



# Little Blue Natural Resources District

*"Serving The Public Since 1972"*

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## 2023 Spring Static Levels

Spring water levels were completed the month of April. Geologic Area 1 was down -1.43 feet, Geologic Area 2 was down -0.58 feet. The first attachment is the weighted average graphs of each area and show the last two years of declines leave 2.01 (8.00 – 5.99) feet to a stay in Area 1 and 1.82 (7.02 – 5.20) feet to a stay east of Fairbury in Area 2. The dash line is the Base Line, and the dash dot line is the Trigger Level.

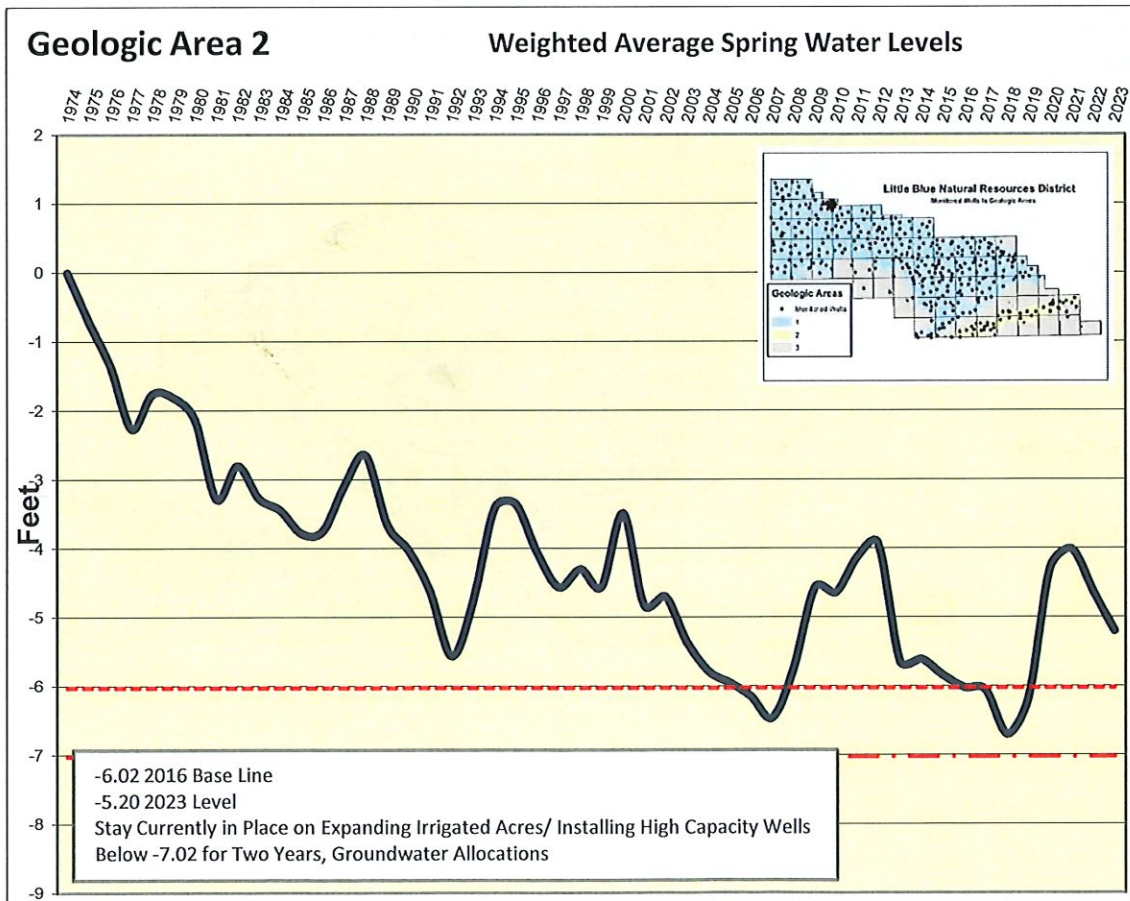
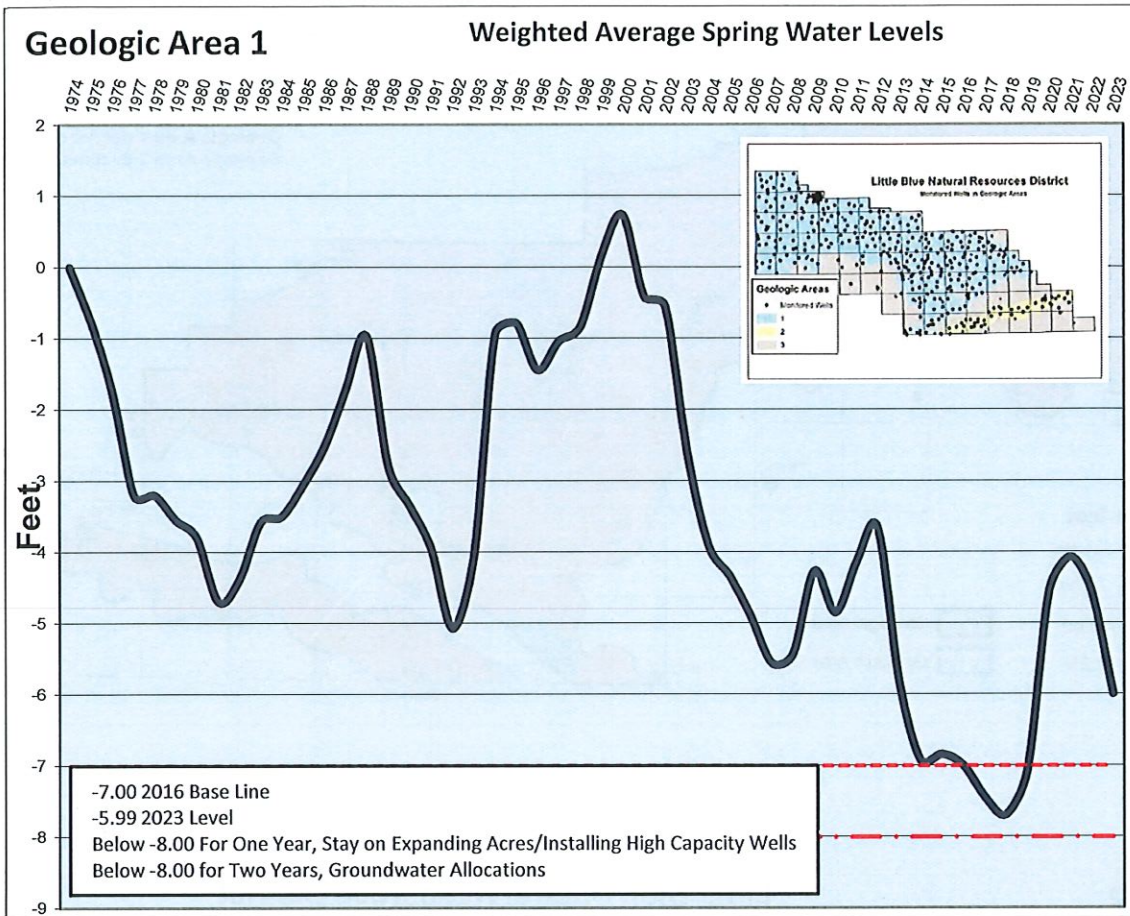
The first map is 2023 Spring Static Water Levels; it shows how the water levels changed from 2022. The spring 2023 change of -1.43 and -0.58 in each geologic area is noted on the map, only a small area along the Kansas border showed any rise in the water table.

Since 2016 is the base line for the weighted average graphs, the next three maps show where the water table stood in 2021, 2022, and 2023 as compared to that year. Some areas where levels are below those recorded in 2016 have grown while areas above that mark have shrunk. Please note that the scale for the red decline area from 2021 has grown larger with each succeeding year.

On the last page are 2 scatter plots comparing the weighted average change in the spring water levels to annual irrigation usage and annual rainfall. The Annual Irrigation Withdrawal shows the most immediate impact to water levels, the data is tightly grouped to the regression line. Average irrigation use of 5.2 to 6.7 inches relates to a 0 to 1 foot rise in the water table the next spring. 7.4 to 8.8 inches can be 0 to 1 feet of decline, 9.4 to 10.7 can be from 0 to -2 feet, and 12.1 to 13.6 inches of irrigation use relates to a decline of 1 to 2 feet. The annual irrigation allotment if the district goes to allocations is 13 inches per year.

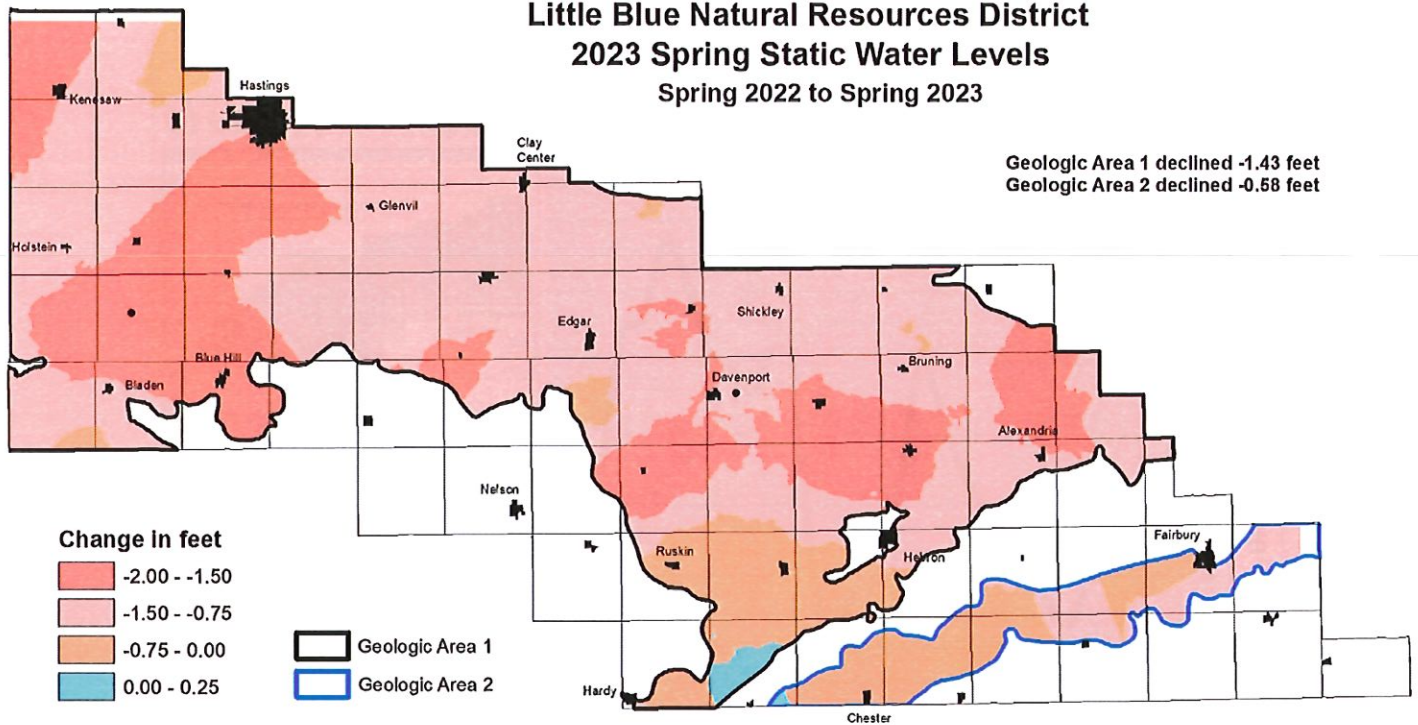
The rainfall plot is more diverse, factors such as timing, intensity, and soil type affect what rainfall runs off compared to what infiltrates. But annual rainfall amounts of 24.25 to 30.23 inches leaves the water table fluctuating between declines and rises of 1 foot. Less than that seems to be a predictable decline while more than 32 inches results in a rise.



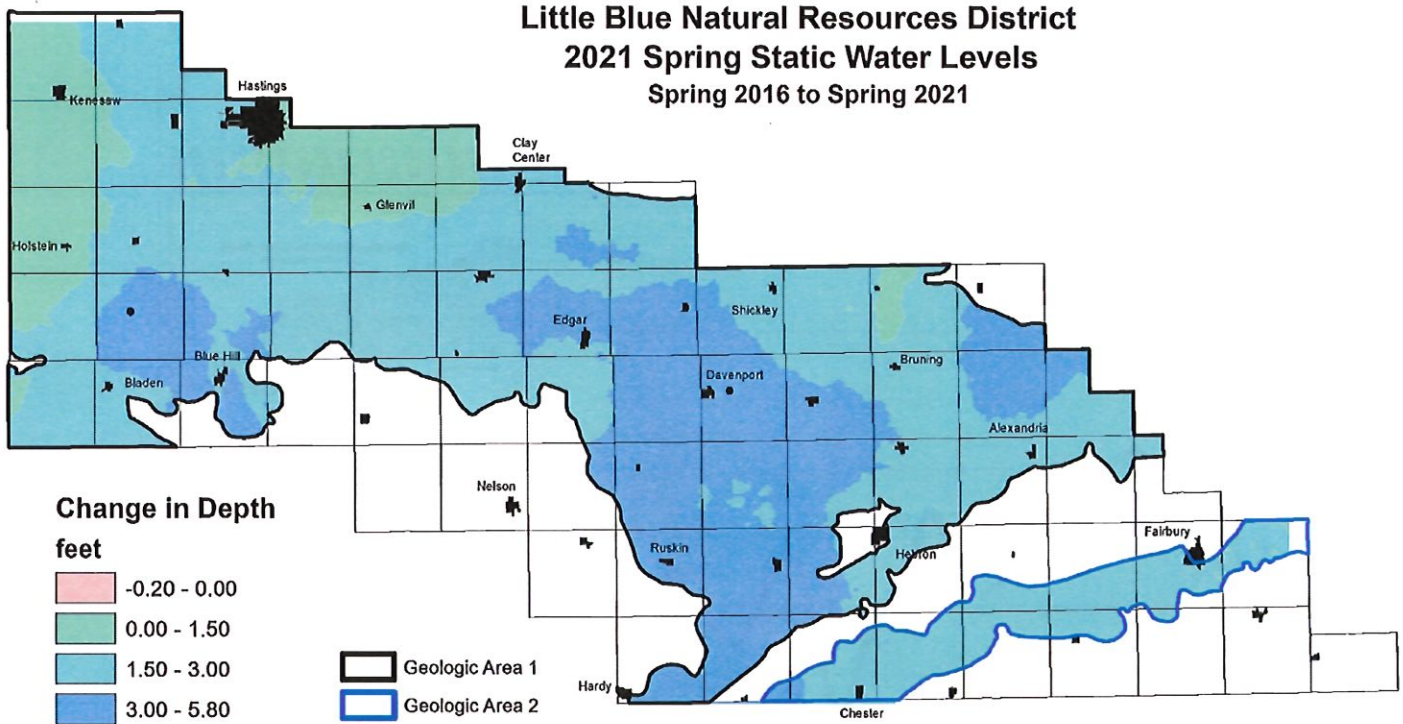


# Little Blue Natural Resources District 2023 Spring Static Water Levels Spring 2022 to Spring 2023

Geologic Area 1 declined -1.43 feet  
Geologic Area 2 declined -0.58 feet

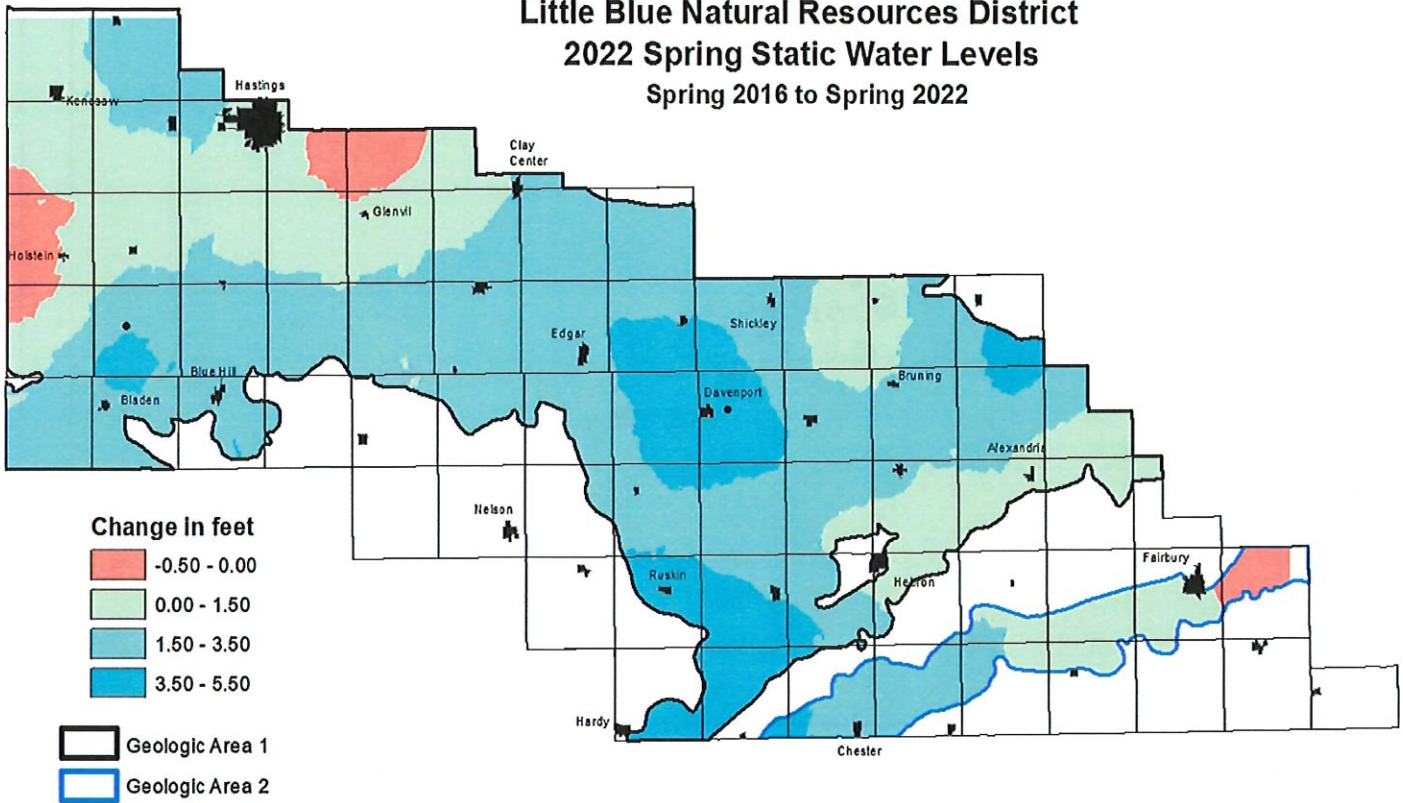


# Little Blue Natural Resources District 2021 Spring Static Water Levels Spring 2016 to Spring 2021

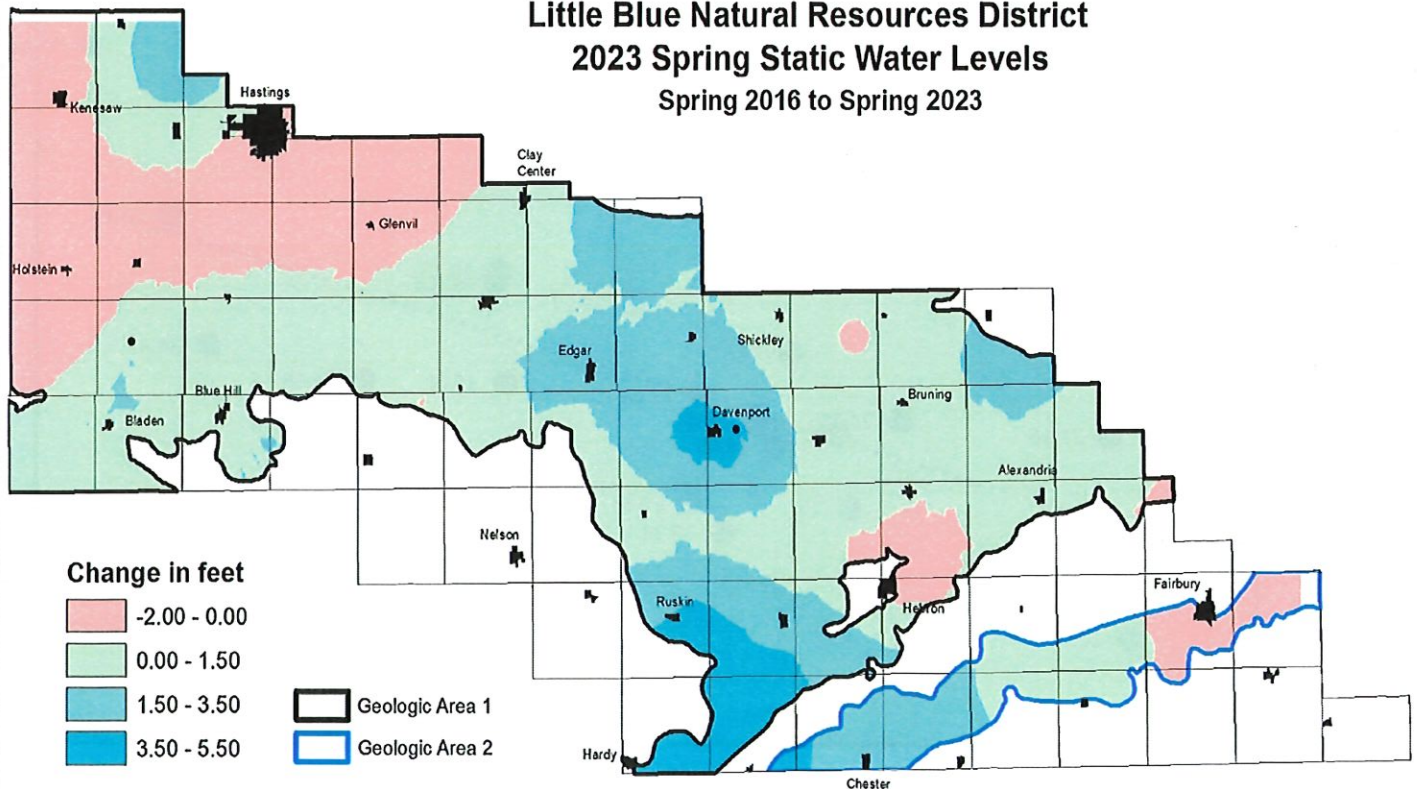




# Little Blue Natural Resources District 2022 Spring Static Water Levels Spring 2016 to Spring 2022

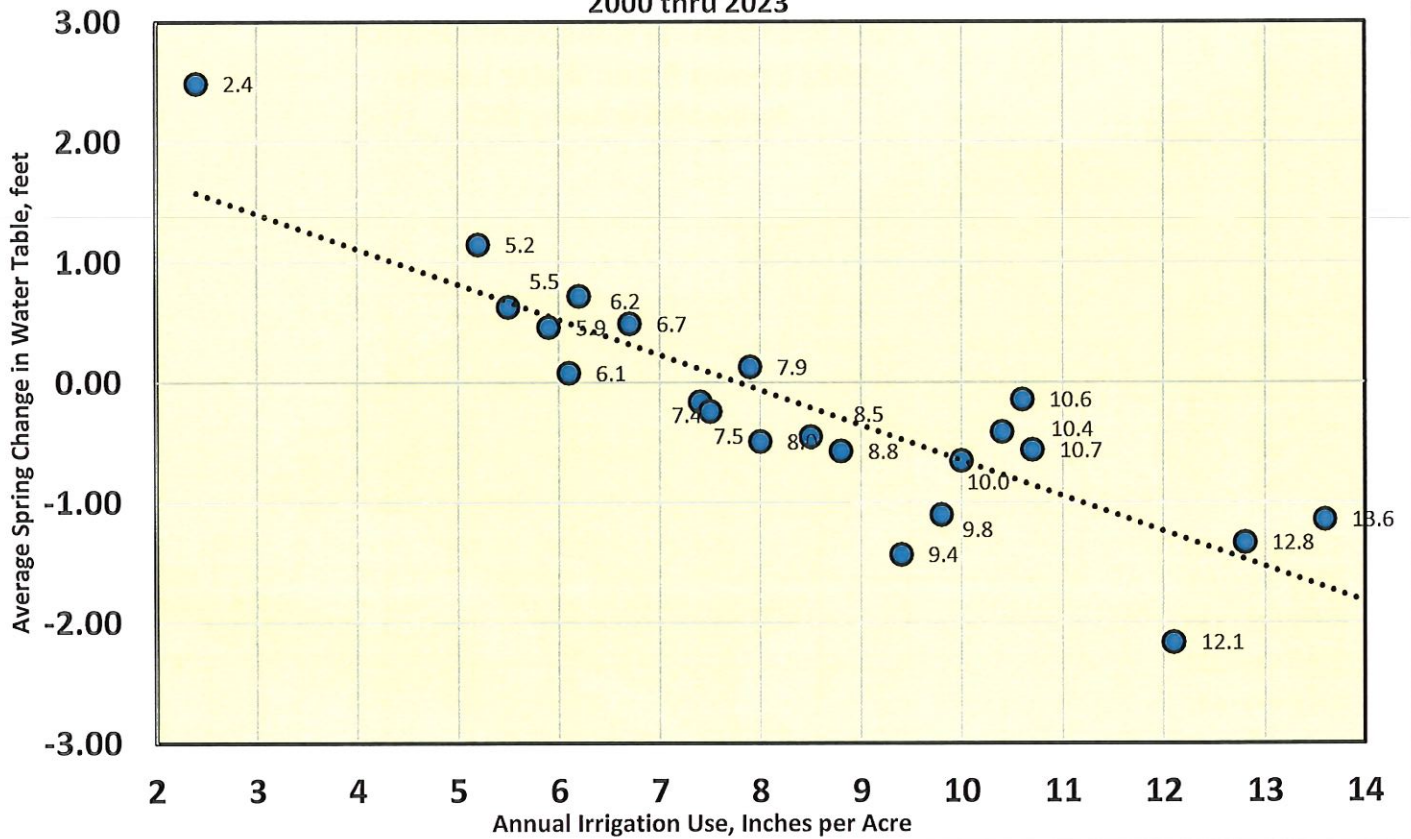


# Little Blue Natural Resources District 2023 Spring Static Water Levels Spring 2016 to Spring 2023



Annual Irrigation Withdrawal to Water Level Change.

2000 thru 2023



Annual Rainfall to Water Level Change

2000 thru 2023

