

Lower Loup NRD Groundwater Management Area Rules & Regulations

AUTHORITY – The Lower Loup Natural Resources District (“LLNRD” or “District”) adopts these Rules and Regulations pursuant to the authority granted in the Nebraska Ground Water Management and Protection Act (“Act”), Chapter 46, Article 7.

PURPOSE – These Rules and Regulations are adopted for the following purposes: (1) to protect Ground Water quantity; (2) to protect Ground Water quality; (3) to prevent or resolve conflicts between Ground Water users and surface water appropriators in those areas where Ground Water and surface water are hydrologically connected; and (4) to implement the necessary controls to carry out the goals and objectives identified in the Voluntary Integrated Management Plan (“IMP”) jointly adopted by the LLNRD and the Nebraska Department of Natural Resources (“DNR”).

CHAPTER 1 - DESIGNATION OF BOUNDARIES AND MANAGEMENT AREA

These Rules and Regulations apply within the entire geographic boundary of the LLNRD. The stratigraphic boundary is from the land surface to the base of the underlying sand and gravel layers that contain the water bearing material. The entire District is designated a Ground Water Management Area pursuant to Neb. Rev. Stat. § 46-712. The boundaries of the District are described in Appendix “A.”

CHAPTER 2 - DEFINITIONS

- A. **Alleged Violator** shall mean any person against whom a complaint has been filed against in accordance with Rule 3.
- B. **Banked Acre** shall mean an acre-foot that is (a) recognized by the District; (b) not currently being utilized; and (c) available to offset new District-approved uses.
- C. **Board** shall mean the Board of Directors of the Lower Loup Natural Resources District and/or its employees and agents acting at the direction of the Board of Directors.
- D. **Common Carrier** shall mean any carrier of water including a pipe, canal, ditch, or other means of piping or adjoining water for irrigation purposes.
- E. **Compliance Officer** shall mean an employee, agent, or director of the District, authorized to perform the functions assigned thereto by these rules and regulations.
- F. **Education Program** shall mean informational and educational training sessions designed to acquaint landowners and operators with the best management practices and general information to assist in the operation of their irrigation and cropping system.

- G. **Flow Meter** shall mean a measuring device, approved by the Board of Directors, to measure the quantity of water pumped, withdrawn, or taken from a water well, Common Carrier, and/or surface water source.
- H. **Ground Water** shall mean that water which occurs, moves, seeps, filters, or percolates through under the surface of the land.
- I. **Ground Water Quality Management Area** means all areas within the District designated as such by the District pursuant to Neb. Rev. Stat. §§ 46-712 or 46-718, any area designated as such by the Director of the Department of Environmental Quality pursuant to Neb. Rev. Stat. § 46-725, or any area designated by the Interrelated Water Review Board pursuant to Neb. Rev. Stat. § 46-719.
- J. **Ground Water Quality Management Sub-Area** means a geographical area with the Ground Water Quality Management Area designated by the District as such and for which controls specific to that Ground Water Quality Management Sub-Area have been adopted in accordance with these Rules & Regulations.
- K. **Ground Water Quantity Management Area** means all areas within the District designated as such by the District pursuant to Neb. Rev. Stat. § 46-712 or 46-718.
- L. **Ground Water Quantity Management Sub-Area** means a geographical area with the Ground Water Quantity Management Area designated by the District as such and for which controls specific to that Ground Water Quantity Management Sub-Area have been adopted in accordance with these Rules & Regulations
- M. **Ground Water User** shall mean a person who at any time extracts, withdraws, or confines groundwater for any use by himself or allows such use by other persons at a rate in excess of fifty (50) gallons per minute. Whenever the landowner and operator are different, the term 'groundwater user' shall mean both the owner and operator.
- N. **Illegal Water Well** shall mean (a) any water well operated or constructed without or in violation of a permit required by the Nebraska Ground Water Management and Protection Act; (b) any water well not in compliance with rules and regulations promulgated by the District; (c) any water well not properly registered in accordance with Neb. Rev. Stat. §§ 46-602 to 46-604; or (d) 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.
- O. **Improper Irrigation Runoff** shall mean the occurrence of irrigation runoff water which (1) causes or contributes to the accumulation of water upon or beneath the surface of the lands of any other person(s) to their detriment, damage, or inconvenience; (2) causes or contributes to

the deterioration of water quality by depositing sediment and/or associated chemicals in surface water within the area; or (3) which contributes to the flow of groundwater to waste.

- P. **Irrigated Acre** shall mean any acre of land that is certified in accordance with Rule 16.
- Q. **Irrigation Runoff Water** shall mean Ground Water used for irrigation purposes which escapes from land owned, leased, or otherwise under the direct supervision and control of a Ground Water User. Ground Water which becomes commingled with surface water runoff shall be treated as irrigation runoff.
- R. **Lagoon Water** shall mean water, not considered groundwater or surface water, which is part of a manure waste system that stores effluent from livestock, municipal, commercial or industrial facilities to be used to provide nutrients and water to crops
- S. **Landowner** shall mean any person who owns or is in the process of purchasing land within the District.
- T. **New Groundwater Irrigated Acre** shall mean an acre of land that is not certified to be irrigated or not offset and is allowed to be irrigated by the variance process causing a new net depletion to the basin.
- U. **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 applied, 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.
- V. **Offset** shall mean that the depletion resulting from a new Water Well or transfer has been accounted for and has been determined that the same amount of water or less would be depleted from the stream over a 50-year period absent the installation of the same new Water Well or transfer.
- W. **Operator** shall mean a person with direct control over day-to-day farming operations of the land.
- X. **Person** shall mean a natural person, part partnership, association, corporation, municipality, irrigation district, and any agency or political subdivision of the state.
- Y. **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 natural resources district and, if the purpose is for irrigation, the replacement water well delivers water to the same tract

of land served by the original water well and (1) replaces a decommissioned water well within one hundred 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 nonconsumptive or de minimis use approved by the applicable natural resources district.

Z. Water Well

1. The term Water Well shall mean (i) any excavation that is drilled, cored, bored, washed, driven, dug, jetted, or otherwise constructed for the purpose of exploring for groundwater, monitoring groundwater, 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; or (ii) any excavation made for any purpose if groundwater 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.
2. The term 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 Conservation Commission; or (ii) any structure requiring a permit by the Department of Natural Resources used to exercise surface water appropriation.

CHAPTER 3 – ENFORCEMENT AND PENALITIES

RULE 3-1 – ENFORCEMENT

A. Penalties for violating certain provisions of these Rules and Regulations are identified below, listed penalties may be enforced without the need for the LLNRD to issue a cease and desist order. To the extent that specific penalties are not identified below, these Rules and Regulations shall be enforced by the LLNRD through the use of cease and desist orders issued in accordance with the NEB. REV. STAT. § 46-707(h).

B. The following persons may file a complaint against a ground water user or other person within the District for non-compliance with the Act or these Rules and Regulations :

1. Any person who owns land, leases land, or resides within the District;
2. Any person directly affected by the alleged violator ;
3. District staff ; or
4. The Board by its own motion.

C. The complaint should include as much information as known by the filer, including, but not limited to:

1. The name of the filer;
2. The name of the alleged violator;
3. The provision or rule allegedly violated; and
4. A clear and concise statement of the factual basis for the alleged violation, including any evidence available to the filer to support a finding that the provision or rule was violated.

D. Complaints must be submitted to the District in writing on a form provided by the District.

E. Upon the receipt of a complaint, the District shall review the complaint for completeness and, if necessary, conduct an investigation for the purpose of determining the extent of the alleged violation and obtaining any additional information that may be reasonably necessary for the Board to determine whether a violation has occurred. If an investigation is conducted, an investigation report summarizing the investigation and any evidence gathered shall be attached to the complaint and submitted to the Board with the complaint for consideration.

F. If the Compliance Officer, upon receipt of the complaint and/or investigation report, determines that there is sufficient cause to open a proceeding against the alleged violator, the District shall notify the alleged violator in writing of its intent to issue a cease and desist order. The notice of intent to issue a cease and desist order shall include the general grounds for the action, the contemplated action, and a date and time for a hearing no less than ten days after the date of issuance where the alleged violator may have a reasonable opportunity to be heard before the Board. A copy of the complaint and/or investigation report shall be attached thereto.

G. The hearing shall afford both the District and the Alleged Violator the opportunity to present testimony and evidence regarding the allegations contained within the complaint, investigation report, or notice of intent to issue a cease and desist order.

H. If an alleged violator or an agent thereof is unable to appear at the date and time of the hearing provided in the notice of intent to issue a cease and desist order for reasons that are satisfactory to the General Manager and/or the Chairman of the Board, and with notice, the General Manager and/or the Chairman of the Board may issue a notice of hearing in writing stating a new date and time where the alleged violator may have a reasonable opportunity to be heard before the Board.

I. When the notice of intent to issue a cease and desist order has provided notice of a properly scheduled formal hearing and the alleged violator has failed to appear or respond, the Board may:

1. Review the complaint and/or the inspection report , as well as any other pertinent information; and
2. Issue a cease and desist order or other order, if appropriate.

J. Pursuant to NEB. REV. STAT. §§ 46-707(h) and 46-746(1), the Board may issue cease and desist orders to enforce any of the provisions of the Act, orders or permits issued pursuant to the Act, or the District's Rules and Regulations, to initiate suits to enforce the provisions of orders issued pursuant to the Act, and to restrain the construction of Illegal Water Wells or the withdrawal or use of water from Illegal Water Wells.

K. It is presumed that any Person subject to these Rules and Regulations has full knowledge of their contents, requirements, and prohibitions. No Person shall be able to use ignorance of the provisions of these Rules and Regulations as a defense in any enforcement action or penalty proceeding.

L. The Board may initiate appropriate legal actions in the District Court of the County where the violation has occurred whenever necessary to enforce any action or orders of the District in accordance with District Rules and Regulations.

RULE 3-2 – PENALTIES

A. Unless otherwise provided, imposition of penalties shall be at the discretion of the Board and may include, but are not limited to:

1. A reduction of, or limitation upon, in whole or in part, a Person's right to irrigate property located within a Ground Water Management Area;
2. A reduction (in whole or in part) of a Person's Certified Irrigated Acres; and
3. Decommissioning of Water Wells.

B. Any person who violates a cease and desist order issued by the District pursuant to NEB. REV. STAT. § 46-707(h) may be subject to a civil penalty assessed pursuant to NEB. REV. STAT. § 46-745.

CHAPTER 4 – ACCESS

RULE 4-1 – ENTRY UPON LAND

A. The LLNRD or authorized designee shall have the power and authority to enter upon the land, after notification to the landowner or operator, for any and all reasons relative to the administration of the provisions of these rules and regulations and the Act. This entry shall not be considered trespass.

B. Notice for entry upon land may be accomplished by rule, oral communication, regular mail, certified mail, or personal service.

Rule 4-2 – NOTICE

A. The LLNRD hereby notifies all landowners and operators of its intent to enter onto property for the following purposes relating to flow meter devices or other similar devices used to measure the quantity of ground water pumped for irrigation, municipal, commercial, and industrial purposes (“measuring devices”):

1. Verify the installation of measuring devices;
2. Read, or verify readings of, all installed measuring devices; or
3. Any other inspection or installation required to ensure proper use and maintenance of measuring devices.

B. The LLNRD hereby notifies all landowners and operators of its intent to enter onto the property for the purpose of conducting static water well measurements and for the purpose of any inspections, measurements, evaluations, or sample collection undertaken pursuant to state law.

RULE 5 – IRRIGATION RUNOFF WATER

Water capable of being captured and utilized by another person in a manner which will prevent waste of such water, deterioration of surface water quality, and accumulation of water upon the land of any other person without his consent, may be excluded from the definition of Improper Irrigation Runoff if the Ground Water User responsible for the runoff submits a copy of a proposed agreement on a form provided by the District providing for the capture and utilization of such water and executed by all affected parties. The District shall review the proposed agreement and issue its approval if it is determined that the Ground Water User’s Irrigation Runoff

Water is under adequate control. The agreement may be terminated at any time by either party or by the District whenever it determines that such agreement no longer prevents or controls Improper Irrigation Runoff. If the District terminates the agreement, written notice shall be provided to both parties by certified mail within ten (10) business days. If one of the parties to the agreement causes the termination, written notice shall be provided to the other party and to the District by certified mail within ten (10) business days.

RULE 6 – WATER WELL CONSTRUCTION PERMITS

A. Any Person intending to construct a Water Well or Replacement Well within the District shall, before commencing construction, apply for a Well Construction Permit on forms provided by the District. A Ground Water User seeking to obtain a Well Construction Permit shall pay a nonrefundable fee, in accordance with the Nebraska Ground Water Management and Protection Act, to the District upon filing the permit application.

B. Any Person intending to undertake the following well-construction activities shall not be required to apply for a Well Construction Permit:

1. No permit shall be required for test holes or dewatering wells with an intended use of ninety (90) days or less; and
2. No permit shall be required for water wells designed and constructed to pump fifty (50) gallons per minute or less.

C. If subsequent modifications to the well-construction activities exempt under Rule 6.B would cause the exemption to be lost, the Person shall be required to apply for a Well Construction Permit. Such permit shall be obtained prior to commencement of the modifications.

D. Any person who fails to obtain a permit as required by this rule shall apply for a late Well Construction Permit on forms provided by the District.

E. The District shall review permit applications and either issue or deny permits within thirty (30) days after the application is filed. If the District finds that the application for a permit is incomplete or needs corrections, it shall return the application to the applicant for any necessary corrections. Corrections must be made within sixty (60) days or the application will be cancelled.

F. A permit required by this rule, whether late or otherwise, shall be granted unless the District finds:

1. The location or operation of the proposed water well in question or other work would conflict with any regulations or controls adopted by the District;

2. The proposed use would not be a beneficial use of water for domestic, agricultural, manufacturing, or industrial purposes; or
3. In the case of a late permit only, that the applicant did not act in good faith in failing to obtain a timely permit.

G. Prior to submitting an application for a Well Construction Permit, any Person intending to construct a Water Well or Replacement Well in which the annual withdraws from it exceeds five hundred (500) acre-feet or upgrade an existing user of five hundred (500) acre-feet to an additional two hundred and fifty (250) acre-feet annually, must provide the following information to the District indicating an acceptable impact to groundwater and surface water uses:

1. A hydrologic evaluation, conducted at the permittee's expense;
2. A detailed description of the potential impact of the withdrawal to water quantity;
3. A detailed description of the potential impact of the withdrawal to water quality;
4. A detailed description of the potential impact of the withdrawal on current groundwater and surface water users;
5. A detailed description of the potential twenty (20) year impact on the groundwater and surface water for potential future uses.

H. A Well Construction Permit issued by the District shall specify all regulations and controls relevant to the construction or utilization of the Water Well or Replacement Well.

I. The District shall transmit a copy of the Well Construction Permit to the Nebraska Department of Natural Resources.

J. A Well Construction Permit shall not vest in any person the right to violate any District rule, regulation, or control, whether in effect on the date of issuance of the permit or adopted thereafter. Obtaining a permit pursuant to this rule shall not relieve any person from the requirement to register a well pursuant to Neb. Rev. Stat. §§ 46-601 through 46-613.02.

K. Upon issuance of a Well Construction Permit, the applicant shall commence construction of the Water Well or Replacement Well as soon as possible and no later than one (1) year after the date of issuance. If the applicant fails to complete construction of the Water Well or Replacement Well in accordance with the terms and conditions of the Well Construction Permit, the District may cancel the Permit.

L. Any new Water Well or Replacement Well constructed after May 9, 2016, may be subject to additional restrictions as the Board of Directors deems reasonable and necessary in light of hydrologic conditions within the District.

RULE 7 – GROUNDWATER QUALITY MANAGEMENT SUB-AREAS; DESIGNATION; CONTROLS

A. The Nebraska Legislature declared the various purposes of the natural resources districts to include pollution control. See Neb. Rev. Stat. § 2-3229(7). The Board of Directors adopted water quality and pollution control as one of its goals in the District’s Master Plan. The Board of Directors adopted water quality as Priority 1 in the District’s Long-Range Implementation Plan.

B. The Groundwater Management Plan provides:

to maintain the quality of the groundwater in the groundwater reservoir to within maximum contaminant levels for all chemicals and compounds established by the Nebraska Department of Environmental Quality and the Nebraska Department of Health and Human Services. Also, to establish a public information, education, and management program designed to reduce existing and potential non-point source contamination of the groundwater reservoir.

C. To achieve its water quality and pollution control goals, the District shall be divided into Ground Water Quality Management Sub-Areas which may be modified by the District from time to time. (See Appendix B). The District shall have the authority to draw, re-draw, or modify the geographical boundaries for Sub-Areas to encompass areas including but not limited to:

1. Areas in which Ground Water quality testing performed by District personnel indicates nitrate contamination levels generally consistent with the Phase I, Phase II, or Phase III triggers set forth in Rule 7.D;
2. Areas with similar soil and land use conditions;
3. Counties, sections, townships, or other political subdivisions;
4. Natural geographic boundaries; or

5. Any other delineation deemed logical by the District and consistent with the goals and objectives of the Ground Water Management and Protection Act or the District's Ground Water Management Plan.
- D. Each Sub-Area may be subject to water quality controls in three separate Phases:
1. Phase I areas are set with median nitrate nitrogen levels of 0 to 6.5 mg/l (milligrams per liter).
 2. Phase II areas are set with median nitrate nitrogen levels of 6.6 to 8.5 mg/l over a continuous four (4) year period beginning with the 1994 test results.
 3. Phase III areas are set with median nitrate nitrogen levels of over 8.6 mg/l over a continuous four (4) year period beginning with the 1994 test results.
- E. The following controls shall apply to Phase I Sub-Areas:
1. Establish information and education programs.
- F. The following controls shall apply to Phase II Sub-Areas:
1. Phase I requirements will continue unless modified or negated by Phase II requirements;
 2. Farm operators using nitrogen fertilizers must attend and pass a certification class conducted by the Lower Loup NRD or an adjoining Natural Resources District;
 3. Fall and winter application of nitrogen fertilizer is prohibited on sandy soils being planted to corn, grain sorghum, soybeans and potatoes. Nitrogen fertilizers can be applied on sandy soils after March 1st of each year;
 4. Nitrogen fertilizer with a nitrogen inhibitor will be permitted on non-sandy soils after November 1st of each year. The operators will be required to furnish documentation that a labeled nitrogen inhibitor was used at the recommended rate; and
 5. An Operator must:
 - a. Supply an annual water analysis for nitrogen concentrations for all wells irrigating corn, grain sorghum, soybeans and potatoes;
 - b. Obtain one composite deep soil nitrate analysis (0-36") for, no greater than, each 80-acres of field of irrigated corn, grain sorghum,

soybeans and potatoes, and submit the results of the analysis prior to February 1st for that crop year following obtainment of the soil sample;

- c. Obtain one manure analysis for total nitrogen for each manure source applied to irrigated corn, grain sorghum, soybeans, and potatoes;
- d. Submit, on forms provided by the District, a report of yearly water tests, flow meter reading, water applied, soil tests, crops planted, yield goals, nitrogen applied, and other field information required to be reported prior to January 31st of each year; and
- e. Monitor water application with a flow meter so operators can more effectively manage fertilizer applications. The flow meter shall be installed and approved by District staff prior to December 31, 2016.

G. The following controls shall apply to Phase III Sub-Areas:

- 1. Phase II requirements will continue unless modified or negated by Phase III requirements;
- 2. Farm operators using nitrogen fertilizers must attend and pass a certification class conducted by the Lower Loup NRD or an adjoining Natural Resources District;
- 3. Require operators who preplant apply nitrogen fertilizer to furnish documentation from a dealer that a labeled nitrogen inhibitor was used at the recommended rate;
- 4. Application of nitrogen fertilizer is prohibited on all soils being planted to corn, grain sorghum, soybeans and potatoes until after March 1st of each year. Spring application of nitrogen fertilizer must be in accordance with guidelines set up by the Lower Loup Natural Resources District, as follows:
 - a. Split applications are authorized; either preplant or preemergent/post-emergent, when no more than 50% of actual nitrogen is being applied as preplant or preemergent;
 - b. If more than 50% is applied as preplant or preemergent, the operator is required to furnish dealer documentation that a labeled nitrogen inhibitor was used at the recommended rate;

- c. In cases where the total application is 80 pounds of actual nitrogen or less, a labeled nitrogen inhibitor is not required; and
 - d. No restrictions if nitrogen fertilizer is applied post-emergent.
5. An Operator must:
- a. Supply an annual water analysis for nitrogen concentrations for all wells irrigating corn, grain sorghum, soybeans and potatoes;
 - b. Obtain one composite deep soil nitrate analysis (0-36") for, no greater than, each 80-acres of field of irrigated corn, grain sorghum, soybeans and potatoes, and submit the results of the analysis prior to February 1st for that crop year following obtainment of the soil sample;
 - c. Obtain one manure analysis for total nitrogen for each manure source applied to irrigated corn, grain sorghum, soybeans, and potatoes;
 - d. Submit, on forms provided by the District, a report of yearly water tests, flow meter reading, water applied, soil tests, crops planted, yield goals, nitrogen applied, and other field operations required prior to January 31st; and
 - e. Monitor water application with a flow meter so operators can more effectively manage fertilizer applications. The flow meter shall be installed and approved by District staff prior to December 31, 2016.

H. Unless otherwise provided, the entire Lower Loup Natural Resources District Groundwater Management Area shall be designated Phase I.

I. Prior to the designation of any Sub-Area, modification of the boundaries of any existing Sub-Area, or modification of the controls to which any particular Sub-Area is subject, the Board of Directors shall hold a public hearing.

J. The boundaries of all Sub-Areas shall be designated on a map, updated from time to time, in the District Office. The map will be available for public inspection during regular office hours and copies will be provided upon request.

RULE 8 – GROUNDWATER QUANTITY MANAGEMENT SUB-AREAS; DESIGNATION; CONTROLS

A. The Nebraska Legislature declared the various purposes of the natural resources districts to include development, management, utilization, and conservation of ground water and surface water. See Neb. Rev. Stat. § 2-3229(6). The Ground Water Management and Protection Act authorizes the District to require meters to be placed on any water wells for the purpose of acquiring water use data. See Neb. Rev. Stat. § 46-707.

B. The Board of Directors adopted development and management of groundwater and surface water for beneficial uses has one of its goals in the District's Master Plan. The Board of Directors has adopted water quantity as a Priority in the District's Long-Range Implementation Plan.

C. The District's Ground Water Management Plan provides for the requirement of flow meters and reports of usage as an option for control in Ground Water Quantity Management Areas.

D. To achieve its water quantity control goals, the District may be divided into Ground Water Quantity Management Sub-Areas, which may be modified by the District from time to time. (See Appendix C). The District shall have the authority to draw, re-draw, or modify the geographical boundaries for Sub-Areas to encompass areas including but not limited to:

1. Areas with similar soil and land use conditions;
2. Counties, sections, townships, or other political subdivisions;
3. Natural geographic boundaries; or
4. Any other delineation deemed logical by the District and consistent with the goals and objectives of the Ground Water Management and Protection Act or the District's Ground Water Management Plan.

E. Each Ground Water Quantity Management Sub-Area may be subject to water quality controls in separate Phases, which controls will be specified by rule or regulation promulgated by the District after a public hearing and opportunity for comment.

F. Within twenty-four (24) months of the District's designation of a Ground Water Quantity Management Sub-Area, operators shall be required to install a Flow Meter on all water wells within the Sub-Area which are designed to pump more than fifty (50) gallons per minute. Withdraw of Ground Water from any water well subject to this provision shall be strictly prohibited without a properly installed and function Flow Meter.

RULE 9 – FLOW METERS

A. For a water well, Common Carrier, and/or surface water source with a discharge pipe of less than or equal to 4-inch outside diameter, an alternative measuring device or method may be used with District approval.

B. All District approved Flow Meters must meet the minimum requirements of plus or minus two percent (2%) of the actual water flow; and when maintenance is required, the flow meter shall be calibrated to the same standard.

C. Flow Meter installation shall be subject to the following requirements:

1. The installation of the Flow Meter shall be done to meet manufacturer's specifications and shall be constructed so all water pumped by the water well, Common Carrier, and/or surface water source will pass through the flow meter to the irrigation system;
2. The District may, at the time of its own choosing, verify the location, readings, and proper installation of flow meters;
3. The District may seal flow meters to prevent tampering. The District may consider whether or not to seal a flow meter when doing so may cause unnecessary inconvenience for the user or the District;
4. The landowner shall notify the District prior to changing the location of a flow meter; and
5. It shall be the responsibility of the District to provide for service and maintenance of the flow meter according to manufacturer standards. The owner of the flow meter will be required to pay for the expense of maintaining the flow meter.

D. It shall be a violation of these Rules and Regulations for any person to damage, alter, adjust, or otherwise tamper with any Flow Meter required under these Rules and Regulations.

E. Flow Meters may be periodically inspected by District staff or their agent for proper installation, function, and operation. The District shall report the results of the inspection, including any corrections required for proper installation or operation of the Flow Meter to the operator. Failure to repair or otherwise correct any deficiency identified by the District as a result of inspection of a Flow Meter within thirty (30) days shall constitute a violation of these Rules and Regulations.

F. Operators shall notify the District in writing within five (5) business days following the discovery of a malfunctioning or otherwise improperly operating Flow Meter.

G. Operators shall provide the District a written copy of a certification from any person who repairs and/or calibrates any Flow Meter installed pursuant to these Rules and Regulations. Such certification must indicate the repaired or calibrated Flow Meter meets the manufacturer's original specifications.

RULE 10 - VARIANCES

A. The Board of Directors may grant variances from the strict application of these Rules and Regulations upon a showing of good cause.

B. Any person may apply for a variance from the Rules and Regulations by filing an application with the Variance Committee on forms provided by the District, along with a nonrefundable fee of \$300.00 due at the time the application is submitted.

C. Within ten (10) days of receipt of an application, the General Manager shall provide the applicant(s) written notice of the date and time for a hearing before the Variance Committee. The Variance Committee shall hear the variance request at two Variance Committee meetings. The first meeting is to hear the information provided by the applicant, the second is to hear additional information and to make a recommendation to the Board of Directors at the next Board meeting. Unless otherwise approved by the Variance Committee, the applicant(s) or his or her representative shall be present at the hearings. Upon prior notification to, and approval by, the Variance Committee, written testimony may be submitted in lieu of the applicant(s) presence.

D. The Variance Committee shall provide a report to the Board of Directors at the next Board meeting concerning those variance applications for which a hearing has been held under Rule 8.C. The Board of Directors shall review the report of the Variance Committee and place the matter on the agenda for a vote at the next Board meeting. The variance request will be voted on at the next regular Board meeting.

E. The Board, at its discretion, may designate conditions under which specific requests for a variance may be approved by methods other than the Variance Committee process. A variance granted under these conditions shall be referred to as an "Expedited Variance."

1. An expedited variance shall be applied for using forms provided by the District. An expedited variance may be granted by the General Manager, or his designated representative, for the purpose of approving an expedited variance for:
 - a. Alternative methods used for public education and/or demonstration projects.
 - b. A water well that is used to supplement an irrigation well or Lagoon Water, that irrigates land already irrigated with groundwater or

Lagoon Water, provided that the irrigated acres do not exceed the acres currently irrigated.

- c. Upon written agreement that the acres irrigated will not exceed the acres irrigated before January 1, 2006;
- d. If the acres are to be irrigated with lagoon water, upon written agreement that the acres irrigated will not exceed the acres certified;
- e. New wells that irrigate land currently irrigated with surface water on the condition that the landowner provides the following:
 - i. Written agreement from the landowner that the well will only be used when the surface water supply has been exhausted and is no longer available to the operator at the normal rotation or scheduled time;
 - ii. Written agreement that the landowner will maintain the surface water right; and
 - iii. Written agreement that the irrigated acres will not exceed the acres currently irrigated.
- f. Land previously irrigated but currently enrolled in a federal, state, or local government conservation program may receive an expedited variance from the raised seal original record of irrigated acres from the County Assessor as long as:
 - i. Acres were irrigated just before being enrolled in a program;
 - ii. Acres are not assessed as irrigated within that county; and
 - iii. Acres are certified through the Irrigated Acres Certification process following the conservation program contract termination.

RULE 11 – NEW CERTIFIED IRRIGATED ACRE DEVELOPMENT

A. New groundwater irrigated acre development will be based on the ranking method described in these rules and regulations. Each year, the Board shall set the number of available new irrigated acres that shall be allowed to be certified and irrigated within the hydrologically connected area designated within the 10% in 50-year line. The process that allows the development of new groundwater irrigated acres shall be as follows:

1. The application period to apply for the new groundwater irrigated acres shall be from September 1 to September 20th
2. The applicants will be notified of the status of their request by December 1 of the application year;
3. The application shall be made on forms provided by the District;
4. The application shall include an Aerial photo delineating the new irrigated acres being sought;
5. The application shall be accompanied with a non-refundable filing fee of five hundred dollars (\$500.00);
6. The application shall be signed by the landowner.
7. An incomplete application may be declined.

B. The applications shall be ranked based on criteria set by the Board of Directors. The criteria will be set to allow development of irrigated acres based on the best use of the water resource. Items to be considered may be, but are not limited to:

1. Number of Acres Applied;
2. Ground Water/Surface Water Status;
3. Irrigation Concentration;
4. Soil Classification; and
5. Stream Depletion Factors.

C. Variances that include transfers of Irrigated Acres or water use transfers will require a title search and approval from lien holders of the property that from which the acres are being transferred. Fees associated with these actions will be charged back to the Landowner(s).

D. The new Irrigated Acres shall be certified with the District prior to July 1 of the following year; new irrigated acres not certified by July 1 of the following year shall be revoked.

E. New Irrigated Acres shall not be allowed within a Department of Environmental Quality designated wellhead protection area.

F. Lagoon Water may be applied through an irrigation system to acres not certified to groundwater or surface water if:

1. There is a significant weather rain event that puts the lagoon at a point of water elevation that jeopardizes the integrity of the structure or puts it to a must-pump status according to their Nutrient Management Plan filed with the Nebraska Department of Environmental Quality;
2. The total application of lagoon water is less than 3 acre-inches per acre per year;
3. A map indicating the amount of acres and location of those acres is on file with the District;
4. Proper management of the lagoon has been followed according to the Nutrient Management Plan filed with the Nebraska Department of Environmental Quality; and
5. The District has been notified prior to pumping and agrees that the requirements of these rules have been met.

G. Any new Irrigated Acres Developed after May 9, 2016 may be subject to additional restrictions as the Board of Directors deems reasonable and necessary in light of hydrologic conditions within the District.

RULE 12 – CERTIFICATION OF IRRIGATED ACRES

A. Certification of irrigated acres is required by January 1, 2008, by each landowner or his or her representative that owns irrigated land within the Lower Loup NRD. The certification records provided by the landowner shall include completed District certification form, raised seal original record of irrigated acres from County Assessor, and FSA aerial photo delineating irrigated acres. The County Assessor's records will be used as the final base for irrigated acre certification. In cases that the acres being certified are not accepted by the General Manager or his or her designated representative, the landowner or his or her representative may request to present his or her information to the Variance Committee for their recommendation to the Board.

B. All or any of the following sources of information will be used in the variance process to resolve a dispute:

1. U.S.D.A. Farm Service Agency records
2. Aerial photographs
3. Crop insurance records
4. Personal documentation

5. Other requested information

C. The Board may take action to approve, modify and approve, or reject the certification provided by the landowner and his or her representative.

D. Irrigated Acres to be certified must:

1. Actually be capable of being supplied with groundwater or surface water through irrigation works, mechanisms or facilities existing at the time of certification if certified prior to January 1, 2008;
2. Had been irrigated at least 2 out of 10 years prior to January 1, 2008. The proof of irrigation shall be the responsibility of the landowner;
3. Land previously irrigated but currently enrolled in a federal, state, or local government conservation program;
4. Be irrigated by lagoon water that had been irrigated at least 2 out of 10 years prior to October 1, 2012 or had previously been certified prior to October 1, 2012;
5. Granted by Rule 8 Variances; or
6. Be irrigated by surface water in accordance with Nebraska Department of Natural Resources Rules and Regulations.

E. Acres irrigated by surface water that are not certified with the District are not eligible for District programs.

F. No acres shall be certified for an Illegal Water Well.

G. The information on the forms needs to be corrected and kept current by the landowner or his or her representative.

RULE 13 – CLOSURE IN THE ISSUANCE OF PERMITS AND IN THE EXPANSION OF IRRIGATED ACRES

A. There is a closure in the issuance of permits to construct new wells and, Effective January 1, 2008, a closure to the expansion of irrigated acres within the Lower Loup NRD. This closure shall remain in effect unless rescinded by the Board of Directors.

B. Wells not subject to these rules are:

1. Test holes;

2. Dewatering wells with an intended use of less than ninety (90) days.
3. Water wells constructed to pump fifty gallons per minute (50 gpm) or less, provided that if two or more water wells have individual pumping capacities of 50 gpm or less but a combined capacity of more than 50 gpm, and if those wells are to be clustered or joined for a single purpose or if the water there from is to be commingled or combined for a single purpose, those wells shall be considered as one well and shall be subject to Rule 9;
4. Water wells to be used as Replacement wells;
5. Wells with permits approved before February 23, 2006 may be constructed if the construction of the well is completed before the expiration date of the permit;
6. The construction of a well for monitoring groundwater or an observation well for obtaining water levels or hydrologic information. A monitoring/observation well shall not have a permanent pump installed;
7. The construction of wells for the purpose of groundwater contamination treatment. The application shall include a copy of an approved site plan; or
8. Water wells that are intended to supply water for municipal, industrial, or commercial.

C. Except as otherwise provided, only irrigated land which has been certified to Ground Water and/or Lagoon Water may:

1. Be irrigated with Ground Water on or after January 1, 2008;
2. Be irrigated with Lagoon Water on or after October 1, 2012; or
3. Be eligible for District programs.

RULE 14 – MUNICIPAL USE AND ACCOUNTING

A. The District, pursuant to NEB. REV. STAT. § 46-740, adopts the following rules regarding municipal use and accounting.

B. The District will calculate a Baseline of Municipal Use for each municipality based on Historic Consumptive Use data for an appropriate interval. Consumptive Use will be determined from Ground Water pumping volumes and, where applicable, wastewater discharge volumes, and converted to a per capita volume. The baseline per capita volume, plus the annual population growth estimated by the Nebraska Department of Economic Development and/or U.S.

Census Bureau will be used to determine annual increases and decreases in Consumptive Uses. These changes in Consumptive Use will be tracked annually for each municipality through a reporting system administered by the District.

C. Once each five (5) years, the District will re-calculate the per capita Consumptive Use based upon similar, but updated data described in subsection (B).

D. Each year the municipality shall be responsible for reporting to the District any Ground Water use that exceeds the amount authorized by a permit that was issued pursuant to the Municipal and Rural Domestic Ground Water Transfers Permit Act and any new or expanded single commercial/industrial Consumptive Use.

E. Any permanent reduction in Consumptive Use of water associated with municipal growth including governmental, industrial, and commercial growth (e.g., by taking irrigated acres out of production), between July 14, 2006, and January 1, 2026, shall accrue to the District's benefit to be used in whole or in part to Offset increased municipal Consumptive Use within the District. Acres taken out of production must be decertified and shall accrue to the District's benefit.

RULE 15 – COMMERCIAL OR INDUSTRIAL USE AND ACCOUNTING

A. The District will calculate Baseline of Commercial and Industrial Use for each Commercial or Industrial Water User in the District based on Historic Consumptive Use data for an appropriate interval. Consumptive Use will be determined from Ground Water pumping volumes and, where applicable, wastewater discharge volumes. The baseline will be used to determine changes in Consumptive Use annually.

B. Changes in Consumptive Use will be tracked for each commercial or industrial user annually through a reporting system administered by the District.

C. Any permanent reduction in Consumptive Use of water associated with a new commercial or industrial use of less than twenty-five million gallons (e.g., by taking irrigated acres out of production), between July 14, 2006, and January 1, 2026, shall accrue to the District's benefit.

RULE 16 – TRANSFER AGREEMENTS

A. For Agriculture purposes, any person who intends to withdraw groundwater and transfer that groundwater off the overlying land which he or she owns or controls or otherwise change the location of use of groundwater shall, before making such transfer, apply for a transfer on forms provided by the District.

B. The District shall approve the withdrawal and transport of groundwater when a public water supplier providing water for municipal purposes receives a permit from the Nebraska

Department of Natural Resources pursuant to the Municipal and Rural Domestic Groundwater Transfers Permit Act.

C. Transfers for which permits or approval for transfer have been obtained pursuant to the Industrial Groundwater Regulatory Act are not required to apply for a transfer from the District.

D. All applications to transfer shall require a non-refundable application fee of three hundred dollars (\$300.00).

E. The applicant shall be required to provide access to his or her property at reasonable times for purposes of inspection by officials of the District.

F. An application for a transfer shall contain, but not be limited to, the following information:

1. The name and address of the well owner(s) and landowner;
2. The registration number of the well(s) involved;
3. Explanation of the proposed activities;
4. An aerial photo with the proposed field(s), well(s), pipeline(s), etc. delineated;
5. Include approved copy of Irrigated Acres certification form(s);
6. Legal description(s) of affected properties; and
7. Landowner(s) and/or well owner(s) signature(s).

G. The application for a transfer shall be denied or conditioned to the extent that it is necessary to:

1. Ensure the consistency of the transfer with the purpose or purposes for which the management area was designated;
2. Prevent adverse effects on other groundwater users or on surface water appropriators;
3. Prevent conflict with any regulations or controls adopted by the District; or
4. Ensure the proposed transfer would be a reasonable and beneficial use.

H. The issuance, by the District, of a transfer shall not vest in any person the right to violate a District rule, regulation, or control in effect on the date of issuance of the transfer or to violate any rule, regulation, or control properly adopted after such date.

I. The issuance, by the District, of a transfer shall not vest in any person the right to violate any statute, state agency or other jurisdictional agency's rule, regulation, or control in effect on the date of issuance of the transfer or to violate any rule, regulation, or control properly adopted after such date. It is the responsibility of the applicant to ensure compliance with other rules and regulations.

J. The transfer of irrigated acres may have conditions attached by the District prior to approval by both the landowner and District.

K. Applications to transfer received prior to March 1st, if approved, shall be effective that year. Applications to transfer received after March 1st, if approved, shall not be effective until the following year.

RULE 17 – TRANSFERS

A. Transfers out of District.

1. Any person desiring to withdraw groundwater from one or more Water Wells located within the District and transport that groundwater out of the District for use elsewhere in the state shall:
 - a. Obtain a Transfer Agreement in accordance with Rule 12; and
 - b. Obtain approval for the use of such water from the Natural Resources District within which the water will be used.
2. Any person intended to transport or contract for the transport of more than 250 acre-feet of groundwater or surface water for use or consumption at a location outside the District shall:
 - a. Consult with the District prior to transporting any such water outside of the District;
 - b. Prior to transporting any such water outside of the District, provide the District with a written evaluation:
 - i. Studying the potential impact of the transport on water quantity and quality within the District;

- ii. Studying potential hydrologic and economic impact of the transport on current groundwater and surface water users within the District;
 - iii. Studying the potential twenty (20) year impact of the transport on future groundwater and surface water uses;
 - iv. Describing any alternative approaches for meeting the water needs sought to be served by the transport of such water outside of the District and providing justification for selecting the transport of such water outside the District in lieu of any alternative approach; and
 - v. Show consistency with the District's and Nebraska Department of Natural Resource's Integrated Management Plan.
 - vi. Include any additional information required by the Nebraska Department of Natural Resources.
- c. Within sixty (60) days, the District shall review the written evaluation provided under Subsection (b) and provide a response indicating:
- i. Whether the written evaluation meets the requirements of Subsection (b);
 - ii. Whether additional analysis is required before transport of any such water outside of the District may commence; and
 - iii. Whether additional consultation is required before transport of any such water outside of the District may commence.

B. Transfers into the District. Groundwater withdrawn outside the District shall not be transferred for use inside the District unless the Natural Resources District from which the groundwater is withdrawn approves the withdrawal and transfer in advance. Use of the transferred water must be in accordance with these Rules.

C. Permanent Transfer. A permanent transfer may be accomplished by decommissioning the well(s) and discontinuing the certified use and transferring the right to that use to another owner. The new well shall be limited to number of acres associated with the certified acres from the well being replaced.

D. Transfer of Irrigated Acres to a Property. A transfer of irrigated acres may be permitted in accordance with the following procedure:

1. The applicant shall submit an application to the Board of Directors on forms provide by the District.
2. The application shall include:
 - a. An aerial photo delineating the proposed location to which the irrigated acres will be transferred;
 - b. Criteria that will be set by the Board of Directors to promote minimal soil erosion and promote water savings including, but not limited to: 1) soil classification; 2) slope; and 3) infiltration rates.
 - c. Landowner's signature;
3. Applications that do not contain the information provided in this Rule may be declined.
4. The criteria set forth in the application shall be based on historic data, when available, prior to any land leveling or dirt work.

E. Field Boundary Change. When an irrigated acre is moved from its original location to another location within a parcel, it shall be subject to the same criteria as a transferred acre, but shall not be considered a transfer.

F. Transfers within the District shall be restricted to the following:

1. Acre had to have been developed prior to January 1, 2006 and irrigated at least 2 out of 10 years prior to January 1, 2008. The proof of irrigation shall be the responsibility of the landowner;
2. Land that is currently certified with the District as irrigated
3. The original irrigated acres that are being transferred must be converted to a non-irrigated use.
4. Transfers shall be based on Stream Depletion Factors and shall not cause an increase in Stream Depletion.
5. Staff may defer approval of a transfer application to the Variance Committee.

6. Transfers of irrigated acres or water use transfers will require a title search and approval of lien holders of the property from which the acres are being transferred from. Fees associated with these actions will be charged back to the landowner(s).
7. Transfers of irrigated acres or water use transfers may be subject to the variance process set forth in Rule 8.
8. Acres may only be transferred to or from a property once per year.
9. A transfer shall not result in an increase in irrigated acres.
10. A transfer shall not be allowed to increase the number of irrigated acres within a designated wellhead protection area.
11. Certified irrigated acres retired by a permanent easement shall not be allowed to be transferred.

RULE 18 – CHEMIGATION

A. The Lower Loup Natural Resources District (District) 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 (DEQ) and the provisions of the Nebraska Chemigation Act (Neb. Rev. Stat. §§ 46-1101 to 46-1148), as the same may be amended from time to time.

B. Nothing in these rules shall exempt any person from the provisions of Title 195 or the Nebraska Chemigation Act.

C. Chemigation Permit. No person within the geographic boundaries of the District shall apply or authorize the application of chemicals to land or crops through the use of Chemigation unless such person obtains a permit from the District.

1. Chemigation permit is not required on an open discharge irrigation system.

D. Any person who intends to engage in Chemigation shall, before commencing Chemigation, apply to the District, on forms provided by the District, for a Chemigation permit for each injection location. The Chemigation permit application shall be accompanied by an application fee, determined by the type of permit application. The fees are as follows:

1. The application fee for a new Chemigation permit is fifty dollars (\$50), with five dollars (\$5) of this amount paid by the District to the DEQ.

2. The application fee for a Chemigation renewal permit is thirty dollars (\$30), with two dollars (\$2) of this amount paid by the District to the DEQ.
3. The application fee for an emergency Chemigation permit is five hundred dollars (\$500), with ten dollars (\$10) of this amount paid by the District to the DEQ.
4. The application fee for a special Chemigation permit is sixty dollars (\$60), with five dollars (\$5) of this amount paid by the District to the DEQ.

E. The District will review the Chemigation permit application, conduct an inspection of the Chemigation system and approve or deny the application within forty-five (45) days after a completed application form is filed. Emergency Chemigation permit applications shall be reviewed and approved or denied within (2) working days after a completed application is filed.

F. Inspections. Employees of the District shall have access at all reasonable times to inspect Chemigation systems and otherwise carry out their duties under the Chemigation Act and these rules.

1. All approved Chemigation permit holders will have their Chemigation system inspected at a minimum of once every three (3) years;
2. The District will make periodic inspections of Chemigation systems for which no permit has been issued.
3. If a Chemigation permit is not issued following an inspection by District personnel, it is the responsibility of the permit applicant to request the District to perform a re-inspection of the Chemigation system.
4. A reapplication for a new Chemigation permit will be required if two inspections of the Chemigation system have been conducted and the District has denied the permit application or suspended or revoked an existing Chemigation permit.
5. The Chemigation permit holder, applicator, or their designated system operator is required to be present during inspection of the Chemigation system by District staff.
6. The District will investigate complaints concerning Chemigation systems for which no permit has been issued.

G. Equipment. Employees of the District will not operate any irrigation or Chemigation equipment, nor will District staff open any electrical control box.

1. The Chemigation system must be started and shut-down during the inspection.
2. The irrigation system shall be started and shut-down to the extent the Inspector has sufficient water to perform the inspection.
3. District staff may assist in removal of the chemical injection line check valve and the inspection port if requested by the Chemigation permit holder or applicator.
4. The District will not replace a chemical injection check valve which becomes damaged during removal or reattachment thereof or by any defects in the valve.

Appendix A

Commencing on the Custer-Dawson County line at the SW corner of Sec. 31, T13N, R20W of the 6th PM; thence northerly to the SW corner of Sec. 31, T14N, R20W of the 6th PM; thence westerly to the SW corner of Sec. 34, T14N, R21W of the 6th PM; thence northerly to the SW corner of Sec. 15, T14N, R21W of the 6th PM; thence westerly to the SW corner of Sec. 18, T14N, R21W of the 6th PM; thence northerly to the SW corner of Sec. 31, T15N, R21W of the 6th PM; thence westerly to the SW corner of Sec. 31, T15N, R22W of the 6th PM; thence southerly to the SE corner of Sec. 36, T14N, R23W of the 6th PM; thence westerly to the SW corner of Sec. 31, T14N, R23W of the 6th PM; thence northerly to the SW corner of Sec. 18, T14N, R23W of the 6th PM; thence westerly to the SW corner of Sec. 15, T14N, R24W of the 6th PM; thence northerly to the SW corner of Sec. 34, T15N, R24W of the 6th PM; thence westerly to the west Custer County line at the SW corner of Sec. 31, T15N, R25W of the 6th PM; thence northerly to the NW corner of Custer County at the NW corner of T20N, R25W of the 6th PM; thence easterly along the 5th standard parallel to the SW corner of Sec. 31, T21N, R20W of the 6th PM; thence northerly to the NW corner of Loup County at the NW corner of Sec. 6, T24N, R20W of the 6th PM; thence easterly on the north Loup County line to the SW corner of Rock County at the SW corner of Sec. 33, T25N, R20W of the 6th PM; thence northerly to the NW corner of Sec. 4, T26N, R20W of the 6th PM; thence easterly to the NE corner of Sec. 1, T26N, R19W of the 6th PM; thence southerly to the NE corner of Sec. 1, T25N, R19W of the 6th PM; thence easterly to the Rock-Holt County line at the NE corner of Sec. 1, T25N, R17W of the 6th PM; thence southerly on the Rock-Holt County line to the SE corner of Rock County at the SE corner of Sec. 36, T25N, R17W of the 6th PM; thence easterly on the south Holt County line to the NE corner of T24N, R13W of the 6th PM; thence southerly to the NE corner of T23N, R13W; thence easterly to the east Wheeler County line at the NE corner of T23N, R9W of the 6th PM; thence southerly to the NW corner of Boone County at the NW corner of T22N, R8W of the 6th PM; thence easterly on the Boone-Antelope County line to the NE corner of Sec. 5, T22N, R6W of the 6th PM; thence southerly to the NE corner of Sec. 29, T22N, R6W of the 6th PM; thence easterly to the NE corner of Sec. 25, T22N, R6W of the 6th PM; thence southerly to the NE corner of Sec. 24, T21N, R6W of the 6th PM; thence easterly to the NE corner of Sec. 21, T21N, R5W of the 6th PM; thence southerly to the NE corner of Sec. 21, T20N, R5W of the 6th PM; thence easterly to the Boone-Platte County line at the NE corner of Sec. 24, T20N, R5W of the 6th PM; thence easterly to the NE corner of Sec. 22, T20N, R4W of the 6th PM; thence southerly to the NE corner of Sec. 34, T20N, R4W of the 6th PM; thence easterly to the NE corner of Sec. 31, T20N, R3W of the 6th PM; thence southerly to the NE corner of Sec. 30, T19N, R3W of the 6th PM; thence easterly to the NE corner of Sec. 27, T19N, R3W of the 6th PM; thence southerly to the NE corner of Sec. 10, T18N, R3W of the 6th PM; thence easterly to the NE corner of Sec. 7, T18N, R2W of the 6th PM; thence southerly to the NE corner of Sec. 18, T18N, R2W of the 6th PM; thence easterly to the NE corner of Sec. 17, T18N, R2W of the 6th PM; thence southerly to the NE corner of Sec. 20, T18N, R2W of the 6th PM; thence easterly to the NE corner of Sec. 22, T18N, R2W of the 6th PM; thence southerly to the NE corner of Sec. 27, T18N, R2W of the 6th PM; thence easterly to the NE corner of Sec. 25,

T18N, R2W of the 6th PM; thence southerly to the NE corner of Sec. 36, T18N, R2W of the 6th PM; thence easterly to the east Platte County line at the NE corner of Sec. 36, T18N, R1E of the 6th PM; thence southerly on the Platte-Colfax County line to where it intersects the south bank of the Platte River; thence westerly along said south bank to a point where the dividing line between Townships 16 and 17N intersects the same; thence westerly on the 4th standard parallel to the point where the Platte County line intersects the Nance-Merrick County line on the southern boundary of Sec. 31, T17N R3W of the 6th PM; thence southerly on the Nance-Merrick County line to the southern boundary of Sec. 7, T16N, R3W of the 6th PM; thence westerly to the SW corner of Sec. 10, T16N, R5W of the 6th PM; thence southerly to the SE corner of Sec. 16, T16N, R5W of the 6th PM; thence westerly to the SW corner of Sec. 16, T16N, R5W of the 6th PM; thence southerly to the SE corner of Sec. 20, T16N, R5W of the 6th PM; thence westerly to the SW corner of Sec. 24, T16N, R6W of the 6th PM; thence southerly to the SE corner of Sec. 26, T16N, R6W of the 6th PM; thence westerly to the SW corner of Sec. 26, T16N, R6W of the 6th PM; thence southerly to the SE corner of Sec. 3, T15N, R6W of the 6th PM; thence westerly on the Nance-Merrick County line to the point on the southern boundary of Sec. 6, T15N, R6W of the 6th PM where the east-west Nance-Merrick County line turns north-south; thence southerly on the Nance-Merrick County line to the southern boundary of Sec. 7, T15N, R6W of the 6th PM; then westerly on the Nance-Merrick County line to the point on the southern boundary of Sec. 10, T15N, R7W of the 6th PM where the east-west Nance-Merrick County line turns north-south; thence southerly on the Nance-Merrick County line to the southern boundary of Sec. 15, T15N, R7W of the 6th PM; thence westerly on the Nance-Merrick County line to the point where the county line intersects the eastern boundary of Sec. 13, T15N, R8W of the 6th PM in Merrick County; thence southerly to the SE corner of T15N, R8W of the 6th PM; thence westerly to the SW corner of Sec. 34, T15N, R8W of the 6th PM; thence southerly to the SE corner of Sec. 9, T14N, R8W of the 6th PM; thence westerly to the SW corner of Sec. 7, T14N, R8W of the 6th PM, thence southerly to the SE corner of Sec. 25, T14N, R9W of the 6th PM; thence westerly to the SW corner of Sec. 25, T14N, R9W of the 6th PM; thence southerly to the SE corner of Sec. 35, T14N, R9W of the 6th PM; thence westerly to the SW corner of Sec. 32, T14N, R9W of the 6th PM; thence southerly to the SE corner of Sec. 6, T13N, R9W of the 6th PM; thence westerly to the SW corner of Sec. 2, T13N, R10W of the 6th PM; thence southerly to the SE corner of Sec. 15, T13N, R10W of the 6th PM; thence westerly to the SW corner of Sec. 15, T13N, R10W of the 6th PM; thence southerly to the SE corner of Sec. 28, T13N, R10W of the 6th PM; thence westerly to the SW corner of Sec. 29, T13N, R10W of the 6th PM; thence southerly to the SE corner of Sec. 31, T13N, R10W of the 6th PM; thence westerly along the 3rd standard parallel to the SW corner of Sec. 34, T13N, R12W of the 6th PM, thence southerly to the SE corner of Sec. 5, T12N, R12W of the 6th PM; thence westerly to the SW corner of Sec. 5, T12N, R12W of the 6th PM; thence southerly to the SE corner of Sec. 18, T12N, R12W of the 6th PM; thence westerly to the SW corner of Sec. 18, T12N, R12W of the 6th PM; thence southerly to the SE corner of T12N, R13W of the 6th PM; thence westerly to the SW corner of T12N, R13W of the 6th PM; thence southerly to the SE corner of T11N, R14W of the 6th PM; thence westerly to the SW corner of T11N, R16W

of the 6th PM; thence northerly to the NW corner of Sec. 19, T11N, R16W of the 6th PM; thence westerly to the SW corner of Sec. 18, T11N, R17W of the 6th PM; thence northerly to the NW corner of T11N, R17W of the 6th PM; thence westerly to the SW corner of T12N, R18W of the 6th PM; thence northerly to the NW corner of T12N, R18W of the 6th PM; thence westerly to the point of beginning.

Appendix B

Insert Map of all 29 Water Quality Management Areas

Appendix C

Ground Water Quantity Management Sub-Areas