RULES AND REGULATIONS

FOR THE ENFORCEMENT OF THE GROUNDWATER MANAGEMENT AREA OF THE LITTLE BLUE NATURAL RESOURCES DISTRICT

Effective Date: July 15th, 2024

CONTENTS

RULES AND REGULATIONS

FOR THE ENFORCEMENT OF THE GROUNDWATER MANAGEMENT AND PROTECTION ACT

AUTHORITY – The Little Blue Natural Resources District hereby adopts these Rules and Regulations pursuant to the authority granted in the Nebraska Ground Water Management and Protection Act ("Act"), Neb. Rev. Stat. §§ 46-701 to 46-754.

APPLICABILITY - On January 1, 1997, a Level I Groundwater Management Area was established over the entire Little Blue Natural Resources District to address both water quality and water quantity issues in accordance with § 46-712.

PURPOSE - The purposes of these Rules and Regulations as adopted and set forth herein are to reduce, and prevent groundwater contamination, support wise management of groundwater resources and prevent groundwater depletions. By adopting these Rules and Regulations, the Board of Directors of the District endeavor to achieve sustainability of the groundwater resources to meet the stated Groundwater Reservoir Life Goal, which is "**To maintain an adequate supply of acceptable quality and quantity groundwater to forever fulfill the reasonable groundwater demands within the Little Blue NRD."** The District further endeavors to preserve and sustain the groundwater quality and quantity of the District to meet the future needs for domestic, agricultural and industrial uses, to reduce conflicts between water users and to protect the local economic resource base of the area.

1. CHAPTER 1 - DEFINITIONS

1.1 **ACRE-INCH** means the amount of water that will cover one surface acre to the depth of one (1) inch, or twenty-seven thousand, one hundred fifty-four (27,154) gallons.

1.2 **ALLOCATION** means the apportionment of groundwater per certified acre of irrigated land, or volumetric total for other certified uses to be used within a specified period.

1.3 **ALLOCATION PERIOD** means the number of years over which the allocation of water can be used.

1.4 **ALLOCATION SUSPENSION LEVEL** means the water level at which allocations will be suspended once the current allocation period has expired.

1.5 **BEST MANGEMENT PRACTICES (BMP'S)** means schedules of activities, maintenance procedures and other management practices utilized to prevent or reduce present and future contamination of groundwater and/or reduce groundwater depletion. These shall consist of any authorized controls under each level of the implementation of this plan respectively, or as otherwise determined by the District, which may include: soils testing, water testing, scheduling water usage, proper timing and rate of fertilizer and pesticide application and other fertilizer and pesticide management programs, or groundwater management programs as adopted by the Board of Directors.

1.6 **BOARD OR BOARD OF DIRECTORS** means the elected Board of Directors of the Little Blue Natural Resources District and/or its employees and agents acting at the direction of the Board of Directors.

1.7 **CARRY-OVER** means the unused portion of an allocation which can be carried over to the subsequent allocation period.

1.8 **CERTIFICATION** means the act of certifying that a person has completed a required course of study in best management practices approved by the District.

1.9 **CERTIFIED IRRIGATED ACRES** means those acres of land approved by the District on which groundwater is used for a beneficial use.

1.10 **CERTIFIED USE** means those uses approved by the District whereby groundwater was consumed from a registered well.

1.11 **COMPLIANCE OFFICER** means an employee or agent of the District authorized by the General Manager to perform the functions assigned by these Rules and Regulations.

1.12 **DEMONSTRATION FIELD** means an operator's largest irrigated field as delineated in the Farm Service Agency (FSA) cropping plan records, or other fields with specific management challenges as agreed to by the District, in which the operator intends to apply groundwater for the production of corn, soybeans, milo, or forage sorghum in the ensuing crop year. If the operator does not have any irrigated row crop fields, the Demonstration Field shall mean the largest dryland field as delineated in the FSA cropping plan records, or other field with specific management challenges as agreed to by the District, in which the operator intends to plant corn, soybeans, milo, or forage sorghum in the ensuing crop year. An irrigated Demonstration Field shall be 5 acres in size or larger, a non-irrigated Demonstration Field shall be 10 acres in size or larger. **(04/2022)**

1.13 **DISTRICT or NRD** means the Little Blue Natural Resources District or any administrative agent designated by the Board of Directors to carry out these rules and regulations.

1.14 **FERTILIZER** means any material or product of natural or synthetic origin that is applied to soil or to plant tissues to supply plant nutrients in order to promote plant growth.

1.15 **FIELD** means Little Blue NRD non-irrigated lands ten (10) acres or larger, and irrigated lands that are five (5) acres or larger on which agricultural crops will be grown.

1.16 GROUNDWATER means that water which occurs or moves, seeps, filters or percolates through ground under the surface of the land and shall include groundwater which becomes commingled with waters from surface sources.

1.17 GROUNDWATER USER means any person who at any time extracts, withdraws or confines groundwater for any use by himself or other persons at a rate in excess of 50 gallons per minute.

1.17.1 Whenever the landowner and operator are different, the term "groundwater user" shall mean both the landowner and the operator.

1.18 HIGH-CAPACITY WATER WELL means a single water well, or series of interconnected water wells, designed to pump more than 50 gallons-per-minute.

1.19 HIGH RISK AREA means those portions of the District which the Board has designated due to limitations on the availability of groundwater and/or productivity of water wells, potential impacts to domestic water supplies, and potential for conflicts between groundwater users.

1.20 HYDRO-GEOLOGIC UNIT means a geographic area identified by the Board for management purposes.

1.21 ILLEGAL WELL means:

1.21.1 Any well-constructed or operated in violation of these Rules and Regulations, Neb. Rev. Stat. § 46-1207.01, or of other applicable laws of the State of Nebraska.

1.22 IMPROPER IRRIGATION RUNOFF means the occurrence of irrigation runoff water which

1.22.1 causes or contributes to the waste of groundwater.

1.22.2 causes the accumulation of water upon or beneath the surface of the lands of any other person(s) and causes visible physical damage or nuisance.

1.23 INACTIVE WELL means a water well that has no associated certified acres and is shown on Little Blue NRD records as not in use. A variance can be requested to have an inactive well be considered as a replacement well.

1.24 INSPECTOR means an employee or agent of the District authorized by the Compliance Office to inspect suspected rule or statute violations.

1.25 IRRIGATED ACRE means any acre of ground upon which groundwater is being applied for agricultural, wildlife, recreational, and turf purposes, and has been certified as such.

1.26 IRRIGATION RUNOFF means groundwater used for irrigation purposes which escapes from land owned, leased or otherwise under the direct supervision and control of a groundwater user.

1.26.1 Groundwater which becomes comingled with surface runoff water will be treated as irrigation runoff.

1.27 LANDOWNER means a person, or persons who owns land.

1.28 LATE PERMIT means written authorization from the District for construction of a well for which a permit was not obtained prior to drilling the well.

1.29 LITTLE BLUE NRD HYDRO-GEOLOGIC STUDY (July 14, 2011) means a compilation of hydrogeologic information, data and maps which depict the water and related resources of the District and is referred to herein for the determination of varying hydrologic and hydrogeologic conditions of specific areas.

1.30 MCL or MAXIMUM CONTAMINANT LEVEL means the level for a specified contaminant measured in mg/l as established by the U.S. Environmental Protection Agency.

1.31 NITROGEN FERTILIZER means a chemical compound in which the percentage of nitrogen is greater than the percentage of any other nutrient in the compound.

1.32 OPERATOR means a person who controls the day-to-day operations on a field.

1.33 OPERATOR CERTIFICATION means formal recognition by the District that an individual has completed a required course of study in best management practices approved by the District.

1.34 PERMIT means a document required to be obtained from the District authorizing an activity or the construction of a well in the District.

1.35 PERSON means a natural person, personal representative, trustee, guardian, conservator, irrigation district, corporation, limited liability company, partnership, association, municipality, or any agency or political subdivision of the State of Nebraska or any agency of the Federal Government.

1.36 REPLACEMENT WELL means a well which is intended to be located on the same field and provides groundwater to the same lands as the well that it replaces.

1.37 REPORT means documents required by the District to effectively verify the operator's, or landowner's compliance with the District rules and regulations.

1.38 STAY means to halt, stop, or delay a well permit, action of development, or the expansion of irrigated acres.

1.39 STRAIGHT LINE AVERAGE means the sum of all data in a specific geographic area divided by the number of data sets collected.

1.40 TRANSFER (of an Allocation) means allowing any or all of a groundwater acre-inch allocation to be transferred to other certified acres.

1.41 TRANSFER (of Groundwater) means groundwater withdrawn for any purpose from a high-capacity well, or series of wells, producing more than 50 gallons per minute and being transferred from a field on which the well is located to another field.

1.42 VARIANCE means the approval to act in a manner contrary to existing and applicable rules and regulations.

1.43 WATER ACCOUNT BALANCE means the tracking of a new allocation amount, carry-over or adjustments in acre inches of available water credited for use on a certified irrigated acre.

1.44 WATER WELL means 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 hydro geologic information, or extracting water from or injecting water into the underground water reservoir. Water wells shall not include any excavation made for obtaining or prospecting for oil or natural gas, or for inserting media, to re-pressure oil or natural gas bearing formations regulated by the Nebraska Oil and Gas Conservation Commission.

1.45 WEIGHTED AVERAGE means a water level measurement calculated by assessing the proportionate land area that a single data point represents of the total calculated area using the Thiessen polygon method.

2. CHAPTER 2 - GENERAL DISTRICT-WIDE LEVEL I REGULATIONS

2.1 WELL CONSTRUCTION

2.1.1 Any person who intends to construct a high-capacity water well on land which he or she owns or controls in the District shall, before commencing construction, apply for a permit from the District. No new high-capacity irrigation wells shall be permitted in the areas of well stays or moratoriums designated by the District and identified in Section 2.2 of this Chapter. Permits are required for replacement wells. Exemptions to this rule are:

2.1.1.1 No permit shall be required for test holes or dewatering wells with an intended use of ninety days or less, and

2.1.1.2 No permit shall be required for a single water well designed and constructed to pump fifty gallons per minute or less.

2.1.2 In order to assure that proper applicable rules and regulations of the District are followed, the following rules apply:

2.1.2.1 All applications for a new high-capacity water well shall be submitted on forms provided by the District.

2.1.2.2 The application form shall be accompanied by an aerial photo of the site with a distinctive mark, and if available, GPS coordinates, locating the proposed new well, and an outline of the acres to be irrigated from the well.

2.1.2.3 All well applications must be signed by the landowner, a person holding power of attorney, or a pending landowner as evidenced by an instrument such as a signed purchase agreement, a copy of which shall be provided to the District at the time the application is submitted.

2.1.2.4 The well permit application shall include the fee of $50 per application pursuant to Neb. Rev. Stat. § 46-735.

2.1.2.5 Any Person who fails to obtain a permit before well construction is commenced shall apply for a Late Permit on forms provided by the District and pay a Late Permit fee of $250.00 fee payable to the District pursuant to Neb. Rev. Stat. § 46-735.

2.1.2.6 The District will review the application form, examine aerial photos, topographic maps, and other relevant information, and is authorized to do a physical on-site inspection if deemed necessary.

2.1.2.7 The permit will be issued only after District staff has determined:

2.1.2.7.1 That the proposed well and irrigation development meets a minimum standard as set forth in the District's Policy of Land Use Conversion to Irrigation, (Attachment A) and a minimum aquifer score of 100 points calculated by District staff using the Little Blue NRD Hydro-Geologic Study.

2.1.2.7.2 A permit may also be approved if it fails to meet the requirements above, but has met the test prescribed in Section 2.1.2.11 of this chapter for wells in "Very High Risk" or other areas of the District and satisfied the District that the impacts of such a well to existing groundwater users and the water resource have no observable adverse impacts.

2.1.2.8 All permits shall be issued, with or without conditions attached, or denied not later than thirty (30) days after receipt by the district of a complete and properly prepared application. (Neb. Rev. Stat. § 46-736)

2.1.2.9 Each water well-constructed shall be registered with the Nebraska Department of Natural Resources within 60 days of completion or the well will be considered an illegal well.

2.1.2.10 No more than one high capacity well shall be allowed per eighty acres of land within the "Very High-Risk Areas", identified in the Appendix to these rules as Figure 1. Any wells installed prior to the October 11, 2011, adoption date of this rule at a development level 2 wells per quarter section of land or more, are grandfathered and may continue to be operated.

2.1.2.11 Any applicant for a high-capacity irrigation well which would be constructed in the "High Risk" or "Very High Risk" areas is required to file for a pre-application for a permit. A scoring procedure entitled "Policy of Land Use Conversion to Irrigation" developed as tool of the Little Blue NRD Hydro-Geologic Study is found in the Appendix of these rules as Attachment A and shall be used to score all proposed well

sites. If the pre-permit score assigned to the well location is equal to or greater than 100 points, no additional information is required and a formal permit may be filed. However, if the score assigned to the well location is below 100 points, the applicant will be required to supply additional hydrogeologic, water quality and well capacity information for evaluation by the District. The information shall include:

2.1.2.11.1 A well hole log and physical material sample summary of the well site.

2.1.2.11.2 A 24-hour pump test will be required between August 1 and September 30 and the well must maintain a 400-gpm output or more throughout the 24-hour test period, verified by the District.

2.1.2.11.3 A water quality sample collected at the end of the pump test and submitted to an approved laboratory for analysis including nitrates, sodium, chloride, pH, and total dissolved solids.

2.1.2.11.4 The static water level and drawdown shall be measured during the pump test by the pump installer or well driller on the new well drilled and reported to the District. The NRD may gather drawdown information for other water wells located within 2,640' of the subject well for a better understanding of the aquifer's characteristics and response to pumping.

2.1.2.12 When the District is satisfied that the location, hydrology, pump test data and water quality data reflect conditions sufficient to justify permit approval, the applicant will be instructed to file for a formal water well permit.

2.1.2.13 When a well fails to meet the 400-gpm requirement, the well shall be abandoned or, at the option of the landowner, it may be registered as a domestic or livestock well and equipped only for those purposes.

2.1.2.14 All new or replacement water wells shall be equipped with a port for measuring water levels and an operable faucet for the collection of water samples.

2.1.2.15 After March 10, 2006, all new or replacement water wells to be used for domestic, stock, or other such purposes shall be constructed to such a depth that they are less likely to be affected by seasonal water level declines caused by other water wells in the same area.

2.1.3 High-Volume Water Wells

2.1.3.1 In addition to the water well permitting requirements set forth above, any water user who intends to construct a new well, replace an existing well or use an existing well or series of interconnected wells with the purpose of using more than five hundred (500) acre-feet of groundwater per year, or increasing ground water withdrawal from an existing well or series of wells by an additional two hundred and fifty (250) acre feet on a cumulative basis, must also apply to the NRD for a high volume groundwater use permit. The high-volume groundwater use permit application shall include a hydrologic evaluation, conducted at the permittee's expense, showing the impact, if any, of the intended withdrawal on current groundwater users and a minimum 20-year impact on the groundwater table for potential future uses. In determining appropriateness of allowing the development of such a well or series of wells, the board shall also consider the preference of use as follows: 1) domestic, 2) agriculture and 3) industry and manufacturing in accordance with Neb. Rev. Stat. § 46-613.

2.1.3.2 A high-volume groundwater use permit shall be reviewed by the District's Water Resources Committee and recommendations acted on by the NRD Board of Directors. The Board may approve, deny, or approve with conditions and limitations thereon as determined necessary to protect groundwater supplies, prevent groundwater waste or

take other such other actions as may be appropriate to limit adverse impacts on adjacent or nearby groundwater users. Such conditions may include, but are not limited to:

2.1.3.2.1 limitations on the rate or volume of groundwater pumping,

2.1.3.2.2 requirements to offsets for depletions to groundwater table declines,

2.1.3.2.3 reporting pumping to the NRD on an annual basis,

2.1.3.2.4 allowing NRD personnel access to the well site for inspection of the well and flowmeter,

2.1.3.2.5 construction and maintenance of groundwater observation wells at locations to be determined,

2.1.3.2.6 limitations on the location, rate, and manner of discharge of groundwater after use in an industrial facility.

2.1.3.2.7 Every reasonable effort shall be made by the permittee to reclaim as much of the water withdrawn from the aquifer as possible and that pumpage to waste shall be avoided if possible.

2.1.3.2.8 The applicant shall pay a non-refundable fee of $500 and shall also pay an amount estimated by the District to be reimbursed for its actual costs expended in hiring a consultant for peer review and assessment of the hydrologic evaluation.

2.2 STAYS ON WELL DRILLING AND/OR NEW IRRIGATED ACRES

2.2.1 The NRD Board may issue a stay on new well permits for selected uses and the expansion of irrigated acres.

2.2.2 No new well permits shall be issued for the selected groundwater use(s) immediately upon Board decision and action that a stay on well construction will be implemented. Inactive wells may not be brought back into service.

2.2.2.1 Exemptions are granted for replacement wells and uses that pertain to human health, safety and welfare, or range livestock, or injection wells, including heat pump installations and groundwater remediation systems.

2.2.2.2 Irrigation projects for which the owner/operator have substantially completed may be allowed to be completed by the District. Notification and documentation of substantial completion are required as proof of such completion.

2.2.3 Effective immediately upon the first year's announcement and a vote by the Board of Directors that the groundwater quantity trigger for a Water Quantity Hydrogeologic Unit (Figure 3) has been met (See Section 3.2.1), the District shall impose an immediate stay on the construction of all high-capacity irrigation wells and expansion of irrigated acres in that hydrogeologic unit. Such a stay shall remain in effect indefinitely unless specific action of the Board dictates otherwise. The construction of replacement wells, or wells for fields identified in Section 2.2.6.2 below, will continue to be permitted.

2.2.4 Upon decision of the Board of Directors that a stay on new well construction or expansion of irrigated acres shall be implemented, an announcement shall be made and notice of such stay shall be provided by publication once each week for three consecutive weeks in at least one newspaper of local circulation.

2.2.5 The Board may allow the construction of a well for which a well permit was previously approved, but not completed prior to the date of announcement of the stay.

2.2.6 Expansion of groundwater irrigated acres shall be prohibited beginning on the date that the stay is announced.

2.2.6.1 An owner may receive an approval to increase irrigated acres on the field if proof can be provided to the Board that the increase in acres will cause an improvement in irrigation system efficiency or a reduction in waste. If such an increase in acres is allowed by the Board, no additional allocation will be granted for the additional acres. The previous assigned allocation shall be used to serve both the previously certified acres and the new acres. The decision of the Board will be final.

2.2.6.2 During the time that a stay is in place, if the water source for certified irrigated acres is lost due to landownership changes, disputes or other reasons, and no new acres will be irrigated, the affected landowner may apply for a permit to construct a well to serve the formerly certified irrigated acres, with no increase in acres. Such wells shall not be subject to the rules for new well development which apply to the Very High-Risk Areas.

2.2.7 The Board has imposed stays in portions of the District shown in the Appendix to these rules in Figure 2. The stays imposed, lands impacted, and their implementation date include:

2.2.7.1 The portion of the paleovalley aquifer known as Unit 8, (a subunit of Hydrogeologic Unit 2) where high capacity well permits, the expansion of new irrigated acres and groundwater transfers are prohibited (Effective March 16, 2006). The stratigraphic boundaries for this stay area are from the land surface through the underlying water bearing silts, clays, sands, and gravels, and include the sandstones, siltstones, chalk, and shale formations which may contain groundwater below the Unit.

2.2.7.2 Lands identified Water Quantity Hydrogeologic Unit 3 where high-capacity well permits are prohibited, however, the expansion of irrigated acres is allowed in this area. The stratigraphic boundaries for the stay area are from the land surface through the underlying water bearing silts, clays, sands, and gravels, and include the sandstones, siltstones, chalk and shale formations which may contain groundwater below the Unit. (Effective May 12, 2014)

2.2.7.3 The Platte River Special Management Area in Northwest Adams County where groundwater uses have been determined by Nebraska Department of Natural Resources modeling to impact Platte River stream flow by 10 percent in 50 years. (Effective May 10, 2018)

2.3 WELL SPACING

2.3.1 All new high-capacity irrigation wells shall be a minimum of one thousand (1,000) feet from any existing irrigation well, except as described in paragraphs 2.3.4 and 2.3.5 below.

2.3.2 This spacing shall apply to all irrigation wells, even if registered to the same owner.

2.3.3 When multiple wells are commingled or combined for use in the same irrigation system and have a total capacity exceeding 50 gallons per minute, each well shall comply with all provisions of this section.

2.3.4 After May 12, 2014, permits for new high-capacity irrigation wells which lie in the "Very High Risk" areas shall be a minimum of one thousand two hundred fifty (1,250) feet from any existing irrigation well.

2.3.5 After May 12, 2014, permits for new high-capacity irrigation wells constructed within one (1) mile of the municipal well may be approved with additional conditions at the discretion of the District for protection of municipal water supply.

2.3.6 If the permit for a new well construction lies within 2 miles of the municipal well, the municipality will be notified of the pending permit to provide an opportunity for comment and to assure all local rules and ordinances are considered.

2.3.7 When a high-capacity well located less than the minimum spacing stated in this section is replaced, the replacement high-capacity well may be constructed no more than fifty (50) feet closer to the existing high-capacity well of different ownership. However, when replacing a high-capacity well the state requirement of 600 feet between high-capacity wells of differing ownership must still be maintained.

2.3.8 All new high-capacity wells shall be located no closer than 500 feet to the nearest registered domestic water well. Any existing well that was in place prior to May 12, 2014, is grandfathered. A domestic well may be constructed closer than 500 feet to a high capacity well at the domestic well owner's risk.

2.4 WATER TRANSFERS

2.4.1 Any existing transfer of ground water from a high-capacity water well to another field prior to May 12, 2014, is grandfathered and may continue. Any person who intends to transfer water from one field to acres on an adjacent quarter section shall, before commencing construction, apply for a permit on forms provided by the District. The field on which the water well is located must be a single, contiguous field no larger than 160 acres and the groundwater well(s) used for transfer may not irrigate, or deliver groundwater to, more additional acres than the total acreage of the field on which the well is located. If a groundwater transfer is to be made beyond a government survey section, such transfer shall only be allowed to a field directly adjacent or cater-corner (diagonal) to the field on which the water well is located. The applicant shall be required to provide access to the property at all reasonable times for the purpose of inspection.

2.5 TRANSFERS FOR IRRIGATION

2.5.1 Transfers to adjoining fields shall be prohibited, even though they are located in the same section of land, if 1) there is no groundwater aquifer under the receiving field; 2) the aquifer that underlies the receiving field is incapable of providing enough water to support the irrigation system on the receiving field on its own; or 3) more than two high-capacity wells would be required to support the irrigation system of the receiving field.

2.5.2 New transfers of irrigation water from within the District to any area where a well stay, moratorium, permit suspension, or groundwater allocation has been established, or to an area that is determined to be fully appropriated by the Nebraska Department of Natural Resources, are prohibited.

2.5.3 A non-refundable application fee of $50 payable to the Little Blue NRD shall accompany all irrigation transfer requests to cover any costs associated with investigation or review.

2.6 TRANSFERS FOR USES OTHER THAN IRRIGATION

2.6.1 For new transfers which will consume more than five hundred (500) acre-feet of groundwater per year from an existing well or series of well, or an increase in ground water withdrawal from an existing well or series of wells by an additional two hundred and fifty (250) acre feet on a cumulative basis, a hydrologic evaluation will be required, conducted at the permittee's expense, showing the impact, if any, of the intended withdrawal on current groundwater users and a minimum 20-year impact on the groundwater table for potential future uses.

2.6.2 Groundwater transfers authorized by the Municipal and Rural Domestic Ground Water Transfers Permit Act, Neb. Rev. Stat. §§ 46-638-46-650, and groundwater transfers by a municipality within its corporate limits, are exempt from this rule.

2.6.3 The applicant shall pay a non-refundable fee of $50 and shall also pay an amount estimated by the District to be reimbursed for its actual costs expended in hiring a consultant for peer review and assessment of the hydrologic evaluation.

2.6.4 All applications for transfers will be reviewed by the District's Water Resources Committee and recommendations to approve, approve with conditions, deny, or request additional information forwarded to the Board based on:

2.6.4.1 Preference of use as follows: 1) domestic, 2) agriculture and 3) industry and manufacturing in accordance with Neb. Rev. Stat. § 46-613.

2.6.4.2 The Groundwater Reservoir Life Goal of the District.

2.6.4.3 Potential adverse effects on other ground or surface water users.

2.6.4.4 Any adverse impacts on the State's ability to comply with an interstate compact or decree or to fulfill the provisions of any other formal state contract or agreement.

2.6.4.5 Protection of the public's interest and welfare.

2.6.5 Nothing in this control shall exempt a person from the provisions of applicable state laws regarding groundwater transfers.

2.7 RELOCATION OF CERTIFIED IRRIGATED ACRES

2.7.1 Certified irrigated acres may be permanently relocated from one field to another field under the following conditions:

2.7.1.1 Both fields must be under the same common ownership.

2.7.1.2 The owner must make an application for such relocation on forms provided by the District**.**

2.7.1.3 A non-refundable application fee of $75 payable to the Little Blue NRD shall accompany the certified irrigation acre relocation requests to cover any costs associated with the review, changes in District records and any filing fees.

2.7.1.4 If either field is currently under a mortgage, the mortgage holder or any other lienholder must grant approval for such relocation.

2.7.1.5 The irrigation system on the destination field to which the relocated irrigated acres are moved shall be equal to or more efficient than the irrigation system on the originating field.

2.7.1.6 The Board may consider any relevant information in determining whether to approve or deny the relocation request, including the location of both the originating field and destination field, the water levels of the area, the erodibility of fields, potential stream flow depletions, or other relevant criteria.

2.7.1.7 The Board of Directors shall review and either approve or deny the request. The Board's decision shall be final.

2.7.1.8 If approved by the Board, the NRD will file an "Instrument of Certified Irrigated Acre Relocation" with the county assessor in the county in which the originating field is located to assure that adjustments are made in the county assessor records.

2.8 FLOWMETER INSTALLATION, OPERATIONAL REQUIREMENTS AND MAINTENANCE

2.8.1 After April 1, 2017, all high-capacity water wells within the District shall be equipped with an approved and fully operational flowmeter.

2.8.2 Wells for livestock production are exempt from this rule.

2.8.3 Flowmeters must meet the following specifications:

2.8.3.1 Meters must be installed according to the manufacturer's specifications,

2.8.3.2 Must meet proper size, pressure rating and operating range for specific installation,

2.8.3.3 Accuracy must maintain a plus or minus two percent (2%) accuracy throughout the operating range.

2.8.3.4 Meter must have flow rate indicator and volumetric totalizer.

2.8.3.5 Meter must be installed to record the entire flow for the irrigation system.

2.8.4 Groundwater withdrawals from water wells that are connected by a common pipeline may be measured by a single flowmeter, provided that the total groundwater withdrawal is measured.

2.8.5 The District will certify the location and proper installation of flowmeters.

2.8.6 When flow meters have been certified by the District as properly installed and serviceable, general meter maintenance will be provided by the District, or its agent, on an area-wide rotational basis.

2.8.7 Prior to any allocation, the District will establish a method by which the installed meter is tagged, marked, and sealed on the well to prevent tampering.

2.8.8 If meters are removed for off-season storage or any other reasons by the operator, the District must be notified that the seal has been broken and the meter removed. Any meter removed for meter maintenance or off-season storage shall be reinstalled at the same well from which it was removed the previous season unless permission is otherwise granted by the District.

2.8.9 Damaged or malfunctioning water meters must be reported to the District within twenty-four (24) hours from the time the malfunction is discovered, excluding weekends and holidays.

2.8.10 Meter maintenance will be performed on meters that are reported not working.

2.8.11 District staff will pick up and repair broken meters throughout the season, or when reported not working on the annual pumpage forms. A pipe blank can be installed if the malfunction occurs during the irrigation season so irrigation can continue. The District will return the meters to the well after maintenance is accomplished.

2.8.12 Meter repairs will be conducted by the District or an authorized service center on a least cost basis. Repairs will be new or rebuilt but will meet factory replacement specifications.

2.8.13 The District will provide free labor for irrigation flow meter maintenance; the landowner will be responsible for the cost of parts. Cost share may be available for meter repairs whether conducted by the District or an approved service center.

2.8.14 It shall be a violation for any person to willfully alter, remove, reset, manipulate, or in any manner tamper with any flowmeter within the District. It is also a violation to break a seal on any meter without prior notification of and permission from the District.

2.9 CERTIFICATION OF HIGH-CAPACITY WELLS, IRRIGATED ACRES & OTHER USES

2.9.1 All groundwater uses from high-capacity wells and irrigated acres in the District shall be certified. Each owner or duly authorized agent shall certify:

2.9.1.1 the well registration number for that well, and

2.9.1.2 the maximum number and location of all acres irrigated.

2.9.2 Such certification shall be on forms provided by the District and may be determined by applicable records from the Farm Service Agency, County Assessor, Department of Natural Resources, suitable aerial photographs, or such other information as requested by the District to verify the information.

2.9.3 Exceptions: All domestic, public water supply or livestock uses are exempt from this rule. Changes in municipal jurisdictional limits and land uses will be a part of the annual municipal use reporting.

2.9.4 Acres located on lands that are contractually bound through a government or private set-aside program (CRP, CREP, etc.) shall retain their irrigated history.

2.9.5 Failure to certify existing irrigated acres will preclude a groundwater user from receiving an allocation at such time as allocations are mandated.

2.9.5.1 The exception would be adjustments to already certified irrigated acres approved by the District after the original deadline has passed.

2.9.6 ADJUSTMENTS IN IRRIGATED ACRES: The Board shall review and modify certified irrigated acres in accordance with these rules. After the initial certification process, when the ground water user desires to change the number of certified irrigated acres, he or she shall notify the Board of such desire by filing an updated irrigation acre report on forms provided by the District. Nothing contained herein shall be construed to prohibit the development of new irrigated acres when such new development is in conformity with these rules and regulations.

2.9.7 The total number of certified irrigated acres on each field shall be fixed at the time of announcement that the groundwater quantity trigger level has been met. Subsequent allocations shall be set based on this fixed number of certified irrigated acres.

2.10 WATER USE REPORTING

2.10.1 All agricultural water users, including recreational, fish & wildlife users, shall report to the District the groundwater withdrawal from each high-capacity water well he or she controlled for the calendar year on or before December 15th, of each year. **(06/2023)**

2.10.2 Owners of high-capacity water wells with intended municipal and industrial, uses shall be metered and report to the District no later than February 15th of each year, the amount of groundwater withdrawn from each such well during the preceding calendar year.

2.10.3 Owners of high-capacity livestock wells are not required to meter those wells but must report to the District by February 1st of each year the number of head served. An estimate of groundwater used should be made based on the average daily stocking rate of the units or lots times the average daily consumption per head of livestock, plus any additional flushing or misting activities.

2.11 NITROGEN FERTILIZER RESTRICTIONS

2.11.1 Nitrogen fertilizer restrictions for agronomic applications are as follows:

2.11.1.1 Pre-plant anhydrous ammonia may not be applied prior to November 1. Producers are urged to wait until soil temperatures have reached and remained below 50 degrees Fahrenheit for three consecutive days.

2.11.1.2 No nitrogen fertilizer may be applied to sand, sandy loam, and loamy sand soils according to NRCS Soil Survey Soils Properties, before March 1st.

2.11.1.3 Pre-plant nitrogen fertilizers in liquid or dry forms may not be applied prior to March 1 except under the following conditions:

2.11.1.3.1 A “Fertilizer Permit” will be required by the District prior to fertilizer applications.

2.11.1.3.2 A nitrogen inhibitor will be required if applying over 20 lbs. of active actual nitrogen/acre.

2.11.1.3.3 An annual report will be required to be submitted to the District by the Operator by March 15 of each year if receiving the “Fertilizer Permit.”

2.11.1.3.4 However, the following activities are exempt from the pre-plant nitrogen fertilizer restriction.

2.11.1.3.4.1 The spreading of manure, sewage, and other by-products conducted in compliance with state laws and regulations.

2.11.1.3.4.2 Applications of pre-plant starter nitrogen formulation to fall seeded crops.

2.11.1.3.4.3 The application of a fertilizer that is not considered a “nitrogen fertilizer.”

2.11.1.4 Operators are urged to consider split applications of fertilizer and chemigation to provide nutrients to crops as close to plant uptake time as possible.

2.12 SOIL SAMPLING REQUIREMENTS

2.12.1 Any farm operator who intends to plant corn, soybeans, milo, or forage sorghum in the ensuing crop year on a field larger than ten (10) acres is required to collect a minimum of one (1) soil sample for each 80 acres from a declared field, and have it analyzed for organic matter and residual soil nutrients. **(04/2022)**

Sampling would be required each year.

The soil samples shall consist of a composite surface sample from 15 – 20 cores collected to a depth of 8 inches, and analyzed for general fertility and nitrate – N; and a subsurface sample from 6 – 8 cores to a depth of 24 inches and analyzed for nitrate – N. Soil sampling to 36 inches is encouraged but not required.

2.12.2 Prior to applying nitrogen fertilizers, the operator must calculate the nitrogen application rate needed for the field. Calculations must be based on the soil analysis and laboratory fertilizer recommendations utilizing all available nitrogen credits. Fertilizer applications should follow licensed soil test laboratory recommendations.

2.12.3 Operators must retain soil sample results because the District may request a copy of the soil sample results on a random basis to assure operator compliance with this requirement.

3 CHAPTER 3 – GROUNDWATER QUANTITY REGULATIONS

3.1 DETERMINATION OF AVERAGE GROUNDWATER LEVEL CHANGES

3.1.1 The annual groundwater level change is determined by comparing the spring groundwater level measurements taken from dedicated observation wells to measurements taken the previous spring. The wells used in the annual water level calculations are determined by the District.

3.1.1.1 The District has identified three water quantity subareas which are shown on the Figure 3-Water Quantity Hydrologic Units, and described as:

- Unit 1 - the principal High Plains Aquifer of the District, and
- Unit 2 - the paleovalley aquifer extending from Byron to east of Fairbury.
- Unit 3 – those areas where the aquifer is either thin (generally less than 10 feet), or absent.

3.1.2 Water level measurements will be gathered from wells in each Water Quantity Hydrologic Unit and each Unit's water levels will be calculated on a weighted average basis independent of the other.

3.1.3 If allocations are triggered in Unit 1 or Unit 2, the adjacent areas of Unit 3 will also be allocated in like fashion according to the Hydrologic Unit Division shown in the Appendix of these rules as Figure 4.

3.1.4 The District will from time to time add additional wells to the monitoring network to improve the coverage and distribution of groundwater levels. Such wells will only be used in District weighted averages after five years of continuous recordings.

3.1.5 Water levels from dedicated observation wells will be collected prior to irrigation at the beginning of each crop year and will be used in the spring water level calculations, only after at least five years of continuous recordings have been achieved.

3.1.6 When a monitored well fails or is decommissioned by the owner, the District will attempt to find a replacement well to monitor in close proximity to the decommissioned well to preserve

network integrity. Comparable land elevations and spring static water level and/or active monitoring well data shall be noted and filed for continuity of the historical water level record.

3.2 GROUNDWATER QUANTITY TRIGGER LEVELS AND APPLICATION

The data collected through static groundwater level measurement program will be compiled and a weighted average of the data used to determine if the groundwater quantity trigger has been met.

3.2.1 If the spring weighted average water levels in a water quantity hydrogeologic unit identified in the Appendix of these rules as Figure 3, reaches or exceed the groundwater quantity trigger level of one (1.00) foot below the established 2016 groundwater level (baseline) for that unit, and the water levels remain below the baseline in the second consecutive spring measurement as well, mandatory groundwater allocations shall begin immediately for the then-current crop year for all high capacity irrigation, municipal, industrial, recreational, and fish & wildlife users. If the second year's spring reading is above the groundwater quantity trigger point, the allocation of water will not be imposed for that year's crop season. Livestock uses shall be exempt from allocations.

3.2.2 A numeric chart and visual graphic of the water levels of each water quantity hydrogeologic area will be prepared and maintained in the District office following each spring's water level collection.

3.3 GROUNDWATER ALLOCATIONS FOR AGRICULTURAL, TURF, GOLF, RECREATION AND WILDLIFE USERS

3.3.1 Groundwater for agricultural irrigation will be allocated based on the Board-approved acre-inches for each certified irrigated acre. Only acres that have been certified by the District may apply groundwater for irrigation.

3.3.2 Groundwater allocations for wetland management will be considered agricultural use.

3.3.2.1 Allocations for wetland management agencies will be based on the hydric soils' footprint acres of the wetlands to which water may be applied.

3.3.2.2 Allocations for wetland management agencies may include upland acres only if those lands have documented history of irrigated cropland, have been certified as irrigated by the agency, and are being used to raise agricultural crops and/or during establishment of native vegetation.

3.3.3 The initial allocation period will be five years.

3.3.4 The initial agricultural allocations are as follows:

3.3.4.1 Each certified irrigated acre will be granted an allocation of sixty-five (65) acre inches of groundwater for the first allocation period.

3.3.5 If at the end of an allocation period the operator has a remaining allocation balance, that balance may be carried over to subsequent allocation periods. Operators may use up to five (5) inches of their remaining allocation balances from previous periods in a single growing season, as applicable.

3.3.6 If an operator exceeds his/her 5-year allotted acre inch allocation, the subsequent allocation period allocation will be reduced by 2 times the amount of over usage.

3.3.7 When the control of certified irrigated acres is transferred to a different landowner and/or operator during an allocation period, the remaining allocation balance, including any carryover balance, for said acres shall also be transferred to the new landowner and/or operator.

3.3.8 Certified irrigated acres enrolled in any land or irrigation retirement program, including, but not limited to the Federal Conservation Reserve Program, EQIP, CREP, or other incentive programs shall not receive an allocation while enrolled.

3.3.9 Certified irrigated acres being removed from any retirement program shall be granted a base allocation prorated to the years remaining in the current allocation period. In addition, upon removal from the land or irrigation retirement program, each certified irrigated acre shall receive the total of the carryforward accumulated at the time of enrollment in the program.

3.4 GROUNDWATER ALLOCATIONS FOR MUNICIPAL USERS

3.4.1 If the groundwater quantity trigger in Section 3.2.1 is met, all municipalities within the water quantity hydrologic unit are required to develop and adopt a Water Conservation Plan within one year of announcement of the agricultural allocation. A copy of the plan shall be provided to the District.

3.4.1.1 Communities which provide water service to rural water projects and other small communities should include such additional service areas in their plan. (NOTE: Municipalities are not subject to allocations until after January 1, 2026, Neb. Rev. Stat. § 46-740.)

3.5 GROUNDWATER ALLOCATIONS FOR BUSINESS, INDUSTRIES, SCHOOLS, AND OTHER WATER USERS

3.5.1 When agricultural allocations are enforced, businesses, industries, schools, and other water users shall be granted the average of the last three (3) years of historical annual usage for the initial allocation period.

3.5.2 If historical usage data is not available, the user shall make a reasonable estimate of past water consumption using GMP output, hour meter, energy charges or any other available information.

3.5.3 If a business, industry, school, and other water users desires to expand or start a new operation which requires additional water, such water users shall make a formal request to the District documenting:

3.5.3.1 the purpose for which groundwater is needed,

3.5.3.2 the quantity of water desired,

3.5.3.3 description of operational methods, including water conservation measures to be implemented,

3.5.3.4 any other information requested by the Board.

3.5.4 An application for an allocation of water for business, industrial, school, or other use will not be denied by the Board if, in the Board's opinion, the use is reasonable and beneficial for the area, and conservation measures are in place to reduce waste and inefficiencies.

3.5.5 The maximum carry-over of unused allocation shall not exceed ten percent (10%) of the total allocation for the allocation period.

3.6 SUSPENSION OF GROUNDWATER ALLOCATIONS

3.6.1 If spring groundwater levels in the last year of the allocation period rise to a level three (3.0) feet above the groundwater quantity trigger level (the "allocation suspension level"), allocations will be suspended.

3.6.2 If the spring groundwater levels in the final year of an allocation period remain below the allocation suspension level, allocations will continue into the next allocation period the following year. The Board will set the groundwater allocation amount and allocation period by September 1 of the year prior to the end of such allocation period. Allocation carry-over will

be calculated at the end of the allocation period and added to the subsequent certified acre allotments for those acres.

3.7 IMPROPER IRRIGATION RUNOFF

3.7.1 Groundwater users shall not operate an irrigation system that allows or causes improper irrigation runoff. Such runoff water shall be considered a non-beneficial use of water and may result in the issuance of a Cease-and-Desist order prohibiting use of the irrigation system.

4 CHAPTER 4 - GROUNDWATER QUALITY TRIGGERS & SUB-AREAS

4.1 DETERMINATION OF AVERAGE GROUNDWATER CONTAMINATION LEVELS

4.1.1 The District has been given legislative authority to control non-point source pollution. The most common non-point pollution which impacts groundwater in the District is nitrates which originate from agronomic applications and livestock waste. The District administers a groundwater monitoring program to track trends and changes in nitrates. The wells used in the annual water quality data collection are to be collected randomly and in a statistically variable method as determined by the District.

4.1.2 The groundwater quality results will be determined annually by collecting groundwater samples from a network of irrigation wells and/or dedicated groundwater observation wells and comparing groundwater contaminant levels to historical measurements previously taken from those wells. If and when a monitored well fails or is decommissioned by the owner, the District will attempt to find a replacement well to monitor in close proximity to the decommissioned well to preserve network integrity.

4.2 GROUNDWATER QUALITY TRIGGER LEVELS

4.2.1 The data obtained through water quality sampling programs will be calculated using a straight-line average to determine if the groundwater quality triggers are met. To establish a groundwater quality sub-area and/or move to the next higher level of controls the following groundwater quality triggers must be met:

4.2.2 Water Quality

4.2.2.1 Level II – Is enacted when 70% of the contaminant MCL is recorded in 60% of the monitored wells.

4.2.2.2 Level III – Is enacted when 100% of the contaminant MCL is recorded in 60% of the monitored wells.

4.3 SUB-AREA DESIGNATION AND ESTABLISHMENT OF CONTROLS

4.3.1 A sub-area for Water Quality Controls will be established, or a higher level of controls implemented, when the groundwater quality triggers above are met, when requested under the terms of Chapter 5, or upon specific action of the Board. The following procedure will be followed:

4.3.2 A Water Quality Sub-Area is defined as an area containing at least five sampled wells within the District's well sampling program around which a logical boundary can be drawn. The minimum size of a sub-area shall be sixteen (16) square miles.

4.3.2.1 An exception can be made for Wellhead Protection Areas that have been delineated for any NRD community. A community can request assistance from the NRD in protecting its municipal water supply in accordance with Chapter 5, without regard

to the size of the management area. This area can be managed by the District for water quality and/or water quantity purposes under existing rules and regulations.

4.3.3 The District will advertise a public hearing in the newspaper(s) of general circulation in the area of the proposed sub-area.

4.3.4 The public hearing will be held to provide information about the problems being experienced, the proposed boundaries of the area, the proposed controls to be implemented, and will receive testimony from the affected public on the same.

4.3.5 Following review of available data and public comment, the Board of Directors shall take action to implement the proposed sub-area and controls, or delay implementation for further study. If action is taken to implement the sub-area and controls, notification shall be made to the public in a newspaper(s) of general circulation in the affected area once each week for 3 consecutive weeks.

4.3.6 The controls proposed by the Board for the sub-area or hydrologic unit area will take effect not less than seven (7) days after the final publication date. The full text of all controls adopted shall be available upon request at least thirty (30) days prior to the effective date.

4.4 SUB-AREA BOUNDARY OR CONTROL MODIFICATION

4.4.1 If, after three years of monitoring in areas adjacent to or within an established water quality sub-area, the condition for which the original sub area was established has changed and/or the next higher or lower groundwater quality trigger has been reached according to these rules, the district shall provide:

4.4.1.1 monitoring information to the public;

4.4.1.2 a proposal for expanding or reducing the boundaries of the sub area in question for which a logical boundary can be drawn;

4.4.1.3 if an expanded area, the proposed control(s) to be implemented; and

4.4.1.4 hold one or more public hearings to receive testimony on the proposed change.

4.4.2 Upon approval by the Board of Directors, the proposed geographical modification of the sub-area or change in the level of control measures will be implemented. In accordance with these rules, the advancement to each new level of control cannot occur more rapidly than one level per year.

5 CHAPTER 5 – WELLHEAD PROTECTION AREAS

5.1 Municipalities located within the District may request the District to establish a water quality sub-area to protect the municipal water supply. The District will consider such a request only if:

5.1.1 The average nitrate level in the municipality's water supply exceeds 5 ppm (mg/l).

5.1.2 The municipality has adopted a Wellhead Protection Area Plan and such plan has been approved by the State of Nebraska as per the Nebraska Wellhead Protection Area Act. Neb.Rev. Stat. §§ 46-1501 to 46-1509.

5.2 Within 60 days after receipt of such a request, the District shall appoint an advisory committee consisting of an equal number of representatives from the municipality and farmers in the proposed sub-area and at least one representative from the District.

5.3 Within eight months of the request, the District's advisory committee shall submit a report to the District outlining the problems that exist and recommending whether a sub-area should be designated. If the report recommends such designation, it must also include recommendations on the rules and regulations and/or management activities that should be implemented to protect that community's water supply. The District's advisory committee may also make recommendations to the municipality concerning modifications to their Wellhead Protection Plan.

5.4 The District shall hold a public hearing concerning the designation of a sub-area to conform to the

boundaries of the municipalities' approved Wellhead Protection Boundary. Following the hearing the District may accept or reject a resolution designating the Sub-Area.

5.5 The discontinuance or modification of a municipality-requested sub-area will be subject to review every five years.

6 CHAPTER 6 – GROUNDWATER QUALITY SUB-AREA REGULATIONS

6.1 LEVEL II ACTIONS

When 70% of the contaminant MCL is recorded in 60% of the monitored wells, and a Level II Water Quality Sub-area is established by the Board, the following controls will be enacted.

6.1.1 LEVEL II OPERATOR EDUCATIONAL OPPORTUNITIES, TRAINING AND CERTIFICATION

6.1.1.1 The purpose of operator educational opportunities, training and certification is to share results of ongoing monitoring of water resources conditions and trends, provide learning opportunities in the use of Best Management Practices (BMP's) and water conservation, share updates on rules and regulations, and report other measures to increase nitrogen use efficiency, irrigation water use efficiency, and general environmental protection.

6.1.1.2 Operator training and certification will be offered for owners and operators who actively farm within designated Water Quality Sub-Areas which lie entirely within the LBNRD boundary. Operator training and certification is required for owners and operators who actively irrigate crops or turf within Hastings Wellhead and Superior/Hardy Sub-Areas. These persons may include but not limited to operators, farm managers, commercial applicators, operators of lawn service companies, operators of golf courses, operators of sod farms, and anyone engaged in the application of manure/bio-solids/bio-liquids on five (5) acres or more. Within two (2) years following the designation of a Level II Water Quality Sub-Area, all operators of land in a new designated sub-area who make the day-to-day decisions about the operations of agricultural lands of ten (10) acres or more and are engaged in the use, application and storage of nitrogen fertilizers and/or irrigation management in the sub-area must attend a Natural Resources District approved training session and be certified by the District. **(04/2022)**

6.1.1.2.1 Training and certification for owners and operators who actively farm within Hastings Wellhead and Superior/Hardy Sub-Areas must be renewed every four (4) years, completed by April 1st. **(04/2022)**

6.1.1.2.2 The District will accept certification from other Natural Resources Districts.

6.1.1.2.3 Renewal certification may be received by District approved methods which may include:

6.1.1.2.3.1 Attendance at a Natural Resources District approved training session.

6.1.1.2.3.2 Completing a Natural Resources District approved home study course.

6.1.1.2.3.3 Passing a Natural Resources District approved test.

6.1.1.3 Crop consultants are also required to attend operator training once every four (4) years and will receive Continuing Education Credits for participation.

6.1.1.4 Failure to attend the required operator training event or maintaining certification is a violation of these rules.

6.1.1.5 The District will offer opportunities for voluntary participation by owners and operators for resources training and information through web site information, social media, and other appropriate means.

6.1.2 LEVEL II WATER QUALITY SUB-AREA DEMONSTRATION FIELD

6.1.2.1 Level II controls require the designation of a Demonstration Field for the purpose of implementing BMPs focused on good soil and water management by the operator. The Demonstration Field is described in the definitions and is subject to these additional criteria:

6.1.2.1.1 Operators are encouraged to retain the same demonstration field each year to develop a better understanding of field conditions and maintain a continuous record of information. However, some flexibility may be granted when specific challenges in fertilization, irrigation, tillage, or other practices make an alternate field more practical.

6.1.2.1.2 If an operator has farming operations in two or more sub-areas, he or she will only be required to maintain a Demonstration Field in the sub-area with the highest level of control.

6.1.2.1.3 If the operator's Demonstration Field is idled, placed in a farm program set aside, or rotated from row crop to another crop such as alfalfa or permanent grass cover, the operator will be required to identify another field farmed in the Water Quality Sub-Area as a Demonstration Field.

6.1.2.1.4 If an operator sells or otherwise loses control of the field which was identified as the Demonstration Field, he or she will be required to implement Level II controls on the largest field which he or she continues to operate which meets the definition of the Demonstration Field.

6.1.3 LEVEL II WATER QUALITY SUB-AREA SOIL SAMPLING

6.1.3.1 Soil sampling is required on a Demonstration field according to the specifications outlined in section 2.12.1 and shall be submitted to the District by April 1st of each year.

6.1.3.2 Deep soil sampling exemptions will be given for corn-soybean rotations in accordance with UNL Extension guidelines. This exemption states that deep sampling is not necessary after a legume crop, as no nitrogen fertilizer was added and the crop scavenged residual nitrogen during the growing season. (NebGuide EC 117).

6.1.3.3 The operator is required to adhere to the licensed laboratory fertilizer recommendations for the Demonstration Field.

6.1.4 LEVEL II SUB-AREA IRRIGATION SCHEDULING

Irrigation scheduling will be required on the Demonstration Field in all Water Quality/Quantity Sub-Areas, and encouraged on all irrigated fields, using the following methods in accordance with NRD or UNL Extension guidelines:

6.1.4.1 Capacitance probes

6.1.4.2 Matric potential (electrical resistance) sensors or similar devices

6.1.4.3 Other practices which the industry may identify as beneficial which are approved by the District's Board of Directors.

6.1.5 LEVEL II WATER QUALITY SUB-AREA ANNUAL FARM OPERATIONS INFORMATION

6.1.5.1 Initial Reports are required at the establishment of any Level II Water Quality sub-area as a baseline report of the use of best management practices. They must be completed by the operator on forms provided by the District.

6.1.5.2 Year-end annual reports regarding the use of best management practices of the landowner/operator will be required only for the demonstration field in Level II. The operator's report must be submitted on forms provided by the District by April 1st.

6.2 LEVEL III ACTIONS

When 100% of the contaminant MCL is recorded in 60% of the monitored wells, a Level III Water Quality Sub-area will be established by the Board, and the following controls will be enacted.

6.2.1 LEVEL III WATER QUALITY CONTROLS REQUIREMENTS

6.2.1.1 All Level II requirements will continue in Level III but will be expanded to all fields in the Water Quality Sub-Area.

6.2.1.2 Commercial Nitrogen Fertilizer is prohibited prior to March 1st unless a nitrogen inhibitor is used.

6.2.1.3 Annual collection of soil samples and analysis are required on all fields and shall be submitted to the District by April 1st of each year.

6.2.1.4 Operators/Landowners are required to adhere to the licensed soils test laboratory fertilizer recommendations, including all available nitrogen credits.

6.2.1.5 Irrigation Scheduling is required on all irrigated fields.

6.2.1.6 The operator shall collect and retain year-end crop data on all fields regarding crops, fertilizer, and best management farming practices. In order to confirm compliance with the requirements of Level III, the District will select a representative sample of operators throughout the District on an annual basis and provide forms for reporting year-end crop, fertilizer, and best management practice. If selected, the operator's report must be completed and submitted to the District by April 1st.

6.2.1.7 If groundwater nitrate levels continue to rise, the Board may impose other best management practices as deemed necessary to protect groundwater quality.

7 CHAPTER 7 – SPECIAL WATER QUALITY SUB-AREAS

7.1 SUPERIOR-HARDY SUB-AREA

The Superior Hardy Sub-Area was originally established as a Special Protection Area to address rising groundwater nitrate problems of the area of concern. The boundaries extend across the boundaries of the Little Blue and Lower Republican Natural Resources Districts and a description of the area is found in Appendix B. The management controls applied will be the same as those for the other water quality sub-area of the District, however the reporting requirements differ as spelled out below.

7.1.1 All measures under Level III management controls above apply.

7.1.2 Annual reporting for lands within the Superior-Hardy Sub-Area must be submitted to the Lower Republican NRD by December 31st of each year. The Lower Republican NRD has agreed to serve as the administrator for annual reports.

7.2 HASTINGS WELLHEAD PROTECTION MANAGEMENT SUB-AREA

The Hastings Wellhead Protection was developed between the City of Hastings, Little Blue NRD and Upper Big Blue NRD and implemented on July 1, 2013. The area extends across the boundaries of the two NRDs and its description is found in the Appendix of these rules as Attachment C. Practices requirements are slightly different than those of the imposed in the remainder of the District and are as follows:

7.2.1 A nitrification inhibitor must be applied with all anhydrous ammonia applications made between November 1 and March 1 at the manufacturer's recommended rate.

7.2.2 Liquid and Dry Nitrogen Fertilizers may not be applied before March 1.

7.2.3 All Pre-Plant Nitrogen Fertilizer applied on or after March 1 at a rate greater than one hundred (100) pounds of actual nitrogen per acre, must be applied with a nitrification inhibitor at the manufacturer's recommended rate.

7.2.4 Fertilizer Application Exceptions

7.2.4.1 The following fertilizer application activities are exempt from the provisions of 7.2.1 through 7.2.3 above:

7.2.4.2 A.the application of Nitrogen Fertilizer for any purpose other than fertilization for spring planted crops.

7.2.4.3 B. the application of Nitrogen Fertilizer for spring planted small grains such as barley, oats, and rye.

7.2.4.4 C. the application of Nitrogen Fertilizer on pastures.

7.2.4.5 D. the application of a fertilizer that is not considered a "Nitrogen Fertilizer" as defined in the definitions.

7.2.4.6 E. the spreading of manure, sewage and other by-products conducted in compliance with state laws and regulations.

7.2.5 Lawn care requirements – All lawn care services that apply Nitrogen Fertilizer to lawns are required to complete a lawn nitrogen course recommended by the NRD every 4 years.

7.2.5.1 This includes Operators and employees.

7.2.5.2 Annual reports will be required from all lawn care services on Nitrogen Fertilizer use. Reports will be due on December 1st of each year and must include the following:

7.2.5.2.1 Total Nitrogen Fertilizer use within the Wellhead Protection Groundwater Management Area

7.2.5.2.2 Total number of acres or square footage Nitrogen Fertilizer is applied.

7.2.5.3 All persons who apply Nitrogen Fertilizer to more than one (1) acre of grass or turf in the Hastings Wellhead Protection Groundwater Management Area are required to attend a lawn nitrogen course or other approved training. This may include web-based training. Certification must be renewed every four (4) years.

7.2.5.4 The utilization of mulching mowers and blades are encouraged to reduce the Nitrogen Fertilizer use for lawns.

7.2.5.5 Soil sampling is encouraged before applying Nitrogen Fertilizer to a lawn or turf.

8 CHAPTER 8 - RELAXATION OF WATER QUALITY CONTROLS

8.1 If the results of the District's water quality monitoring program for a sub-area indicate average contaminant levels have fallen below the groundwater quality trigger level threshold being enforced in that sub-area for three-consecutive years, then controls in that sub-area will decrease to the next less restrictive level, unless specific action by the District Board maintains the current level.

8.2 If, however, in any subsequent consecutive three-year period, water analysis indicates that the higher groundwater quality trigger level is again reached, the controls in that sub-area will be re-instated at that higher level and will remain for at least ten subsequent years.

9 CHAPTER 9 – OPERATION INFORMATION & DATA PROTECTION

9.1 It shall be the policy of the District that information provided to the District through operator reports and data collection shall only be used for District business, analysis of resources utilization and conservation, and to provide the District with information to use when providing technical assistance where needed. Farm unit information provided from producers to the District will not be released on a specific producer basis but will be summarized in reports that are made available to partner agencies and the public.

10 CHAPTER 10 – VARIANCES

10.1 The Little Blue Natural Resources District Board of Directors may grant variances from the strict application of these regulations upon good cause shown. Variance requests shall be considered by the District's Water Resources Committee on a case-by-case basis, with recommendations made to the Board of Directors for formal action. An applicant is responsible for providing proof that a variance is warranted. A request for a variance shall include:

10.1.1 The name and addresses of all landowners adjacent to the location of the requested variance.

10.1.2 A map or sketch showing the location of lands and/or water wells that would be affected by the variance. If the request for a variance is for well spacing, the sketch must include measured distances from the proposed water well to any affected wells.

10.1.3 An explanation as to why the variance is needed including how the person making the application would be affected if the variance is not granted and any alternatives that could be considered.

10.1.4 A list of adjacent landowner(s) and water well owner(s). Such owners may be contacted by the District to assess potential impacts or conflicts between users.

10.1.5 Any other information that shall be deemed relevant.

10.1.6 A non-refundable application fee of $100 payable to the Little Blue NRD shall accompany the request for a variance to cover any costs associated with investigation or review.

10.2 If a variance is granted, the grantee shall sign an affidavit agreeing to all terms and conditions of the variance. The affidavit will be recorded by the District with the register of deeds and/or appropriate State Agency and be attached to all properties affected by the variance.

11 CHAPTER 11 – ACCESS FOR COMPLIANCE AND ENFORCEMENT PURPOSES

11.1 The District or authorized designee shall have the power and authority to enter upon the land, after notification to the landowner, for any and all reasons relative to the administration of the provisions and enforcement of these Rules and Regulations and the Ground Water Management and Protection Act. This entry shall not be considered trespass. (Neb. Rev. Stat. § 2-3232) Notification for entry upon land may be accomplished by regular mail, certified mail, electronic communication or by oral communication.

12 CHAPTER 13 – MISCELLANEOUS PROVISIONS

12.1 COMPLAINTS

13.1.1 Any person who owns, rents, or leases land or resides within the District, or any non-resident person who can show the actions of an operator or groundwater user within the District directly affects him or her, or a District representative, may file a complaint. Complainants are urged to notify the alleged violator of possible damages or nuisance and attempt to resolve the problem voluntarily without a written complaint. If voluntary attempts to resolve the problem fail, a written complaint may be filed by the complainant against the operator or groundwater user alleging a violation of rules and regulations adopted pursuant to the Groundwater Management and Protection Act. Complaints must be filed at the Little Blue Natural Resources District Office, 100 E. 6th Street, Davenport, NE, 68335, or directly with a District representative on complaint forms provided by the District.

12.2 AGREEMENTS BETWEEN GROUNDWATER USERS

13.2.1 A groundwater user whose irrigation runoff water is capable of being captured and utilized by another person in a manner which will prevent waste of such water or accumulation of water on the land of any other person without its consent, may have such water excluded from the definition of improper irrigation runoff water by submitting to the District an agreement providing for such capture and utilization signed by all affected parties, on forms provided by the District.

13.2.2 When such agreement is approved by the District, it will indicate the District's concurrence that the groundwater user's irrigation runoff water is under adequate control.

13.2.3 Such 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 water or accumulation of water on the land of any other person without his consent.

13.2.4 The party terminating the agreement must provide written notice to all other parties involved in the agreement.

12.3 SITUATIONS NOT COVERED BY THESE RULES AND REGULATIONS

12.3.1 The Board may consider situations not covered by these rules and regulations on a case-by-case basis.

12.4 SEVERABILITY

12.4.1 If any Rule or any part of any Rule herein shall be declared invalid or unconstitutional by a Court of competent jurisdiction, such declaration shall not affect the validity or constitutionality of the remaining Rules or portion thereof.

12.5 STATE LAWS

12.5.1 Nothing contained in these rules and regulations shall exempt a person or the District from the provisions of applicable state law.

12.6 EFFECTIVE DATE

12.6.1 These Rules and Regulations were originally adopted on September 15th, 2018. Subsequent amendments are listed below.

These Rules and Regulations are hereby adopted this 1st day of July 15th, 2024. These Rules and Regulations shall be effective commencing on **July 15th 2024,** and shall remain in full force and effect until repealed, amended, or superseded.

(S) Alan Wiedel

Chairman

Attest:

(S) Jay Meyer

Secretary

AMENDMENT HISTORY

- April 1st, 2022
- June 1st, 2023
- June 1st, 2024
- July 15th, 2024

FIGURE 1 – RISK MAP

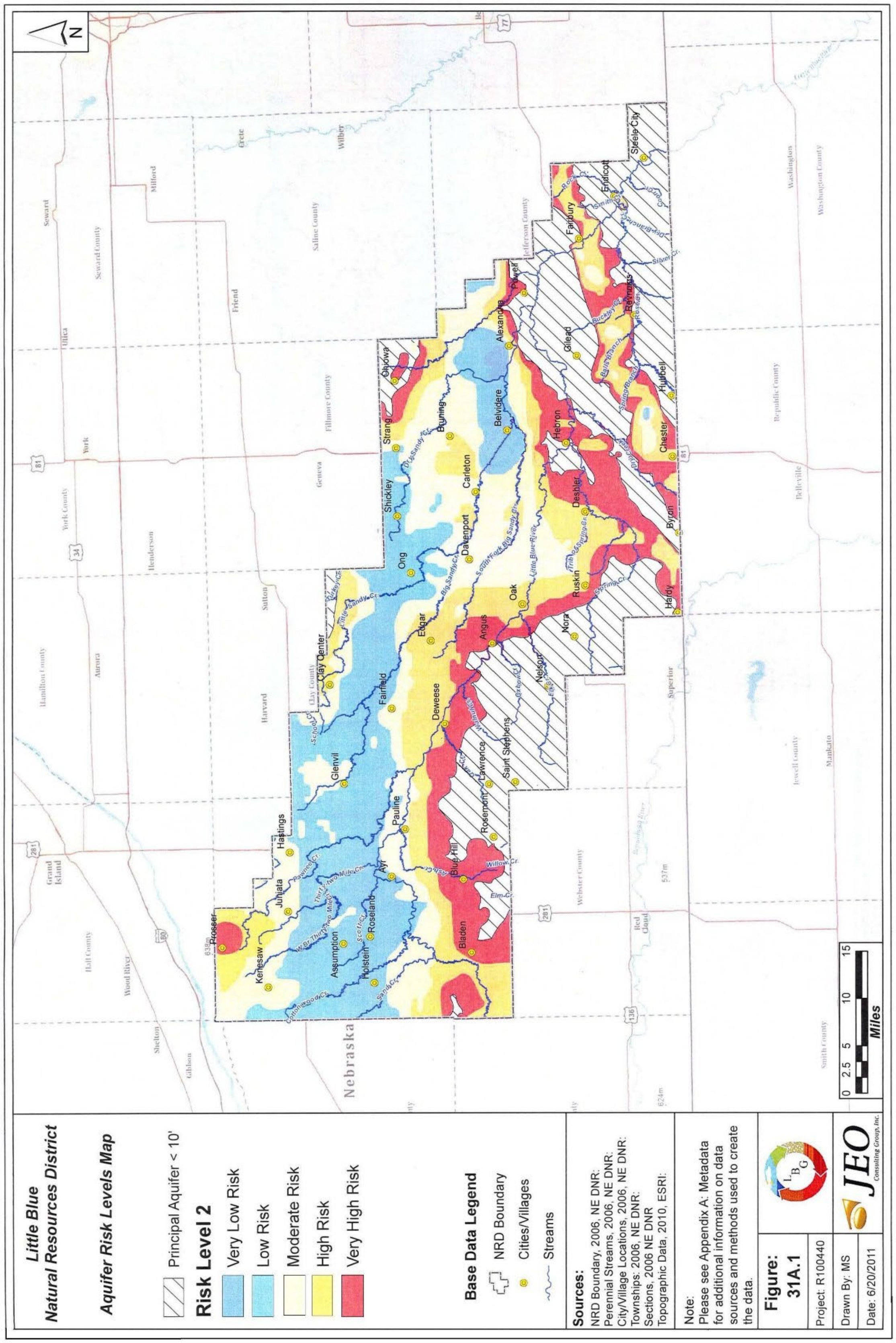


FIGURE 2 – STAY AREA MAP

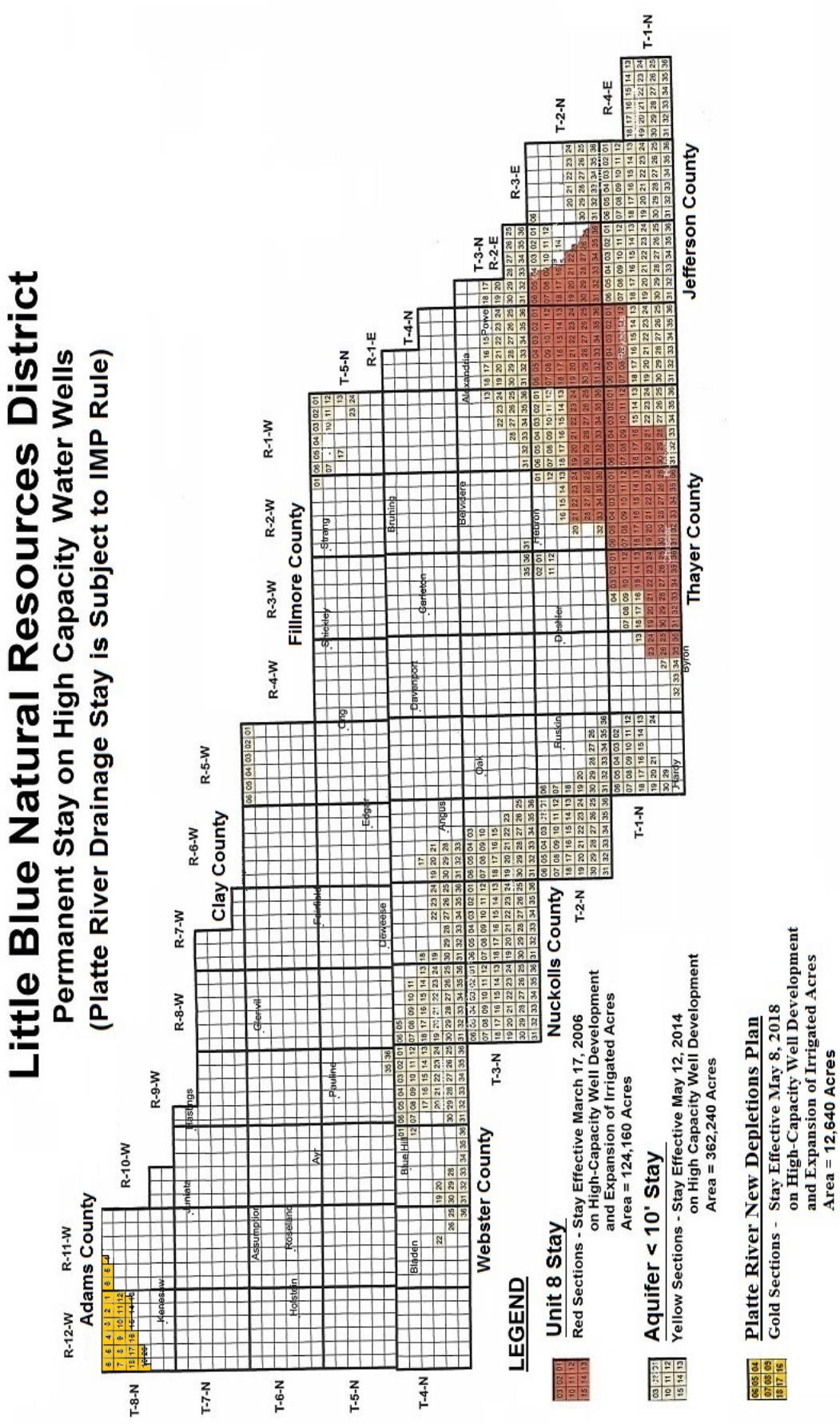


FIGURE 3 – WATER QUANTITY HYDROLOGIC UNITS

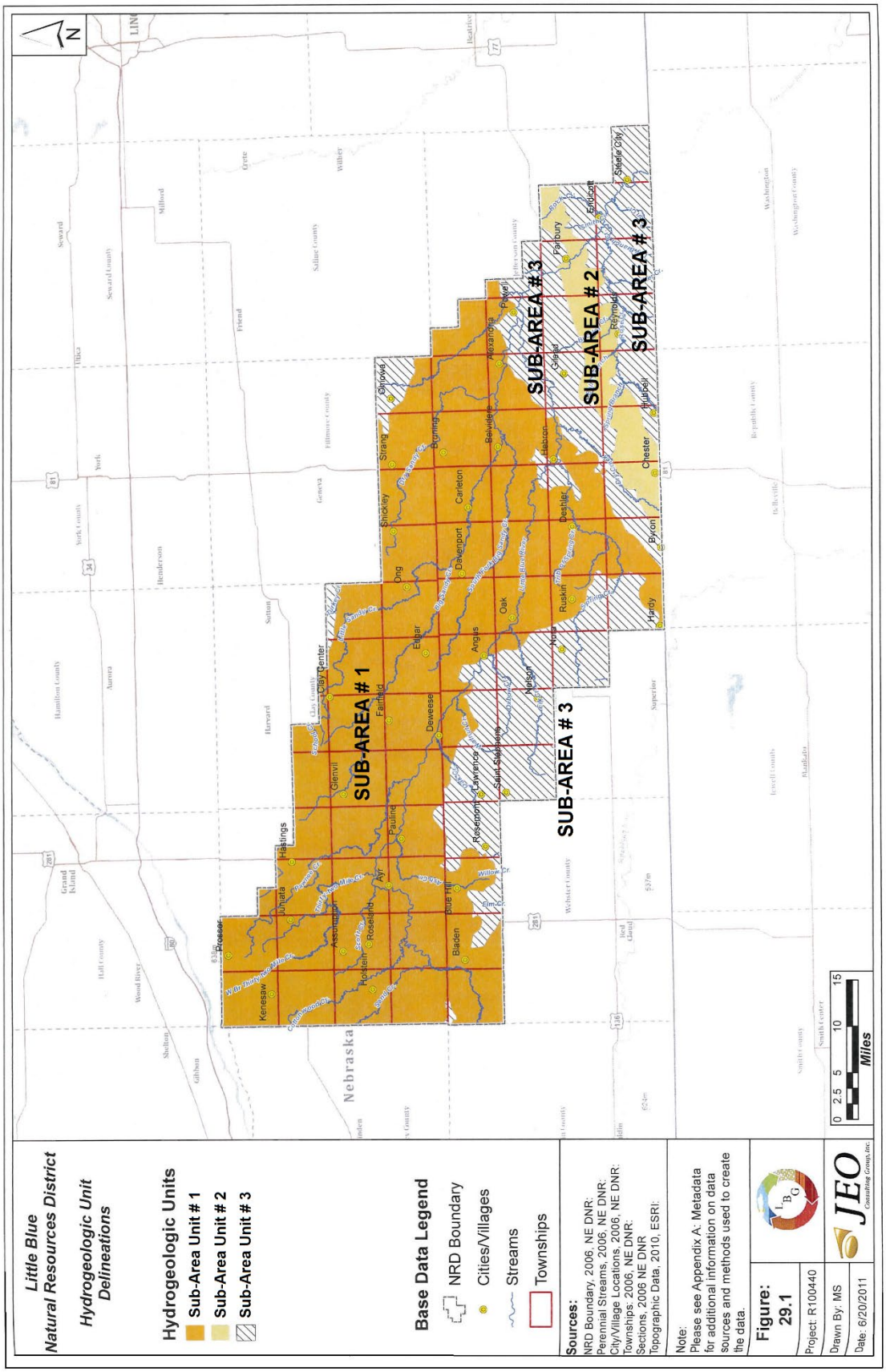
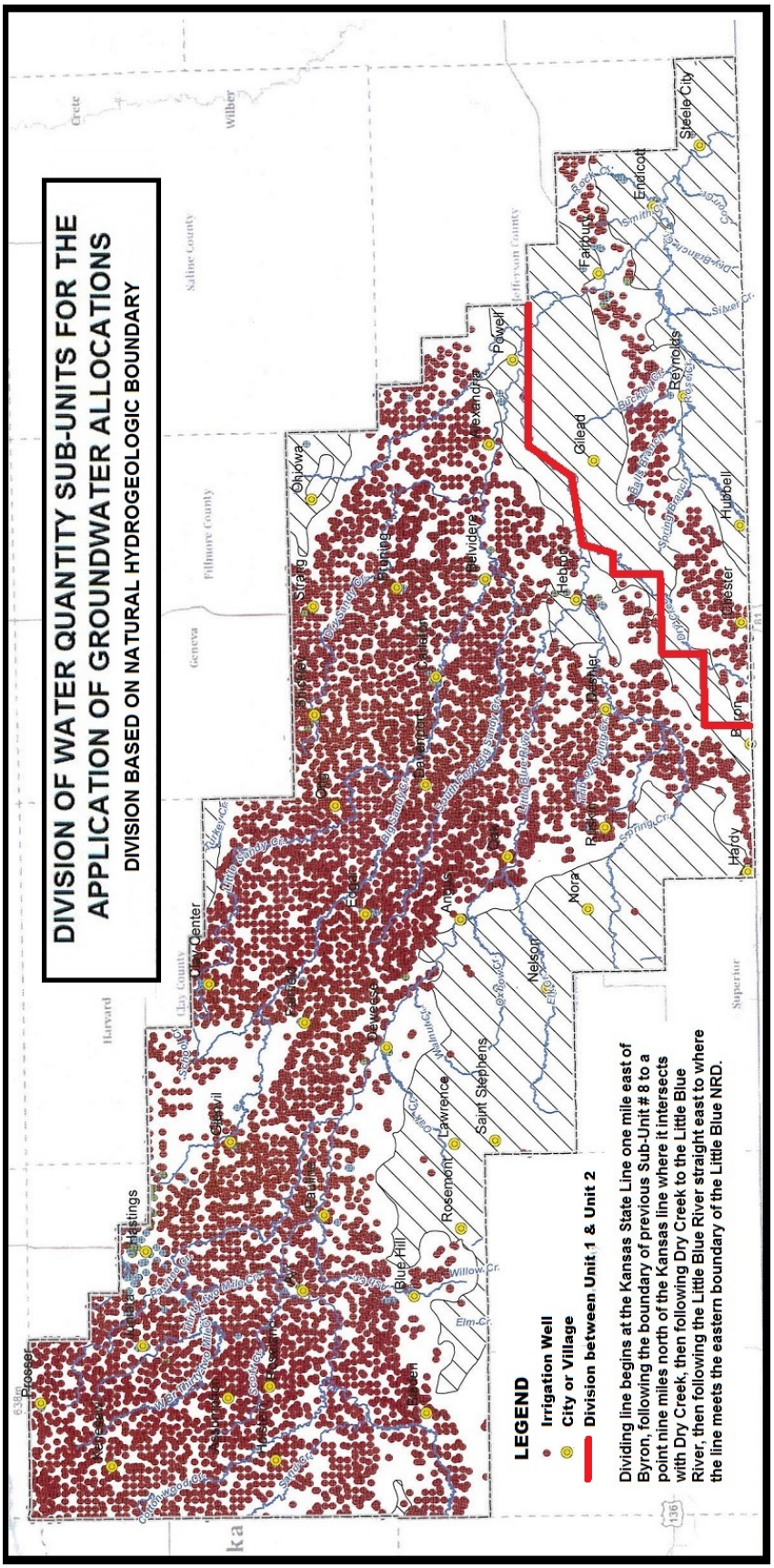


FIGURE 4 – WATER QUANTITY HYDROLOGIC UNITS

DIVISION FOR ALLOCATION PURPOSES



ATTACHMENT A

Little Blue Natural Resources District
Policy of Land Use Conversion to Irrigation
Amended December 12, 2017

Original adoption of this policy was on September 13th, 2011; after that date any lands converted to irrigation requiring a new well permit shall be evaluated using a Resources Scoring total.

As noted in USGS HA 730-D, USGS Report 2012-5291, USGS fact sheet 103-03, USGS article Groundwater Depletion, and CSD article Analysis of Aquifer Depletion Criteria with Implications for Groundwater Management (Korus/Burbach) the High Plains aquifer has experienced groundwater declines which have the potential to negatively affect all groundwater users. This policy was adopted to protect the land and water resources and to reduce conflicts between users in areas of low groundwater availability, low transmissivity, or poor geologic composition. It is also used to determine if the development would pose a threat to the soil resource and cause potential for irrigation runoff.

The scoring process looks at both soil properties and aquifer characteristics. A value has been given to each soil type based on its' suitability for irrigation. The value of each soil is multiplied by the acres of that soil type in the irrigation development, all products are added together and divided by the total acres. The resulting dividend is the permit soil score. There five categories used for scoring the aquifer: Transmissivity (T), Saturated Sands (Sat San), Specific Yield (SY), Static Water Level Change from 2000 to 2007 (WL~), and Groundwater Recharge as a percent of annual rainfall (Re). T, Sat San, and SY each account for 25% of the total score and are given a value of 100 points each; WL~ and Re account for 12.5% each of the total score and are assigned a value of 25 points each. An example of the spreadsheet used for the scoring process is included with this policy.

The 400-gpm minimum well output, increased well spacing, and limitation of one well per 80 acres outlined in the rules were established utilizing the facts that an aquifer must be capable of minimum yields and adequate aquifer storage to support demands for domestic, irrigation, or industrial uses without negative impacts or interference to each.

Each soil within the Little Blue NRD was assigned a value by a soil scientist based on its' potential response to irrigation applications. The factors used to evaluate the soils are Water & Wind Erodability Index, Slope, and Available Water Holding Capacity. The soils being developed for irrigation are clipped from NRCS soils maps and the acres of each type are determined and multiplied by its' value. The values of all soils are totaled and then divided by the acreage being brought into irrigated production for a Soil Score.

The Board of Directors established a base score of 100 for both the aquifer and soils after studying water well logs, registrations information, and field tours. Permits that rank 100 or above on both scores will be approved without conditions.

Scores below 100 staff approves with the following conditions:

a) For aquifer scores, an irrigation flow meter with both annual and gallons-per-minute reports is required.
b) The well must pass the 400-gpm regulation which states:
    i. A well hole log and physical material sample summary of the well site must be provided.
    ii. A 24-hour pump test of the well must be conducted between August 1 and September 30 and the well must maintain a 400-gpm output or more throughout the 24-hour test period, verified by the District.
    iii. A water quality sample must be collected at the end of the pump test and submitted to a qualified laboratory for analysis including nitrates, sodium, chloride, pH, and total dissolved solids.
    iv. The static water level drawdown shall be measured by the pump installer or well driller on the new well drilled and reported to the District. The NRD may gather drawdown information for other water wells located within 2,640' of the subject well for a better understanding of the aquifer's characteristics and response to pumping.

c) For soil scores, a conservation plan as developed by the county Natural Resources Conservation Service, must be implemented and irrigation flow meter are required, with annual reports.

Permits that fall outside the normal aquifer and soil parameters will be brought to the Water Resources Committee for review. Further conditions for those situations, and appropriate to the individual Resources Scoring section, may include:

- A signed statement by applicant they are aware of the limited nature of the aquifer from which water will be withdrawn and, should adverse impacts be realized by existing adjacent domestic water well owners, they may be required to assume responsibility for impacts or damages to such.
- An operating water flow meter must be installed in the irrigation system which meets District standards before any water is withdrawn, and annual water use reports must be submitted to the LBNRD.
- Applicant shall be required to practice best management practices as recommended by the District.
- A soil conservation plan must be developed and implemented to reduce irrigation runoff to acceptable minimums. This plan could use no-till farming practices, waterways, terraces, or silt dams to manage irrigation water runoff and/or shorten slope lengths.
- Any other best management practice deemed appropriate by the Board of Directors.

Staff will use the following guidelines for evaluating the need to score each well permit.

1. By state statute definition a replacement well irrigates the same acres, and potentially more, as the well it replaces. If acres are added, only those additional acres brought under irrigation with the replacement well will be scored.
2. A replacement well will be scored for aquifer ranking if new acres are added to the irrigation system.
3. If multiple wells are used for the irrigation system, the aquifer scores for each site will be averaged together for the final score.
4. If additional wells are added to an existing irrigation system, the additional well will be scored based on aquifer.
5. If seventy five percent (75%) or more of an existing or proposed irrigation system lies within the "Very High Risk" the permitting of any new high-capacity water wells for such system will be subject to the District's "One-Well Per Eighty Rule."
6. The "Aquifer Less Than 10 Feet" area, as designated by the Little Blue NRD's Hydrogeologic Study, is closed to development of high-capacity wells. If seventy five percent (75%) or more of a section lies in the "Aquifer Less Than 10 Feet" area, then the entire section is closed.
7. Any bore hole is which a casing is set of adequate size to withdraw water from the aquifer is considered a water well. At the landowner's request, and if noted on the well permit, multiple exploratory (cased) wells may be installed to ascertain the best location on the field for the new water wells. However, only one well per eighty, or series containing no more than two wells, may be retained by the landowner and must be registered with the State within 60 days of installation. All other exploratory wells must be decommissioned within 60 days by the landowner at their expense. If at any time in the future the producer ties any additional well of any capacity, or directly supplements the irrigation system with stored surface water on the field, the entire irrigation system will be considered in violation of the District's one well per eighty rule and subject to a cease-and-desist order.
8. As soon as a permit is known to fall below the soil score, the landowner is contacted about developing a conservation plan, the county NRCS is also notified. For those producers not participating in the Federal Farm Program, conservation plans will be developed by the NRCS as workload allows.
9. If the soil score is above the minimum but lands are being cleared for cultivation, the permit is approved but the landowner notified they should check with the NRCS for program compliance.
10. Each application will be initially scored by office personnel, and then the figures double checked by another staff member.
11. Conditional permits will be initially inspected by the District for proper installation of a flow meter and compliance with conservation practices. If potential issues are uncovered with the conditions stipulated for approval of the well permit, the District will work with the landowner to correct any problems before non-compliance occurs.

Example
Soil and Aquifer Scoring Spreadsheet for High Capacity Well Permitting

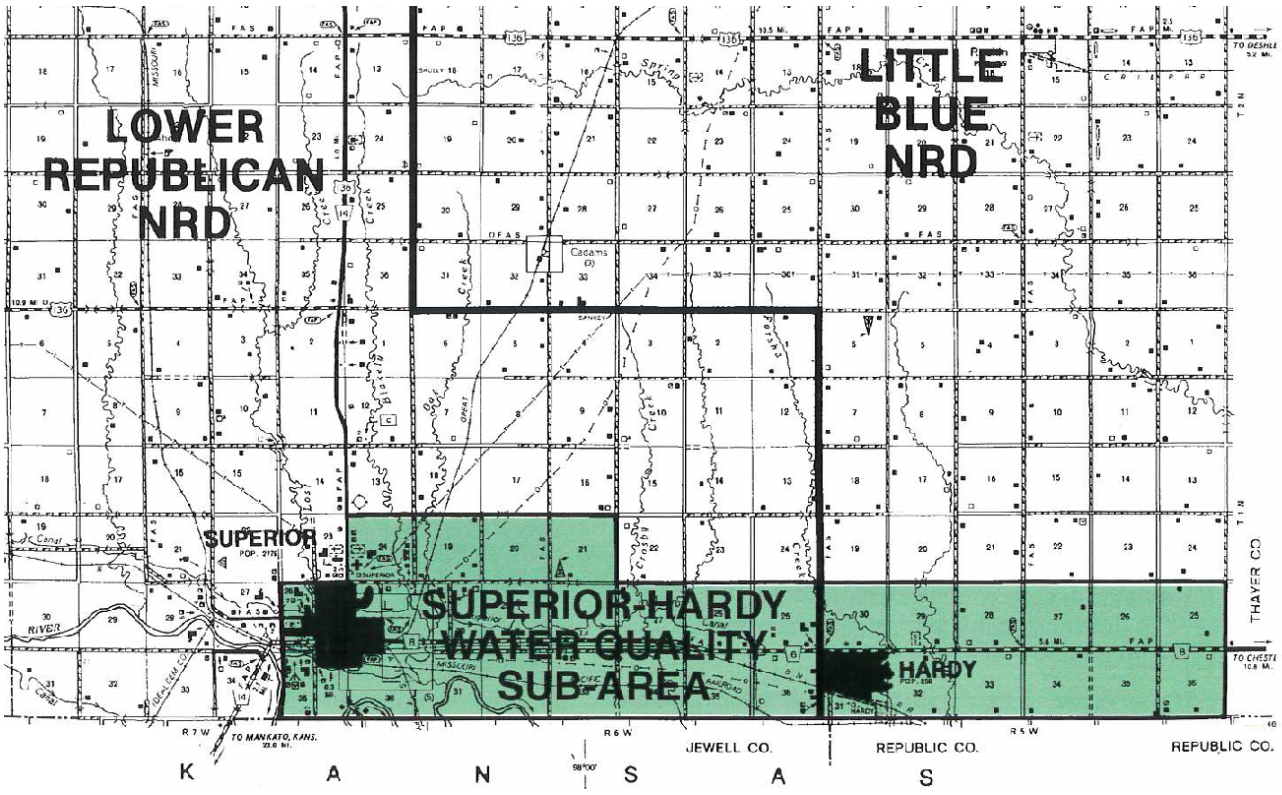
		Column A	B	C	D	E
		Soil Number	Soils Value	Acres	Field Value	
	1				= B1 X C1	
	2				= B2 x C2	
	3				= B3 X C3	
	4				= B4 X C4	
	5		Totals	sum C1:C4	sum D1:D4	
	6			**Field Score**	= D5/C5	
	7					
	8	Aquifer			Permit	
Row	9	Parameter	Value	Points	Ranking	Score
	10	T	285528	100		= (D10/B10) X C10
	11	Sy	24.499	100		= (D11/B11) X C11
	12	Sat San	223.594	100		= (D12/B12) X C12
	13	WL~	-15.8	25		= (D13/B13) X C13
	14	Recharge	15	25		= (D14/B14) X C14
					Aquifer Score	sum E10:E14

ATTACHMENT B

SUPERIOR-HARDY
WATER QUALITY SUBAREA

The **Superior-Hardy Water Quality Sub-Area lies in southeastern Nuckolls County and Southwestern Thayer County of Nebraska. The area is jointly managed by the Little Blue NRD and the Lower Republican NRD.**

The land area includes, in Nuckolls County: Sections 18, 19, 20 and 25 through 36 of Township 1 North, Range 5 West, and Sections 24, 225, 26, 35 and 36 of Township 1 North, Range 6 West. In Thayer County, Sections 25 through 36 of Township 1 North, Range 4 West.



ATTACHMENT C

HASTINGS WELLHEAD PROTECTION WATER QUALITY SUBAREA

The **Hastings Wellhead Protection Water Quality Sub-Area lies in northern Adams County. The area is jointly managed by the City of Hastings, the Little Blue NRD and the Upper Big Blue NRD.**

The land area includes the following lands: Sections 5, 6, 7, 8 and 13 through 24 of Township 7 North, Range 9 West; Sections 1 through 18 of Township 7 North, Range 10 West; Sections 1, 12 and 13 of Township 7 North, Range 11 West; Sections 29 through 32 of Township 8 North, Range 9 West; Sections 2 through 11, and 14 through 36 of Township 8 North, Range 10 West; and Sections 1 through 5, 8 through 17, 21 through 27 and 35 and 36 of Township 8 North, Range 11 West.