

UPPER BIG BLUE NATURAL RESOURCES DISTRICT

Terry Julesgard, Water Department Manager

NATURAL RESOURCES DISTRICT HISTORY

- Established in 1972, Nebraska's Natural Resources Districts are local government units involved in a variety of projects and programs to conserve and protect the state's natural resources. Today, Nebraska's unique system of locally-controlled, tax-funded, watershed-based conservation is widely admired throughout the nation.

In 1969, Sen. Maurice Kremer introduced and the Nebraska Legislature enacted Legislative Bill 1357 to combine Nebraska's 154 special-purpose entities into 24 Natural Resources Districts by July 1972. In 1989, the Middle Missouri NRD and the Papio NRD were merged to become the Papio-Missouri River NRD resulting in today's 23 Natural Resources Districts.

- NRD boundaries are organized based on Nebraska's major river basins, which allows for better management practices to be applied to similar topography.
- Natural Resources Districts were created to solve flood control, soil erosion, irrigation run-off, and groundwater quantity and quality issues. Nebraska's NRDs are involved in a wide variety of projects and programs to conserve and protect the state's natural resources. NRDs are charged under state law with 12 areas of responsibility including flood control, soil erosion, groundwater management and many others.

NATURAL RESOURCES MANAGEMENT

- Water
- Soil
- Urban Conservation
- Flood Control
- Trees & Wildlife Habitat
- Recreation
- Grazing Lands
- Education

NATURAL RESOURCES DISTRICT RESPONSIBILITIES

- Development, management, use, and conservation of groundwater and surface water
- Soil conservation
- Erosion prevention and control
- Flood prevention and control
- Pollution control
- Water supply for any beneficial uses
- Prevention of damages from flood water and sediment
- Development and management of recreational and park facilities
- Forestry and range management
- Development and management of fish and wildlife habitat
- Drainage improvement
- Solid waste disposal

Upper Big Blue NRD 2022 Irrigation Withdrawal

Legend

Outside of GWMA

Town

Inches Per Acre

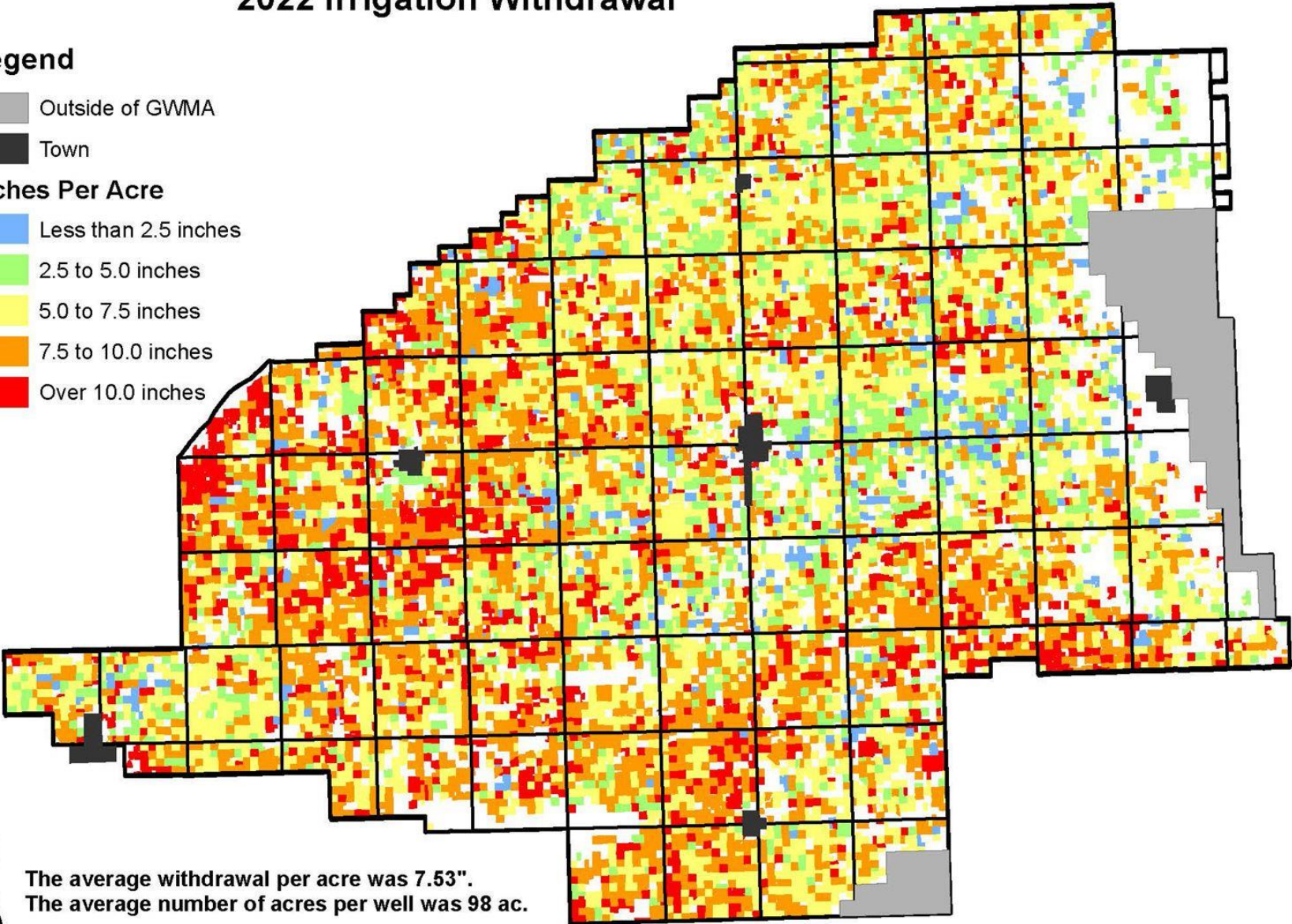
Less than 2.5 inches

2.5 to 5.0 inches

5.0 to 7.5 inches

7.5 to 10.0 inches

Over 10.0 inches

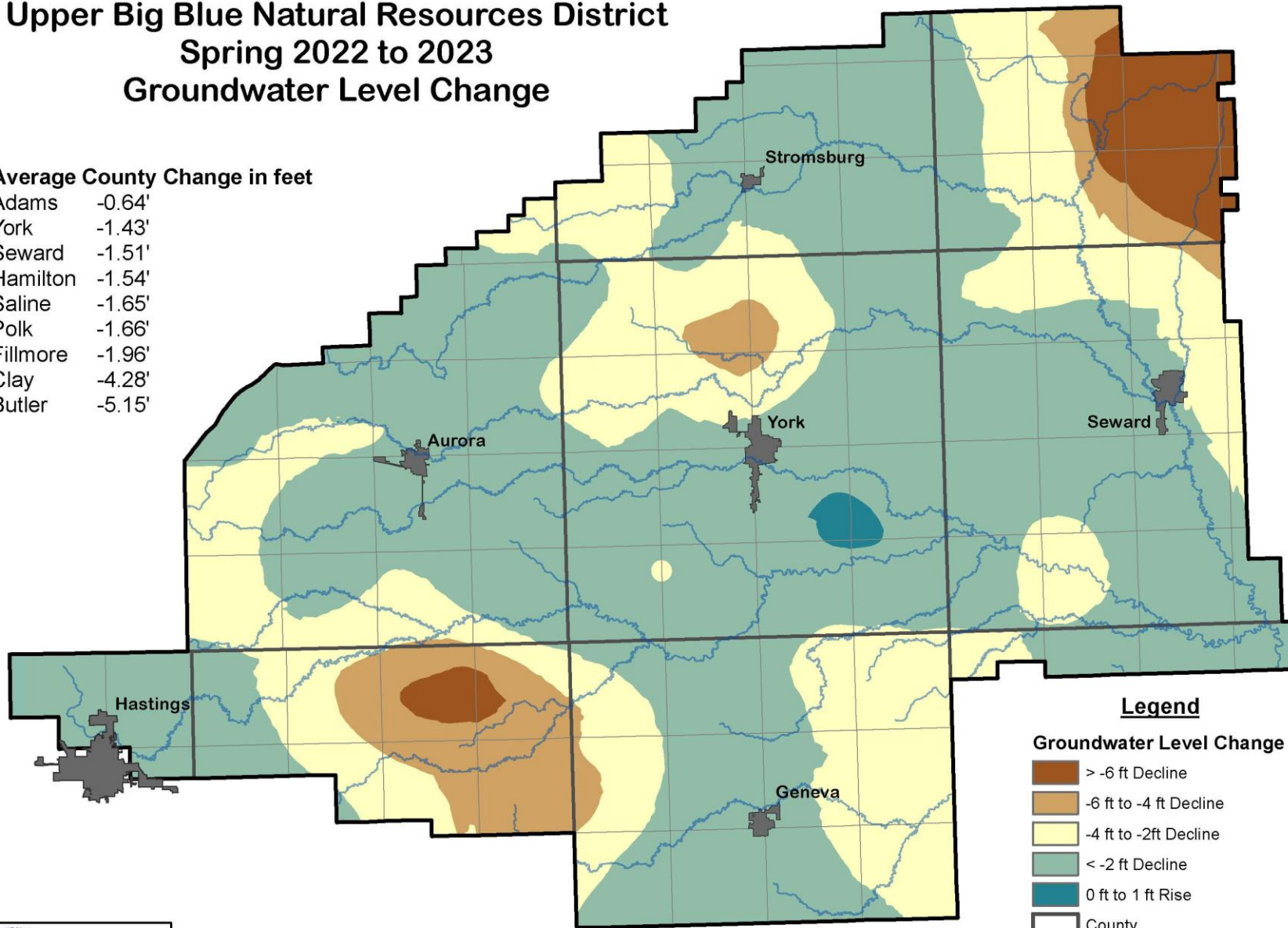


Pitch Deck

Upper Big Blue Natural Resources District Spring 2022 to 2023 Groundwater Level Change

Average County Change in feet

Adams	-0.64'
York	-1.43'
Seward	-1.51'
Hamilton	-1.54'
Saline	-1.65'
Polk	-1.66'
Fillmore	-1.96'
Clay	-4.28'
Butler	-5.15'



Legend

Groundwater Level Change

- > -6 ft Decline
- 6 ft to -4 ft Decline
- 4 ft to -2ft Decline
- < -2 ft Decline
- 0 ft to 1 ft Rise
- County
- River



Upper Big Blue NRD
319 E. 25th Street
York, NE 68467
(402) 362-6601
www.upperbigblue.org

The average groundwater level change was -2.21 feet (decline)

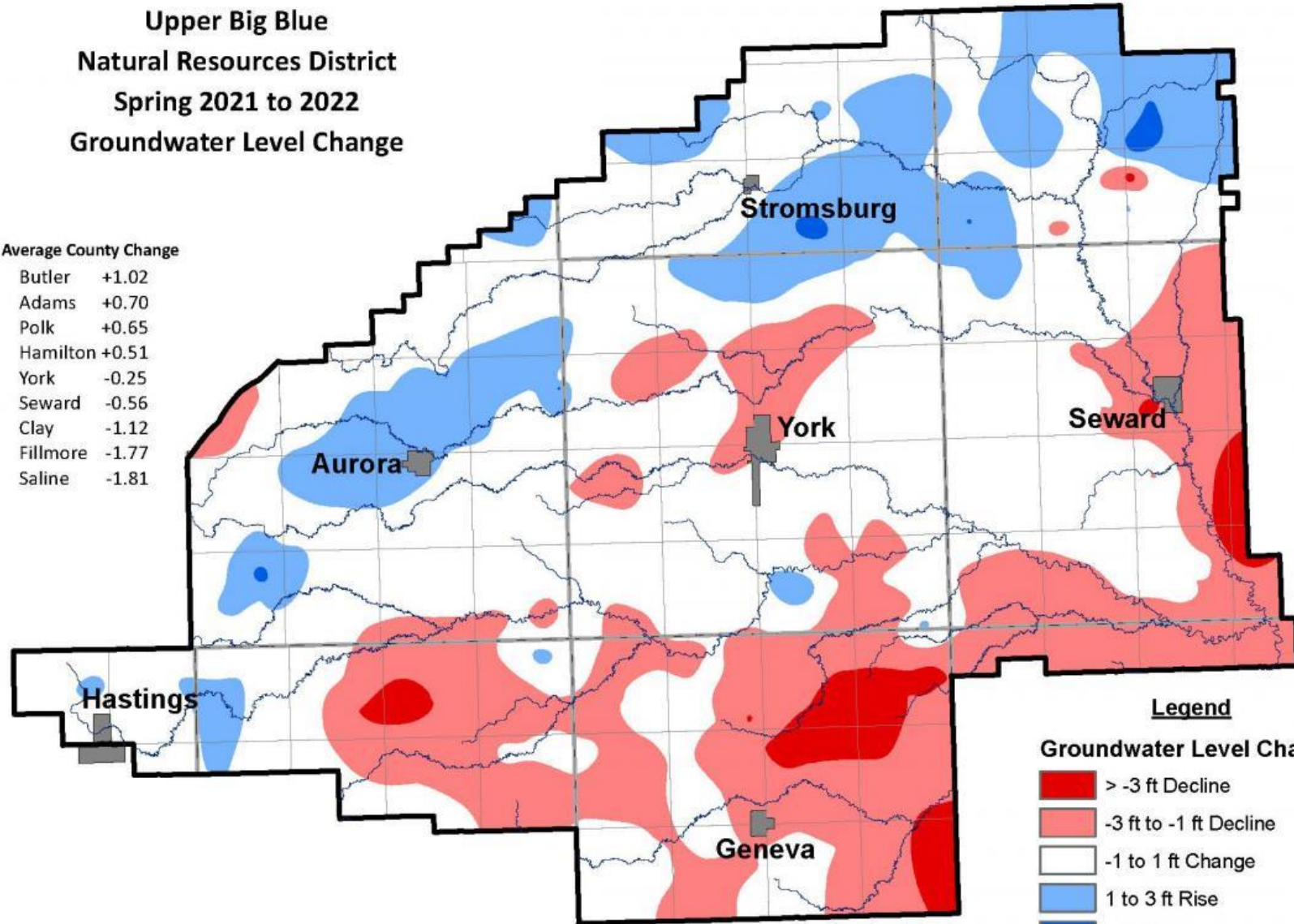
Pitch Deck



Upper Big Blue
Natural Resources District
Spring 2021 to 2022
Groundwater Level Change

Average County Change

Butler	+1.02
Adams	+0.70
Polk	+0.65
Hamilton	+0.51
York	-0.25
Seward	-0.56
Clay	-1.12
Fillmore	-1.77
Saline	-1.81



Legend

Groundwater Level Change

- > -3 ft Decline
- 3 ft to -1 ft Decline
- 1 to 1 ft Change
- 1 to 3 ft Rise
- > 3 ft Rise
- Rivers
- Counties

The average groundwater level change was - 0.24 Feet (decline)



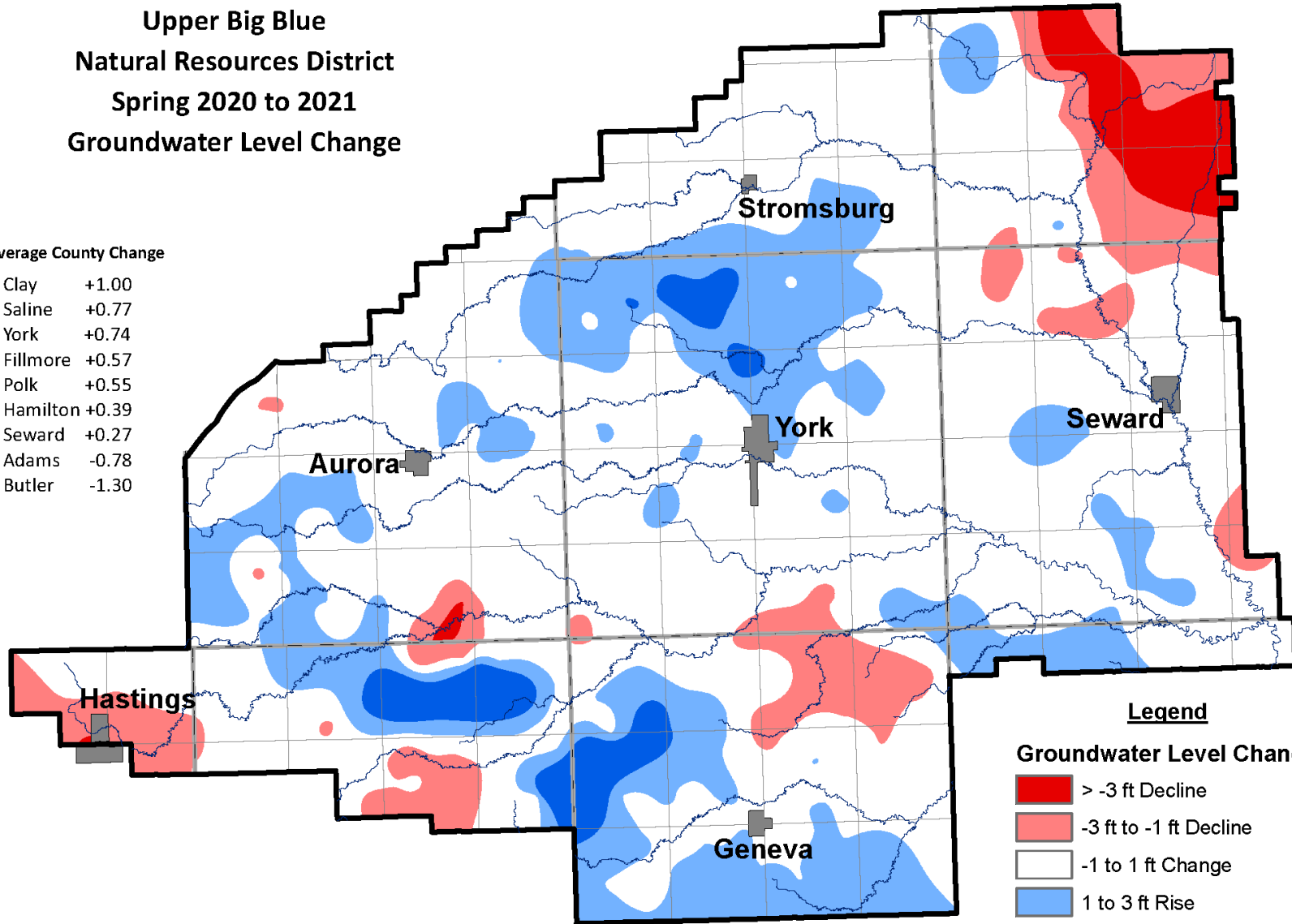
Upper Big Blue NRD
319 E. 23rd Street
York, NE 68467
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Upper Big Blue
Natural Resources District
Spring 2020 to 2021
Groundwater Level Change

Average County Change

Clay	+1.00
Saline	+0.77
York	+0.74
Fillmore	+0.57
Polk	+0.55
Hamilton	+0.39
Seward	+0.27
Adams	-0.78
Butler	-1.30



Legend

Groundwater Level Change

- > -3 ft Decline
- 3 ft to -1 ft Decline
- 1 to 1 ft Change
- 1 to 3 ft Rise
- > 3 ft Rise
- Rivers
- County Lines

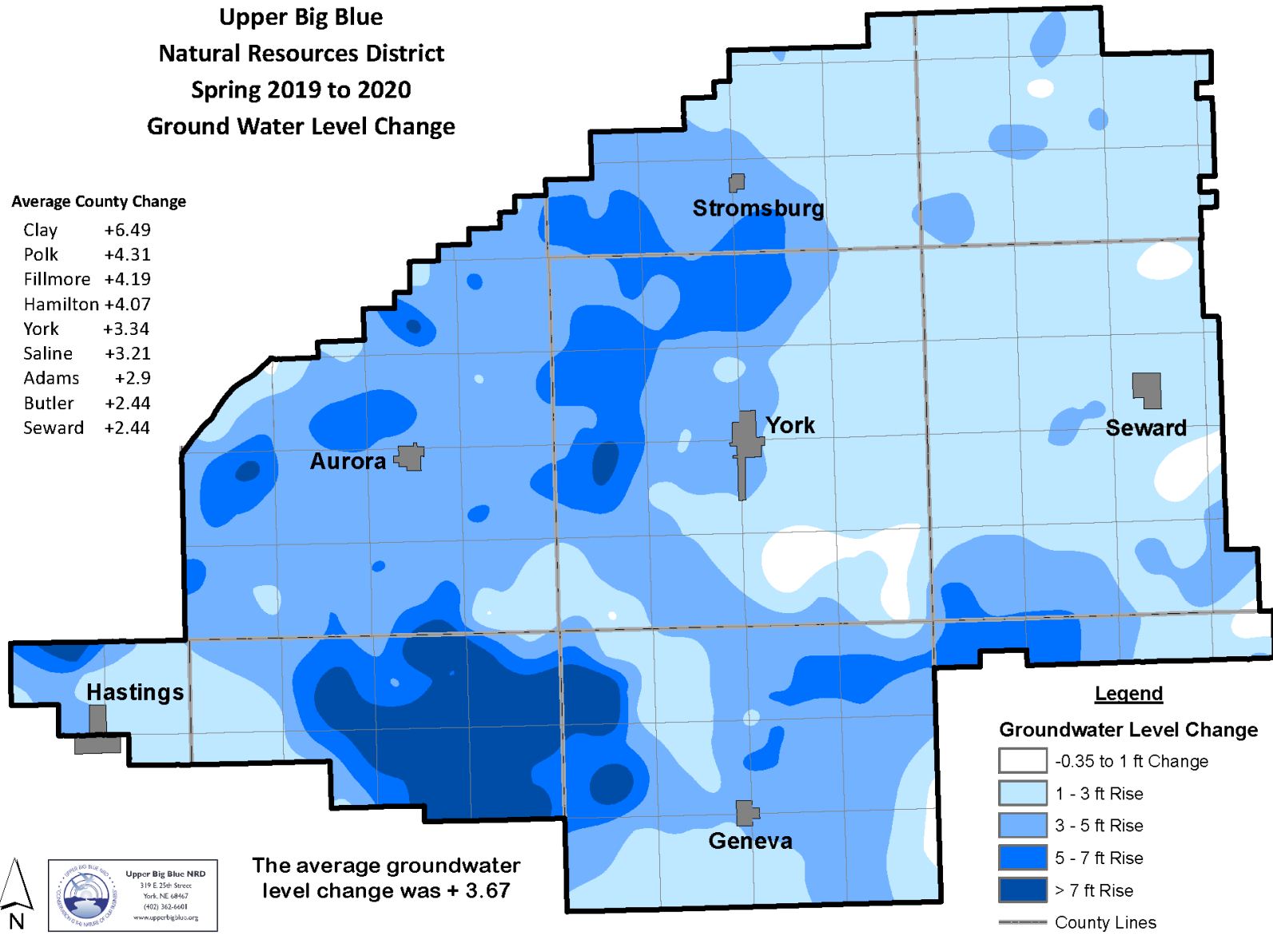
The average groundwater level change was + 0.35 Feet



**Upper Big Blue
Natural Resources District
Spring 2019 to 2020
Ground Water Level Change**

Average County Change

Clay	+6.49
Polk	+4.31
Fillmore	+4.19
Hamilton	+4.07
York	+3.34
Saline	+3.21
Adams	+2.9
Butler	+2.44
Seward	+2.44



The average groundwater level change was + 3.67



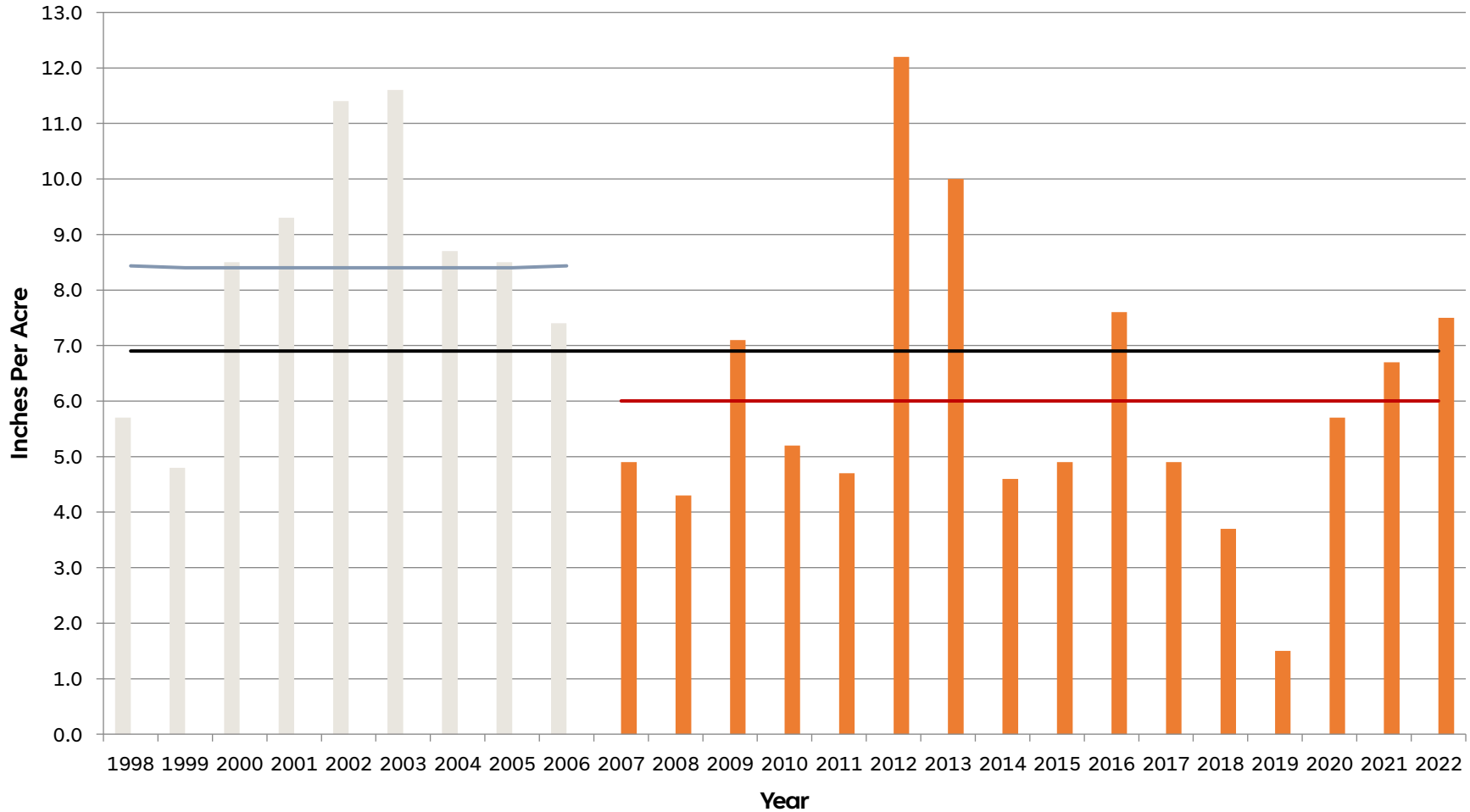
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Groundwater Level Change

- 0.35 to 1 ft Change
- 1 - 3 ft Rise
- 3 - 5 ft Rise
- 5 - 7 ft Rise
- > 7 ft Rise
- County Lines

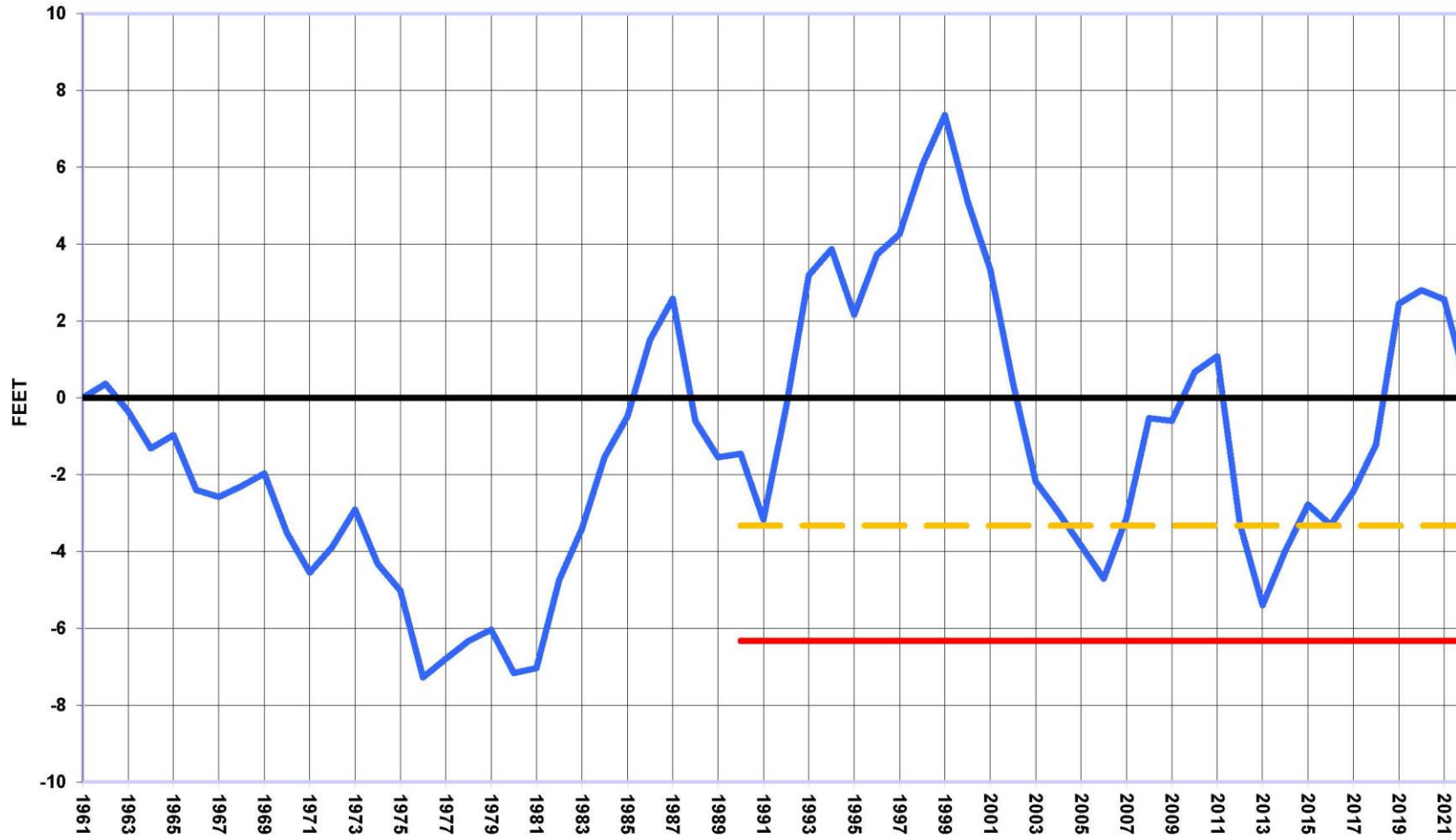
Upper Big Blue NRD

Historic Groundwater Withdrawal for Irrigation



- Cost-share Reports
- Annual Water Use Reports
- Long Term Water Use Avg.
- Cost-share Avg.
- Annual Water Use Report Avg.

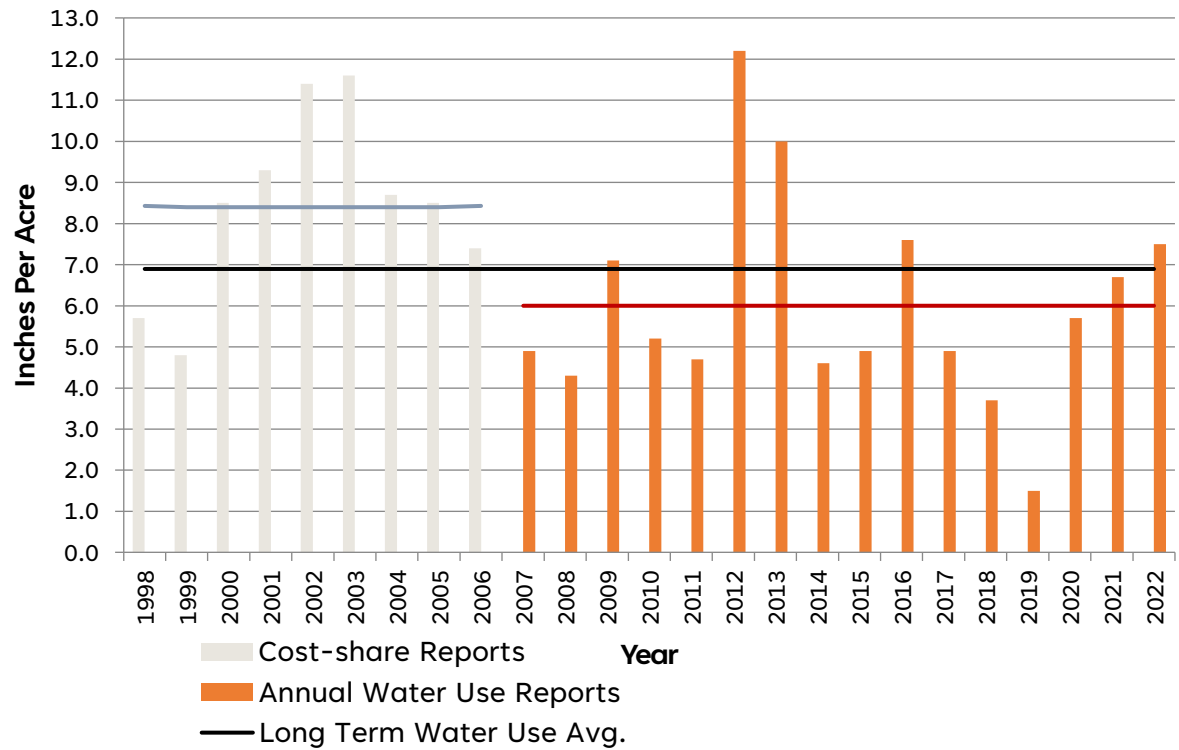
**UPPER BIG BLUE NRD - AVERAGE GROUNDWATER LEVELS
TRIGGERS COMPARED TO HISTORIC LEVELS
SPRING 2023**



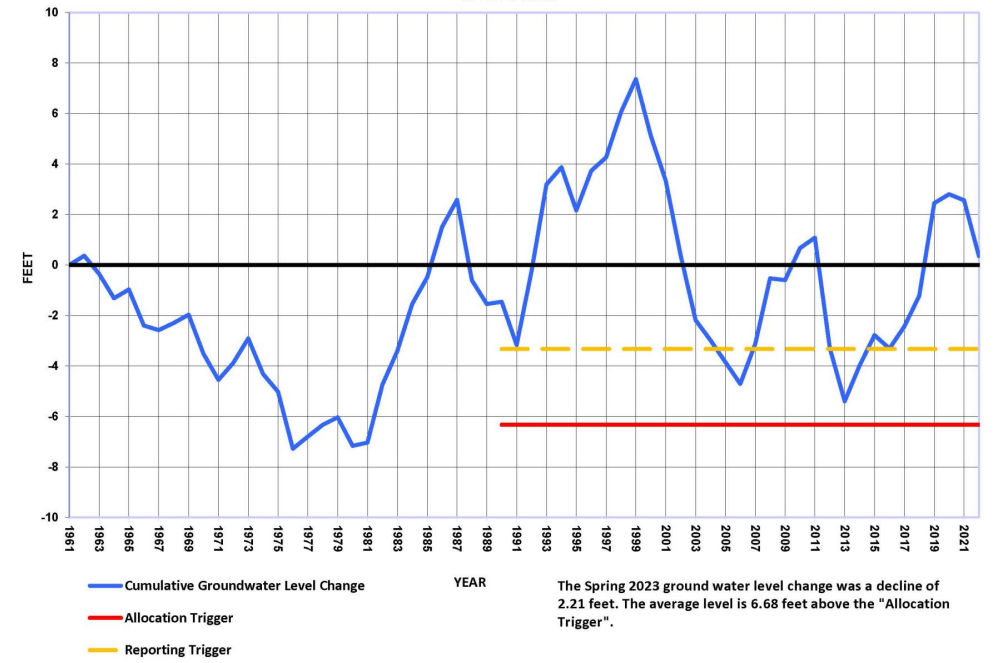
- Cumulative Groundwater Level Change
- Allocation Trigger
- - - Reporting Trigger

The Spring 2023 ground water level change was a decline of 2.21 feet. The average level is 6.68 feet above the "Allocation Trigger".

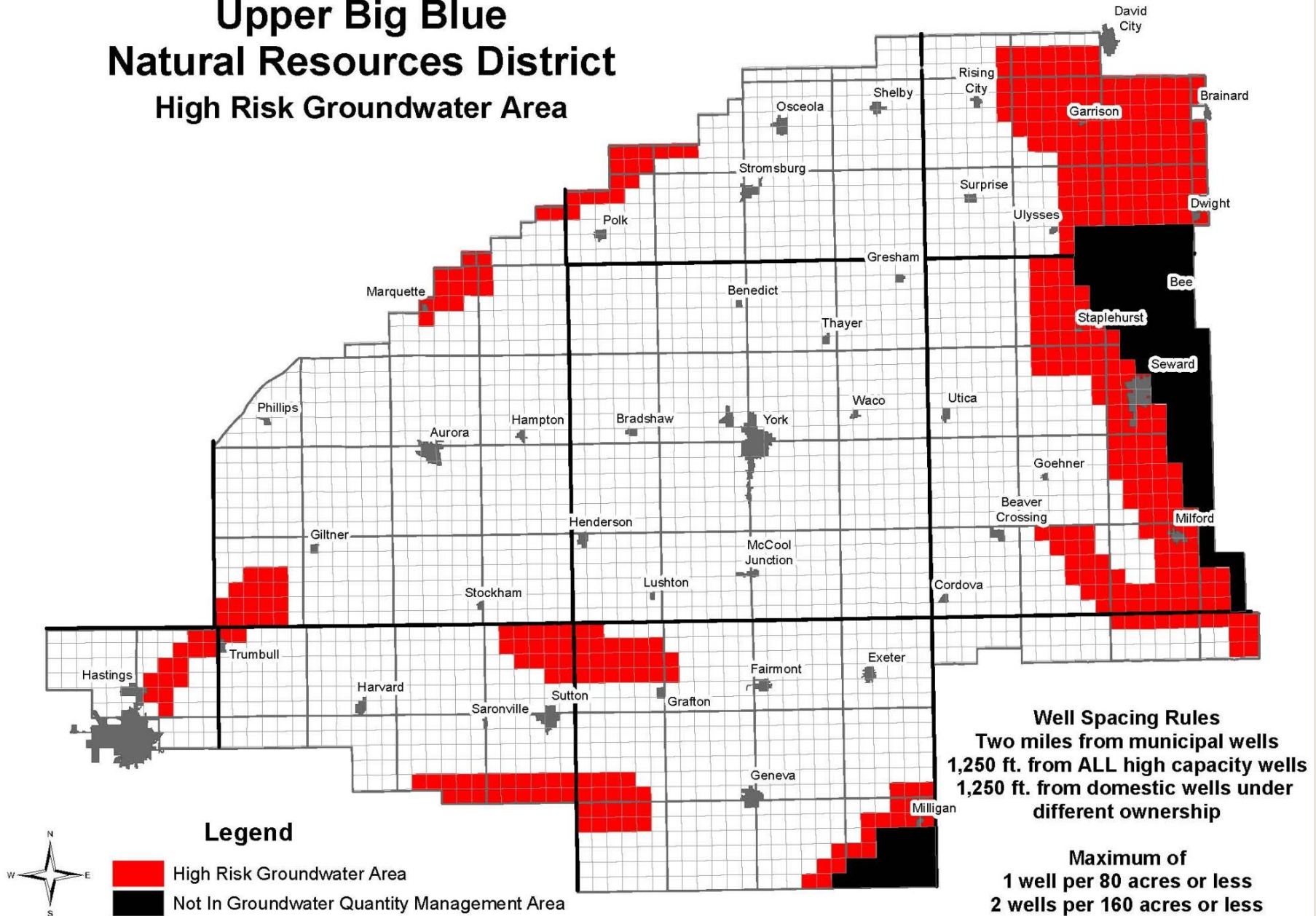
Upper Big Blue NRD Historic Groundwater Withdrawal for Irrigation



UPPER BIG BLUE NRD - AVERAGE GROUNDWATER LEVELS
TRIGGERS COMPARED TO HISTORIC LEVELS
SPRING 2023



Upper Big Blue Natural Resources District High Risk Groundwater Area



Well Spacing Rules
 Two miles from municipal wells
 1,250 ft. from ALL high capacity wells
 1,250 ft. from domestic wells under different ownership

Maximum of
 1 well per 80 acres or less
 2 wells per 160 acres or less

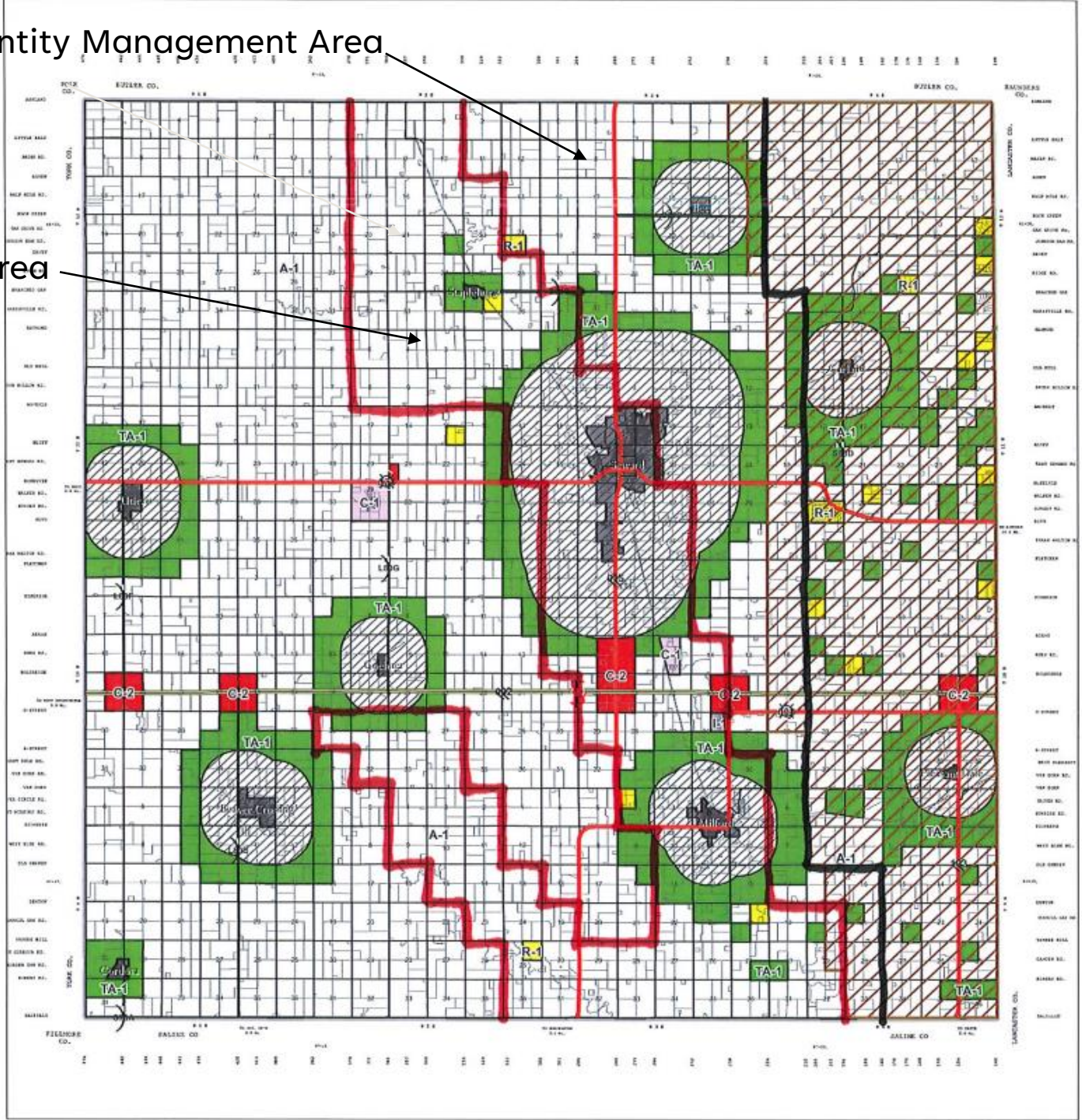


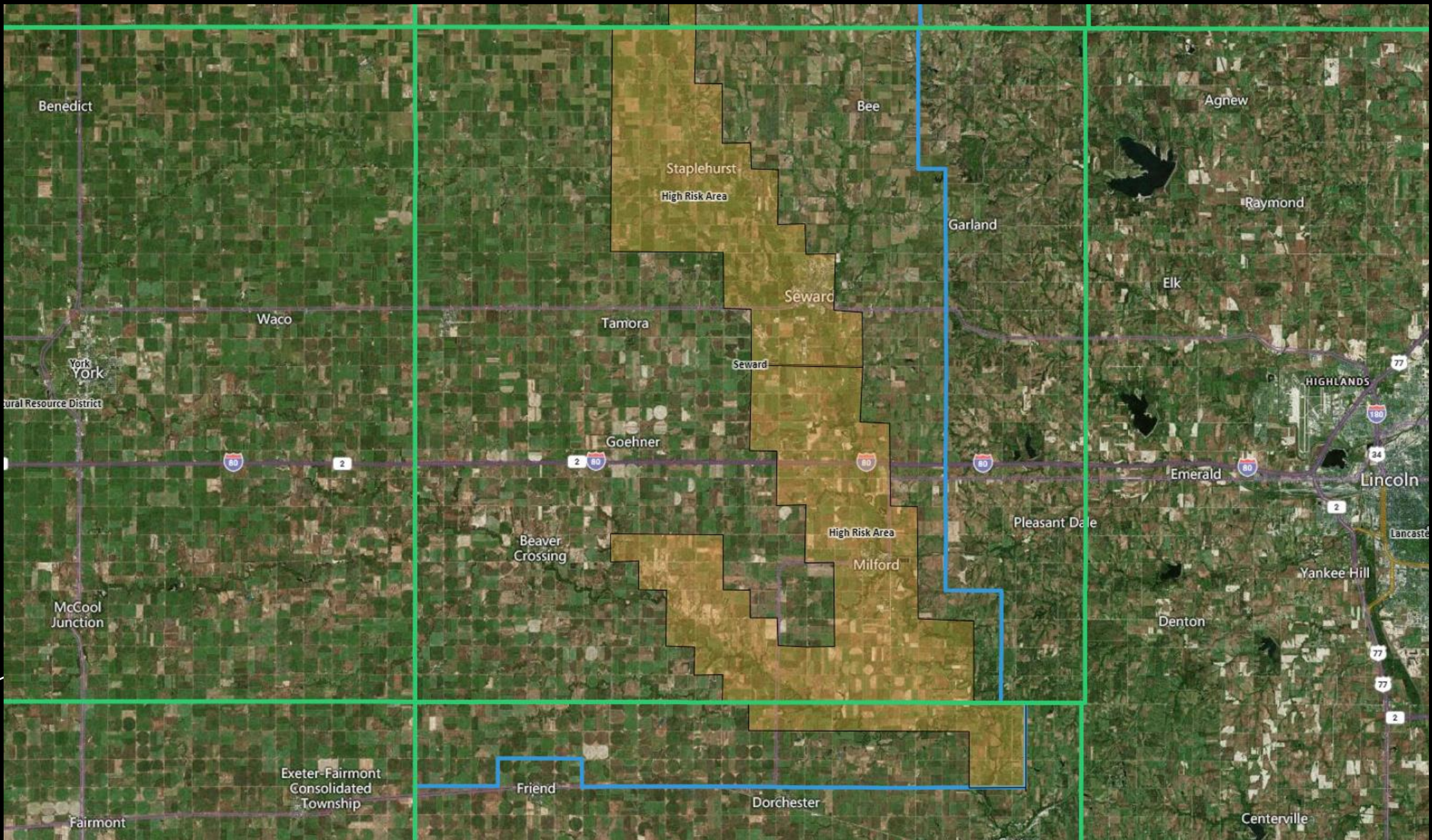
Legend

- High Risk Groundwater Area
- Not In Groundwater Quantity Management Area

Not in Groundwater Quantity Management Area

High Risk Groundwater Area





12. ESTIMATED PUMPING CAPACITY: _____ gallons per minute.

12a. Will the proposed well(s) withdraw 250 acre feet or more annually? **Yes** **No**

If YES, please include questions 12B-12E on Addendum B – Large Water User Determination with application

13. REPLACEMENT WELL INFORMATION:

13a. Will this well(s) replace a well(s) that is or will be permanently abandoned? **Yes** **No**

13b. State Registration No. _____

13c. The proposed well will be _____ feet from the original well.

13d. Will the proposed well(s) have the original meter installed? **Yes** **No**

14. GROUND WATER TRANSFER:

Is the proposed well to be used to transfer water outside of the section listed above? **Yes** **No**

If YES, include a Groundwater Transfer Authorization application.)(Approval of this permit DOES NOT constitute approval of the groundwater transfer authorization

LANDOWNER CERTIFICATION:

I, hereby, certify that I am the landowner, his or her power of attorney or other (see #3 below) and that I am familiar with the information contained in this application and, that to the best of my knowledge and belief, the information is complete and accurate. I also acknowledge that I understand and will comply with the District’s Ground Water Management Area Rules and Regulations (District Rule 5). I further authorize representatives of the District to enter onto this above described property for the purpose of determining compliance with District’s Ground Water Management Area Rules and Regulations (District Rule 5).

Please read application instructions and permit restrictions listed below before you sign.

Date _____ Authorized Signature _____

(See Application Instructions - item # 3)

Application Instructions

Application Fee: This application must be completed in full and be accompanied by the appropriate non-refundable filing fee:

- The fee is dependent on the nature of the request. The fees are as follows:
 \$50 Construction of a new or replacement well(s), or modification of a well(s) from 50 gpm or less to more than 50 gpm.
 \$100 The combination of construction of a well and a groundwater transfer authorization (combination of 1 and 2).
 \$250 Late permit for a well constructed without a permit prior to construction.
- An incomplete application will be returned for correction. A returned application must be resubmitted within 30 days or the filing fee is forfeited.
- The application must be signed by the landowner, his/her power of attorney or be accompanied by a notarized statement, signed by the landowner, authorizing the other person’s signature.
- State law requires that a “United States Citizenship Attestation Form” must be completed and submitted with the well permit application.
- If the answer to item 12A was “YES”, a hydrologic evaluation, as described in District Rule 5, may be required. The applicant should contact the District prior to submission of this application.

Permit Restrictions and Important Information

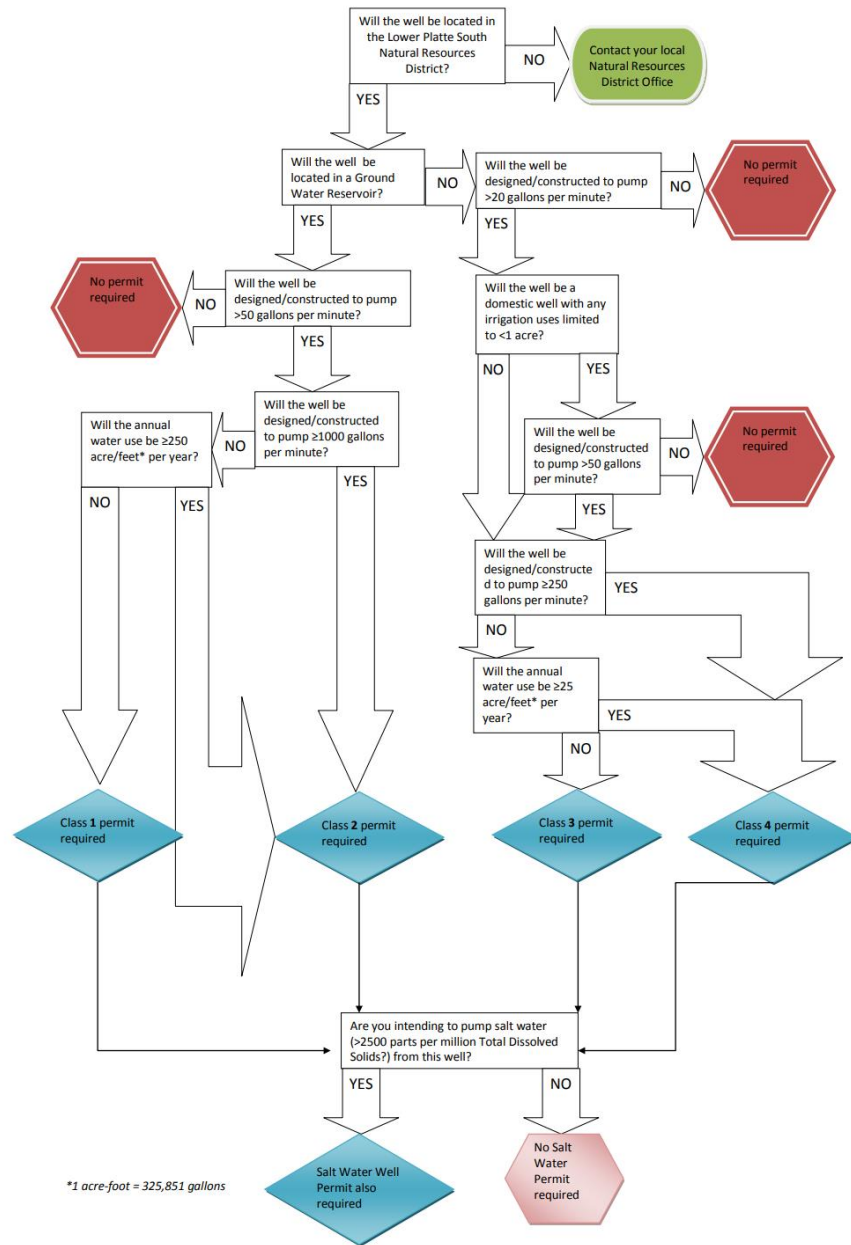
- This permit shall remain in force for one (1) year from the date approved.
- The construction and operation of the wells authorized by a water well permit must comply with the provisions of the District’s Ground Water Management Area Rules and Regulations (District Rule 5). Failure to comply with District Rule 5 is subject to Issuance of a Cease and Desist Order and a civil penalty of not less than one thousand dollars, and not more than five thousand dollars for each day an intentional violation occurs. Prior to construction or operation, the permittee should contact the NRD office if he or she has any questions about the rules and regulations. A copy of District Rule 5 can be obtained by contacting the Upper Big Blue NRD office or online at http://www.upperbigblue.org/sites/default/files/files/1/rule_5_-_as_adopted_8-21-2014_0.pdf
- All wells permitted after March 1, 2004, must be equipped with a NRD approved flow meter prior to groundwater withdrawal.
- New irrigated acres, changes in farm operator, or changes to other information described in District Rule 5, must be reported to the NRD within 60 days of the change. New irrigated acres must also be reported to the County Assessor prior to being certified by the NRD.
- When a replacement well is constructed, the original water well must be decommissioned either before or within one hundred eighty days (180) after such construction.
- Issuance of this permit **DOES NOT** imply that the proposed well complies with Federal, State, or Local requirements. It is the responsibility of the applicant to determine compliance with all requirements related to the construction and operation of the proposed well.

NRD USE ONLY

COMMENTS:

Date Approved _____ NRD Representative _____

Flowchart for determining which Lower Platte South NRD well permit is required, if any.



*1 acre-foot = 325,851 gallons



THANK YOU

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