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APPENDICES

- A: Nebraska Natural Resource District's Map and Upper Loup NRD District Wide Ground Water Management Area Map

DISTRICTWIDE GROUND WATER MANAGEMENT AREA

RULES AND REGULATIONS

Rule 1: AUTHORITY - These rules and regulations are adopted pursuant to the authority granted in Neb. Rev. Stat. §§ 46-701 to 46-753, the Nebraska Ground Water Management and Protection Act, (“the Act”).

Rule 2: PURPOSE - The purpose of these rules and regulations is to implement the Upper Loup Natural Resources District’s Ground Water Management Plan (“the Plan”). The Act provides authority for the Plan and these rules and regulations. The Goal of the Plan is to facilitate the proper management of ground water for quality, quantity, and integrated management.

Rule 3: APPLICABILITY - Creation of Area: These rules and regulations apply to all lands within the District, which have been designated as the district wide Ground Water Management Area (“Management Area”). A description of the lands subject to these rules and regulations is set forth in Appendix A and a map showing the location of such lands in Appendix B. The management area and these rules and regulations became effective on November 7, 2002 and applied initially to the 2003 growing season. The controls adopted pursuant to the authority in the Act are set forth beginning with Rule 14 of these rules and regulations.

Rule 4: DEFINITIONS

4.01 Abandoned Well shall mean a water well 1) the use of which has been accomplished or permanently discontinued, 2) which has been decommissioned as described in the rules and regulations of the Department of Health and Human Services Regulation and Licensure, and 3) for which notice of abandonment required by Neb. Rev. Stat. §46- 602(8) has been filed with the Department by the licensed water well contractor or pump installation contractor who decommissioned the water well or by the water well owner if the owner decommissioned the water well.

4.02 Acre-inch shall mean the amount of water necessary to cover an acre of land one inch deep.

4.03 Acre-foot shall mean volume of water required to cover one (1) acre of land (43,560 sq. feet) to a depth of one (1) foot; equivalent to 325,851 gallons.

4.04 Act shall mean the Nebraska Ground Water Management and Protection Act, Neb. Rev. Stat. §46-701 to §46-754 and may be referred to as “the Act”.

4.05 Active Status Water Well shall mean a water well which has a pumping apparatus in the column that will allow pumping of groundwater over 50 gallons per minute.

4.06 Alleged Violator shall mean the landowner and/or operator of the land who allegedly has failed to comply with any of these rules and regulations.

4.07 Allocation shall mean the allotment of a specified total number of acre-inches of irrigation water per certified irrigated acre for the allocation period as granted by the Board.

4.08 Application for a Permit shall mean an application on a written form supplied by The District for the construction of water well in accordance with Neb. Rev. Stat. §46-735 to §46-738.

- 4.09 Application for a Late Permit** shall mean an application for a permit that was not timely filed. Such permit shall be reviewed by the District in accordance with Neb. Rev. Stat. §46-736.
- 4.10 Application for a Transfer Permit** shall mean an application on a form supplied by the District for the physical transfer of ground water or the transfer of certified acres.
- 4.11 Back-up Well** shall mean a commercial livestock or industrial well which operate only in emergencies when the primary well fails. Back-up wells shall not be operated simultaneously with the primary well.
- 4.12 Beneficial Use** shall mean that use by which ground water may be put to use to the benefit of humans or other species.
- 4.13 Best Management Practices (BMPs)** shall mean the scheduling of activities, maintenance procedures and other management practices used for purposes of irrigation efficiency, to conserve or effect a savings of ground water, or to prevent or reduce present and future contamination of ground water. Best management practices may include but are not limited to such things as soil testing, water testing, irrigation scheduling, monitoring of irrigation water applications, use of inhibitors, proper timing and rate of fertilizer and pesticide application, and other fertilizer and pesticide management programs.
- 4.14 Board or Board of Directors** shall mean the elected Board of Directors of the Upper Loup Natural Resources District.
- 4.15 Certification** shall mean a current certificate of completion issued by the District to the operator for completion of the necessary educational programs specified by the District.
- 4.16 Certified Irrigated Acre** shall mean any acre of land upon which ground water is being applied for irrigation purposes greater than two (2) acres in total, regardless of the source of the ground water, and that has been certified as such by the District.
- 4.17 Certified Irrigated Tract** shall mean a specific area of land that contains certified irrigated acres, not exceeding six hundred and forty (640) contiguous acres, which has been certified by the District in connection with a particular water source, or sources that are physically connected.
- 4.18 Certified Laboratory** shall mean any laboratory within or outside the State of Nebraska certified and approved by the Nebraska Department of Environmental Quality.
- 4.19 Chemical** shall mean any fertilizer, fungicide, herbicide, or pesticide mixed with the water supply for application through chemigation.
- 4.20 Chemigation** shall mean any process whereby chemicals are applied to land or crops in or with ground water through an on farm irrigation distribution system.
- 4.21 Commercial Livestock Well** shall mean a well-used for watering of livestock and other uses directly related to the operation of a feedlot or other confined livestock or dairy operation that pumps over fifty (50) gallons per minute.

- 4.22 Commingled Wells** shall mean two (2) or more water wells that are commingled, combined, clustered, or joined with any other water well or wells or other water source, other than a water source used to water range livestock. Such wells shall be considered one water well and the combined capacity shall be used as the rated capacity.
- 4.23 Complainant** shall mean any person who files a complaint alleging a violation of these rules and regulations.
- 4.24 Compliance Officer** shall mean an employee or agent of the District authorized by the District Manager to perform the functions assigned to him or her by these rules and regulations.
- 4.25 Conservation Assistance** shall mean any payments, technical, and/or planning assistance or other forms of compensation provided by the Upper Loup NRD utilizing District equipment and/or funds or utilizing funds from programs administered by the District.
- 4.26 Consumptive Use** shall mean the amount of water that is consumed under appropriate and reasonably efficient practices to accomplish without waste the purposes for which the appropriation or other legally permitted use is lawfully made.
- 4.26 Contamination or contamination of ground water** shall mean nitrate nitrogen or other material which enters the ground water due to action of any person and causes degradation of the quality of ground water sufficient to make such ground water unsuitable for present or reasonably foreseeable beneficial uses.
- 4.27 Controls** shall mean any requirement, obligation, duty, or restriction placed upon a ground water user, landowner or operator, who owns, uses or controls land within the District by these rules and regulations.
- 4.28 Critical Area** shall mean a geographic area, designated by the Board within which ground water users shall be subject to regulations to protect ground water or surface water quality and supplies.
- 4.29 Decommission** when used in relation to a water well shall mean the act of filling, sealing, and plugging a water well in accordance with the Department of Health and Human Services Regulation and Licensure rules and regulations.
- 4.30 Department** shall mean the Nebraska Department of Natural Resources.
- 4.31 Depletion** shall mean reduction to streamflow that results from a new use to either ground water or surface water.
- 4.32 Dewatering Well** shall mean a water well-constructed and used solely for the purpose of lowering the ground water table elevation.
- 4.33 District, ULNRD, or NRD** shall mean Upper Loup Natural Resources District.
- 4.34 District Nitrogen Applicator Certified** shall mean the landowner or operator that has completed nitrogen certification class approved by the District to be renewed every four (4) years.
- 4.35 Director** shall mean the Director of the Department of Natural Resources.

- 4.36 Domestic Well** shall mean a water well, designed and constructed to pump less than fifty (50) gallons per minute, used by a person or by a family unit or household for normal household uses and for the irrigation of lands not exceeding two (2) acres in area for the growing of gardens, orchards, and lawns, and keeping of domestic animals. Such wells are exempt from application of these rules and regulations.
- 4.37 Educational Programs** shall mean information and training programs designed to educate a landowner and/or operator of the land with best management practices in the operation of irrigation and cropping systems.
- 4.38 Fertilizer** shall mean any formulation or product used as a plant nutrient and or intended to promote plant growth distributed on lands in the District, containing one (1) or more plant nutrients recognized by the Association of American Plant Food Control Officials in its publications.
- 4.39 Flow Meter** shall mean a measuring device of the type and design which shall meet the standards and specifications for installation, operation, and maintenance as established by the District. Every flow meter shall be a mechanical or sensor device which measures and totalizes the amount of ground water withdrawn.
- 4.40 Formal Notice** shall mean written notice provided from the District to an alleged violator of an alleged violation of the rules and regulations.
- 4.41 Good Cause Shown** shall mean a reasonable justification for granting a variance from a consumptive use of water that would otherwise be prohibited by rule or regulation and which the District reasonably and in good faith believes will provide an economic, environmental, social, or public health and safety benefit that is equal to or greater than the benefit resulting from the rule or regulation from which a variance is sought.
- 4.42 Ground Water** shall mean that water which occurs or moves, seeps, filters, or percolates through ground under the surface of the land.
- 4.43 Ground Water Irrigation Runoff** shall mean ground water used for irrigation purposes which escapes from land owned, leased, or otherwise under the control of a ground water user. Ground water that becomes commingled with surface water runoff shall be treated as irrigation runoff; except that ground water irrigation runoff, whether commingled with surface water or not, which reaches a stream becomes surface water and is not subject to these rules and regulations.
- 4.44 Ground Water Management Area** shall mean any geographic area, up to and including the entire Upper Loup NRD that shall be designated by the Board pursuant to Neb. Rev. Stat. §46-712.
- 4.45 Ground Water Management Plan** shall mean a plan developed by the Upper Loup NRD, and approved by the Department in accordance with Neb. Rev. Stat. §46-709 to §46-711.
- 4.46 Ground Water Quality Controls** shall mean the rules and regulations adopted for ground water quality management based on the three (3) phase program defined in Rule 26.

- 4.47 Ground Water User** shall mean a person who at any time pumps, extracts, withdraws, or confines ground water for any use by any person at a rate in excess of fifty (50) gallons per minute. Whenever the landowner and operator are different persons or entities, the term ground water user shall include both the landowner and operator.
- 4.48 High Capacity Well** shall mean any well that pumps fifty (50) gallons per minute or greater.
- 4.49 Historic Consumptive Use** shall mean that amount of water that has previously been consumed under appropriate and reasonably efficient practices to accomplish without waste the purposes for which the appropriation or other legally permitted use was lawfully made.
- 4.50 Illegal Water Well** shall mean (a) any water well operated or constructed without or in violation of a permit required by the Act or these rules and regulations, (b) any water well not properly registered in accordance with Neb. Rev. Stat. §46-602 to §46-604, (c) any water well in violation of spacing requirements specified by Neb. Rev. Stat. §46-609 or §46-651, (d) any well located within fifty (50) feet of the bank of a channel of any natural stream and utilized for irrigation purposes without a permit required by Neb. Rev. Stat. §46-637, (e) any water well not in compliance with any other applicable laws of the State of Nebraska or with rules and regulations adopted and promulgated pursuant to such laws.
- 4.51 Inactive Well** shall mean a water well which does not have a pumping apparatus in the column that will allow pumping of groundwater over 50 gallons per minute.
- 4.52 Industrial Well** shall mean a water well that provides ground water for manufacturing, commercial, and power generation purposes. Commercial use shall include, but not limited to, maintenance of golf course turf.
- 4.53 Improper Irrigation Run-off** shall mean the occurrence of irrigation run-off water (1) within a designated management area; (2) which causes or contributes to the accumulation of water upon or beneath the surface of the lands of any other person(s) to their detriment, or (3) which causes or contributes to the deterioration of water quality by depositing sediment or associated chemicals in surface waters within the area.
- 4.54 Installer** shall mean the person that installs flow meters on the groundwater user's irrigation equipment.
- 4.55 Irrigated Acre** shall mean any acre of land that is assessed as irrigated with the County Assessor and supplied with ground water through irrigation works, mechanisms, or facilities.
- 4.56 Irrigation Well** shall mean an active water well that is fully equipped, and used for the pumping of ground water to more than two (2) acres of crops and other plants.
- 4.57 Landowner** shall mean any person who owns real estate or has contracted to purchase or otherwise acquire title to real estate.
- 4.58 Livestock Well** shall mean a water well designed and constructed to pump less than fifty (50) gallons per minute which is used for the watering of livestock and other uses of water directly related to the operation of a pasture, range, feedlot or other confined livestock or dairy operation. Such wells are exempt from application of these rules.

- 4.59 Maximum Contaminant Level or MCL** shall mean the maximum permissible level of a contaminant in water, which is delivered to any user of a public or private water system as established by the Environmental Protection Agency (EPA). The MCL represents a level of a contaminate beyond which serious health problems have occurred or can occur.
- 4.60 Milligrams per Liter (mg/l)** shall mean a ratio used to describe the presence of any substance that may contaminate water that shows how many milligrams is present in one liter of water.
- 4.61 Monitoring Well** shall mean a water well from which ground water is withdrawn for purposes of monitoring the possible presence of contaminants and static water levels where applicable.
- 4.62 New Groundwater Irrigated Acre** shall mean an acre that is not certified to be irrigated or not off-set and is allowed to be irrigated causing a new net depletion to the basin.
- 4.63 Nitrate-Nitrogen Concentration** shall mean the amount of nitrate in ground water expressed in units of either parts per million (ppm) of nitrate-nitrogen or milli-grams per liter (mg/L) of nitrate-nitrogen.
- 4.64 Nitrogen Fertilizer** shall mean a chemical compound in which the percentage of nitrogen is greater than the percentage of any other nutrient in the compound, or when applies, results in an average application rate of more than twenty (20) pounds of nitrogen per acre over the field to which it is being applied.
- 4.65 Non-point Source Contamination** shall mean any source of pollution resulting from the dissolution and disbursement of widespread, relatively uniform contaminates of a nonspecific origin.
- 4.66 Observation Well** shall mean a water well used for purposes of monitoring static water level.
- 4.67 Offset** shall mean the transfer or retirement of water use from one (1) source, to allow an increase in use for another source at another location.
- 4.68 Operator** shall mean the person who has control over the day-to-day operations of the land in question, which shall include any landowner and/or any tenant.
- 4.69 Overlying Land** shall mean the tract of land where the well withdrawing the ground water is or will be located and any other tract of land that 1) is owned or controlled by the same person or persons as the tract of land where such well is or will be located, 2) is not completely separated from such tract of land by land owned by any other person, and 3) is located in the same government surveyed section as such well is located or will be located in or in a government surveyed section adjacent to the section where such well is or will be located.
- 4.70 Parts per Million (ppm)** shall mean a ratio used to describe the presence of any substance that may contaminate water, where one part of the contaminant is present among one million parts of water.
- 4.71 Permit to Construct a Water Well** shall mean the written authorization, granted by the Upper Loup NRD with conditions specified by the Board pursuant to these rules and regulations, for construction of a new or replacement well.

- 4.72 Person** shall mean a natural person, a partnership, a limited liability company, an association, a corporation, a municipality, an irrigation district, an agency or political subdivision of the state, or a department, an agency, or a bureau of the United States.
- 4.73 Phase Area** shall mean a geographic area, designated by the Board, within which ground water users shall be subject to regulations to protect ground water quality.
- 4.74 Point Source** shall mean any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, vessel, other floating craft, or other conveyance, over which the Department of Environmental Quality has regulatory authority and from which a substance which can cause or contribute to contamination of ground water is being or may be discharged.
- 4.75 Public Water Supply Well** shall mean a water well used by villages, towns, cities, rural water districts, or other public water systems (as further defined in 179 Nebraska Administrative Code) for providing the public with ground water.
- 4.76 Replacement Well** shall mean a water well which is constructed to provide water for the same purpose as the original water well and is operating in accordance with any applicable permit from the Department and any applicable rules and regulations of the District and, if the purpose is for irrigation, delivers water to the same tract of land served by the original water well and 1) replaces a decommissioned water well within one hundred and eighty (180) days after the decommissioning of the original water well, 2) replaces a water well that has not been decommissioned but will not be used after construction of the new water well and the original water well will be decommissioned within one hundred eighty (180) days after such construction, except that in the case of a municipal water well, the original municipal water well may be used after construction of the new water well but shall be decommissioned within one (1) year after completion of the replacement water well, or 3) the original water well will continue to be used but will be modified and equipped within one hundred eighty (180) days after such construction of the replacement water well to pump fifty (50) gallons per minute or less and will be used only for livestock, monitoring, observation, or any other non-consumptive or deminimis use approved by the District. In addition, the replacement well shall not irrigate more acres than were irrigated by the original well.
- 4.77 State** shall mean the State of Nebraska.
- 4.78 Sub-area** shall mean a geographic area, which a logical boundary can be drawn, established by the District where specific groundwater quality or quantity problems have been identified and require different controls, without having to apply those controls over the entire ULNRD.
- 4.79 Supplemental Well** shall mean a water well that provides supplemental ground water to acres that are normally irrigated by surface water. Annual use is not a requirement to be considered a supplemental well.
- 4.80 Test Hole** shall mean a hole designed solely for the purpose of obtaining information on hydrologic or geologic conditions.
- 4.81 Transfer of certified irrigated acres** shall mean any arrangement approved by the Board through the granting of a permit in which the location of use or location of certified irrigated acres is altered in accordance with Rule 20.04.

- 4.82 Transfer of ground water** shall mean the transfer of ground water off of overlying land to another contiguous tract in accordance with Rule 20.04.
- 4.83 Transport** shall mean the actual movement of water from one point to another by physical and or mechanical means.
- 4.84 Variance** shall mean the approval of the District to act in a manner contrary to existing rules or regulations of the District, whose rule or regulation is otherwise applicable.
- 4.85 Violation** shall mean the disregard of or noncompliance of the Ground Water Management and Protection Act or any other orders, controls, rules or regulations adopted by the District, or with any cease and desist order issued by the District pursuant to these rules and regulations. Any person who commits a violation shall be subject to any enforcement provisions and sanctions provided by law and to the controls, rules, regulations and remedies enacted by the District.
- 4.86 Water Well** shall mean any excavation that is drilled, cored, bored, washed, driven, dug, jetted or otherwise constructed for the purpose of exploring for ground water, monitoring ground water, utilizing the geothermal properties of the ground, obtaining hydrogeologic information or extracting water from or injecting fluid as defined in Neb. Rev. Stat. §81- 1502 into the underground water reservoir. Water well includes any excavation made for any purpose if ground water flows into the excavation under natural pressure and a pump or other device is placed in the excavation for the purpose of withdrawing water from the excavation for irrigation. For such excavations, construction means placing a pump or other device into the excavation for the purpose of withdrawing water for irrigation. Water well shall not include (i) any excavation made for obtaining or prospecting for oil or natural gas or for inserting media to repressure oil or natural gas bearing formations regulated by the Nebraska Oil and Gas Commission or (ii) any structure requiring a permit by the Department used to exercise a surface water appropriation.

Rule 5: VARIANCES

- 5.01** The District may grant variances from these Rules and Regulations upon good cause shown.
- 5.02** A variance may only be granted if third parties are not harmed or prejudiced and if such variance is consistent with the goals and objectives of these Rules and Regulations.
- 5.03** All variance requests shall be acted upon by the Board of Directors.
- 5.03.1** Directors will consider all variance requests on a case by case basis;
- 5.03.2** Directors may place terms and conditions on the variance that applicant must agree to.
- 5.04** All requests for a variance shall be submitted on forms provided by the District and include:
- 5.04.1** Name, address, and phone number;
- 5.04.2** Legal description to the nearest quarter section;
- 5.04.3** State the reason the variance is needed;
- 5.04.4** Aerial photo showing location of the variance request;
- 5.04.5** List stating names of all adjoining land owners;
- 5.04.6** Any other information the District deems necessary;
- 5.04.7** A non-refundable \$50.00 fee to cover administrative costs.

Rule 6: SEVERABILITY OF RULES

6.01 If any rule or any part of any rule herein shall be declared invalid or unconstitutional, such declaration shall not affect the validity of constitutionality of the remaining orations thereof.

Rule 7: ACCESS

7.01 The District, after notification to the landowner, shall have the power and authority to enter upon the land, for any and all reasons relative to the administration of these Rules and Regulations and provisions of the Act. This entry shall not be considered trespass.

7.02 The District shall notify all operators of its intent to enter onto property, to perform water quality tests, including chemigation inspections and or to verify the installation of flow meters or other devices and to read or verify the readings of flow meters or another device used to measure quantity of ground water used for irrigation by either regular mail, certified mail, registered mail, email, oral communication, District newsletter or local newspaper.

Rule 8: ENFORCEMENT

8.01 The District shall enforce the Act and all rules and regulations adopted pursuant thereto by the issuance of cease and desist orders in accordance with the procedures hereinafter specified and by bringing appropriate actions in the District Court of the county in which any violation occurs for the enforcement of such orders.

Rule 9: COMPLAINTS

9.01 Any person who owns land, leases land, or resides within the District, or any non-resident person who can show the actions of any landowner or operator within the District directly affects him or her; or an employee or other agent of the Board so authorized; or the Board on its own motion, may file a written complaint. Said complaint shall be filed against a landowner/operator or both, and shall provide the information on which a violation of the Rules and Regulations or other violations of laws governed by these Rules and Regulations is alleged.

9.02 Complaints shall be filed at the office of the District, 39252 Highway 2, Thedford, NE 69166, on complaint forms prepared by the District.

Rule 10: INSPECTIONS

10.01 A compliance officer may conduct an inspection to confirm compliance with these rules and regulations.

10.02 A compliance officer may conduct a field inspection, after informing the ground water user, landowner, or operator, either in person, by registered mail or certified mail, return receipt requested, or by leaving notice posted at the ground water user, landowner or operators' last known address of the suspected violation(s) and the purpose of the inspection.

10.03 Upon completion of the investigation of records or field activities, the compliance officer shall file a written report of his or her findings to the District office and shall deliver a copy of the report to the ground water user, landowner, or operator.

Rule 11: SUBMISSION OF INSPECTION REPORT ALLEGING VIOLATION AND ALLEGED VIOLATOR'S ALTERNATIVES

- 11.01** If the compliance officer finds that there is reasonable cause to believe that the ground water user, landowner, or operator is in violation of these rules and regulations, the compliance officer's report shall be accompanied by a formal notice to the ground water user, landowner, or operator of the alternative actions available to the alleged violator. Alternative actions include:
- 11.01.1** Agree with and accept as true and correct the compliance officer's findings that the alleged violation(s) has in fact occurred or is occurring and consent in writing to cease and desist from continuing or allowing the recurrence of such violation; and submit a schedule for corrective action pursuant to Rule 11; or
 - 11.01.2** Reject the findings of the compliance officer's report and request in writing a formal hearing be scheduled and conducted in accordance with District rules and regulations.
 - 11.01.3** The alleged violator shall be granted not more than seven (7) days (excluding Saturdays, Sundays, and legal holidays) following receipt of said report to respond.

Rule 12: SCHEDULE OF COMPLIANCE

- 12.01** If the alleged violator agrees with the compliance officer's findings and further agrees to submit a plan to conform with these rules and regulations, the ground water user, landowner, or operator shall submit a plan within seven (7) days (excluding Saturdays, Sundays, and legal holidays) following the notification provided by the District. Failure to submit a plan within seven (7) days shall be deemed a rejection of the findings and shall be deemed a request for a formal hearing.
- 12.02** Subsequent to the submission of a plan to take corrective action, the District shall review the investigation report, the plan, and any other related or pertinent document necessary to evaluate the plan.
- 12.03** The District within its sole discretion shall determine whether the actions agreed to by the ground water user, landowner, or operator will, when implemented, bring the ground water user, landowner, or operator into compliance with these rules and regulations. If the District determines that the proposed actions of the ground water user, landowner, or operator are adequate and will prevent future violations within a reasonable time period, such action or plan will be approved and the District shall notify the ground water user, landowner, or operator notified of approval within seven (7) days (excluding Saturdays, Sundays, and legal holidays) of and provide a schedule of compliance to complete the plan.
- 12.04** If the District within its sole discretion determines that implementation of the proposed plan or schedule of compliance would be inadequate to prevent further violation of the rules and regulations, the District shall inform the ground water user, landowner, or operator of its disapproval within seven (7) days (excluding Saturdays, Sundays, and legal holidays) and shall make proposed changes or additions to the plan to obtain conformance with these rules and regulations. An alleged violator shall have five (5) days (excluding Saturdays, Sundays, and legal holidays) from the receipt of the proposed changes from the District to consent to such \ additions or changes, agree to negotiate appropriate changes, or reject such changes and request a formal hearing.

Rule 13: FORMAL HEARING

13.01 If voluntary measures cannot be agreed upon between the compliance officer and the ground water user, landowner, or operator, or if the ground water user, landowner, or operator rejects the findings of the compliance officer's report set forth in Rule 10, then the alleged ground water user, landowner, or operator shall be given an opportunity to contest the investigation report, or the schedule of compliance required by the District, at a Board hearing or formal public hearing to be held no sooner than fifteen (15) days and not more than forty-five (45) days after receipt of the initial notice provided pursuant to Rule 10. Notice of the hearing shall be provided to the ground water user, landowner, or operator and any other necessary person. The District's rules for formal hearings shall govern the conduct of all such hearings. The ground water user, landowner, or operator shall be further notified that if he or she fails to respond to any notice and fails to appear at the scheduled hearing, the Board shall proceed to make a final determination as to the alleged violation of these rule and regulations and shall determine if a formal cease and desist order shall be issued and enforced against the ground water user, landowner or operator. Said order shall be transmitted to the violator in person or by certified or registered mail.

Rule 14: LANDOWNER'S / OPERATOR'S ACTIONS FOLLOWING ISSUANCE OF A CEASE AND DESIST ORDER

14.01 A landowner and/or operator who has been served with a cease and desist order for a violation of these rules and regulations shall be allowed seven (7) days (excluding Saturdays, Sundays, and legal holidays) following receipt of such order, to submit a schedule of compliance.

14.02 The District will review the schedule of compliance within seven (7) days (excluding Saturdays, Sundays, and legal holidays) upon submission and within its sole discretion shall determine if such plan satisfies these rules and regulations. If the plan fails to comply with these rules and regulations the District shall proceed with the enforcement of the cease and desist order.

Rule 15: PENALTIES

15.01 Any person who violates any cease and desist order issued by the District pursuant to Neb. Rev. Stat. § 46-707, or who violates any controls or Rules or Regulations adopted by the District relating to the Management Area, shall be subject to any penalties imposed through the controls adopted by the District including, but not limited to:

15.01.1 A civil penalty of not more than five hundred (500.00) dollars each day of continued violation pursuant to Neb. Rev. Stat. §46-746;

15.01.2 Having any allocation of water reduced in whole or in part (allocation meaning the allotment of a specified total number of acre-inches of irrigation water per certified irrigated acre);

15.01.3 Irrigated acres certified by the District permanently reduced in whole or in part;

15.01.4 Irrigated acres certified by the District to be set aside for a period of time to be determined by the Board (to set aside means to not irrigate).

15.02 Notice and hearing shall be provided to such person before the District takes any action.

Rule 16: PERMIT TO CONSTRUCT WATER WELL

- 16.01** Except as provided in Rule 16.02 any person who intends to construct a new or replacement water well on land in the ground water management area which he or she owns shall, before The District shall review such applications and issue the approved permit, with or without conditions, or deny the permit within thirty (30) days after the application is properly prepared and received. An incomplete or defective application shall be returned for correction. If correction is not made within sixty (60) days the application shall be cancelled.
- 16.02** Exceptions. No permit shall be required for:
- 16.02.1** Test holes;
 - 16.02.2** Dewatering wells with an intended use of ninety (90) days or less;
 - 16.02.3** A single water well designed and constructed to pump forty-nine (49) gallons per minute or less;
 - 16.02.4** Monitoring or observation wells.
- 16.03** A permit is required for a water well designed and constructed to pump fifty (50) gallons per minute or less if such water is commingled, combined, clustered, or joined with any other water well or wells or other water source. Such wells shall be considered one (1) well and the combined capacity shall be used as the rated capacity.
- 16.04** A person shall apply for a permit before he or she modifies a water well, for which a permit was not required when the well was constructed, into one for which a permit would otherwise be required.
- 16.05** The application for the construction of a high capacity well shall be accompanied by a fifty (50.00) dollar filing fee payable to the District and shall contain:
- 16.05.1** The name and post office address of the well owner;
 - 16.05.2** The nature of the proposed use;
 - 16.05.3** The intended location of the proposed water well by legal description;
 - 16.05.4** The intended size, type and description of the proposed water well and the estimated depth, if known;
 - 16.05.5** The estimated capacity in gallons per minute
 - 16.05.6** The estimated number of acres to be irrigated by the well, if applicable;
 - 16.05.7** The registration number of the well being replaced, if applicable;
 - 16.05.8** The certified use of the well being replaced, if applicable;
 - 16.05.9** Such other information as the District may require.
- 16.06** The application for the construction of a high capacity industrial / commercial well shall be accompanied by a five hundred (500.00) dollar filing fee payable to the District and in addition to the information required on the application provide:
- 16.06.1** A hydrological evaluation, performed by a professional engineering firm, conducted at applicant's expense, showing the potential impact of the withdrawal to water quantity, water quality, on current ground water and surface water users and a minimum twenty (20) year impact on ground water and surface water for potential future uses.
 - 16.06.2** Reimbursement to the District for its actual costs expended for peer review and assessment of the hydrologic evaluation.
- 16.07** No refund of any application fees shall be made regardless of whether the permit is issued, canceled, or denied.

- 16.08** Any person who has failed or in the future fails to obtain a permit before construction is commenced shall make application for a late permit on forms provided by the District.
- 16.08.1** The application for a late permit shall be accompanied by a two hundred and fifty (250.00) dollar late fee payable to the District and shall contain the same information required in Rule 16.05.
- 16.09** The application for a permit shall be denied if the location or operation of the proposed water well or other work would conflict with any regulations or controls adopted by the District.
- 16.10** The issuance, by the District, of a permit or the registration of a water well with the Department shall not vest in any person the right to violate any District rule, regulation, or control in effect on the date of issuance of the permit or the registration of the water well or to violate any rule, regulation, or control properly adopted after such date.
- 16.11** Water well permits shall expire one (1) year from date of approval. Failure to complete the project under the terms of the permit may result in the withdrawal of the permit by the District.

Rule 17: WELL SPACING

- 17.01** Spacing of all wells for which District well construction permits are required shall be approved by the District prior to drilling the well. New wells must comply with Neb. Rev. Stat. §46-609 and §46-651 in addition to the District's spacing requirements below:
- 17.01.1** No new well requiring a well construction permit, except for a backup well, shall be constructed upon any land in this District within three hundred (300) feet from any active domestic well or within one thousand three hundred and twenty (1,320) feet of any other irrigation, industrial, commercial, or public water supply well, regardless of ownership or within fifty (50) feet of the bank of a channel of any natural stream.
- 17.01.2** Any replacement high capacity water well that replaces a high capacity water well must be constructed within one thousand three hundred and twenty (1,320) feet of the well that is being replaced and abide by spacing requirements of all new wells as listed in rule 17.01.1.
- 17.02** The well spacing required by Rule 17.01 shall also apply to the distance between a proposed New well requiring a well construction permit and unregistered irrigation, industrial, commercial, or public water supply water well but only for a period of sixty (60) days to allow for registration of such unregistered water well.

Rule 18: INACTIVE WELL STATUS

- 18.01** The District shall maintain a record of all wells registered as inactive status by the Department.
- 18.02** Both the Department and the District must be notified within sixty (60) calendar days of the change to inactive condition and of any subsequent changes to the condition of the well.
- 18.03** If an active well has certified irrigated acres associated with it and is placed in inactive status, the certified irrigated acres will remain with the well while it is in inactive status unless rescinded by the District or relinquished by the ground water user.

Rule 19: FLOWMETERS

19.01 All active high capacity wells shall be equipped with a flowmeter by May 1, 2020. Any new high capacity wells shall be equipped with a flowmeter prior to use.

19.02 Installation of Flowmeters:

- 19.02.1** Installation will be done by a person qualified through training to install flowmeters.
- 19.02.2** All flowmeters are required to measure the entire amount of water pumped by a regulated well in conformance with all specifications and requirements contained with these rules and regulations. In cases where water from two or more wells is commingled, one flowmeter may be installed at a point after the water has been commingled.
- 19.02.3** If chemigation practices will be used the flow meter must be installed on an impeller driver unit or in front of the chemigation injection site on electric meters
- 19.02.4** Meters must be located so as to prevent damage to the meter from excessive vibration;
- 19.02.5** Meters must be installed so that the removal of the meter for service or maintenance can be performed with the use of normal tools and does not require excessive or unusual removal of hardware or other appurtenances;
- 19.02.6** All flowmeters must be verified by the District for proper installation.

19.03 Flowmeter specifications and requirements:

- 19.03.1** Each flowmeter is required to be installed (physically attached) according to the manufacturer's specifications and calibrated to the pipe size. Calibration must maintain an accuracy of plus or minus two (2) percent of normal flow range.
- 19.03.2** The meter registry will have a visual volume recording totalizer, which is protected from the elements, with sufficient capacity to record for the period of one year the quantity of water diverted from each well or commingling of wells. All flowmeters also will have a clearly visible and readable analog or digital display that provides a real time reading of the rate of flow of water through the flowmeter.
- 19.03.3** Electronic meters or any meter with a digital readout must have an uninterruptible power supply.

19.04 Flowmeter reading, inspections and maintenance:

- 19.04.1** District personnel shall have access to the well or commingled wells and flowmeter(s) at any reasonable time to read and record flowmeter readings.
- 19.04.2** Flowmeters installed that do not meet manufacturers' or District standards must be corrected.
- 19.04.3** Flowmeters may be periodically inspected for performance, accuracy and evidence of tampering.
- 19.04.4** Each flowmeter is required to be kept in working order and clear of debris, vegetative growth or other material that would impede operation.
- 19.04.5** Landowners and operators are responsible to ensure that flowmeters are fully functional, properly maintained and operational.
- 19.04.6** Any malfunctioning flow meter shall be reported to the District office at Theford, Nebraska, by the ground water user, landowner or operator within twenty-four (24) hours after discovery, unless such discovery is on a weekend or holiday recognized by the State of Nebraska. In that event, such malfunction shall be reported before the office closes on the first working day following the discovery. During the time when such flow meter is malfunctioning or removed from the well for service, repair or replacement, the ground water user, landowner or operator shall use a method

approved by the District to determine the volume of water withdrawn from the well. The ground water user, landowner or operator shall use best efforts to put the flow meter back in service as soon as possible.

- 19.04.7** It shall be a violation of these rules and regulations for any person to willfully damage, alter, remove, reset, adjust, manipulate, obstruct, or in any manner interfere with or tamper with any flow meter within the ground water management area for the purpose or with the intent to produce an incorrect, inaccurate or misleading measurement, or to cause, procure or direct any other person to do so.

Rule 20: GROUND WATER TRANSFERS

- 20.01** Physical transfer of ground water out of State: Requests for transfer of ground water out of state pursuant to Neb. Rev. Stat. §46-613.01 by any ground water user, shall not be acted upon by the District until such time as the approval or denial, by the Department, of the required transfer permit.
- 20.02** Physical transfer of ground water into the District: Ground water withdrawn outside the District by any ground water user, shall not be transported for use inside the District unless the District from which the ground water is withdrawn approves the withdrawal and transport in advance. Use of the transported water must be in accordance with these rules.
- 20.03** Physical transfer of ground water out of the District: Ground water withdrawn inside the District by any ground water user, for use elsewhere in the state is prohibited.
- 20.04** Transfers within the District: Any ground water user who desires to physically withdraw ground water, transfer certified irrigated acres, transfer the type of use, or add a type of use of ground water within the District is required before making such a transfer, to apply for a permit and receive approval from the Board. If the ground water user has received a permit from the Department pursuant to the Municipal and Rural Domestic Ground Water Transfers Permit Act or the Industrial Ground Water Regulatory Act, the District will approve the transfer.
- 20.04.1** Physical ground water transfers for irrigation:
- 20.04.1.1** A ground water user shall only be allowed to transfer ground water for irrigated crop production off overlying land that the user owns and has current certified irrigated acres to ground located to and within one (1) mile of the land in which he or she owns;
 - 20.04.1.2** An irrigation well used for transfer may not irrigate more acres than the total certified of the source tract;
 - 20.04.1.3** The original certified irrigated acres that are being transferred must be converted to a non-irrigated use.
- 20.04.2** Certified acre transfers for irrigation:
- 20.04.2.1** Landowners intending to transfer certified irrigated acres shall only be allowed to transfer acres which he or she owns to land in which he or she owns and that is located within District boundaries;
 - 20.04.2.2** Transfers shall not exceed the current number of certified irrigated acres associated with the parcel for which the transfer involves;
 - 20.04.2.3** Upon approval of transfer the landowner shall contact the county assessor and then provide the District with documentation showing they are recorded as irrigated with the county.

- 20.04.3** New transfers of ground water or certified acres from within the District to any area that is determined to be fully appropriated or under a well drilling moratorium, permit suspension, or where a ground water allocation has been established, is prohibited.
- 20.05** All transfer requests shall be acted upon by the Board of Directors. The District will either approve, approve with conditions, deny, or request additional information before action on the transfer.
- 20.06** All transfer requests shall be submitted on forms provided by the District and shall include:
- 20.06.1** The name and address of the landowner where the well(s) are located;
 - 20.06.2** The legal description of the point of withdrawal and the location of intended use;
 - 20.06.3** Aerial photo showing land involved in the proposed transfer;
 - 20.06.4** List stating names of all adjoining land owners;
 - 20.06.5** The registration number of the water well(s) involved;
 - 20.06.6** The nature of the proposed use;
 - 20.06.7** Any other information the District deems necessary;
 - 20.06.8** A non-refundable administrative fee of one hundred (100.00) dollars per application of twenty-five (25) acres or less or five hundred (500.00) dollars for applications over twenty-five (25) acres.
 - 20.06.9** Failure of the applicant to provide the requested information may be grounds for denying the permit.
 - 20.06.10** Transfer permits will expire upon a change of land ownership, a change in transfer location, at landowner's request.

Rule 21: EXPANSION OF IRRIGATED ACRES

- 21.01** The Upper Loup will limit development of new ground water uses to fifty (50) percent of the annual available stream depletions.
- 21.02** The number of total new ground water well construction permits and/or new ground water irrigated acres shall not exceed two thousand five hundred (2,500) acres annually for the entire geographic boundaries of the District.
- 21.02.1** The Board reserves the right to approve less than the two thousand five hundred (2,500) acres on an annual basis.
 - 21.02.2** There will be no carryover of unapplied acres.
 - 21.02.3** At the regularly scheduled June board meeting the Board will determine if the District is to allow the addition of any irrigated acres for the upcoming year.
- 21.03** A minimum score of fifteen (15) points on the Upper Loup District Irrigated Acre Ranking Sheet is required for an application to be considered for approval. A copy of the current ranking sheet is available at the District Office, 39252 Highway 2, Thedford, NE.
- 21.03.1** Each application for expansion of irrigated acres will be ranked according to the following criteria: groundwater quality in the vicinity, density of irrigated acres within the vicinity, NRCS soil classification (e.g. Highly Erodible Lands, or HEL), stream depletion, slope, and any other criteria and/or considerations deemed relevant by the District.
 - 21.03.2** If an application is docked due to the removal of an established windbreak and the producer agrees to replace the trees at another location at a 2:1 ratio they could gain back a portion (to be determined on a case by case basis) of those points initially deducted.

- 21.04** In order for expansion of ground water irrigated acres to be considered for approval by the District, the landowner must file an application with the District on forms provided by the District.
- 21.05** The application period to apply for new ground water irrigated acres with the District shall be annually during the months of July, August and September of each year. An application received outside of an application period will be returned to the applicants as incomplete.
- 21.06** Land previously irrigated but currently enrolled in a federal, state, or local government conservation program will have to abide by Rule 21.03 if planning on irrigating the ground upon conservation program contract termination.
- 21.07** A maximum of two hundred and sixty (260) irrigated acres per individual, corporation, limited liability company, partnership, other entity or trust will be allowed per application period for expanded irrigated acres.
- 21.07.1** for the purposes of this rule, if an individual and any member of his or her immediate family owns and controls, directly or indirectly, more than 50% (fifty percent) of the ownership of said irrigated acres, either individually or through a corporation, limited liability company, partnership, other entity or trust, such irrigated acres will be considered as owned by the applicant. A member of one's immediate family shall include spouses, children, and lineal descendants of the same.
- 21.08** The application is valid for one (1) year and follows land ownership.
- 21.09** Applicants shall be notified on the status of their application within thirty (30) days following the end of the application period each year.
- 21.10** Acres approved for expansion pursuant to Rule 21 must subsequently be certified in accordance with Rule 22.
- 21.11** If a new well(s) is to be constructed for expansion of irrigated acres, the application pursuant to Rule 21 must be approved prior to construction of the new well. Such construction must be in accordance with Rule 16.
- 21.12** The application shall include:
- 21.12.1** The most recent aerial photo delineating the new acres to be sought;
- 21.12.2** The legal description of the field(s) to be watered along with the number of acres requested;
- 21.12.3** The location of the existing well(s) to be used and the corresponding DNR registration number or, if applicable, the proposed location of the new well(s);
- 21.12.4** If applicable, the identification of any sources of irrigation water other than ground water;
- 21.12.5** The signature of the current landowner or power of attorney;
- 21.12.6** A one-time non-refundable administrative fee of one hundred (100.00) dollars per application of twenty-five (25) acres or five hundred (500.00) dollars for applications over twenty- five (25) acres.

Rule 22: CERTIFICATION OF IRRIGATED ACRES

- 22.01** Any ground water user who irrigates with ground water is required to have obtained certification from the District for all irrigated acres. No ground water user may irrigate with ground water within the GWMA until he or she obtains certification from the District.

- 22.02** Only those acres approved in accordance with Rule 21, pumping from a legal well, have a flow meter and assessed as irrigated on the county tax role will be considered for certification.
- 22.03** Certified acres will be reviewed annually by the District for an ACTIVE status.
- 22.04** Any change in ownership of certified acres shall be reported to the District as soon as reasonably possible, for the certified acres follow the land not the landowner or operator.
- 22.05** Any change in the farming or ranching operation that would result in a change in the number or location of certified irrigated acres shall be reported to the District and will require the applicant to follow Rule 21, expansion of irrigated acres, to be able to recertify.
- 22.06** All acre certification forms must be submitted to the District's office on forms supplied by the District.
- 22.06.1** An acre certification form is required for each legal land description.

Rule 23: GROUND WATER WELL USE REPORTING REQUIREMENTS

- 23.01** Each city or village within the ground water management area that owns operates or controls a public water supply well shall provide to the District an annual water use report to establish a baseline water use per capita within such city or village.
- 23.02** Municipality reporting requirements – on or before January 31 of each year, a village or a city shall report the following information to the District:
- 23.02.1** The water wells operated by the village or city and the Department's registration number.
- 23.02.2** Total acres within village or city jurisdiction limits and any acres outside the village or city jurisdictional limits served by the public water supply system.
- 23.02.3** The number of people served by the public water supply system.
- 23.02.4** Total amount of water pumped by each well.
- 23.02.5** Any other information deemed appropriate by the District.
- 23.03** Industrial / Commercial uses – on or before January 31 of each year any Industrial / Commercial user that does not obtain its water from a city or village user shall report the following information to the District, if it has not already been obtained from ULNRD personnel:
- 23.03.1** The water wells operated by the user and the Department's registration number;
- 23.03.2** Total amount of water pumped by each well;
- 23.03.3** The purpose for which the ground water is used;
- 23.03.4** The location of use;
- 23.03.5** Any other information deemed appropriate by the District.
- 23.04** Agricultural Uses - Each agricultural user of ground water that does not have a metered well and is reporting prior to the mandatory metering dates of that Sub-district is encouraged to report by January 31 of each year to the District the total amount of water pumped by each irrigation well he or she controlled for the previous irrigation season.

Rule 24: CHEMIGATION PROGRAM

- 24.01** After January 01, 1987, no person who chemigates in the confines of the Upper Loup NRD shall apply or authorize the application of chemicals to land or crops through the use of chemigation unless such person, shall possess a current permit thereby from the District

except that nothing in this chapter shall require a person to obtain a chemigation permit to pump or divert water to or through an open discharge.

- 24.02** The Upper Loup NRD hereby incorporates, as part of these rules and regulations, the requirements of Title 195 of the Nebraska Administrative Code, as promulgated by the Nebraska Department of Environmental Quality and the provisions of the Nebraska Chemigation Act (Neb. Rev. §§ 46-1101 to 46-1148), as the same may be amended from time to time.
- 24.03** Application fee for each new and or special permit is sixty (60.00) dollars, with five (5.00) dollars paid by the District to the Department of Environmental Quality. For each renewal permit thirty (30.00) dollars, with two (2.00) dollars paid by the District to the Department of Environmental Quality. For each emergency permit two hundred and fifty (250.00) dollars, with ten (10.00) dollars paid by the District to the Department of Environmental Quality. The permit application fee will be invoiced at the time of application to the Upper Loup Natural Resources District.
- 24.04** Employees of the District and the Department shall have access at all reasonable times to inspect chemigation systems and otherwise carry out their duties under the Chemigation Act, all in accordance with Nebraska law, including Neb. Rev. Stat. §§ 46-1124.
- 24.04.1** All approved chemigation permit holders will have their system inspected at a minimum once every three (3) years.
- 24.04.2** The District will make area wide selective and periodic inspections of systems for which no permit has been issued. The District will also investigate complaints concerning systems for which no permit has been issued. In cases of non-cooperation by an irrigator, the District may apply to the district or county court of the county in which the irrigation system is located for an inspection warrant to allow the employee entry onto his/her land to carry out duties under the Nebraska Chemigation Act.
- 24.04.3** If after an inspection, a permit is not issued, it is the responsibility of the person making the permit application to request a re-inspection from the District.
- 24.04.4** In the event that after two (2) inspections have been made, the permit denied, suspended or revoked, the District will require reapplication for a new permit and payment of sixty (60.00) dollars prior to each of the next inspections.
- 24.04.5** As the system is required to be started, brought to normal operating pressure, and shut down for the inspection process, a permit holder or applicator is required to be present during inspection by District Staff. Inspectors will not operate any irrigation or chemigation equipment, nor will they open any electrical control box.
- 24.04.6** The inspector may assist in removal of either valve if so requested by the applicator / permit holder. The District will replace, at District expense, a chemical injection check valve only if damaged during the testing process. The District will not replace a chemical injection check valve damaged in removal or reattachment thereof or by any defects in the valve.
- 24.04.7** A start-up and shut-down of the chemigation system during inspection is required.
- 24.04.8** District employees will carry for sale a limited number of chemical injection check valves and other pieces of chemigation equipment as needed to improve the inspection process in the event of equipment malfunction while on the site.
- 24.04.9** If District Staff is required to make a second trip to complete a chemigation inspection, a thirty (30.00) dollar fee can be charged to the permit holder/applicator. If a third trip is required the fee would increase to fifty (50.00) dollars. District staff can use discretion in apply such fees.

24.05 Compliance with the Nebraska Chemigation Act shall be an affirmative defense to any civil action, resulting from a person's use of chemigation.

Rule 25 GROUND WATER QUALITY SAMPLING PROGRAM

25.01 The District shall implement procedures to monitor and protect the quality of the ground water within the GWMA. All sub-districts of the District shall be monitored using the maximum contaminant levels (MCL) for various contaminants set by the United States Environmental Protection Agency. Ground water quality data will be collected and reviewed for each ground water management sub-district to monitor trends and determine if there are ground water quality concerns within the District. If the concentration of a particular contaminant from wells in a sub-district meet or exceed the pre-determined levels of contamination for the phases outlined in Rule 26 of these rules and regulations, then appropriate controls will be implemented by the District as listed in Rule 27.

25.02 A ground water analysis for nitrate-nitrogen content in registered active domestic, active irrigation, active industrial, and public water supply wells will be accomplished once within a five (5) year cycle, with the exception of those wells listed on DEQs Current Statewide Ground Water Monitoring Network which will be tested annually.

25.03 The landowner/operator shall allow the ground water sample for nitrate-nitrogen analysis to be collected and analyzed by the Upper Loup NRD using approved methods.

25.04 Results of the nitrate-nitrogen analysis will be either mailed or phoned to the operator and/or the landowner. These results will give the landowner/operator knowledge of the nitrogen present in the ground water.

25.05 If a sample is found to contain one hundred percent (100%) of the Maximum Contaminant Level (ten (10) parts per million or ten (10) mg/l) of nitrate-nitrogen, a second sample will be sent to a reputable lab for verification and quantification prior to any quality phase area designation.

25.06 A minimum of ten (10) percent of all wells sampled annually will be sent to a reputable lab for analysis as a quality control measure.

25.07 If there is reason to believe that contaminants other than nitrate-nitrogen may be present, samples may be taken to test for those contaminants.

Rule 26: GROUND WATER QUALITY PHASE AREA CRITERIA

26.01 Phase I Area – areas that are not designated as either Phase 2 or Phase 3 (0 to 5.9 mg/L (milligrams per liter)).

26.02 Phase 2 Area – areas where forty-five (45) percent or greater of the nitrate nitrogen samples have tested between 6 to 8.5 mg/L (milligrams per liter) for four (4) consecutive years beginning in 2008.

26.03 Phase 3 Area – areas where forty-five (45) percent or greater of the nitrate nitrogen samples have tested between 8.6 to 10 mg/L (milligrams per liter) for four (4) consecutive years beginning in 2008.

26.04 Prior to placing any water quality management sub-area into a higher phase or lower phase area, there will be a public hearing held by the Upper Loup Board of Directors.

Rule 27: GROUND WATER QUALITY PHASE AREA CONTROLS

27.01 Phase 1 Area - the following controls shall apply to all Landowners and operators of irrigated land in Ground Water Management Areas with a Phase area designation of one (1):

27.01.1 A water analysis for nitrogen content for irrigation wells will be done as described in Rule 25;

27.01.2 The District will encourage operators to attend classes for fertilizer and irrigation water management and to perform deep soil testing for residual nutrients;

27.01.3 The District will encourage operators to not apply nitrogen fertilizer on sandy soils in the fall or winter;

27.01.4 The NRD will expand education activities relating to ground water.

27.02 Phase 2 Area - the following controls shall apply to all Landowners and operators of irrigated land in Ground Water Management Areas with a Phase Area designation of two (2):

27.02.1 All Phase 1 requirements;

27.02.2 Operators using nitrogen fertilizers must attend and pass a certification class conducted by a Natural Resources District;

27.02.3 Irrigation water must be tested each year for nitrate-nitrogen;

27.02.4 Soil must be tested for residual nitrogen content to a two (2) foot depth each year;

27.02.5 Fall and winter application of nitrogen fertilizer is prohibited on sandy soils. Nitrogen fertilizers can be applied on sandy soils after March 2nd

27.02.6 All operators applying fertilizer must submit, on forms provided by the District, a report of yearly water tests, soil tests, crops planted, yield goals, nitrogen applied, and other field information as deemed necessary by the District to be reported prior to January 31st of each year.

27.03 Phase 3 Area - the following controls shall apply to all landowners and operators of irrigated land in Ground Water Management Areas with a Phase area designation of three (3):

27.03.1 All Phase 1 and 2 requirements;

27.03.2 Operators are required to monitor water application with a water meter, or an electrical meter, hour meter or other measuring device that has been calibrated to the output of the irrigation distribution system so operators can more effectively manage fertilizer applications;

27.03.3 Irrigation schedule is required.

Rule 28: GROUND WATER QUANTITY PROGRAM

28.01 The District will maintain a monitoring well network for water levels. Network wells shall be measured each spring.

28.02 A water well log file including elevations, water use and other pertinent information shall be maintained.

28.03 The District shall require permits for all new and replacement water wells which pump greater than fifty (50) gallons per minute.

28.04 The District shall approve any new irrigated acres within the GWMA prior to any pumping of ground water to those new acres.

- 28.05** Certification of all acres irrigated with each ground water well.
- 28.06** Collect annually all water usage from high capacity wells.
- 28.07** Shall have flow meters on all high capacity wells throughout the District by May 1, 2020.
- 28.08** Provide incentive programs to encourage water conservation practices.
- 28.09** Provide information and education on water conservation and use to water users, both rural and urban.
- 28.10** In order to be proactive in regards to ground water quantity protection efforts and management the Board of Directors reserves the right to:
- 28.10.1** Establish a sub-area;
 - 28.10.2** Place a temporary moratorium on any new irrigated acres in the established sub-area stated in 27.10.1;
 - 28.10.3** Initiate a study during which, as a minimum, water levels in surrounding wells will be measured to determine the severity, the geographical extent, and the boundaries of the affected area.
- 28.11** The District will offer workable solutions and/or voluntary controls, by which any water quantity problems may be addressed. Solutions may include but not limited to: irrigation scheduling, reduction of irrigated acres, adopt a system of rotation of use of groundwater, allocate ground water withdraw on an acre-inch basis, and any other reasonable regulations to protect the quantity of ground water in the sub-area.

APPENDICES

The Upper Loup Natural Resources District District wide Ground Water Management Area is delineated to include all lands within the political boundaries of the Upper Loup NRD. This area includes all lands within the counties of Grant, Hooker, Thomas, Blaine, Logan, southern Cherry, and southwestern Brown.

APPENDIX A

