

10.0 Implementation of the LBNRD Groundwater Management Plan

10.1. LBNRD Groundwater Reservoir Life Goal

The Groundwater Reservoir Life Goal of the LBNRD is to: "Maintain an adequate supply of acceptable quality and quantity groundwater to forever fulfill the reasonable groundwater demands within the LBNRD".

10.2. Initiation of a Groundwater Management Area Formation

In support of the Groundwater Reservoir Life Goal, the LBNRD Board has established a Ground Water Management Area (GWMA) over the entire LBNRD after approving a Groundwater Management Plan (GWMP), obtaining the approval of that plan by DNR, and holding a public hearing on creating a GWMA. The entire LBNRD is under Level I Quality and Quantity controls, effective July 30, 1996. (See Sections 10.5 and 10.6.)

The Groundwater Management Area overlays the LBNRD's existing Superior-Hardy Groundwater Management Area (GWMA), however the current GWMA program will remain in effect and all GWMA requirements will continue as designed in that area.

10.3. Establishment of Sub-Areas and Higher Levels of Control in the LBNRD

Particular areas in the LBNRD have specific needs because of varying groundwater uses, different irrigation distribution systems, different cropland uses, different recharge rates, or varying climatic, hydrologic, geologic, or soil conditions that exist. Thus, uniform application of controls throughout the district would fail to provide flexibility for any higher levels of management listed in this plan.

It is the intention of the LBNRD to establish and implement groundwater management sub-areas, as needed, in specific areas of the LBNRD with actual or potential problems of groundwater quality or quantity. The purpose of establishing sub-areas is so that different controls and/or levels of controls may be applied over a specific area of the LBNRD as required by the conditions in that area, without having to apply those controls or levels over the entire LBNRD. The relevant bases for applying different controls is varying ground water uses, different irrigation distribution systems, or varying climatic, hydrologic, geologic, or soil conditions. The LBNRD Board will use

these bases when determining boundaries or established specific controls for sub-areas. As an example, Hydro-Geologic Unit # 8 identified in this plan possesses unique hydrological and geologic conditions which warrant the application of different controls from those in the remainder of the District. Unit 8 was distinguished in the plan because it contains an isolated buried bedrock valley, or paleo-valley, which runs from approximately Chester to Fairbury and is separated from the district's general aquifer by an apparent restrictive bedrock shelf just to the north of the aquifer. The aquifer is a very narrow formation, varying from only approximately three miles to one mile in width. The surface topography of the area is also more dissected and rolling than in most areas of the district which increases storm water runoff, thereby reducing water penetration and groundwater recharge potential. These factors limit the local area's capacity to replenish groundwater supplies through natural recharge to offset the impacts of irrigation pumpage. Therefore, the board outlines herein a plan to address this area differently. After establishment, individual sub-areas have the same legal status as an individual management area would have. As the need arises, the LBNRD Board will delineate and establish these sub-areas in regions where the potential for groundwater quantity or quality problems exists or where actual problems have been identified. The procedure the LBNRD will follow in determining when and where sub-areas are required is as follows:

The LBNRD Board will review the results of their groundwater monitoring program at least annually. The data and reports generated from the monitoring programs shall be reviewed by the Water Resources Committee and Board of Directors before being provided to the public or other governmental agencies. When the data show that the triggering levels for either Quality or Quantity (which are presented in Section 10.5.2 and 10.6.2, respectively) have been reached or exceeded, the LBNRD will take the following actions:

- 1) Conduct further studies (review existing data and gather additional data), taking from two to five years to determine the extent and seriousness of the problem or potential problem. If it is determined that non-point source pollution is not occurring, that the problem area does not meet the size requirement of a sub-area or that the levels needed to trigger a higher level of control have not been met, the LBNRD shall take

- no further action to establish a groundwater management sub-area or to increase the level of controls in an existing sub-area.
- 2) If a problem has been identified, characterized by non-point pollution or groundwater declines with an area of adequate size to meet the criteria for a sub-area, and/or the trigger for a higher level of controls has been reached, the LBNRD will:
 - a. Identify the boundaries of the proposed sub-area within which the problem is occurring. The sub-area shall be an area containing at least 5 monitored wells within the LBNRD's monitoring network and a minimum of sixteen (16) square miles with legally definable boundaries (following township, section or quarter-section lines, roadways, rivers, etc.).
 - b. Determine the controls which will be applied in the proposed sub-area in order to address the problem. Controls for quality and quantity problems are identified in Sections 10.5.2 and 10.6.2, respectively.
 - c. Conduct at least one public meeting to share monitoring results and discuss possible action necessary to address identified problems.
 - d. Hold a public hearing at which groundwater conditions, proposed sub-area boundaries and controls are presented to local residents of the proposed sub-area.
 - e. Take LBNRD Board action to set the boundaries of the sub-area and the controls to be implemented.
 - f. Enact the next Level of controls in the sub-area in the following year.
 - 7) Wellhead Protection Boundaries have been delineated for all Little Blue NRD communities. A community can request the NRD for assistance in protecting its municipal water supply, without regard to the size of the management area. This area can be managed by the NRD for water quality and/or water quantity purposes under existing rules and regulations.

In no event will the LBNRD skip over one level of control to activate a higher level of control. Controls must be in place in a given level for at least one year before action is taken by the LBNRD Board to initiate the next higher level of controls.

10.4. Levels of Controls in Management Areas and Sub-Areas

10.4.1 In every established management area and sub-area the level of controls applied will depend on the severity of the problems identified in that area. Level I Quality and Quantity controls were initiated over the entire LBNRD on July 30, 1996.

10.4.2 As certain "triggering levels" are reached in an area, as determined from the results of the LBNRD's well monitoring program, then additional levels of controls are applied in that sub-area after action by the LBNRD Board in accordance with Section 10.3. Triggering levels may be defined as a percentage of the Primary Maximum Contaminant Level (PMCL's) or of the Secondary Maximum Contaminant Level (SMCL's) for quality as outlined in Section 10.5, or as declines in the water table for quantity as outlined in Section 10.6.

Lists of Maximum Contaminant Levels (MCL's) are issued by DEQ and DOH and are based on lists published by the U.S. Environmental Protection Agency (EPA). Current lists of PMCL's and SMCL's from the EPA Safe Drinking Water Standards are included in Appendix 12.3. PMCL's are for contaminants which have a proven negative effect on human health when the 100% level is reached. SMCL's are for contaminants which give water a poor taste or color and may be injurious to humans at higher concentrations.

The LBNRD strategy for the protection of groundwater quality stresses prevention of groundwater contamination, recognizing that it is much more expensive to clean up a problem than it is to prevent one. The quality controls imposed by the LBNRD in a GWMA will be determined by the extent of the problem. The LBNRD is concerned mainly with nitrates and other contaminants that are a result of non-point source pollution. The LBNRD will field sample wells for nitrates, and where levels equal or exceed 100% of MCL, an optional field sample may be taken from that well and tested for triazine herbicides. If the field sample shows a positive occurrence of triazines, another sample will be collected from that well and sent to a lab for verification and quantification. In addition, blind sampling on a random 2% of the wells sampled each year will be analyzed by a laboratory for triazines. Analysis for all the contaminants

listed in Table 10.4-1 will also be done as deemed necessary by the LBNRD Board and based on results of field samples for nitrates, atrazine (as stated above) and data collected from other sources. This list may be modified to keep current with newly developed chemicals.

If pesticides or PCB's listed in Table 10.4-1 are found at triggering levels, during annual sampling, the LBNRD Board will consult with the appropriate state agency before proceeding with the actions outlined in Section 10.3.

**TABLE 10.4-1
GROUNDWATER CONTAMINANTS
MONITORED BY THE LBNRD**

<u>Contaminant</u>	<u>MCL</u>	
Inorganic Chemicals:		
Nitrate	10.	mg/l
Nitrite	1.	mg/l
Total nitrate and nitrite	10.	mg/l
Organic Chemicals:		
Pesticides & PCB:		
Alachlor (Lasso Herbicide)	0.002	mg/l
Aldicarb (Temik Insecticide)	0.003	mg/l
Aldicarb sulfoxide (Temik Insecticide)	0.004	mg/l
Aldicarb sulfone (Temik 1/4 Strength)	0.003	mg/l
Atrazine	0.003	mg/l
Carbofuran (Furadan)	0.04	mg/l
Chlordane	0.002	mg/l
Dibromochloropropane	0.0002	mg/l
2, 4-D	0.07	mg/l
Endrin (No longer produced)	0.0002	mg/l
Ethylene dibromide (EDB, Pestmaster)	0.00005	mg/l
Heptachlor	0.0004	mg/l
Heptachlor epoxide	0.0002	mg/l
Lindane	0.0002	mg/l
Methoxychlor (Dual)	0.04	mg/l
Pentachlorophenol (PCP)	0.001	mg/l
Polychlorinated biphenyls	0.0005	mg/l
Toxaphene	0.003	mg/l

The Level I controls listed in Sections 10.5.1 and 10.6.1 were applied over the entire LBNRD upon adoption of this plan. Additional or stricter controls will be applied over individual sub-areas as problems are identified and LBNRD action is initiated by established triggering mechanisms (see Section 10.3). Separate levels of controls are established for quality and quantity problems. Thus, one area or sub-area may have Level III Quality controls and Level I Quantity controls applied concurrently as required by the specific problems occurring in that sub-area. The Board may expand a sub-area to include adjacent lands, or reduce the size of a sub-area, without regard to the minimum size criteria, when monitoring evidence dictates such action.

10.5. Quality Controls

10.5.1 Level I Quality

The following actions will be taken and/or controls implemented upon establishment of a groundwater management area over the entire LBNRD.

- A. Establish the following education and technical assistance programs in accordance with the LBNRD's annual education planning and budget process:
1. Provide voluntary training sessions on water management techniques, pumping plant efficiency, new technologies and research, fertilizer management, etc.
 2. Sponsor and participate in demonstration projects which stress items above.
 3. Provide public information and education programs through newsletters, articles, pamphlets, TV, radio, magazine or public forums.
 4. Establish water conservation, lawn care and management programs in cooperation with cities and villages.
 5. Encourage the use of BMP's.
 6. Provide technical assistance in developing efficient irrigation systems and management schemes.

- B. Maintain an ongoing program of sampling wells for groundwater quality throughout the area. Identify any obvious sources of pollution. Identify any deficiencies in data. The water quality sampling program will include the following:
1. Establish a well sampling program and associated protocol for field samples.
 2. Develop and maintain a well sampling record, well condition record and site assessment for each sampled well.
 3. Collect samples on 1/3 of program wells annually and test for nitrates.
 - a. Collect duplicate samples on a random 5% of the wells sampled each year with these sent to an EPA certified lab for verification.
 4. Offer in-house nitrate analysis with Hach Spectrophotometer.
 5. Optional field triazine screening will be done on wells which test at or above 100% MCL for nitrates. If screening shows a positive occurrence of triazines, a second sample will be taken and sent to the lab for verification and quantification.
 6. Acquire nitrate, pesticide, and other contaminant analysis data for all municipal wells annually.
 7. Obtain water quality sample data, gathered from within the LBNRD, from other local, state, or federal agencies.
 8. Conduct urban runoff water monitoring study to determine overland pollution potential.
 9. If possible, sample streams 3 years prior to development of flood control, recharge or recreation projects.
- C. Establish the following controls and program requirements:
1. Require permits for all new water wells, except test holes, dewatering wells with intended use of ninety days or less, and water wells which are designed and constructed to pump 50 gallons per minute or less.

2. Encourage all new non-domestic water wells designed to pump 50 GPM or more to be constructed with adequate free space in the pump discharge to accommodate a flow device if required in the future.
3. Require a water sample to be drawn at completion of test pump from all new water wells to establish a benchmark groundwater nitrate condition record. Sample will be analyzed by the LBNRD and at the LBNRD's expense.
4. Enforcement of water well abandonment laws in accordance with the Nebraska Water Well Standards and Contractors' Licensing Act.
5. Enforce existing chemigation rules for prevention of groundwater pollution under LBNRD jurisdiction.
6. Share information and seek cooperation in solving problems where applicable.
7. Preplant applications of nitrogen fertilizers may not be applied prior to November 1.
 - a. The Board reserves the right to establish exemptions for certain fertilizers, manure and sewage which will be outlined in the Rules and Regulations of the District.

10.5.2. Higher Level Quality Controls

10.5.2.1. Level II Trigger And Controls

When sampling results show that 70% of MCL has been reached for any constituent in Table 10.4-1 in 60% or more of at least 5 sampled wells within an area, the LBNRD Board will take the actions outlined in Section 10.3. to further identify the problem area, establish sub-area boundaries and determine the controls to be implemented. A sub-area for Quality Controls is defined as an area containing at least five sampled wells within the LBNRD'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. Exception can be made for Wellhead Protection Areas as referred in 10.3(3)

Level II actions will include the following requirements in addition to the Level I Quality requirements:

- A. Increase information and education efforts for the target area.
- B. Training and certification of operators is required.
- C. Require every operator to establish a demonstration field for implementation of Level II actions.
- D. Annual soil samples are required on the operator's demonstration field.
- E. Require operator adherence to the District approved laboratory fertilizer recommendations on the demonstration field.
- F. Require irrigation scheduling on the demonstration field if the field is an irrigated-tract.
- G. If manure or sludge is used as a supplement, or in place of, commercial fertilizer, a credit for the nitrogen in the manure or sludge must be used in the calculation for the nitrogen recommendation.
- H. Require initial operator reports of pertinent farm and practice information as a means of establishing a benchmark for management practice implementation, educational needs and future program progress.
- I. Require year end annual reports tailored to crop and farming practices on the Demonstration Field from the landowner/operator.
- J. Provide one on one assistance to operators (as available).
- K. Provide or secure through outside sources, funding for short term incentive programs to encourage producers to adopt BMP's.

The LBNRD may also include one or more of the following actions under Level II Quality, as deemed necessary by the LBNRD Board:

- A. Conduct studies in cooperation with experts in the field to determine movement and travel time of the contaminants.
- B. Deep soil and irrigation water samples for use in fertilizer or chemical application determinations.
- C. Approved irrigation water measuring devices.
- D. Implementation of additional BMP's by operators.

E. Other measures deemed appropriate.

10.5.2.2. Level III Trigger And Controls

When sampling results show that 85% of MCL has been reached for any constituent in Table 10.4-1 in 60% or more of the sampled wells in a sub-area, further action by the LBNRD is required.

Level III Quality actions, in the sub-area will include the following in addition to all previous level requirements:

- A. Encourage a water analysis for nitrogen (NO₃-N) content on each field growing corn, grain sorghum, or forage sorghums. The water sample can be tested at the LBNRD office.
- B. Annual soil samples are required on all fields.
- C. Require operator adherence to the District approved laboratory fertilizer recommendations.
- D. Irrigation Scheduling is required on all irrigated fields
- E. Require year-end annual reports on all fields tailored to crop and farming practices of the landowner/operator.

10.5.2.3. Level IV Trigger And Controls

When sampling results show that 100% MCL has been reached for any constituent in Table 10.4-1 in 60% or more of the sampled wells in a sub-area, further action by the LBNRD is required.

Level IV Quality actions in the sub-area will include the following requirements in addition to previous requirements:

- A. Fall application of commercial Nitrogen Fertilizer is prohibited prior to January 1st.
- B. Annual reporting on activities on all fields.
- C. No greater than the District approved laboratory Nitrogen Fertilized Recommendation followed, on all fields, with all credits figured.

10.6. Quantity Controls

10.6.1. Level I Quantity

These controls are applicable upon establishment of a groundwater management area over the entire LBNRD.

- A. Provide information and education programs on water conservation and use to water users. A list of such programs is included in Section 10.5.1 under Level I Quality, paragraph A.
- B. Maintain a monitoring well network for water levels to provide sufficient coverage of all aquifers in the LBNRD. Monitored wells may include the same wells used for water quality monitoring. The water quantity sampling program will include the following:
 - 1. Measure established monitoring network wells twice each year, spring and fall.
 - 2. Develop and maintain a water well log file, including elevations, predevelopment levels, and pertinent information.
 - 3. Develop a visual hydrograph of each well.
 - 4. Develop a LBNRD-wide annual water contour map based on water levels.
 - 5. Examine water level contour maps to document trends and identify problem areas.
- C. Implementation of Level I Quality controls listed in Section 10.5.1, paragraph C, will also support the Level I Quantity efforts. The following additional actions will also be implemented under Level I Quantity:
 - 1. Require season end irrigation pumpage reports from owners/operators with flow meters as a condition of meter maintenance.
 - 2. Provide meter maintenance to non-reporting cooperators on a "cost of parts" basis.
 - 4. Aggressive enforcement against irrigation runoff, center pivot end guns shutoffs and water wastefulness.
- D. The District may implement restrictions on new groundwater transfers.
- E. The District may implement well spacing requirements more restrictive than those in State Statute.

- F. The District shall require permits for all new and replacement water wells and may require that new or replacement water wells to be used for domestic or other purposes shall be constructed to such depth that they are less likely to be affected by seasonal water level declines caused by other water wells in the same area.
- G. Because of unique hydrologic and geologic conditions which exist in Hydro-Geologic Unit 8 as described in Page 10-2, the District Board may initiate higher level management controls as to that Unit in lieu of meeting the established triggers if deemed necessary by the Board of Directors. The board recognizes that if similar conditions exist in other areas of the district, the application of similar actions may be necessary.
- H. The district may establish different water allocations for different irrigation distribution systems.

10.6.2. Higher Level Quantity Controls

10.6.2.1. Level II Trigger And Controls

When spring groundwater levels decline below, and remain below, the lowest level of record (pre-1994) for three consecutive years in any of the monitored wells, further action by the LBNRD Board is required. Following the outline in Section 10.3, the LBNRD Board will initiate a study during which water levels in surrounding wells will be measured to determine the severity, the geographical extent, and the boundaries of the affected area. A sub-area will be established and Level II Quantity activities will be enacted in the calendar year immediately after the following trigger has been satisfied: When the percentage established in Table 10.6.2.2-1 and Figure 13-26, or a greater percentage, of the monitored wells in the sub-area which are included in the study show a spring water level decline of 50% or more of the “Reasonable Acceptable Decline” set forth on that Table, as measured for the lowest level of record for that well, and remain below that level for two consecutive years. A sub-area is an area containing at least five monitored wells within the district's well monitoring program around which a logical boundary can be drawn. The minimum size of a sub-area shall be sixteen (16) square miles. A public hearing will be conducted to

establish the boundaries of the sub-area and the practices to be implemented. For additional wells acquired in the LBNRD's well monitoring network that do not have a pre-1994 level established, the LBNRD will gather water level data for the well for a five (5) year period of time and will use the lowest level of that period as its lowest level of record. The level will not be included in average groundwater levels until five (5) years of water levels have been collected.

Level II Quantity actions will include the following requirements in addition to the Level I Quantity requirements:

- A. Provide information and education on water conservation and use to water users, both rural and urban.
- B. Require all non-domestic water users to report annual water usage. Reports will be generated by using the best available procedures, as approved by the LBNRD Board.
- C. Require every operator to establish a demonstration field for implementation of Level II actions. On the demonstration field an operator shall:
 - Report on the use of irrigation scheduling.
 - Install irrigation flow meter(s) to record groundwater use.
- D. Provide technical assistance to water users in order to increase water use efficiency.
- E. Provide or secure through outside sources, funding for incentive programs to encourage water conservation practices.
- F. Certify all acres irrigated with each groundwater well within a Level II sub-area.

The LBNRD may also include one or more of the following actions under Level II Quantity:

- A. Training and certification of operators.

- B. Conduct a detailed study of the area to gather information to make informed predictions of trends and impacts. Additional recording devices may be necessary.
- C. Require flow meters for irrigation water use.
- D. An increase in the number of monitoring wells.
- A. Expand well spacing requirements.

If, during the initial study, investigation determines that the quantity problem is most probably due to interfering wells and is limited in area or extent involving only a few wells or owners, then the LBNRD Board may attempt to act as a mediator or arbitrator between the parties affected. The LBNRD Board may suggest solutions and/or voluntary controls, mutually agreed upon by the parties involved, by which the problem may be addressed. This would be in lieu of formally establishing a groundwater management sub-area and mandatory controls.

10.6.2.2. Level III Trigger And Controls

Level III Quantity controls will be enacted when the percentage established in Table 10.6.2.2-1 and Figure 13-26, or a greater percentage, of the monitored wells in the sub-area which are included in the study show a spring water level decline equal to or greater than the “Reasonable Acceptable Decline” set forth on that Table, as measured for the lowest level of record for that well, and remain below that level for two consecutive years. Along with controls enacted in Level I and II, these stringent controls will include:

- A. Requiring the use of flow meters on water wells.
- C. Allocating the total permissible withdrawal of groundwater.

The Little Blue NRD may also include the following action in Level III Quantity:

D. Close all or a portion of the sub-area to the issuance of additional well permits, this may be selective as to use.

**TABLE 10.6.2.2-1
LITTLE BLUE NRD
EXPLANATION OF DETERMINATION
FOR REASONABLE ACCEPTABLE DECLINES BASED
ON HYDROGEOLOGICAL CHARACTERISTICS
PRE- 1994**

Hydro Unit	Ave. Pre-Devel Sat. AQUI.	Ave. 1992 Sat. AQUI.	Ave. Percentage Approx. Pump Drawdown	NRD Allowable Usage	Reasonable Acceptable Decline ¹	of wells allowed to decline
<u>1</u>	<u>155 ft.</u>	<u>148 ft.</u>	<u>-14 ft.</u>	<u>10%</u>	<u>15 ft.</u>	<u>80%</u>
<u>2</u>	<u>135</u>	<u>121</u>	<u>-21 ft.</u>	<u>10%</u>	<u>12 ft.</u>	<u>80%</u>
<u>3</u>	<u>90</u>	<u>86</u>	<u>-30 ft.</u>	<u>10%</u>	<u>9 ft.</u>	<u>80%</u>
<u>4</u>	<u>70</u>	<u>65</u>	<u>-20 ft.</u>	<u>10%</u>	<u>7 ft.</u>	<u>80%</u>
<u>5</u>	<u>92</u>	<u>80</u>	<u>-27 ft.</u>	<u>10%</u>	<u>8 ft.</u>	<u>80%</u>
<u>6</u>	<u>125</u>	<u>110</u>	<u>-21 ft.</u>	<u>10%</u>	<u>11 ft.</u>	<u>80%</u>
<u>7</u>	<u>135</u>	<u>130</u>	<u>-17 ft.</u>	<u>10%</u>	<u>13 ft.</u>	<u>80%</u>
<u>8</u>	<u>70</u>	<u>65</u>	<u>-15 ft.</u>	<u>5%</u>	<u>3 ft.</u>	<u>40%</u>
<u>9</u>	<u>N.A.</u> ²					

¹ Values rounded to nearest foot.

² N.A. indicates data Not Applicable due to absence of aquifer.

The columns in Table 10.6.2.2-1 were developed by the following procedures. The Hydro-Unit, Average Pre-Development Saturated Aquifer, and Average 1992 Saturated Aquifer were developed by District Staff working with Olson & Associates and Conservation and Survey Division personnel. The Average Approximate Pump Drawdown column was established by researching well registration records in the respective Hydro-Unit. The NRD Allowable Usage and Percentage of Wells allowed to decline was established as Board policy and the Reasonable Acceptable Decline is the 1992 Saturated Aquifer multiplied by the NRD allowable usage rounded to the nearest foot

10.7. Relaxation of Controls

If the results of the LBNRD's monitoring well sampling program for a sub-area indicate that a triggering level for a level of controls lower (less restrictive) than that level which is currently being enforced in that sub-area is met for three consecutive years, then controls in that sub-area will decrease to that less restrictive level, unless specific action by the LBNRD Board maintains the current level. This relaxation of controls applies to

both quality and quantity controls.

Quality Example: An established sub-area is currently under Level II Quality controls due to nitrate readings in monitoring wells equal to or greater than 70% of MCL. If nitrate level readings in monitoring wells in that sub-area are below 70% of MCL for three consecutive years (and no other Level II triggering levels are met for other contaminants), then that sub-area will revert to Level I Quality controls after the third year, unless the LBNRD Board determines a problem still exists and acts to maintain Level II Quality controls in that sub-area.

Quantity Example: An established sub-area is currently under Level II Quantity controls. If the established percentage or greater, as set in table 10.6.2.2.1, of the measured wells in that sub-area show a spring water level above the 50% of the "Reasonable Acceptable Decline" level, and that water level has been maintained for three consecutive years, then that sub-area will revert to Level I Quantity controls after the third year, unless the LBNRD Board determines a problem still exists and acts to maintain Level II Quantity controls in that sub-area.

This relaxation of controls is an acknowledgement that the problem which had existed in that sub-area has been remediated and that the lessons and practices learned during the remediation process, employed by the residents of that sub-area, will continue to maintain an improved water quality or quantity without the burdens and restrictions imposed by a higher level of controls.

If, however, in any subsequent year, in a sub-area in which controls have previously been relaxed, a higher triggering level for the same problem (ie: water quantity or the same contaminant if controls were for water quality) is reached, the controls in that sub-area will be re-instated at that higher level and will remain there until the following conditions are met:

- 1) The monitored problem level (ie: water quantity or contaminant level) in the sub-

area has dropped to a lower triggering level and remained there for at least seven subsequent years; and

- 2) The LBNRD Board acts to remove the higher level controls and reinstate a lower level of controls as appropriate for the existing triggering level.

Example: Four years after the controls in the sub-area in the example above were relaxed to Level I Quality, well sampling in that sub-area indicates nitrate readings equal to or greater than 70% of MCL. The controls in that sub-area will immediately revert to Level II Quality controls and will remain there until both conditions mentioned above are met, even if the nitrate readings return to the 70% level or lower, and remain there. This would not require specific action of the LBNRD Board nor an amendment to the GWMP. (If a different contaminant besides nitrate, should reach Level II triggering levels, the sub-area would also go to Level II Quality controls, but would still be eligible for later relaxation of controls for that contaminant.)

This "anti yo-yo" clause acknowledges that it was the presence of the higher level controls themselves that was improving the water quality or quantity in the sub-area and that these controls must remain in place to continue or maintain improvements. Thus, the higher level controls must be reinstated and maintained in that sub-area.

10.8. Impact of NRD Actions on Threatened or Endangered Species

There are no recent confirmed records of endangered or threatened species that could be impacted by groundwater management activities within the jurisdictional boundaries of the Little Blue NRD.

The LBNRD acknowledges:

- 1) That some portions of the District may possess potential habitat for certain threatened and endangered species; and
- 2) It is the intentions of the Little Blue NRD not to negatively impact any species, whether threatened, endangered or otherwise through the implementation of our groundwater management practices.

Therefore, the LBNRD staff has familiarized themselves with the range, characteristics, and appearance of the potential threatened and endangered species that may be found in the district by reading the Nebraska Game and Parks publications on Nebraska

Threatened and Endangered Species. If, during the course of his or her filed work, a staff member observes an actual (or a suspected) threatened and endangered species, its specific location will be noted and reported to the Nebraska Game and Parks Commission for further investigation and identification.