to ensure that individual producer data cannot be identified. When establishing reporting requirements, data privacy concerns must be considered.
- Develop education for producers and agronomists on water measurement data, including how to use the data to better producer production and practices and recognizing that one-on-one interactions often produce more impactful results.
- Explore opportunities to share and leverage existing water-use data collected by pivot manufacturers. This includes identifying what data is already available and evaluating how it could support statewide water-management and reporting efforts for water use.

#### **Metrics for Success:**

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- Number of new measurement devices implemented.
- Percent of statewide producers with water measurement in place.

### **Goal 10: Develop strategies to support large water users and continued economic growth in the State.**

Water-intensive industries often serve as critical drivers of local and regional economies throughout the state, but demand can place pressure on water supplies. By implementing proactive planning and coordination, policymakers and stakeholders can support economic development while ensuring water availability for generations to come.

#### **Action Items:**

- Improve coordination between State Department of Economic Development, Department of Water, Energy, and Environment, Natural Resources Districts, [Power and Irrigation Districts, water and energy utilities](#), ~~local~~ counties and municipalities for siting of new industries.
- Support NRDs in establishing a more consistent messaging regarding “large water users” statewide, while allowing for regional variability as necessary. Facilitate resource sharing and continued dialogue among NRDs [and surface water stakeholders](#) – some of which [may include statutory requirements and](#) already have existing approaches established that could be used as an example.
- [Develop public facing portal for new industries to assess water availability and requirements.](#)
- [Convene a group of Nebraska water experts, surface and groundwater managers, to review and reevaluate existing water laws that allow for \(or might hinder\) continued economic growth.](#)

#### **Metrics for Success:**

- Review coordination efforts considering statewide priorities no less than annually.
- Launch public facing portal within 18 months.

### **Goal 11: Expand water storage opportunities and management of water consumption.**

Expanding water storage opportunities and improving the management of water consumption are essential strategies for enhancing water sustainability. By investing in

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new and existing reservoirs, aquifer recharge systems, underground storage, and other retention projects, the State can better capture and retain water during periods of surplus for use during droughts or high-demand periods. Education and outreach is also important, helping stakeholders understand the benefits of these water projects.

### **Action Items:**

- Identify and promote existing recharge and storage projects and expand use of excess surface water flows for intentional groundwater recharge and underground storage.
- Invest in existing storage and recharge systems and cConstruct new regional storage or recharge facilities where feasible.
- Educate public and stakeholders on water quality and quantity benefits, including, but not limited to topics such as water conservation and community water consumption; the benefits of recharge for not only quantity, but for water quality as related to nitrates in groundwater.

### **Metrics for Success:**

- Launch publicly available resources identifying storage and recharge opportunities across the state.
- Number of public and stakeholder engagements.

## **Financing and Incentives**

### **Goal 12: Establish a centralized clearinghouse to inventory and prioritize water quality and quantity projects across Nebraska.**

Establishing a centralized clearinghouse for water projects in Nebraska would create a coordinated platform to inventory, track, and prioritize initiatives addressing both water quality and quantity. By consolidating information on ongoing and proposed projects, funding opportunities, and regional needs, this would serve as a valuable resource for state agencies, local governments, and other stakeholders and improve decision-making, reduce duplication of efforts, and ensure resources are directed to high priority projects. This approach can enhance Nebraska's ability to manage its water resources sustainably, support local communities, while protecting public health.

#### **Action Items:**

- Establish a clearinghouse platform to compile, organize, and maintain information on water project needs across the state.
- Designate a point person within DWEE responsible for maintaining the clearinghouse who shall be responsible for coordinating with the Department of Economic Development to capture public and private investment opportunities.
- Use standardized criteria for prioritizing projects based on factors such as environmental impact, public health, regional needs, cost-benefit, urgency, and alignment with state and local water goals.
- Implement annual review process to update the clearinghouse, reassess priorities, and track project progress.

#### **Metrics for Success:**

- Point person assigned: Designation and onboarding completed of Water Project Coordinator or equivalent role within six months.
- Clearinghouse launch: Minimum viable product established within six months and functional clearinghouse established ~~by~~within 12 months.
- Complete annual review and maintenance of clearinghouse to best serve the State.

### **Goal 13: Identify and implement sustainable, diversified funding models to support the development, implementation, and maintenance of priority water projects in Nebraska.**

The Task Force recommends identifying and implementing diversified funding to ensure that Nebraska's water systems can meet both current and future needs efficiently and sustainably. By leveraging a mix of federal, state, local, and private resources, these funding strategies can provide consistent financial support while reducing reliance on any single source.

**Action Items:**

- DWEE point person will conduct a funding analysis to identify existing state, federal, local, and private funding sources.
- Work to secure financial resources that will assist with upgrades and improvements to ensure long-term financial stability but most importantly, to ensure that residents of the state have access to safe and reliable drinking water.
- DWEE point person will evaluate gaps, limitations, and overlap within existing funding mechanisms.
- Based on the findings from abovementioned analysis the point person will collaborate with communities, irrigation districts, NRDs, and producers, etc. The point person should also review available funding opportunities to determine when partnerships should be developed to pursue grants and other funding opportunities from the clearinghouse in **Goal 12**.
- Explore innovative funding models including but not limited to private funds (outside investments like Google, Frito Lay, Amazon, etc.); tax revenue; revolving loan funds; or bonds.

**Metrics for Success:**

- Funding analysis complete: Funding and gap analysis completed within 12 months.
- Funding alternatives identified: Identify alternatives or innovative funding models and present with pros and cons within 12 months.
- Dollars secured through legislative processes and new funding allocations (private donations and expanded grant opportunities)
- Maintain and update fund analysis and partnership opportunities with no less than annual reviews.

**Goal 14: Recommend funding priorities for ONE RED funding and other potential funding sources.**

Task Force members were surveyed to identify priorities for ONE RED funding and will continue to serve as a strategic advisory body for a portion of these funds, supporting the

implementation of Task Force recommendations that align with grant requirements. The Task Force has identified as equally important the ongoing identification of funding mechanisms and opportunities to leverage federal, state, local, and private resources for water projects in the long term.

**Action Items:**

- Develop a tiered incentive program based on ONE RED survey results (see attached results), allowing each NRD flexibility in setting scoring criteria and prioritizing practices. The program should be simple and scalable for producers and crop consultants, outline clear steps to achieve measurable outcomes, and consider alignment with existing regulatory frameworks. This includes offsetting costs or prioritizing eligibility for practices that create strategic partnerships to incentivize compliance with existing NRD regulations or other laws.
- Communicate enhanced market value to producers and crop consultants by demonstrating how operating at an improved carbon intensity (“CI”) score can create additional value for their commodities in other markets.
- Identify additional funding and incentive priorities that encourage greater adoption of innovative technologies by producers across the State.

**Metrics for Success:**

- ONE RED Incentive Program Established: Launch a minimum viable program within one year and provide incentives to producers for the 2027, 2028, and 2029 growing seasons in accordance with grant requirements.
- Continued Feedback: Provide annual feedback on funding utilization and priorities.