

Updated March 2021	Phase I	Phase II	Phase III	Phase IV
Lewis & Clark NRD	<p>Trigger: 0-5.0 ppm (Entire District)</p> <p>Requirements: 1. Monitor &amp; identify problem area</p>	<p>Trigger: 5.1-9.0 ppm, average reaches 50% of MCL for 2 years, focus area is 2 square miles of well with 50% MCL</p> <p>Requirements: 1. Additional quality monitoring 2. Public Meetings 3. Hydrogeologic studies Preventive programs (soil sampling, sealed well abandonment program, wellhead assistance program, I&amp;E, rural water distribution projects, chemigation permit and inspection program)</p>	<p>Trigger: ≥8.0 ppm, when 50% of the groundwater samples taken over a large area show an increasing trend for 3 years that reaches 90% MCL area shall be a minimum of 18 square miles (BGMA)</p> <p>Requirements: 1. Restriction of fall fertilizer applications 2. Certification by area farmers on irrigation and fertilizer management 3. Requiring BMPs (irrigation scheduling, timing of fertilizer and pesticide application and other management programs) Require annual analysis of groundwater and deep soils samples</p>	
Lower Elkhorn NRD	<p>Trigger: Areas that are not designated as either Phase 2 or Phase 3</p> <p>Requirements: 1. Persons installing new or replacement wells with a capacity greater than 50 gpm must obtain a permit from the NRD 2. The district will encourage operators to attend certification classes for fertilizer and irrigation water management, to perform deep soil testing for residual nutrients, to test irrigation water for nutrients and to submit an annual report of fertilizer application to the district. 3. The district will also encourage operators to use nitrification inhibitors or split application of nitrogen fertilizers and to not apply nitrogen fertilizer in the fall or winter.</p>	<p>Trigger: Areas that have from 50% to 90% of the MCL for a contaminant (5 to 9ppm of nitrate nitrogen), are vulnerable to groundwater contamination, have vadose zone contamination that indicates a potential for groundwater contamination, are in the recharge areas for public supply wells, or are areas with similar soil and land use conditions as an existing Phase 2 or 3 area. Phase 2 areas must be minimum of 10 square miles in size</p> <p>Requirements: 1. All Phase I requirements 2. No commercial fertilizer application between October 15 and March 15 3. All operators who apply commercial nitrogen on their fields must be certified by the district 4. Irrigation water must be tested for nitrate nitrogen once every 4 years 5. deep soil sampling (24 inches) in fields planted to continuous corn 6. submittal of annual field reports to district by March 15th of each calendar year 7. Any single application of commercial nitrogen fertilizer in excess of 80 lbs per acre is prohibited 8. Require use of district approved nitrogen inhibitor or stabilizer if applying more than 50 lbs or commercial nitrogen in any single application (after March 15) and provide documentation to verify use along with proper application rate</p>	<p>Trigger: Areas with greater than 90% of the MCL for a contaminant (9 ppm of nitrate nitrogen), are vulnerable to groundwater contamination, have vadose zone contamination that indicates a potential for groundwater contamination, are in the recharge areas for public supply wells, or have similar soil and land use conditions as an existing Phase 3 area. Phase 3 areas must be a minimum of 10 square miles in size.</p> <p>Requirements: 1. All Phase 1 &amp; 2 requirements 2. Require use of district approved nitrogen inhibitor if applying more than 50 lbs or commercial nitrogen in any single application (after March 15) 3. Any single application of commercial nitrogen fertilizer in excess of 80 lbs per acre is prohibited 4. Require deep soil sampling (24 inches) in all fields planted to corn (regardless of crop rotation) 5. Require the development and adherence to a district approved Nutrient Management Plan 6. Require annual irrigation water sampling</p>	<p>Trigger: Areas previously in Phase 3 for minimum of 5 years</p> <p>Requirements: 1. Continue all Phase 1,2,3 requirements 2. Require annual irrigation sampling 3. Require deep soil sampling (24 inches) in all fields planted to corn (regardless of crop rotation) 4. Nitrogen application rate determined in consultation with the district 5. Compliance with district approved crop rotation plan 6. Required use of cover crops 7. Provide receipts and supporting documentation to verify fertilizer purchases, application amount, and crop production history</p>
Lower Niobrara NRD	<p>Trigger: 0-5.0 ppm nitrate nitrogen (entire district)</p> <p>Requirements: 1. Require all operators/applicators of nitrogen fertilizer to maintain a Nitrogen Management Certification 2. Discourage fall and winter application of commercial fertilizer 3. Recommends water samples of all wells 4. Encourage deep soil sampling 5. Recommend nitrogen fertilizer application rate will be determined by using UNL recommendations or a crop advisor certified by the American Society of Agronomy.</p>	<p>Trigger: &gt;5.0-9.0 ppm nitrate nitrogen</p> <p>Requirements: 1. All Phase I requirements unless modified by Phase II requirements 2. Fall (Sept. 23 - Dec. 20) and winter (Dec. 21 to March 1) application of commercial nitrogen fertilizer will not be allowed until after November 1 and is discouraged until March 1 on any soil type. Exceptions will be allowed for application rates of less than 20 lbs/ac of actual nitrogen on fall or spring seeded crops. Spring (March 1 to June 20) applications of commercial fertilizer greater than 100 lbs of actual nitrogen per acre will be encouraged through split applications 3. Encourage split application of fertilizer applications of greater than 100 lbs of actual N per acre 4. Require deep soil sampling on fields of at least 40A where 50 lbs/A of N is to be applied at a minimum depth of 0-8 inches and 8-24 inches. 5. Required annual crop report: landowner/operators shall submit annually an online crop report to the district on or before December 31, (for the crop year just completed). An online form will be filed for each field at least 40 acres. 6. Residents of towns who apply fertilizer or pesticides are encouraged to attend a workshop presented by the District. 7. Animal Waste and municipality waste shall be properly applied and accounted for to avoid contamination. 8. All livestock facilities requiring a permit must be permitted by the State of Nebraska and a copy must be filed with the District. 9. Any waste applied must be properly accounted for and shall not exceed crop need. 10. Discourage spreading waste on frozen ground with more than 4% slope and on tilled ground with greater than 10% slope. 11. Waste cannot be spread on frequently flooded land, land that has been flooded more than once in a 10 year period, or in a drainage area or within 200 feet of a water body.</p>	<p>Trigger: &gt;9.0 ppm nitrate nitrogen</p> <p>Requirements: 1. All Phase I and II requirements shall remain in effect unless modified by Phase III requirements 2. Application of commercial nitrate nitrogen fertilizer is prohibited on all soils until after March 1. Exceptions will be allowed for application rates less than 20 lbs of actual nitrogen per acre on fall or spring seeded crops. Spring (March 1 to June 20) application of actual nitrogen over 100 lbs of actual nitrogen will require split application: pre-plant, starters, pivot applications, and side-dressing with no more than 50% applied as pre-plant or pre-emergent 3. If more than 50% is applied as pre-plant or pre-emergent a district approved inhibitor must be used at the manufacturer's recommended rate. The operators shall be required to furnish certification from dealer that inhibitor was used and at recommended rate, unless the total pre-plant application is 80 lbs/ac of actual nitrogen or less, in which case the 50 percent rule above would not apply, or; all applied as side dress post-emergent 4. Nitrogen applications must not exceed the district's recommendations. A copy of fertilizer receipt showing the amount of fertilizer purchased for the regulated fields will be submitted to the district with the annual report 5. An annual analysis of groundwater from each irrigation well for nitrate/nitrogen levels in parts per million with the analysis to be made by a laboratory utilizing EPA approved methods 6. The required annual deep soils analysis for residual nitrate/nitrogen on each field or 40 acre tract, whichever is smaller, with the analysis to be conducted by a laboratory participating in the University of Nebraska Soil Testing Program. Each composite sample tested must consist of a mixture from no less than one three-foot probe every 5 acres 7. If manure or sludge is used, a credit for the nitrogen in the manure or sludge must be used in the calculation for the nitrogen recommendation. A laboratory analysis must be conducted for each source of manure or sludge and attached to the report form 8. A credit for previous year's crop if the previous year was in a legume crop (beans, alfalfa, etc.) must be used in the calculation for the nitrogen recommendation for corn and sorghum 9. All crop fields in a Phase III management area are required to have a crop rotation plan submitted to the district 10. All crop fields in a Phase III management area are required to plant a cover crop to reduce nitrogen leaching OR for fields to be planted to corn or sorghum, reduce actual N applied by fifty (50) pounds per acre; applied nitrogen receipts required. 11. In order for the operator to better manage fertilizer applications and control leaching of nutrients below the root zone, continuous monitoring of the inches of groundwater applied per acre on each field shall be required 12. No groundwater shall be withdrawn from any well located within a Phase III water quality management area prior to having in place and operational a District approved flow meter 12.1. All new, different, or repaired flow meters must be reported to the District within 30 days. 13. Irrigation scheduling, rain sensors, or other approved water monitoring and control devices will be required. Water applied and method of application is required on the annual reporting form. One monitoring device per field of at least 40 acres is required. 14. If a flow meter is not in place and operational the system will be in violation and deemed to be an illegal well 15. The district requires the operator to implement and maintain two additional best management practices. These practices will also be listed on the annual crop report form 16. The district requires a water sample from irrigation wells analyzed within the last 2 years on the annual crop report form 17. Pre-cropping report requirements: Landowner/operator shall submit on or before March 1 an annual online Pre-Cropping report to the District. 18. Post Cropping Report: Landowner/operator shall submit annually online Pre-Cropping report to the District on or before March 1 (the end of the crop year just completed).</p>	
Upper Elkhorn NRD	<p>Trigger: 0-5 ppm nitrate-nitrogen (entire district)</p> <p>Requirements: 1. The person responsible for making final decisions on nitrogen fertilizer on an area larger than 1 acre and applying more than 50 pounds per acre of actual nitrogen is required to be certified by the District once every 4 years by attending an approved educational class established by the District. 2. A groundwater analysis for nitrate-nitrogen content in all registered wells used for irrigation of crops must be accomplished by the certified operator once every four (4) years. 3. All new wells constructed in a control or management area must have a permit from the local NRD prior to construction. The cost of permitting and penalties applied will be consistent with the laws of the State of Nebraska. 4. Certified operators are encouraged to set a realistic yield goal for crops where more than 50 lbs of nitrogen fertilizer per acre is to be applied. 5. Residents in communities with the UENRD who apply nitrogen fertilizer will be encouraged to attend Nitrogen Awareness Programs established by the District. 6. Fall and Winter applications of commercial nitrogen fertilizer will be discouraged on all soils. Spring applications of commercial nitrogen fertilizer greater than 100 lbs per acre will be encouraged through split applications. 7. The District encourages voluntary testing of all domestic and stock wells for nitrate-nitrogen content. 8. The District encourages a deep soil sampling analysis for nitrate-nitrogen content on each field larger than 40 acres with more than 50 lbs per acre of actual nitrogen fertilizer applied. 9. The District encourages the use of calibration monitors on all applications of fertilizers and pesticides. Proper maintenance of all fertilizer and pesticide equipment is also encouraged. 10. The District encourages producers to use alternative irrigation and fertility management technology as it becomes available to increase efficiency and protect the environment</p>	<p>Trigger: &gt;5.0-9.0 nitrate-nitrogen</p> <p>1. A continuation of Phase I activities will remain in effect unless modified or negated by Phase II requirements. 2. The District will require the certified operator to accomplish an annual deep soil sampling analysis (mandatory two foot sample, three foot sample encouraged, if applicable) for nitrate-nitrogen content on each field larger than 40 acres with more than 50 lbs per acre of actual nitrogen fertilizer applied. 3. Certified operators must submit a report to the Upper Elkhorn NRD by December 31 following each crop year on forms provided by the District for areas larger than 40 acres where more than 50 lbs per acre of actual nitrogen fertilizer is applied. 4. The District will encourage certified operators to incorporate credits from application of animal waste and municipality waste into the total nitrogen requirement for the specific crop where this application of waste is made. 5. All livestock facilities requiring a permit must be permitted by the State of Nebraska and a copy must be filed with the District. 6. Any waste applied must be properly accounted for and shall not exceed crop need. 7 Discourage spreading waste on frozen ground with more than 4% slope and on tilled ground with greater than 10% slope. 8. Waste cannot be spread on frequently flooded land, land that has been flooded more than once in a 10 year period, or in a drainage area or within 200 feet of a water body. 9. Fall and Winter application of all commercial nitrogen fertilizer will not be allowed before November 1 and will be discouraged until after March 1 on all soils. Exceptions will be allowed for Spring and Fall seeded crops and meadows if the actual nitrogen application rate is less than 20 pounds per acre. 10. The use of monitoring equipment and distribution equipment for efficient fertilizer and water distribution will be encouraged by the District.</p>	<p>Trigger: &gt;9.0 ppm nitrate-nitrogen</p> <p>1. All rules and regulations established for Phases I &amp; II will remain in effect unless modified or negated by Phase III requirements. 2. If the groundwater analysis from Phase I, #2 and reported in Phase II, #3 (c) shows nitrate-nitrogen levels greater than (90)% of the MCL, then the groundwater analysis for nitrate-nitrogen in Phase I, #2 must be made annually and results submitted in the report discussed in Phase II, #3 (c). 3. If a town, village, or city lies within a Phase III Area, will be encouraged to complete a Well Head Protection Area Plan. 4. Randomized soil sampling will be conducted in the Phase III areas to identify fields, which are larger than 40 acres with more than 50 lbs/ac of actual nitrogen applied, with high residual soil nitrate-nitrogen. UENRD staff or contracted workers/agronomists will collect deep soil samples based on proper soil sampling protocol. a. Analysis: Soil sample analysis will be conducted for each sampled field for pounds of nitrate-nitrogen per acre (lbs/ac) and will fall within Trigger Levels. see below* 5. The application of commercial nitrogen fertilizer is prohibited on all soils until after March 1. Spring application of commercial nitrogen fertilizer at a rate of over 100 pounds of actual nitrogen per acre will require split applications. 6. If the Board of Directors deems it necessary to maintain, enhance, or protect groundwater quality, or to address concerns regarding conjunctive use and adverse effects on groundwater quality, the UENRD may choose to implement additional controls as listed in Nebraska State Statutes 46-739. Some of the controls in this Statute are groundwater allocation and irrigated acre reduction.</p>	