

# NEBRASKA NATURAL RESOURCES COMMISSION

## Water Sustainability Fund

Application for Funding

### Section A.

#### ADMINISTRATIVE

**PROJECT NAME:** Vadose Zone Nitrate Accumulation in the Upper Big Blue Natural Resources District Research Study

**SPONSOR'S PRIMARY CONTACT INFORMATION (Not Consultant's)**

Sponsor Business Name: **Upper Big Blue Natural Resources District**

Sponsor Contact's Name: **Jacob Maslonka**

Sponsor Contact's Address: **319 East 25th Street York, NE 68467**

Sponsor Contact's Phone: **402-362-6601**

Sponsor Contact's Email: **jmaslonka@upperbigblue.org**

1. **Funding** amount requested from the Water Sustainability Fund:

**Grant** amount requested. \$ **167,553**

- If requesting less than 60% cost share, what %? -

**If a loan is requested** amount requested. \$ -

- How many years repayment period? -
- Supply a complete year-by-year repayment schedule. -

2. **Neb. Rev. Stat. § 2-1507 (2)**

Are you applying for a **combined sewer overflow project**? YES  NO

**If yes:**

- Do you have a Long Term Control Plan that is currently approved by the Nebraska Department of Environmental Quality? YES  NO
- Attach a copy to your application. [Click here to enter text.](#)
- What is the population served by your project? [Click here to enter text.](#)
- Provide a demonstration of need. [Click here to enter text.](#)
- **Do not complete the remainder of the application.**

3. **Permits Required/Obtained** Attach a copy of each that has been obtained. For those needed, but not yet obtained (box “NO” checked), 1.) State when you will apply for the permit, 2.) When you anticipate receiving the permit, and 3.) Your estimated cost to obtain the permit.

(N/A = Not applicable/not asking for cost share to obtain)  
 (Yes = See attached)  
 (No = Might need, don't have & are asking for 60% cost share to obtain)

G&P - T&E consultation (required)	N/A <input checked="" type="checkbox"/> Obtained: YES <input type="checkbox"/> NO <input type="checkbox"/>
DNR Surface Water Right	N/A <input checked="" type="checkbox"/> Obtained: YES <input type="checkbox"/> NO <input type="checkbox"/>
USACE (e.g., 404/other Permit)	N/A <input checked="" type="checkbox"/> Obtained: YES <input type="checkbox"/> NO <input type="checkbox"/>
FEMA (CLOMR)	N/A <input checked="" type="checkbox"/> Obtained: YES <input type="checkbox"/> NO <input type="checkbox"/>
Local Zoning/Construction	N/A <input checked="" type="checkbox"/> Obtained: YES <input type="checkbox"/> NO <input type="checkbox"/>
Cultural Resources Evaluation	N/A <input checked="" type="checkbox"/> Obtained: YES <input type="checkbox"/> NO <input type="checkbox"/>
Other (provide explanation below)	N/A <input checked="" type="checkbox"/> Obtained: YES <input type="checkbox"/> NO <input type="checkbox"/>

[Click here to enter text.](#)

4. **Partnerships**

List each Partner / Co-sponsor, attach documentation of agreement:

**University of Nebraska Water Sciences Laboratory**

Identify the roles and responsibilities of each Partner / Co-sponsor involved in the proposed project regardless of whether each is an additional funding source.

**Dr. Daniel Snow, research associate professor with the University of Nebraska Water Sciences Laboratory, will be the Project Lead. Dr. Snow and his team will be responsible for the collection, analysis, and reporting of all data through this project. The University of Nebraska Water Sciences Laboratory is not an additional funding source, rather they are a contract service provider.**

**5. Other Sources of Funding**

Identify the costs of the entire project, what costs each other source of funding will be applied to, and whether each of these other sources of funding is confirmed. If not, please identify those entities and list the date when confirmation is expected. Explain how you will implement the project if these sources are not obtained.

**The total cost of the project will be \$279,254. The UBBNRD will provide \$111,701, with the remaining \$167,553 proposed to come from the Water Sustainability Fund.**

**6. Overview**

In 1,000 words *or less*, provide a brief description of your project including the nature/purpose of the project and its objectives. Do not exceed one page!

**The Upper Big Blue Natural Resources District (UBBNRD) has a Ground Water Management Plan and associated rules and regulations that are collectively designed to ensure the sustainable use of ground water for the benefit of its residents. Specific rules for ground water quality exist in the UBBNRD's 12 Ground Water Management (GWMA) Zones. The ground water resource in the UBBNRD supports forty-one (41) municipal water systems serving just under 65,000 urban residents and over 2,000 rural residents. The GWMA zones are supported by a network of monitoring wells and median nitrate triggers that when reached, impose reasonable and incremental requirements on its agricultural resource users.**

**The entire UBBNRD is considered Phase I Management for drinking water quality. The first Phase II Management Zone was designated in 2002 and the only Phase III Management Zone was designated in 2012. Currently fifty-three percent (53%) of the total acres in the UBBNRD are under Phase II or III Management for drinking water quality. Producers in those zones are required to attend nitrogen certification training, annually report best management practices, soil sample, and use irrigation scheduling technologies.**

**This proposed project will focus on the investigation of the vadose (unsaturated) zone and ground water nitrate and agricultural contaminant occurrence and transport in the UBBNRD. Historical and spatial changes in ground water nitrate**

will be evaluated across the district within the 12 GWMA zones and compared to changes in vadose zone nitrate. A combination of both deep and shallow test holes will be drilled to collect and characterize soil types and physical properties, and chemical analysis will be conducted on selected core samples. The sampling plan, collection, and chemical analysis will be led by Dr. Daniel Snow, Nebraska Water Sciences Laboratory, and will be based on an approved Quality Assurance and Protection Plan. The UBBNRD will contact landowners, coordinate property access, and assist with collection of ground water samples. The UBBNRD will also provide historical data on fertilizer use rates and timing irrigation practices as they relate to the observations of vadose zone trends. A nitrate leaching model will be developed using soil and sediment properties measured during this project. This model will be used to predict how changes in nitrogen and irrigation water management will affect nitrate leaching under different soil conditions. The results of this project will be summarized in a technical report including datasets, geologic classification and chemical analysis of the core intervals, water samples, and other interpretations.

**7. Project Tasks and Timeline**

Identify what activities will be conducted to complete the project, and the anticipated completion date.

**For multiyear projects** please list (using the following example):

<u>Tasks</u>	<u>Year 1\$</u>	<u>Year 2\$</u>	<u>Year 3\$</u>	<u>Remaining</u>	<u>Total \$ Amt.</u>
Permits	\$18,000				\$18,000
Engineering		\$96,000			\$96,000
Construction		\$87,000	\$96,000		\$183,000
Close-out				\$8,000	\$8,000
				<b>TOTAL</b>	<b>\$305,000</b>

- What activities (Tasks) are to be completed.
- An estimate of each Tasks expenditures/cost per year.
- Activities in years 4 through project completion under a single column.

**This project requires the collection and analysis of vadose samples from all the GWMA zones over the course of four years. The total cost of the project is \$279,254. A breakdown of project budget is below.**

**Personnel (\$117,774)**

Salary support is requested for Dr. Snow (0.3 months per year) and a post-doc researcher (3 months per year) for laboratory processing, data reduction, analysis, and generation of a final report. Benefits are estimated at 30% of salary for Dr. Snow and 40% of salary for the post-doc. Actual benefits will be charged to the project.

**Travel (\$5,560)**

Dr. Snow and the post-doc researcher will each travel to York, NE twice a year:

Lodging (2 nights)	\$160.00
Meals (3 days)	150.00
Mileage (150 miles)	<u>37.50</u>
Total/Person/Trip	<u><u>\$347.50</u></u>

**Supplies (\$3,600)**

Drilling supplies and liners are estimated at \$900 per year.

**Other Direct Costs (\$152,320)**

	Unit	Unit Type	Year 1		Year 2		Year 3		Year 4		Total	
			Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
Drilling Cost - CSD Deep cores	\$ 650	Each	8	5,200	8	5,200	8	5,200	8	5,200	32	20,800
Giddings Probe - Shallow cores	\$ 400	Each	8	<u>3,200</u>	8	<u>3,200</u>	8	<u>3,200</u>	8	<u>3,200</u>	32	<u>12,800</u>
<b>Totals</b>				<b>\$ 8,400</b>		<b>\$ 8,400</b>		<b>\$ 8,400</b>		<b>\$ 8,400</b>		<b>\$ 33,600</b>

	Unit	Unit Type	Year 1		Year 2		Year 3		Year 4		Total	
			Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
Core processing. NO3, NH4, etc	\$ 24	Each	560	13,440	560	13,440	560	13,440	560	13,440	2,240	53,760
Composites - Nitrate Isotopes	\$ 105	Each	30	3,150	30	3,150	30	3,150	30	3,150	120	12,600
Composites - U, As, Se	\$ 65	Each	60	3,900	60	3,900	60	3,900	60	3,900	240	15,600
Groundwater - Nitrate Isotopes	\$ 110	Each	20	2,200	20	2,200	20	2,200	20	2,200	80	8,800
Groundwater - U, As, Se	\$ 55	Each	20	1,100	20	1,100	20	1,100	20	1,100	80	4,400
Groundwater - Ages	\$ 450	Each	8	<u>3,600</u>	8	<u>3,600</u>	8	<u>3,600</u>	8	<u>3,600</u>	32	<u>14,400</u>
<b>Totals</b>				<b>\$ 27,390</b>		<b>\$ 27,390</b>		<b>\$ 27,390</b>		<b>\$ 27,390</b>		<b>\$109,560</b>

**Indirect Costs**

The Facilities & Administrative rate for state agencies is 10%.

8. **IMP**

Do you have an **Integrated Management Plan** in place, or have you initiated one? **YES** **NO** Sponsor is not an NRD

## Section B.

### DNR DIRECTOR'S FINDINGS

#### **Prove Engineering & Technical Feasibility**

(Applicant must demonstrate compliance with Title 261, CH 2 - 004)

1. Does your project include physical construction (defined as moving dirt, directing water, physically constructing something, or installing equipment)?  
YES  NO

If you answered "YES" you must answer all questions in section 1.A.  
If you answer "NO" you must answer all questions in section 1.B.

If "YES", it is considered mostly structural, so answer the following:

- 1.A.1 Insert a feasibility report to comply with Title 261, Chapter 2, including engineering and technical data; [Click here to enter text.](#)
- 1.A.2 Describe the plan of development (004.01 A); [Click here to enter text.](#)
- 1.A.3 Include a description of all field investigations made to substantiate the feasibility report (004.01 B); [Click here to enter text.](#)
- 1.A.4 Provide maps, drawings, charts, tables, etc., used as a basis for the feasibility report (004.01 C); [Click here to enter text.](#)
- 1.A.5 Describe any necessary water and/or land rights including pertinent water supply and water quality information (004.01 D); [Click here to enter text.](#)
- 1.A.6 Discuss each component of the final plan (004.01 E); [Click here to enter text.](#)
- 1.A.7 When applicable include the geologic investigation required for the project (004.01 E 1); [Click here to enter text.](#)
- 1.A.8 When applicable include the hydrologic data investigation required for the project (004.01 E 2); [Click here to enter text.](#)
- 1.A.9 When applicable include the criteria for final design including, but not limited to, soil mechanics, hydraulic, hydrologic, structural, embankments and foundation criteria (004.01 E 3). [Click here to enter text.](#)

If "NO", it is considered mostly non-structural, so answer the following:

- 1.B.1 Insert data necessary to establish technical feasibility (004.02); **The UBBNRD is contracted with the Water Sciences Laboratory to complete this project. Dr. Snow has implemented similar projects in different NRDs across the state**

and collectively shares his information through the Nebraska Vadose Zone Interactive Map at <https://nebraskavadose.unl.edu/>.

- 1.B.2 Discuss the plan of development (004.02 A); **The UBBNRD has a framework and rules and regulations as the backbone for this project. The existing GWMA Zones will be used to define annual sampling locations. Pairing the data collected through the vadose sample cores with producer interviews of management practices implemented on the land surface will allow Dr. Snow and his team to better understand nitrate movement through the vadose zone. The understanding gained from this project will assist policy makers at the UBBNRD to ensure future rules and regulations appropriately address drinking water concerns.**

**Staff at the UBBNRD will contact landowners, conduct interviews, and be the liaison between Dr. Snow and his team and cooperating landowners. The team will collect both shallow and deep cores in three GWMA Zones per year, sampling cores from all twelve GWMA Zones by the completion of the project. The analysis will be combined in a report and presented to the UBBNRD board of directors and constituents.**

- 1.B.3 Describe field or research investigations utilized to substantiate the project conception (004.02 B); **In recent years, similar research investigations have been completed by Dr. Snow and his team for other NRDs. The most notable areas included in this study are the Central Platte NRD, Hastings Management Area, and the Bazile Groundwater Management Area. Dr. Snow is currently working in the Lower Loup NRD and Lower Elkhorn NRD.**
- 1.B.4 Describe any necessary water and/or land rights (004.02 C); **NA**
- 1.B.5 Discuss the anticipated effects, if any, of the project upon the development and/or operation of existing or envisioned structural measures including a brief description of any such measure (004.02 D). **This project will provide a better understanding of how past and current land management practices influence nitrate movement in the vadose zone throughout the UBBNRD. This knowledge will allow the UBBNRD to make data driven decisions when setting policy and tailor education and outreach on best management practices based on research results.**

#### **Prove Economic Feasibility**

**(Applicant must demonstrate compliance with Title 261, CH 2 - 005)**

2. Provide evidence that there are no known means of accomplishing the same purpose or purposes more economically, by describing the next best alternative. **The next best alternative would be to use existing data collected by the**

UBBNRD staff and perform a paired down data analysis. This would only focus on a few GWMA Zones and not provide the coverage and insights that the UBBNRD board, staff, and constituents are looking for. The proposed project would enhance prior studies in the UBBNRD and provide new insights into how nitrate is moving under current land practices in all the GWMA Zones.

3. Document all sources and report all **costs** and **benefit data** using current data, (commodity prices, recreation benefit prices, and wildlife prices as prescribed by the Director) using both dollar values and other units of measurement when appropriate (environmental, social, cultural, data improvement, etc.). The period of analysis for economic feasibility studies is the project life, up to fifty (50) years; or, with prior approval of the Director up to one hundred (100) years, (Title 261, CH 2 - 005). **There are no instruments or structures to maintain, so there is no long-term economic cost to this project. Upon completion of the project the staff, board, and constituents of the UBBNRD will have a better understanding to guide policy in regard to drinking water quality, which will have long term benefits for economic, environmental, and human health. The exact dollar amount of this benefit over 50 years has not been quantified, but it is estimated to be tens of millions of dollars.**
- 3.A Describe any relevant cost information including, but not limited to the engineering and inspection costs, capital construction costs, annual operation and maintenance costs, and replacement costs. Cost information shall also include the estimated construction period as well as the estimated project life (005.01). **The total project cost is \$297,254, which will cover equipment and supplies, drilling, testing, data processing, travel, and personnel. This is a four-year project with incremental payments made throughout the time period. This project is set to begin in the fall of 2021. The estimated project life is 10 years after completion.**
- 3.B Only primary tangible benefits may be counted in providing the monetary benefit information and shall be displayed by year for the project life. In a multi-purpose project, estimate benefits for each purpose, by year, for the life of the project. Describe intangible or secondary benefits (if any) separately. In a case where there is no generally accepted method for calculation of primary tangible benefits describe how the project will increase water sustainability, in a way that justifies economic feasibility of the project such that the finding can be approved by the Director and the Commission (005.02). **The primary benefit from this project will be the knowledge gained from the sample cores correlated to land management practices. Having a better understanding of how nitrate and agrichemical contaminants move through the vadose zone across the entire district will be invaluable to the UBBNRD board of directors, staff, and constituents. Fifty-three percent of the UBBNRD is in phase II or III management due to drinking water quality impairments. A large portion of the remaining 47% shows little to no signs of nitrate movement through the**



vadose zone. Understanding both sides of nitrate movement is important when setting policy and creating educational programs and incentives. As the consequence of not addressing nitrate contamination is worse health outcomes for citizens and the environment, there is a definite though hard to quantify value to this project.

3.C Present all cost and benefit data in a table to indicate the annual cash flow for the life of the project (005.03). This project is still under development and the data presented here is an estimation of what the cash flow could look like:

Assets	Jun 2022	Jun 2023	Jun 2024	Jun 2025	Total
Total Cash In	\$69,813.50	\$69,813.50	\$69,813.50	\$69,813.50	\$279,254.00
NRD Budget	\$27,925	\$27,925	\$27,925	\$27,925	\$111,701
Funding from Water Sustainability Fund	\$41,888	\$41,888	\$41,888	\$41,888	\$167,552

**Expenses**

Personnel	\$ 29,443.50	\$ 29,443.50	\$ 29,443.50	\$ 29,443.50	\$ 117,774.00
Travel	\$ 1,390.00	\$ 1,390.00	\$ 1,390.00	\$ 1,390.00	\$ 5,560.00
Supplies	\$ 900.00	\$ 900.00	\$ 900.00	\$ 900.00	\$ 3,600.00
Other Direct Costs (drilling, testing)	\$ 35,790.00	\$ 35,790.00	\$ 35,790.00	\$ 35,790.00	\$ 143,160.00

3.D In the case of projects for which there is no generally accepted method for calculation of primary tangible benefits and if the project will increase water sustainability, demonstrate the economic feasibility of such proposal by such method as the Director and the Commission deem appropriate (005.04). (For example, show costs of and describe the next best alternative.) There is no direct alternative for this project to provide a comparison for economic feasibility. The project will increase water sustainability by providing data that will be used to make informed decisions about policy regarding the use of nitrogen fertilizer in the 12 GWMA zones of the district. These improved decisions backed by science will reduce costs incurred by municipalities in the future, who would need to potentially drill new wells or build nitrate remediation facilities.

**Prove Financial Feasibility**

(Applicant must demonstrate compliance with Title 261, CH 2 - 006)

4. Provide evidence that sufficient funds are available to complete the proposal. The board of directors of the UBBNRD has included the necessary funds for this project beginning in fiscal year 2022-2023. This amount will be renewed annually through the completion of the project in fiscal year 2025-2026.

5. Provide evidence that sufficient annual revenue is available to repay the reimbursable costs and to cover OM&R (operate, maintain, and replace). The UBBNRD's annual budget for this project is \$70,000. This project will not have any OM&R expenses.
6. If a loan is involved, provide sufficient documentation to prove that the loan can be repaid during the repayment life of the proposal. **NA**
7. Describe how the plan of development minimizes impacts on the natural environment (i.e. timing vs nesting/migration, etc.). **This project will not have a negative impact on the natural environment as it involves minimal soil disturbance.**
8. Explain how you are qualified, responsible and legally capable of carrying out the project for which you are seeking funds. **The UBBNRD has a wide range of statutory responsibilities and authorities, including but not limited to Nebraska Revised Statutes 2-3,201 through 2-3,243 and 46-701 through 46-755. As NRDs are the state's preferred regulator of groundwater, the UBBNRD is clearly both qualified and responsible to carry out the proposed project.**
9. Explain how your project considers plans and programs of the state and resources development plans of the political subdivisions of the state. **This project is being implemented to assist with the requirements of the UBBNRDs Groundwater Management Plan (GMP). The GMP was developed through the authority granted by the Groundwater Management and Protection Act (GMPA).**
10. Are land rights necessary to complete your project? **YES  NO**

**If yes:**

- 10.A Provide a complete listing of all lands involved in the project. **Click here to enter text.**
- 10.B Attach proof of ownership for each easements, rights-of-way and fee title currently held.
- 10.C Provide assurance that you can hold or can acquire title to all lands not currently held.
11. Identify how you possess all necessary authority to undertake or participate in the project. **The UBBNRD has a wide range of statutory responsibilities and authorities, including but not limited to Nebraska Revised Statutes 2-3,201 through 2-3,243 and 46-701 through 46-755. As the state's preferred**

**regulator of groundwater, the UBBNRD is clearly both qualified and responsible to carry out the proposed project.**

12. Identify the probable consequences (environmental and ecological) that may result if the project is or is not completed. **There would likely be positive environmental and ecological consequences if the project is completed. The project will provide highly valuable assistance to the district to allow them to manage the quality and quantity of groundwater more effectively and efficiently in the district, a vital component to the environment and ecology of the district.**

## Section C.

### NRC SCORING

In the NRC's scoring process, points will be given to each project in ranking the projects, with the total number of points determining the final project ranking list.

The following 15 criteria constitute the items for which points will be assigned. Point assignments will be 0, 2, 4, or 6 for items 1 through 8; and 0, 1, 2, or 3 for items 9 through 15. Two additional points will be awarded to projects which address issues determined by the NRC to be the result of a federal mandate.

#### Notes:

- The responses to one criterion *will not* be considered in the scoring of other criteria. Repeat references as needed to support documentation in each criterion as appropriate. The 15 categories are specified by statute and will be used to create scoring matrixes which will ultimately determine which projects receive funding.
- There is a total of 69 possible points, plus two bonus points. The potential number of points awarded for each criteria are noted above. Once points are assigned, they will be added to determine a final score. The scores will determine ranking.
- The Commission recommends providing the requested information and the requests are not intended to limit the information an applicant may provide. An applicant should include additional information that is believed will assist the Commission in understanding a proposal so that it can be awarded the points to which it is entitled.

Complete any of the following (15) criteria which apply to your project. Your response will be reviewed and scored by the NRC. Place an N/A (not applicable) in any that do not apply, an N/A will automatically be placed in any response fields left blank.

1. Remediates or mitigates threats to drinking water;
  - Describe the specific threats to drinking water the project will address.
  - Identify whose drinking water, how many people are affected, how will project remediate or mitigate.
  - Provide a history of issues and tried solutions.
  - Provide detail regarding long-range impacts if issues are not resolved.

**Nitrate is the most common contaminant in Nebraska groundwater and the most frequent impairment to public water systems in the United States. Treatment costs can be quite high. For example, the 20-year aquifer storage and treatment**

system in Hastings, Nebraska population is estimated at \$46 million. Twenty-year costs for treatment to domestic well owners with nitrate contaminated wells have been estimated to be \$3.5 million in the Bazile Groundwater Management area of northeast Nebraska (Junkakut, et al 2020). Drilling a new well and/or treatment is the most common solution, however both options are limited to the local available economic resources of a community. Finding ways to measure, predict and communicate the connection between fertilizer use and nitrate contamination requires systematic measurement of the quantity and movement of nitrate (and other contaminants) from the land surface to the water table.

The ground water resource in the UBBNRD supports forty-one (41) municipal water systems serving just under 65,000 urban residents and over 2,000 rural residents. Fifty-three percent of the district is in GWMA Phase II or III for drinking water nitrate, meaning that the level of nitrate in the water is approaching or has exceeded 10 mg/L, the EPA standard for safety. Through monitoring and policy, the UBBNRD is addressing the drinking water concern, but is still measuring increasing nitrate contaminant trends in many GWMA Zones. Conversely, some GWMA Zones have seen little to no nitrate increases. A better understanding of both situations is needed to address the nitrate concern districtwide. To gain that understanding a twostep approach including vadose core sampling and historic land management practice information is necessary. That information will aid in the development of educational programming, voluntary incentive programs, and regulatory policy.

2. Meets the goals and objectives of an approved integrated management plan or ground water management plan;
  - Identify the specific plan that is being referenced including date, who issued it and whether it is an IMP or GW management plan.
  - Provide the history of work completed to achieve the goals of this plan.
  - List which goals and objectives of the management plan the project provides benefits for and how the project provides those benefits.

The UBBNRDs existing GWMA Plan requires deep soil sampling once every five years at each of its dedicated nested monitoring well sites. These samples are collected by district staff to a depth of 24' to 27' using a tractor mounted Giddings Probe. The district does not have dedicated nested monitoring well sites in all 12 GWMA Zones, nor does it have the equipment to bore the entire depth of the vadose zone to the ground water table. This project will provide data never before collected in some GWMA Zones, and enhance prior data collected by district staff in other Zones. By partnering with the University Water Sciences Laboratory, the UBBNRD gains access to the equipment and expertise to appropriately sample all 12 zones and to analyze the practices that are making the most difference to the rate of movement of nitrate-nitrogen through the vadose zone and into the aquifer.

3. Contributes to water sustainability goals by increasing aquifer recharge, reducing aquifer depletion, or increasing streamflow;

List the following information that is applicable:

- The location, area and amount of recharge;
- The location, area and amount that aquifer depletion will be reduced;
- The reach, amount and timing of increased streamflow. Describe how the project will meet these objectives and what the source of the water is;
- Provide a detailed listing of cross basin benefits, if any.

**This project will measure ground water age and provide an estimate of local groundwater recharge rates, primarily to show when groundwater nitrate contamination occurred. The location for the project is in the nine Nebraska counties represented in the Upper Big Blue Natural Resources District (Adams, Butler, Clay, Hamilton, Fillmore, Polk, Seward, Saline, and York). The amount of recharge is not being measured, rather the quality and rate of recharge in the sampled zones. The amount of aquifer depletion is not being measured. The reach, amount and timing of increased streamflow are not being measured by this project. The cross basin benefits of this project are that data may be extrapolated for other areas with similar soil structure, depth to water table, and land use (rates of irrigation, rate and timing of fertilization, etc).**

4. Contributes to multiple water supply goals, including, but not limited to, flood control, agricultural use, municipal and industrial uses, recreational benefits, wildlife habitat, conservation of water resources, and preservation of water resources;

- List the goals the project provides benefits.
- Describe how the project will provide these benefits
- Provide a long range forecast of the expected benefits this project could have versus continuing on current path.

**The project provides benefits to municipalities and rural water users, as the policies and practices that will be informed by the results of the study will lead to improvements in water/reduction in the amount of nitrate-nitrogen in the water. The project will provide these benefits by exploring the relationship between land use practices and the rate at which nitrogen contamination occurs, then using this data to provide better recommendations to decision makers. The long-range forecast of the expected benefits is that for at least ten years after the project is completed, the data will be used to improve decisions about regulations that pertain to the use of nitrogen fertilizer as well as funding available for best management practices identified by the study that would slow or reduce the rate of nitrogen contamination.**

5. Maximizes the beneficial use of Nebraska's water resources for the benefit of the state's residents;

- Describe how the project will maximize the increased beneficial use of Nebraska's water resources.
- Describe the beneficial uses that will be reduced, if any.
- Describe how the project provides a beneficial impact to the state's residents.

**The project will increase the beneficial use of Nebraska's water resources by providing data-driven decisions about agricultural regulation that impacts water quality. No beneficial uses will be reduced through this project. This project will provide a beneficial impact to the state's residents by improving the water quality through improved decision making about agricultural practices.**

6. Is cost-effective;

- List the estimated construction costs, O/M costs, land and water acquisition costs, alternative options, value of benefits gained.
- Compare these costs to other methods of achieving the same benefits.
- List the costs of the project.
- Describe how it is a cost effective project or alternative.

**There are no estimated construction costs, O/M costs, or land or water acquisition costs. There is not a direct alternative as a stand-in for this project, as there is not another way to obtain the kind of data to be collected through the project. The value of the benefit of this project is in the tens of millions of dollars, as it will reveal was to reduce the amount of nitrate contamination in the district's drinking water supply, thus reducing health care costs for individuals, as well as water system improvements costs that would otherwise be incurred by municipalities.**

7. Helps the state meet its obligations under interstate compacts, decrees, or other state contracts or agreements or federal law;

- Identify the interstate compact, decree, state contract or agreement or federal law.
- Describe how the project will help the state meet its obligations under compacts, decrees, state contracts or agreements or federal law.
- Describe current deficiencies and document how the project will reduce deficiencies.

**Federal law (Safe Drinking Water Act) requires municipalities to provide drinking water to residents that is clean and safe. The greatest threat to the water supply in Nebraska is nitrate contamination. This project will help**

**Nebraska meet its obligations to federal law by providing guidance to the 41 communities represented in the Upper Big Blue NRD about best management for agricultural practices to protect water quality moving forward. We do not currently have a model for our district that looks at the relationship of land management practices, soil structure, depth to water, and rate and amount of nitrogen leaching. This project would provide much needed information that would inform policy in this area for years to come.**

8. Reduces threats to property damage or protects critical infrastructure that consists of the physical assets, systems, and networks vital to the state or the United States such that their incapacitation would have a debilitating effect on public security or public health and safety;

- Identify the property that the project is intended to reduce threats to.
- Describe and quantify reductions in threats to critical infrastructure provided by the project and how the infrastructure is vital to Nebraska or the United States.
- Identify the potential value of cost savings resulting from completion of the project.
- Describe the benefits for public security, public health and safety.

**The UBBNRD certifies over 1.2 million irrigated acres. With only 1.8 million total acres in the district, irrigated agriculture is the driving force for the economy in the UBBNRD. With irrigated agriculture in the Midwest comes the risk of nitrate contamination. The nitrate threat to public health and safety is a concern, as is linked to a variety of negative health outcomes from Blue Baby Syndrome to certain types of cancers. A current study going on in the district is exploring the correlation between increased nitrate in the drinking water and incidents of pediatric cancer. The cost of treatment to remediate for nitrates in the water for the communities within the UBBNRD would reach well into the tens of millions of dollars. This study will provide the insights to create programs, incentives, and policy to assist agricultural producers and communities in addressing the drinking water nitrate contamination issue.**

9. Improves water quality;

- Describe what quality issue(s) is/are to be improved.
- Describe and quantify how the project improves water quality, what is the target area, what is the population or acreage receiving benefits, what is the usage of the water: residential, industrial, agriculture or recreational.
- Describe other possible solutions to remedy this issue.
- Describe the history of the water quality issue including previous attempts to remedy the problem and the results obtained.



Groundwater nitrate-N concentrations have slowly increased in some parts of the UBBNRD over the past few decades. Median groundwater nitrate-N concentrations currently range from ~0.4 mg/L in the southeast area of the district to near 11 mg/L in Zone 5 surrounding York. While nitrate concentrations in some zones have decreased, overall median groundwater nitrate increased by an average of 54% since measurement began in the mid-1990s. Subsurface geology, aquifer thickness and depth to water varies considerably across the district and likely controls nitrate-N movement from the surface to the water table. Vadose zone cores collected from 8 locations/depths in 1995-1997 had nitrate-N concentrations up to 69 mg/kg (milligrams per kilogram) reflecting depths up to 90 feet below the surface. Fifty percent of 245 unsaturated-zone samples had nitrate concentrations between 2.15 and 5.6 mg/kg. Several locations showed significant changes in nitrate profiles, suggesting variable nitrate loading from fertilizer use (Verstraeten et al 1998). This project will focus on investigation of the vadose (unsaturated) zone and groundwater nitrate and agrichemical contaminant occurrence and transport in the UBBNRD. Historical and spatial changes in groundwater nitrate will be evaluated across the district and within the 12 GWMA Zones and compared to changes in vadose zone nitrate.

10. Has utilized all available funding resources of the local jurisdiction to support the program, project, or activity;

- Identify the local jurisdiction that supports the project.
- List current property tax levy, valuations, or other sources of revenue for the sponsoring entity.
- List other funding sources for the project.

The UBBNRD is the local jurisdiction that supports this project through their tax levy authority. The draft budget for fiscal year 2022 provides for a property tax requirement of \$3,104,280.61. The levy is expected to be set at 0.0207 per \$100 actual valuation. This application allows the UBBNRD to better understand nitrate and agrichemical transport through the vadose zone across the entire district. The information will guide policymakers and staff to better protect our ground water resources.

11. Has a local jurisdiction with plans in place that support sustainable water use;

- List the local jurisdiction and identify specific plans being referenced that are in place to support sustainable water use.
- Provide the history of work completed to achieve the goals of these plans.
- List which goals and objectives this project will provide benefits for and how this project supports or contributes to those plans.

- Describe and quantify how the project supports sustainable water use, what is the target area, what is the population or acreage receiving benefits, what is the usage of the water: residential, industrial, agriculture or recreational.
- List all stakeholders involved in project.
- Identify who benefits from this project.

The UBBNRD is the local jurisdiction with a plan in place to support sustainable water use. The first Groundwater Management Plan for ground water quantity was adopted in 1978. Specific rules for ground water quality were adopted in 1994 in the district's first Special Protection Area (SPA). The SPA was later rebranded as a Groundwater Management Area (GWMA). The GWMA outlines administration, monitoring, and phases of management for groundwater quality for the entire district. It outlines twelve (12) GWMA Zones and a network of shallow and deep, irrigation and domestic sampling wells whose median nitrate level determines its phase of management. The entire UBBNRD is considered Phase I Management for drinking water quality. The first Phase II Management Zone was designated in 2002 and the only Phase III Management Zone designated in 2012. Currently forty-four percent (53%) of the total acres in the UBBNRD are under Phase II or III Management for drinking water quality. Producers in those zones are required to attend nitrogen certification training, annually report best management practices, soil sample, and use irrigation scheduling technologies.

12. Addresses a statewide problem or issue;

- List the issues or problems addressed by the project and why they should be considered statewide.
- Describe how the project will address each issue and/or problem.
- Describe the total number of people and/or total number of acres that would receive benefits.
- Identify the benefit, to the state, this project would provide.

Drinking water nitrate is a problem for many parts of the state. Eighty-five percent of Nebraskans use groundwater as their source of drinking water. To better understand how nitrates and agrichemicals move to groundwater table you need to collect and analyze data from the unsaturated zone and explore the land management practices that are happening on the surface. Using prior studies of the UBBNRD and the framework provided in the district's stated rules and regulations, this study will further drive education, incentive, and policy surrounding drinking water quality.

13. Contributes to the state's ability to leverage state dollars with local or federal government partners or other partners to maximize the use of its resources;

- List other funding sources or other partners, and the amount each will contribute, in a funding matrix.
- Describe how each source of funding is made available if the project is funded.
- Provide a copy or evidence of each commitment, for each separate source, of match dollars and funding partners.
- Describe how you will proceed if other funding sources do not come through.

**This Water Sustainability Fund application is only a small portion of the total amount of money that has been invested locally as part of the implementation of the UBBNRD GWMA plan. There are no other funding sources for this project beyond district funding. This project will be a partnership with the University of Nebraska Water Sciences Laboratory; however they will not provide funding for the project. They are seen as the experts in this type of data collection, analysis, and interpretation. Without the participation of the Nebraska Water Sciences Laboratory and associated research specialists, this project would not be feasible.**

14. Contributes to watershed health and function;

- Describe how the project will contribute to watershed health and function in detail and list all of the watersheds affected.

**Portions of the aquifer underlying the UBBNRD have elevated levels of nitrates. We know that land management practices greatly influence nitrate movement through the vadose zone and into the aquifer and into the water supply. This project will contribute to the health and function of the watershed by giving the board, staff, and constituents of the UBBNRD a better understanding of nitrate and agrichemicals' movement through the vadose zone. That knowledge can guide future educational and incentive programs, and guide policy using the best science for the area.**

15. Uses objectives described in the annual report and plan of work for the state water planning and review process issued by the department.

- Identify the date of the Annual Report utilized.
- List any and all objectives of the Annual Report intended to be met by the project
- Explain how the project meets each objective.

**The 2020 Annual Report and Plan of Work identified efforts made by the UBBNRD in partnership with Nebraska Department of Environment and Energy and Nebraska Department of Natural Resources to combine the Integrated Management Planning and Water Quality Management Planning efforts. Though each planning effort has different plan requirements, they both utilize stakeholder involvement in their development. All agencies**

agreed that ground water quantity has a direct correlation to ground water quality, and that efforts to jointly manage ground and surface water quantity could show positive water quality impacts. The proposed project will provide the UBBNRD research-based information that correlates ground water management practices to nitrate movement in the vadose zone. This information will then be used to educate producers, guide incentive programs, and direct policy.

The report also addresses continued cooperation in modeling efforts within the basin. The geologic portion of the vadose data collected can be incorporated into future modeling work to add geologic information into geologic layers of the model.

16. Federal Mandate Bonus. If you believe that your project is designed to meet the requirements of a federal mandate which furthers the goals of the WSF, then:

- Describe the federal mandate.
- Provide documentary evidence of the federal mandate.
- Describe how the project meets the requirements of the federal mandate.
- Describe the relationship between the federal mandate and how the project furthers the goals of water sustainability.

NA



**UPPER BIG BLUE  
Natural Resources District**

402-362-6601  
Fax: 402-362-1849  
[www.upperbigblue.org](http://www.upperbigblue.org)

319 E. 25th Street  
York, Nebraska 68467

July 30, 2021

Nebraska Natural Resources Commission  
Tom Riley, Director of the Department of Natural Resources  
301 Centennial Mall South  
Lincoln, NE 68509-4676

Re: Letter of commitment and financial support for the Water Sustainability Fund application entitled:  
Vadose Zone Nitrate Accumulation in the Upper Big Blue Natural Resources District Research Study.

Dear Mr. Riley,

Despite producers' best efforts and the regulations and guidance provided by the Upper Big Blue Natural Resources, the level of nitrate-nitrogen in drinking water continues to increase in parts of the district. The cost to human and environmental health of this contamination problem is high. Drinking water high in nitrates has been linked to a number of negative health outcomes, including some types of cancers. For many small communities in the district, it is becoming increasingly difficult—and expensive—to provide access to clean drinking water for their residents.

For these reasons, the board of directors of the Upper Big Blue Natural Resources District strongly supports the opportunity to seek funding through the Water Sustainability Fund program to complete a four-year study to examine the movement of nitrate-nitrogen through the vadose zone across our district. The board is supportive of this initiative as it will provide essential data that will guide policy for years to come. The results of this study will have an immediate impact on the work of district staff as they seek to educate and inform producers on best land management practices to protect water quality for all residents.

The board of directors has approved the level of funding necessary to complete this project with the addition of funds through the Water Sustainability Fund. The Upper Big Blue Natural Resources District is committed to protecting the ground water supply while employing the best science available to achieve district goals. The insights gained from this project will enable the board of directors to make evidence-based decisions to ensure future rules and regulations appropriately address drinking water concerns.

Thank you for your consideration of our application.

Sincerely,

David Eigenberg  
General Manager

NATURAL RESOURCES DISTRICT BUDGET FORM

This budget is for the Period JULY 1, 2021 through JUNE 30, 2022

Upon Filing, The Entity Certifies the Information Submitted on the Form to be Correct:

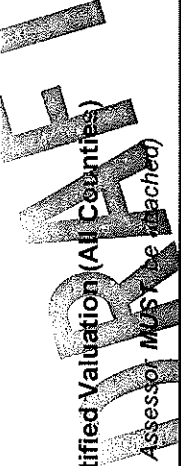
The following PERSONAL AND REAL PROPERTY TAX is requested for the ensuing year:

\$	3,469,900.61	Property Taxes for Non-Bond Purposes
\$	-	Principal and Interest on Bonds
\$	3,469,900.61	Total Personal and Real Property Tax Required

\$ 14,951,779,871.00

(Certification of Valuation(s) from County Assessor MUST be attached)

County Clerk's Use ONLY



Outstanding Bonded Indebtedness as of JULY 1, 2021

Principal	\$	-
Interest	\$	-
Total Bonded Indebtedness	\$	-

Report of Joint Public Agency & Interlocal Agreements

Was this Subdivision involved in any Interlocal Agreements or Joint Public Agencies for the reporting period of July 1, 2020 through June 30, 2021?

YES  NO

If YES, Please submit Interlocal Agreement Report by September 20th.

Report of Trade Names, Corporate Names & Business Names

Did the Subdivision operate under a separate Trade Name, Corporate Name, or Business Name during the period of July 1, 2020 through June 30, 2021?

YES  NO

If YES, Please submit Trade Name Report by September 20th

APA Contact Information

Auditor of Public Accounts  
State Capitol, Suite 2303  
Lincoln, NE 68509

Telephone: (402) 471-2111 FAX: (402) 471-3301

Website: [www.auditors.nebraska.gov](http://www.auditors.nebraska.gov)

Questions - E-Mail: [Jeff.Schreier@nebraska.gov](mailto:Jeff.Schreier@nebraska.gov)

Submission Information

**Budget Due by 9-20-2021**

Submit budget to:

1. Auditor of Public Accounts -Electronically on Website or Mail
2. County Board (SEC. 13-508), C/O County Clerk

Upper Big Blue NRD

Line No.	TOTAL ALL FUNDS	Actual 2019 - 2020 (Column 1)	Actual/Estimated 2020 - 2021 (Column 2)	Adopted Budget 2021 - 2022 (Column 3)
1	<b>Beginning Balances, Receipts, &amp; Transfers:</b>			
2	Net Cash Balance	\$ 593,302.67	\$ 1,118,932.45	\$ 4,063,147.94
3	Investments	\$ 3,606,375.20	\$ 3,063,937.36	\$ 681,956.55
4	County Treasurer's Balance	\$ 30,581.25	\$ 33,944.42	\$ 44,147.74
5	<b>Subtotal of Beginning Balances (Lines 2 thru 4)</b>	<b>\$ 4,230,259.12</b>	<b>\$ 4,216,814.23</b>	<b>\$ 4,789,252.23</b>
6	Personal and Real Property Taxes (Columns 1 and 2 - See Preparation Guidelines)	\$ 3,711,603.12	\$ 3,516,076.96	\$ 3,435,545.16
7	Federal Receipts	\$ 14,090.79	\$ 26,826.91	\$ -
8	State Receipts: Motor Vehicle Pro-Rate	\$ 9,755.19	\$ 10,512.56	\$ 7,800.00
9	State Receipts: State Aid (State Statute Section 77-27,136)	\$ -	\$ -	\$ -
10	State Receipts: Other	\$ 234,765.63	\$ 393,496.02	\$ 223,983.00
11	State Receipts: Property Tax Credit	\$ -	\$ -	\$ -
12	Local Receipts: Nameplate Capacity Tax	\$ 189.52	\$ 1,426.80	\$ -
13	Local Receipts: In Lieu of Tax	\$ -	\$ -	\$ -
14	Local Receipts: Other	\$ 410,347.23	\$ 309,041.98	\$ 377,036.42
15	Transfers In Of Surplus Fees	\$ -	\$ -	\$ -
16	Transfer In Other Than Surplus Fees (Should agree to Transfers Out on Line 28)	\$ -	\$ 250,000.00	\$ 300,000.00
17	<b>Total Resources Available (Lines 5 thru 16)</b>	<b>\$ 8,611,010.60</b>	<b>\$ 8,724,195.46</b>	<b>\$ 9,133,616.81</b>
18	<b>Disbursements &amp; Transfers:</b>			
19	Operating Expenses	\$ 2,922,494.60	\$ 3,118,089.89	\$ 6,735,733.81
20	Capital Improvements (Real Property/Improvements)	\$ 239,701.53	\$ 527,355.39	\$ 1,881,183.00
21	Other Capital Outlay (Equipment, Vehicles, Etc.)	\$ 73,625.04	\$ 39,497.95	\$ 166,700.00
22	Debt Service: Bond Principal & Interest Payments	\$ -	\$ -	\$ -
23	Debt Service: Payments to Retire Interest-Free Loans (Public Airports)	\$ -	\$ -	\$ -
24	Debt Service: Payments to Bank Loans & Other Instruments (Fire Districts)	\$ -	\$ -	\$ -
25	Debt Service: Other	\$ 1,158,375.20	\$ -	\$ -
26	Judgments	\$ -	\$ -	\$ -
27	Transfers Out of Surplus Fees	\$ -	\$ -	\$ -
28	Transfers Out Other Than Surplus Fees (Should agree to Transfers In on Line 16)	\$ -	\$ 250,000.00	\$ -
29	<b>Total Disbursements &amp; Transfers (Lines 19 thru 28)</b>	<b>\$ 4,394,196.37</b>	<b>\$ 3,934,943.23</b>	<b>\$ 8,783,616.81</b>
30	<b>Balance Forward/Cash Reserve (Line 17 - Line 29)</b>	<b>\$ 4,216,814.23</b>	<b>\$ 4,789,252.23</b>	<b>\$ 350,000.00</b>
31	Cash Reserve Percentage			5%
<b>PROPERTY TAX RECAP</b>				
Tax from Line 6		\$	\$	\$ 3,435,545.16
County Treasurer's Commission at 1% of Line 6		\$	\$	\$ 34,355.45
<b>Total Property Tax Requirement</b>		\$	\$	\$ 3,469,900.61

# Upper Big Blue NRD

## To Assist the County For Levy Setting Purposes

## Cash Reserve Funds

The Cover Page identifies the Property Tax Request between Principal & Interest on Bonds and All Other Purposes. If your NRD needs more of a breakdown for levy setting purposes, complete the section below.

Statute 13-503 says cash reserve means funds required for the period before revenue would become available for expenditure but shall not include funds held in any special reserve fund. If the cash reserve on Page 2 exceeds 50%, you can list below funds being held in a special reserve fund.

Property Tax Request by Fund:

	Property Tax Request
General Fund	\$ 3,469,900.61
Bond Fund	\$ -
_____ Fund	_____
_____ Fund	_____
_____ Fund	_____
_____ Fund	_____
<b>Total Tax Request</b>	<b>** \$ 3,469,900.61</b>

Special Reserve Fund Name	Amount
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
<b>Total Special Reserve Funds</b>	<b>\$ -</b>

DRAFT

Total Cash Reserve	\$ 350,000.00
Remaining Cash Reserve	\$ 350,000.00
Remaining Cash Reserve %	5%

\*\* This Amount should agree to the Total Personal and Real Property Tax Required on the Cover Page (Page 1).



# CORRESPONDENCE INFORMATION

## ENTITY OFFICIAL ADDRESS

*If no official address, please provide address where correspondence should be sent*

**NAME** Upper Big Blue NRD  
**ADDRESS** 319 East 25th Street  
**CITY & ZIP CODE** York, NE 68467  
**TELEPHONE** 402-362-6601  
**WEBSITE** www.upperbigblue.org

<b>BOARD CHAIRPERSON</b>	<b>CLERK/TREASURER/SUPERINTENDENT/OTHER</b>	<b>PREPARER</b>
<u>Lynn W Yates</u>	<u>Douglas L. Dickinson</u>	<u>David A. Eigenberg</u>
<b>TITLE /FIRM NAME</b> <u>Chairperson</u>	<b>Treasurer</b>	<b>General Manager</b>
<b>TELEPHONE</b> <u>402-759-4732</u>	<u>402-643-5456</u>	<u>402-362-6601</u>
<b>EMAIL ADDRESS</b> <u>lyates@upperbigblue.org</u>	<u>ddickinson@upperbigblue.org</u>	<u>deigenberg@upperbigblue.org</u>

For Questions on this form, who should we contact (please  one): Contact will be via email if supplied.

Board Chairperson

Clerk / Treasurer / Superintendent / Other

Preparer

Upper Big Blue NRD  
**2021-2022 LID SUPPORTING SCHEDULE**

**Calculation of Restricted Funds**

Total Personal and Real Property Tax Requirements	(1)	\$ 3,469,900.61
Motor Vehicle Pro-Rate	(2)	\$ 7,800.00
In-Lieu of Tax Payments	(3)	\$ -
Transfers of Surplus Fees	(4)	\$ -
Prior Year Budgeted Capital Improvements that were excluded from Restricted Funds.		
Prior Year Capital Improvements Excluded from Restricted Funds (From Prior Year Lid Exceptions, Line (10))	(5)	\$ 1,218,500.00
LESS: Amount Spent During 2020-2021	(6)	\$ 527,355.39
LESS: Amount Expected to be Spent in Future Budget Years	(7)	\$ 691,144.61
Amount to be included as Restricted Funds ( <u>Cannot</u> be a Negative Number)	(8)	\$ -
Nameplate Capacity Tax	(8a)	\$ -
<b>TOTAL RESTRICTED FUNDS (A)</b>	<b>(9)</b>	<b>\$ 3,477,700.61</b>

**Lid Exceptions**

Capital Improvements (Real Property and Improvements on Real Property)	(10)	\$ 1,180,200.00
LESS: Amount of prior year capital improvements that were excluded from previous lid calculations but were not spent and now budgeted this fiscal year ( <i>cannot exclude same capital improvements from more than one lid calculation.</i> ) Agrees to Line (7) above.	(11)	\$ 691,144.61
Allowable Capital Improvements	(12)	\$ 489,055.39
Bonded Indebtedness	(13)	\$ -
Interlocal Agreements/Joint Public Agency Agreements	(14)	\$ 632,975.85
Judgments	(15)	\$ -
Refund of Property Taxes to Taxpayers	(16)	\$ -
Repairs to Infrastructure Damaged by a Natural Disaster	(17)	\$ -
Ground Water Management Activities ( <i>Amount exceeding FY 2003-04</i> )	(18)	\$ 950,720.30
<b>TOTAL LID EXCEPTIONS (B)</b>	<b>(19)</b>	<b>\$ 2,072,751.54</b>

<b>TOTAL RESTRICTED FUNDS</b> <b>For Lid Computation (To Line 9 of the Lid Computation Form)</b> <i>To Calculate: Total Restricted Funds (A)-Line 9 MINUS Total Lid Exceptions (B)-Line 19</i>	<b>\$ 1,404,949.07</b>
--	------------------------

*Total Restricted Funds for Lid Computation **cannot** be less than zero. See Instruction Manual on completing the Lid Supporting Schedule.*

**LID COMPUTATION FORM FOR FISCAL YEAR 2021-2022**

2020-2021 Restricted Funds Authority = Line (8) of last year's Lid Computation Form 2,246,718.69  
(1)

**CURRENT YEAR ALLOWABLE INCREASES**

**1** BASE LIMITATION PERCENT INCREASE (2.5%) 2.50 %  
(2)

**2** ALLOWABLE GROWTH PER THE ASSESSOR MINUS 2.5% - %  
(3)

$$\frac{\text{2021 Growth per Assessor}}{14,951,779,871.00} = \frac{-}{100} \%$$
 Multiply times 100 To get %

**3** ADDITIONAL ONE PERCENT BOARD APPROVED INCREASE - %  
(4)

$$\frac{11}{17} = \frac{64.71}{100} \%$$
 # of Board Members voting "Yes" for Increase / Total # of Members in Governing Body at Meeting = Must be at least .75 (75%) of the Governing Body

**ATTACH A COPY OF THE BOARD MINUTES APPROVING THE INCREASE.**

**4** SPECIAL ELECTION - VOTER APPROVED % INCREASE %  
(5)

**Please Attach Ballot Sample and Election Results OR Record of Action From Townhall Meeting**

TOTAL ALLOWABLE PERCENT INCREASE = Line (2) + Line (3) + Line (4) + Line (5) 2.50 %  
(6)

Allowable Dollar Amount of Increase to Restricted Funds = Line (1) x Line (6) 56,167.97  
(7)

Total Restricted Funds Authority = Line (1) + Line (7) 2,302,886.66  
(8)

**Less:** Restricted Funds from Lid Supporting Schedule 1,404,949.07  
(9)

Total Unused Restricted Funds Authority = Line (8) - Line (9) 897,937.59  
(10)

**LINE (10) MUST BE GREATER THAN OR EQUAL TO ZERO OR YOU ARE IN VIOLATION OF THE LID LAW.**

The amount of Unused Restricted Funds Authority on Line (10) must be published in the Notice of Budget Hearing.

2021-2022 Levy Limit Form  
Natural Resources Districts

Upper Big Blue NRD

Total Personal and Real Property Tax Request		\$ 3,469,900.61 <u>(1)</u>
Less Personal and Real Property Tax Request for:		
Judgments (not paid by liability insurance coverage)	( \$ _____ ) (A)	
Preexisting lease-purchase contracts approved prior to <u>July 1, 1998</u>	( \$ _____ ) (B)	
Bonded Indebtedness	( \$ _____ ) (C)	
Ground Water Management Activities (Exceeding FY 2003-2004)	( \$ 950,720.30 ) (D)	
Interstate Compact (LB 701)	( \$ _____ ) (E)	
Total Exclusions	( \$ 950,720.30 ) (2)	
Personal and Real Property Tax Request subject to Levy Limit		\$ 2,519,180.31 <u>(3)</u>
2021 Valuation (Per the County Assessor)		\$ 14,951,779,871.00 <u>(4)</u>
Calculated Levy for Levy Limit Compliance [Line (3) Divided By Line (4) Times 100]		<u>0.016849</u> (5)
Calculated Ground Water Management Activities Levy (Shall Not Exceed 1 Cent) [Line (D) Divided By Line (4) Times 100]		<u>0.006359</u> (6)
		<u>0.000000</u> (7)
Calculated LB 701 Interstate Compact Levy (Shall Not Exceed 10 Cents) [Line (F) Divided By Line (4) Times 100]		<u>0.000000</u> (8)
Total Calculated Levy for Limit Compliance [Line (5) Plus Line (6) Plus Line (7) Plus Line (8)]		<u>0.023208</u> (9)

DRAFT

**Note :** Levy Limit established by State Statute Section 77-3442:  
 Natural Resources District (NRD) - 4.5 Cents  
**PLUS** Ground Water Management Activities as allowed by State Statute Section 2-3225. Ground Water Management Activities shall not exceed 1 Cent.  
**PLUS** Interstate Compact as allowed by LB 701, shall not exceed 10 Cents.

Attach supporting documentation if a vote was held to exceed the levy limit.