

INTEGRATED MANAGEMENT PLAN
FOR THE
FULLY APPROPRIATED AREA OF THE UPPER PLATTE RIVER BASIN
IN THE UPPER BIG BLUE NATURAL RESOURCES DISTRICT

Jointly Developed by the
Upper Big Blue Natural Resources District
And
Nebraska Department of Natural Resources

CHAPTER 1: EFFECTIVE DATE

This Integrated Management Plan (IMP) was adopted by the Upper Big Blue Natural Resources District (District) on, September 16, 2010, and by the Nebraska Department of Natural Resources (Department) on September 16, 2010.

This IMP became effective on October 18, 2010.

CHAPTER 2: AUTHORITY

This IMP was prepared by the Upper Big Blue Natural Resources District and the Department of Natural Resources to meet the requirements of the Nebraska Ground Water Management and Protection Act, Neb. Rev. Stat. §§ 46-715, 46-716, 46-717, 46-718, and 46-720 Section 46-715 (2)(e) states in part that *“...Nothing in the integrated management plan for a fully appropriated river basin, subbasin, or reach shall require a natural resources district to regulate ground water uses in place at the time of the department’s preliminary determination that the river basin, subbasin, or reach is fully appropriated, ...”*

CHAPTER 3: BACKGROUND

On December 30, 2005, the Department notified the District of the Department’s preliminary determination that portions of the Upper Platte Basin, part of which lies within the District, are fully appropriated and the geographic area in which the surface water and ground water are hydrologically connected. Pursuant to Department rule, 457 NAC 24001.02, the hydrologically connected area is the area within which pumping of a well for 50 years will deplete the river or a baseflow tributary thereof by at least 10% of the amount pumped in that time (the “10/50 Area”).

On April 21, 2006, the Department issued the “Order of Final Determination of River Basins, Subbasins, or Reaches as fully Appropriated, and Describing Hydrologically Connected Geographic Areas”, confirming the preliminary determination of December 30, 2005.

CHAPTER 4: MAP AND INTEGRATED MANAGEMENT AREA BOUNDARIES

1. **Geographic area** –The following sections are located in the Integrated Management Area (IMA) subject to the controls contained in this plan: Sections 5, 6 and 7, Township 10 North, Range 8 West, Sections 1, 2, 10, 11, 12, 14, 15, 16, 20, 21, 22, 28, 29, 30, 31 and 32, Township 11 North, Range 8 West, and Section 6, Township 11 North, Range 7 West, Hamilton County, Nebraska. A figure illustrating the area described above is included as Appendix A.
2. **Stratigraphic area** - The stratigraphic boundaries subject to this IMP include all sediments from ground level downward through all aquifer units underlying the geographic area of the integrated management area.
3. The goals, objectives, and action items described in this IMP are intended to apply to the geographic and stratigraphic area described above.

CHAPTER 5: GOALS AND OBJECTIVES

1. Vision Statement - Manage water resources in the integrated management area in a manner to balance water use and water supply while optimizing economic, social, and environmental benefits for the near and long term.
2. Goals
 - 2.1. Protect to the extent possible existing users, local economy, environmental health, and recreational uses.
 - 2.2. Maintain the total water supply in the integrated management area to achieve sustainability of supply and use while allowing for growth and changes in use.
3. Objectives
 - 3.1. Provide for educational programs related to integrated water management for the integrated management area.
 - 3.2. Allow for water transfers.
 - 3.3. Explore new sources of water and currently used water for offsets, such as unappropriated river flows and transfers of existing water appropriations or certified ground water uses.
 - 3.4. Ensure that no act or omission of the District or the Department will cause the state to be in noncompliance with applicable state and federal laws and with any applicable interstate water compact or decree or other formal state contract or agreement pertaining to surface water or ground water use or supplies.

- 3.5. Gather and evaluate data to increase understanding of surface water and hydrologically connected ground water, and to test the validity of conclusions and information upon which this plan is based.

CHAPTER 6: PLAN COMPONENTS

1. Action Items to Achieve Goals and Objectives

- 1.1. The action items described in this section are intended to be consistent with applicable requirements of Neb. Rev. Stat. § 46-715.

1.2. Non-Regulatory Action Items

1.2.1. Information and Education Programs

The District and the Department will provide educational materials to the public and/or carry out educational activities that may include, but not be limited to, the following: the fully appropriated determination, the IMP, any interstate compacts or decrees or other formal state contracts or agreements, hydrologically connected ground water and surface water, invasive species management, conversion of irrigated acres to dryland agriculture or wildlife habitat, limited irrigation cropping systems, soil residue and tillage management, alternative crops, and funding sources for programs that enhance water supply. These educational materials and/or activities may include, but not be limited to, joint public meetings, pamphlets, and website information.

1.2.2. Gather and Evaluate Data

The Department and the District may jointly pursue and/or evaluate studies to evaluate their potential effectiveness in achieving the goals and objectives of this IMP. The following potential studies have been identified by the Department and the District: (1) crop rotation; (2) vegetation management; (3) irrigation scheduling; (4) a survey of the type and location of irrigation systems throughout the integrated management area; (5) tillage practices; (6) other best management practices; (7) conjunctive management; (8) water budget analysis; (9) invasive species; and (10) conservation measures.

1.3. Ground Water Regulatory Actions (Controls)

- 1.3.1. Periodic Review of Controls - The District will periodically review the controls being implemented to carry out the goals and objectives of this IMP. If necessary and appropriate, the District may adjust, modify, and/or expand the existing

controls and/or implement additional controls to carry out the goals and objectives of this IMP. Based on the annual review of the progress being made toward achieving the goals of this IMP, and pursuant to 46-715(5)(d)(ii), the District may amend or add to the controls. No controls may be removed, however, unless and until the District and the Department amend this IMP. The controls may not be modified in such a manner as to conflict with the goals and objectives of this IMP.

1.3.2. Implementation of Controls - Within the integrated management area, the District will implement the following controls through their rules and regulations. The Upper Platte Fully Appropriated Management Area Rules and Regulations will be adopted and become effective upon the effective date of this IMP and will continue to do so as long as they are necessary to comply with the requirement of the IMP and the Nebraska Ground Water Management and Protection Act as authorized by Neb. Rev. Stat. § 46-739, so long as they are necessary to comply with the requirement of the IMP and the Nebraska Ground Water Management and Protection Act.

1.3.3. Moratorium - The District will implement a moratorium on new or expanded ground water uses in the integrated management area. The District may grant a variance from the moratorium if there is an offset for any new or expanded use, or if there will be no increase in consumptive use due to the new or expanded use. In granting a variance, the District will consider the timing, location, and amount of the depletion, and the corresponding offset, in order to prevent adverse impacts on existing ground water or surface water users.

1.3.4. Certification of Ground Water Use - All ground water uses have been certified by the District. The District will consider the timing, location, and amount of any depletion associated with any modification to certified irrigated acres, as well as any associated offset in order to prevent adverse impacts to existing ground water or surface water users.

1.3.5. Permit Required - Any person who desires to withdraw and/or consumptively use ground water shall, prior to: 1) changing the use of an existing ground water well or wells; 2) commencing construction of any new or replacement ground water well; or 3) modifying the existing infrastructure for the purpose of expanding the consumptive use of ground water, apply for and receive from the District a permit to authorize such withdrawal and/or use of ground water using the process defined in the District's Rules and Regulations.

1.3.6. General Guidelines for Ground Water Transfers

1.3.6.1. Purpose - The purpose of a ground water transfer is to allow for the

consumptive use of ground water to be changed either in location or purpose while ensuring and protecting existing surface water and ground water users.

- 1.3.6.2. Types of Transfers - The District may permit, regulate, or take action on the following types of ground water transfers: (1) physical transfer of ground water off of the overlying land; (2) transfer of the type of use or addition of use; (3) transfer of certified irrigated acres; (4) physical transfer of ground water and transfer of certified irrigated acres between the District's integrated management area and an adjoining NRD; (5) municipal transfers, if the applicant does not have a municipal transfer permit from the Department; (6) industrial transfers, if the applicant does not have an industrial municipal transfer permit from the Department; and (7) transfers out of state.
- 1.3.6.3. Transfer Permit Required - A transfer permit from the District shall be required before any transfer as identified in items (1) through (7) above may be allowed. A water well construction permit shall not be issued unless and until the District has granted a variance to the moratorium on the issuance of water well construction permit and has approved the transfer permit.
- 1.3.6.4. Criteria for evaluation of a Transfer Request - The specifics of the transfer permitting process, including the evaluation criteria, will be included in the District's Ground Water Management Area Rules and Regulations. The evaluation criteria for a transfer permit include, but are not limited to, the following: (1) whether the proposed transfer will cause an impact to existing ground water or surface water users; (2) whether the proposed transfer will cause an increase in depletions to the river; (3) whether the proposed transfer will result in an increase in consumptive use; (4) the amount, location and timing of any changes in depletions or accretions to the river due to the proposed transfer; (5) whether the proposed transfer will cause adverse effects on the state's ability to comply with interstate compacts and decrees, or other agreements; (6) whether the proposed transfer is consistent with the purpose for which the Integrated Management Area was designated; and (7) whether the proposed transfer will protect the public interest and prevent detriment to the public welfare.
- 1.3.6.5. Methodology for calculating depletions and accretions when transferring from the integrated management area within the District to another natural resources district - (1) a permit from the District is required; (2) the transfer must be in conformance with the rules and regulations of the NRD from which the transfer is coming from or going

to; (3) an agreement must be reached between the District and the other NRD involved in the transfer that the use being retired in one district will remain retired for the duration of the transfer; (4) The District and the Department shall use the methodology for calculating depletions and accretions consistent with the other Platte Basin NRDs when evaluating proposed transfers to ensure that the criteria for compliance with interstate compacts, decrees and other agreements, including the timing, location and amount of the depletion and corresponding offset, are met. This requires: (1) the same amount of water that would be depleted from the river over a 50-year period from consumptive use of groundwater withdrawals are retired from use, and (2) the rate occurs at the same time, rate and location as the depletion, where the location of the retired use is west of the depletion, or no more than one mile east of a north/south line drawn along the eastern edge of the new depletion, and within the same basin of influence

- 1.3.6.6. Sharing of Information - Any actions taken by the District related to the approval of transfers through a permitting process will be documented and shared with the Department pursuant to Subsection 2.2 of Chapter 7.
- 1.3.6.7. Permits will not be required for the transfer of ground water for domestic or range livestock uses.
- 1.3.6.8. Copies of variances or District permit applications for transfers shall be forwarded to the Department for review to ensure that compliance with interstate compacts and decrees, or other agreements will be maintained.
- 1.3.6.9. Physical transfer of ground water off of the overlying land.
 - 1.3.6.9.1. Physical transfers are also subject to the provisions of District's Ground Water Management Area Rules and Regulations (District Rule 5 – Chapter 11).
 - 1.3.6.9.2. Physical transfers of ground water from inside the IMA to lands outside the IMA are prohibited.
- 1.3.6.10. Transfer of the type of use or addition of use.
 - 1.3.6.10.1. The transfer cannot result in an increase in consumptive use unless an offset is provided. The source of offset must be located in a government survey section that is adjacent to the location of the proposed new use.
 - 1.3.6.10.2. If the source of offset is located in a different NRD (i.e. the Central Platte), the applicant must comply with all

requirements of that NRD.

1.3.6.10.3. The water well registration must be changed to reflect the new or additional type of use.

1.3.6.11. Transfer of certified irrigated acres.

1.3.6.11.1. The certified acres being transferred must be decertified and the new acres must be certified;

1.3.6.11.2. Because of the small geographic size of the integrated management area, transfers of certified acres within the integrated management shall be on an acre for acre basis. The acre for acre methodology accounts for location, since the reach in question is short relative to the distribution of water users and measurement interval. It accounts for amount by requiring a one-for-one offset of acres. The method also accounts for timing since the management area is relatively narrow and constrained to the river valley.

1.3.6.11.3. The source of certified acres being transferred must be located in an adjacent government survey section as the proposed new certified acres.

1.3.6.11.4. If the source of certified acres being transferred is located in a different NRD (i.e. the Central Platte), the applicant must comply with all requirements of that NRD.

1.3.6.12. Municipal and Industrial Transfer Permits

1.3.6.12.1. Transfers without a municipal and rural domestic transfer permit from the Department will require a transfer permit from the District.

1.3.6.12.2. Municipal and Industrial transfers are subject the same limitations those described in paragraphs 1.3.6.1 through 1.3.6.22.4 of this chapter.

1.3.6.13. Transfers Out of State

1.3.6.13.1. The Department will consult with the District when considering applications filed to transfer ground water out of state, pursuant to Neb. Rev. Stat. § 46-613.01. The District will take action to approve or deny the transfer request based on the same criteria that the Department uses prior to issuing a transfer permit; and

1.3.7. Municipal Use and Accounting

1.3.7.1. As of the adoption of the IMP there are no municipal uses in the integrated management area. In the event that new municipal uses are developed in the integrated management area the following accounting

procedures will be followed. Consumptive use will be determined from ground water pumping volumes and, where applicable, wastewater discharge volumes, and converted to a per capita volume. The baseline consumptive use will be calculated according to Neb. Rev. Stat. 46-740. The baseline per capita volume, plus the annual population growth estimated by the Nebraska Department of Economic Development and/or U.S. Census Bureau will be used to determine annual increases and decreases in consumptive uses. These annual changes in consumptive use will be tracked annually for each municipality through a reporting and database system administered by the District.

1.3.7.2. Once each five (5) years, and more often if requested by the Department or as determined by the District, the District will recalculate the per capita consumptive use based upon similar, but updated, data described in section 1.3.8.1 of this chapter, and make any necessary adjustments to their per capita offset requirements.

1.3.7.3. Each year, the District will be responsible for offsetting all increases from the baseline consumptive use as estimated by population growth except under either of the following events:

1.3.7.3.1. A municipality's water use exceeds the amount of ground water authorized by a permit that was issued pursuant to the Municipal and Rural Domestic Ground Water Transfers Permit Act; or

1.3.7.3.2. The increase is related to any new or expanded single commercial/industrial consumptive uses of more than twenty-five (25) million gallons per year.

1.3.7.4. Each year the municipality shall be responsible for reporting to the District and offsetting to the river, any ground water use that exceeds the amount authorized by a permit that was issued pursuant to the Municipal and Rural Domestic Ground Water Transfers Permit act, and any new or expanded single commercial/industrial consumptive use if that new or expanded consumptive use is greater than twenty five (25) million gallons per year.

1.3.8. Non-Municipal Industrial Use and Accounting - There are no non-municipal commercial/ industrial uses in the integrated management area. In the event that new non-municipal commercial/ industrial uses are developed in the integrated management area, statutory guidelines and the following accounting procedures will be followed:

1.3.8.1. Consumptive use will be determined from ground water pumping volumes and, where applicable, wastewater discharge volumes. The District will calculate baseline consumptive use for each non-municipal

commercial/ industrial user in the District based on historic consumptive use data for the interval of FROM DATE to TO DATE. The baseline will be used to determine changes in consumptive use annually.

1.3.8.2. These changes in consumptive use will be tracked for each non-municipal commercial/ industrial user annually through a reporting and database system administered by the District

1.3.8.3. If the new or expanded single commercial/industrial use is less than or equal to twenty-five (25) million gallons per year, the District will be responsible for offsetting the entire new or expanded use below the amount granted in the industrial transfer permit, if applicable.

1.3.8.4. If the new or expanded non-municipal commercial/industrial use exceeds twenty-five (25) million gallons per year and they do not have a transfer permit, the user will be responsible for offsetting all new or expanded consumptive uses. If the new or expanded non-municipal commercial/industrial use has a transfer permit, the user is responsible for offsetting all new or expanded uses above the amount granted in the industrial transfer permit.

1.3.9. Variances - The District may grant a variance for good cause shown for any of the above listed controls. Any variance granted by the District must consider the timing, location, and amount of any depletion associated with the variance and any associated offset in order to prevent adverse impacts to existing ground water or surface water users, or on the state's ability to comply with interstate compacts and decrees, or other agreements.

1.4. Surface Water Regulatory Actions - The following surface water controls as authorized by Neb. Rev. Stat. § 46-716 will be implemented and/or continued by the Department:

1.4.1. Surface Water Moratorium - The Department will continue the moratorium on new surface water appropriations in the integrated management area, in accordance with Department rules and as authorized by Neb. Rev. Stat. § 46-716

1.4.2. Variances for New Surface Water Appropriations [See Nebraska Administrative Code Title 457, Chapter 23 (457 N.A.C. 23)]:

1.4.2.1. Any person wanting to apply for a new surface water appropriation within a moratorium area must file a petition requesting leave to file an application.

1.4.2.2. The Department will review petition and determine if there is sufficient information to indicate good cause for allowing further consideration.

- 1.4.2.3. The Department will issue a written decision either denying the petition and stating the reasons for the denial; or grant the petition and stating either: 1) petitioner may file the application and supporting documentation or 2) the Department will proceed to process the application filed with the petition.
- 1.4.2.4. The Director will issue a written order approving or denying the application.
- 1.4.2.5. An appeal of the decision may be requested within 15 days of the date of decision.
- 1.4.3. Transfers or changes of Existing Surface Water Appropriations (457 N.A.C. 9):
 - 1.4.3.1. Any person wanting to transfer the location or a change in use of a surface water appropriation must file an application with the Department.
 - 1.4.3.2. The total number of acres irrigated will not increase.
 - 1.4.3.3. The transfer will not result in a change in the point of diversion.
 - 1.4.3.4. The transfer will not diminish the water supply or adversely affect other water appropriators (457 N.A.C. 9.001.03).
 - 1.4.3.5. The land irrigated before the transfer will not be irrigated and no appropriation may continue for it after transfer.
 - 1.4.3.6. Associated incidental underground water storage appropriations are transferred and/or preserved.
 - 1.4.3.7. The Director will issue a written order approving or denying the transfer application.
 - 1.4.3.8. An appeal of the decision may be requested within 15 days of the date of decision.
- 1.4.4. Administration of Surface Water - The Department shall continue to administer surface water appropriations according to the provisions of the permit, statute, Department rules and regulations, and any applicable interstate compact decree or agreement.
 - 1.4.4.1. The Department shall continue to monitor the use of surface water to prevent unauthorized uses (46 N.A.C. 713).
 - 1.4.4.2. If, at some point in the future, the Department changes the

requirements for surface water appropriators relating to conservation measures, or creates other additional restrictions, such requirements or restrictions in surface water administrations will be implemented in accordance with Department rules and procedures for changing the integrated management plan as outlined in Chapter 7.

CHAPTER 7: MONITORING AND STUDIES SECTION

1. The primary purpose of the monitoring and studies section is to ensure that the fully appropriated areas within the management area maintain a fully appropriated condition. The objective of the monitoring and studies section of this IMP is to gather and evaluate data, information and methodologies that could be used to increase understanding of the surface water and hydrologically connected ground water system, to test the validity of the conclusions and information upon which this IMP is based, and to assist decision makers in properly managing the water resources within the integrated management area.

2. MONITORING

2.1. Various methods will be employed to monitor the progress of the implementation of this IMP. Part One of the monitoring section describes the tracking and reporting of water use activities within the integrated management area. Part Two of the monitoring section describes the analyses that will evaluate the progress that has been made toward sustaining a fully appropriated condition.

2.2. Part One: Tracking and Reporting of Water Use Activities

2.2.1. Tracking

2.2.1.1. The District will be responsible for annually tracking the following activities within the integrated management area:

- 2.2.1.1.1. certification of ground water uses and any changes to these certifications;
- 2.2.1.1.2. approved transfers, including all of the information provided with the application and used in the approval of the transfer;
- 2.2.1.1.3. any flow meter data collected;
- 2.2.1.1.4. any water well construction permits issued;
- 2.2.1.1.5. any other permits issued by the District in the integrated management area;
- 2.2.1.1.6. any conditions associated with any permits issued;
- 2.2.1.1.7. information gathered through the municipal and non-municipal industrial accounting process;
- 2.2.1.1.8. any variances issued, including the purpose, the location,

any required offset, the length of time for which the variance is applicable, and the reasoning behind approval of the variance;

2.2.1.1.9. any retirements of irrigated acres or other water uses in the integrated management area;

2.2.1.1.10. information related to any water banking transactions; and

2.2.1.1.11. offset provided for depletions resulting from increased consumptive use related to the above listed items.

2.2.1.2. The Department will be responsible for annually tracking the following activities within the District:

2.2.1.2.1. any surface water permits issued;

2.2.1.2.2. any dam safety permits issued;

2.2.1.2.3. any ground water permits issued; and

2.2.1.2.4. associated offsets for any new permits issued.

2.2.1.3. The Department will be responsible for tracking the following activities within the District on a five (5) year basis in a manner consistent with the state's requirements under interstate agreements, compacts or decrees:

2.2.1.3.1. National Agricultural Statistics Service livestock data;

2.2.1.3.2. US Census Bureau population data;

2.2.1.3.3. inventory of sandpits;

2.2.1.3.4. inventory of reservoirs of less than fifteen (15) acre-feet;

2.2.1.3.5. any retirements of irrigated acres or other water uses; and

2.2.1.3.6. offsets provided for depletions resulting from increased consumptive use related to the above listed items.

2.2.2. Reporting

2.2.2.1. An annual review of the progress being made toward achieving the goals and objectives will include annual reporting by the Department and the District of the information being tracked as described above. This information will be shared between the District and the Department and may be used for compliance with any applicable interstate compacts and decrees, or other agreements.

2.2.2.2. The reports from the District and the Department should include information on the location, amount and timing of the depletions caused by each permitted new or expanded water use, as well as the associated offset and the location, amount and timing of the offset's accretions to the river. The depletions and/or the accretions should be reported for each year.

2.2.2.3. These reports should be made available by April 1. The format of the reports will be standardized as agreed to by the Department and the District.

2.2.2.4. The reported information will be used as appropriate in the evaluation process as described below.

2.3. Part Two: Measuring the Success of Meeting the Goals and Objectives of this IMP.

2.3.1. The District and Department will monitor the success of meeting the goals and objectives of the IMP through a review, assessment and evaluation of any data or information collected, including data collected under section 2.2 of Chapter 7 of this IMP.

2.3.2. Monitor and analyze uses in the integrated management area to determine the change in stream depletions due to such uses.

3. STUDIES

3.1. The Department and the District may jointly pursue and/or evaluate studies, contingent upon budget and staff resources, to evaluate their potential effectiveness in achieving the goals and objectives of this IMP.

3.1.1. The following potential studies have been identified by the Department and the District: (1) crop rotation; (2) vegetation management; (3) irrigation scheduling; (4) a survey of the type and location of irrigation systems throughout the integrated management area; (5) tillage practices; (6) other best management practices; (7) conjunctive management; (8) water budget analysis; (9) invasive species; and (10) conservation measures.

CHAPTER 8: REVIEW OF AND MODIFICATIONS TO THE IMP

1. The District and the Department will jointly determine whether amendments need to be made to this IMP as necessary.
2. Modifications to this IMP will require an agreement by both the UBBNRD and the Department as to the proposed changes. After the proposed changes have been agreed to, a joint hearing on those changes will be required. Following the joint hearing, the UBBNRD and the Department will, by order, adopt the amendments to this IMP.

CHAPTER 9: INFORMATION CONSIDERED IN DEVELOPING THIS IMP

1. Information used in the preparation of this IMP and to be used in the subsequent implementation of this IMP can be found in:
 - 1.1. The Order of Final Determination of River Basins, Subbasins, or Reaches as Fully Appropriated, and Describing Hydrologically Connected Geographic Area in the Matter of the Portion of the Platte River Basin Upstream of the Loup River Confluence; 2) that are within TBNRD (downstream of the overappropriated area), the LBNRD, and the District, adopted April 21, 2006; and
 - 1.2. 2006 Annual Evaluation of Availability of Hydrologically Connected Water Supplies;
 - 1.3. Rule 5 - General Regulations For Ground Water Management Area #1 and Ground Water Management Area #2
 - 1.4. Additional data and studies on file with the District and the Department.
 - 1.5. 457 N.A.C. 9
 - 1.6. 457 N.A.C. 23
 - 1.7. 457 N.A.C. 24
 - 1.8. Neb. Rev. Stat. § 46-613.01.
 - 1.9. Nebraska Ground Water Management and Protection Act

Appendix A: Figure illustrating the extent of the management area covered under this plan.

