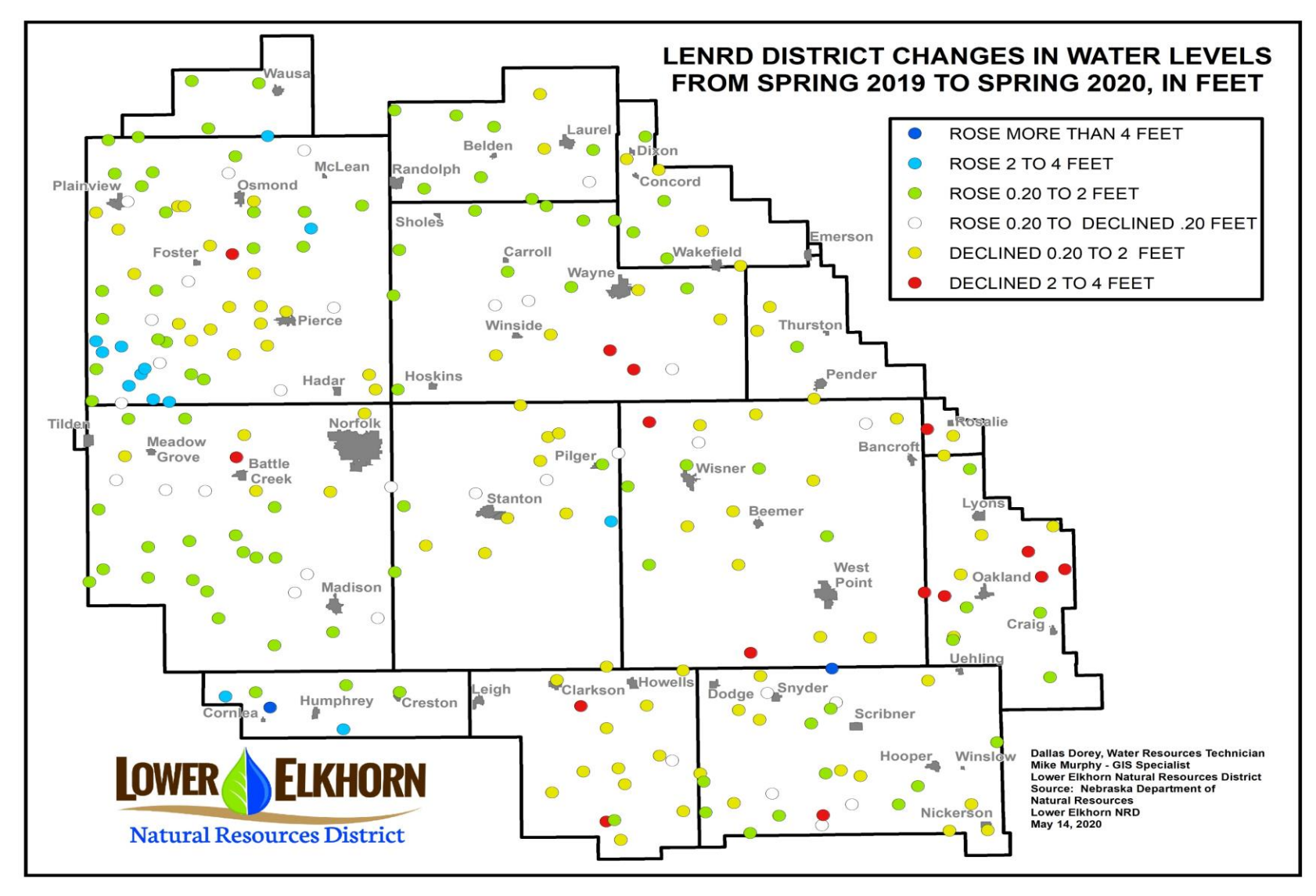
2020 LENRD SPRING STATIC WATER LEVELS

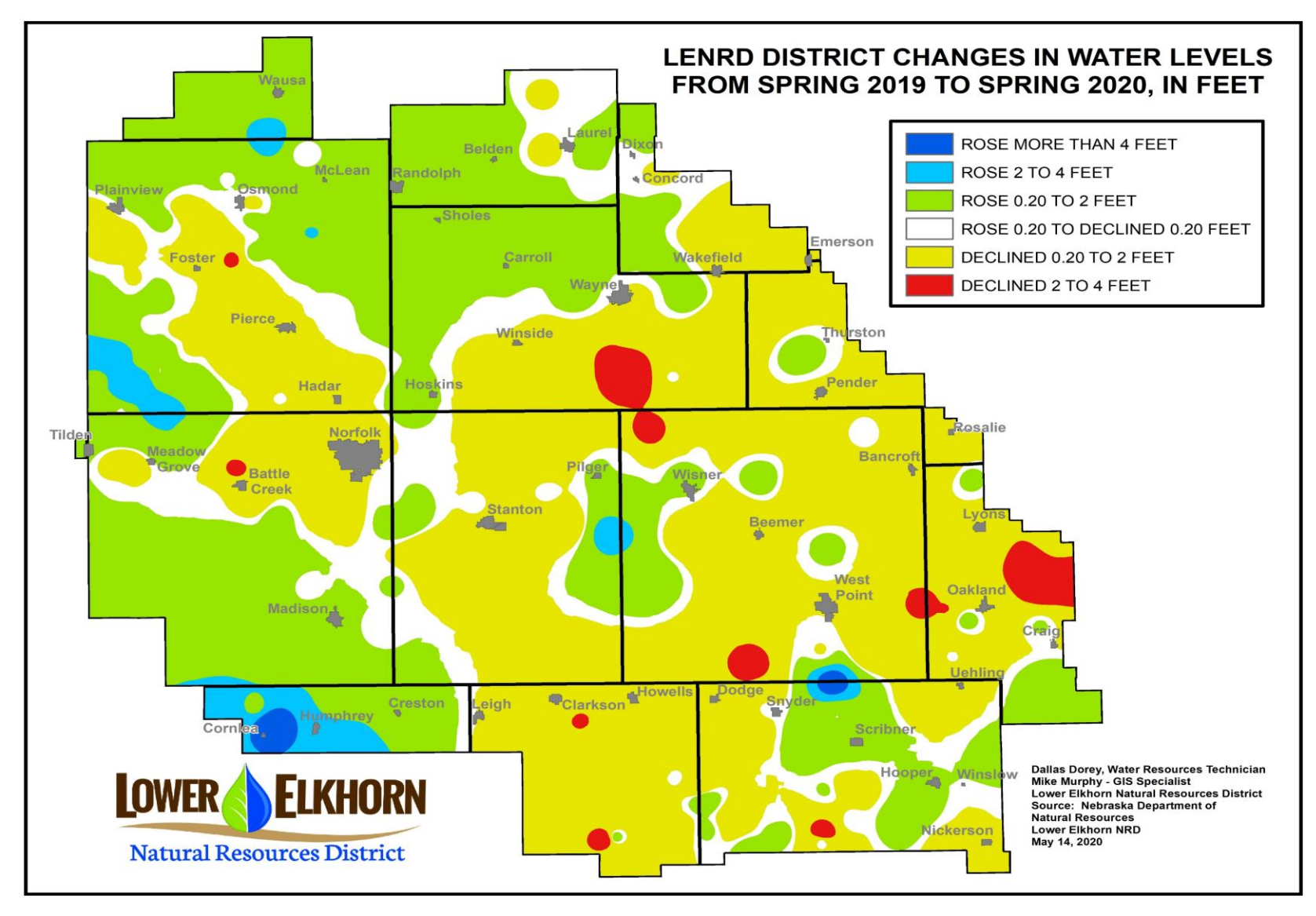
- 236 Wells measured throughout the District
- Measurements done from March 18 through April 10
- HUGE thanks to Josh and Todd for assisting, and Mike Murphy for his GIS work!!

LOWER ELKHORN
Natural Resources District

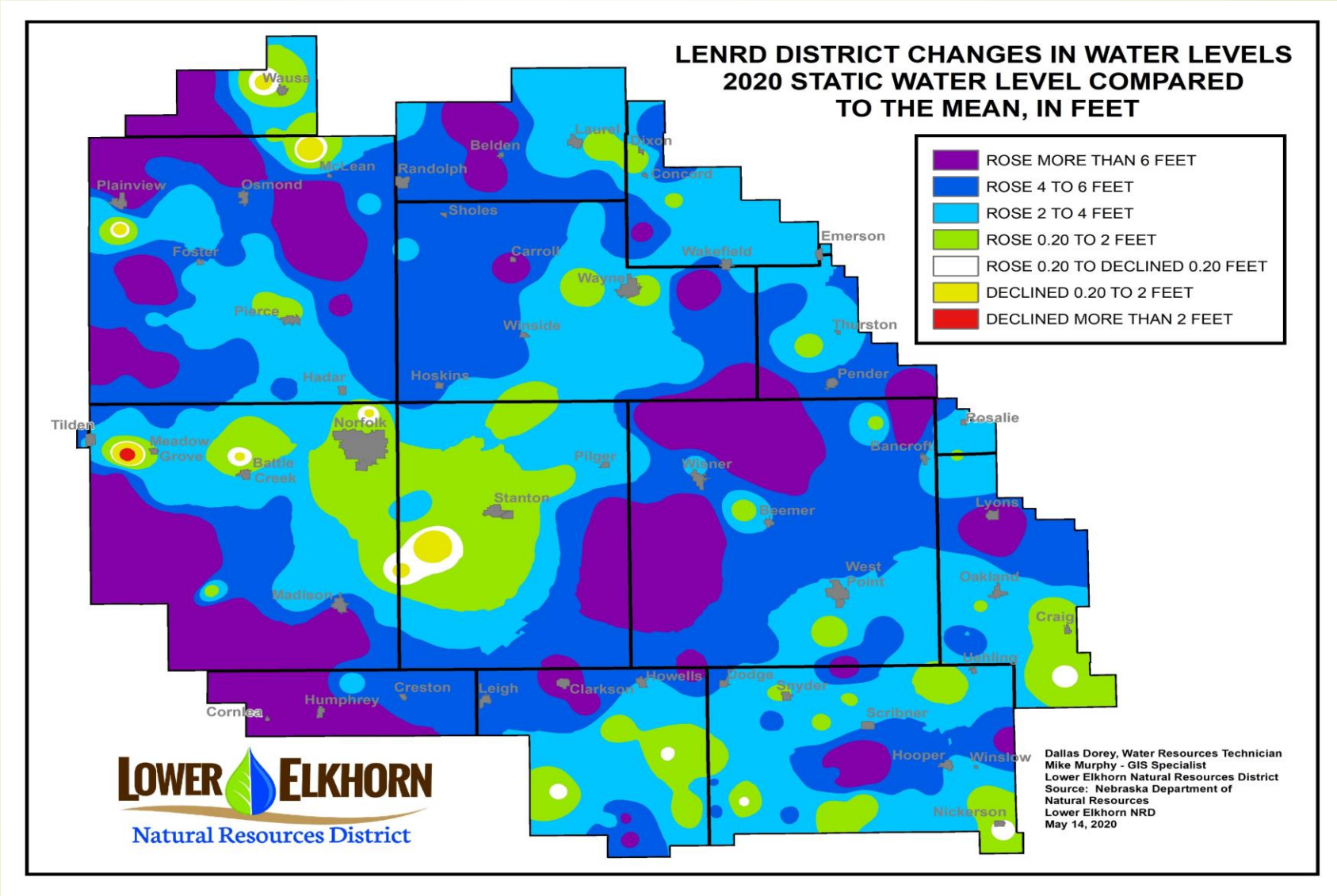
2020 LENRD SPRING STATIC WATER LEVELS



2020 LENRD SPRING STATIC WATER LEVELS



2020 LENRD SPRING STATIC WATER LEVELS



BURT COUNTY

-14 wells measured

-Water levels decreased an average of 0.94' from 2019 readings

-64% of wells declined

-36% of wells increased

-From late July through mid-September much/all of the county was in a D0 drought

-On average, wells were 3.62' above the historical median

CEDAR COUNTY

-10 Wells measured

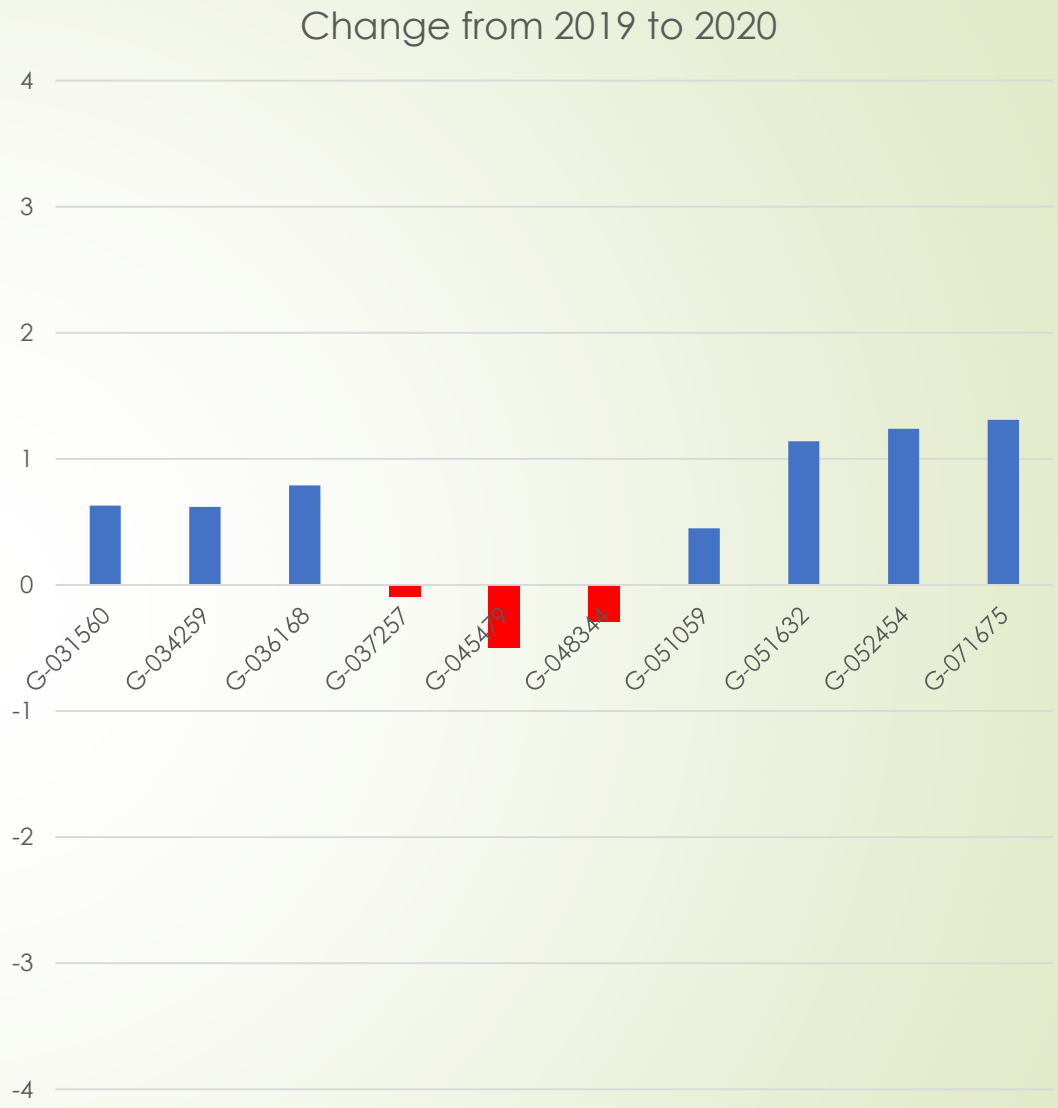
-Water levels increased an average of 0.53'

-30% of wells declined

-70% of wells increased

-6 wells recorded an all time high reading

-On average, wells were 4.39' above historical median



COLFAX COUNTY

-15 Wells measured

-Water levels decreased an average of 0.83'

-87% of wells declined

-13% of wells increased

-Some of the county was in a D0 drought in late July for approximately 2 weeks

-1 well recorded an all time high reading

-On average, wells were 3.42' above historical median

CUMING COUNTY

-19 Wells measured

-Water levels decreased an average of 0.80'

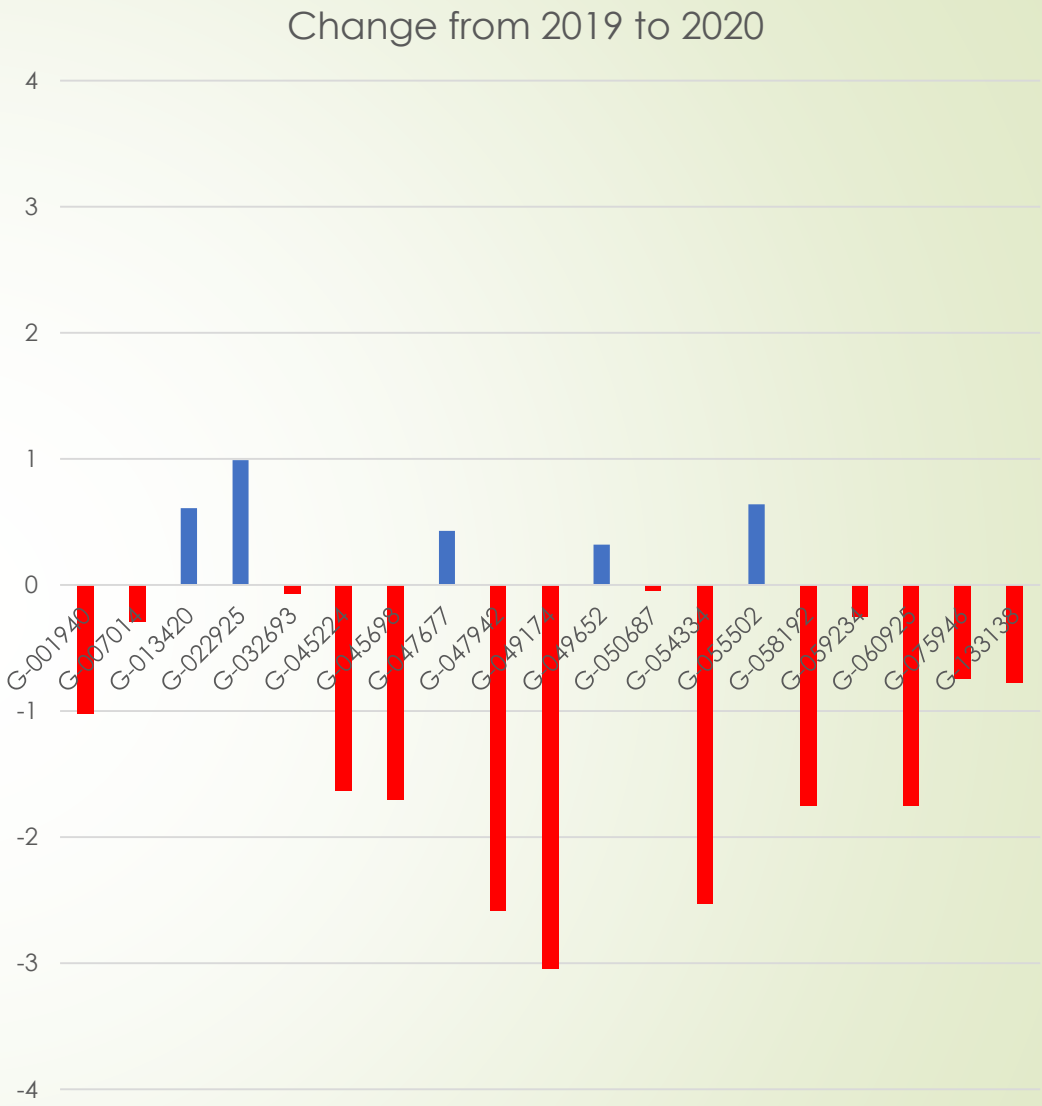
-74% of wells declined

-26% of wells increased

-From late July through mid-September much/all of the county was in a D0 drought

-3 wells recorded all time high readings

-On average, wells were 6.67' above historical median



DIXON COUNTY

-8 Wells measured

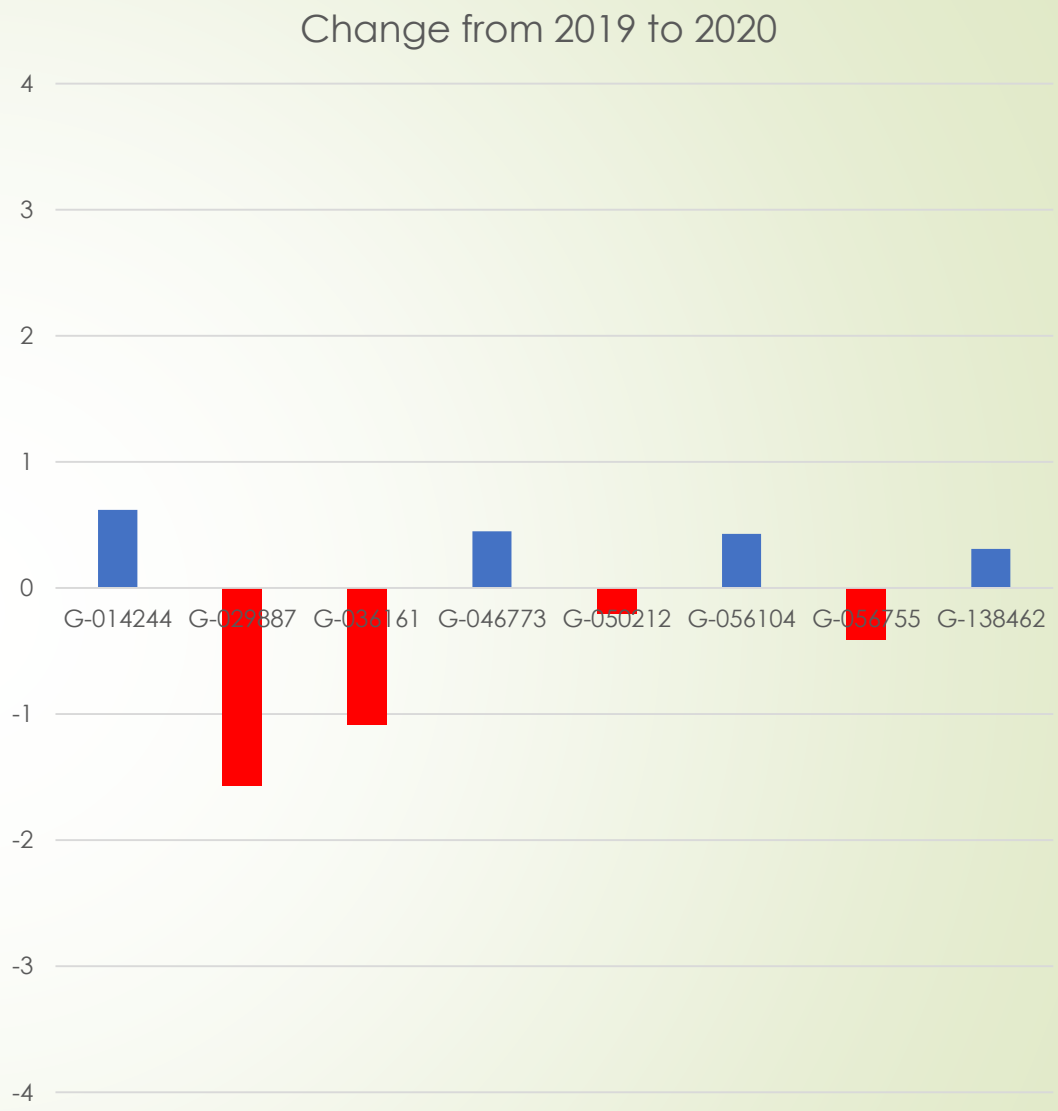
-Water levels decreased an average of 0.18'

-50% of wells declined

-50% of wells increased

-2 wells recorded all time high readings

-On average, wells were 3.46' above historical median



DODGE COUNTY

-28 Wells measured

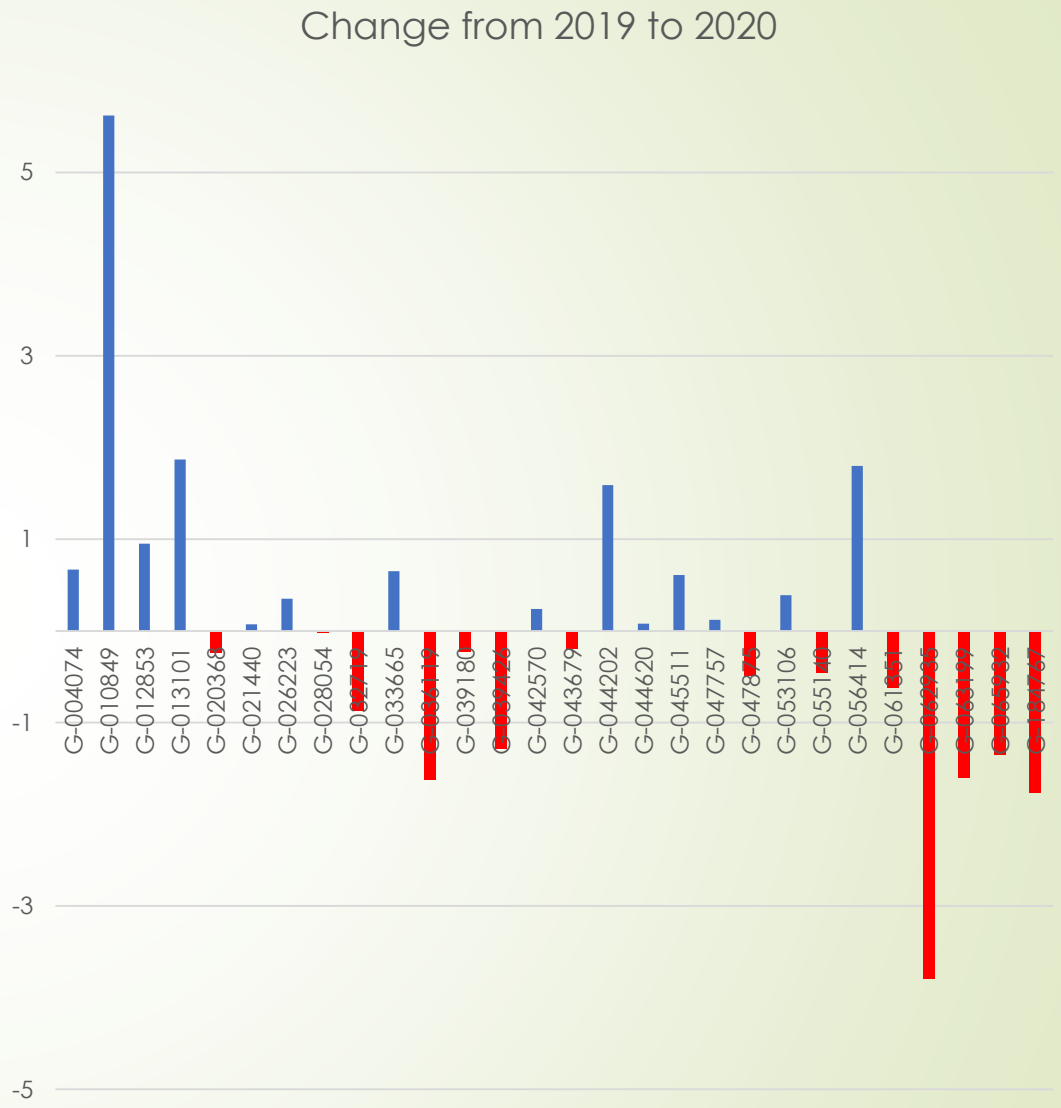
-Water levels decreased an average of 0.02'

-50% of wells declined

-50% of wells increased

-6 wells recorded all time high readings

-On average, wells were 3.40' above historical median



KNOX COUNTY

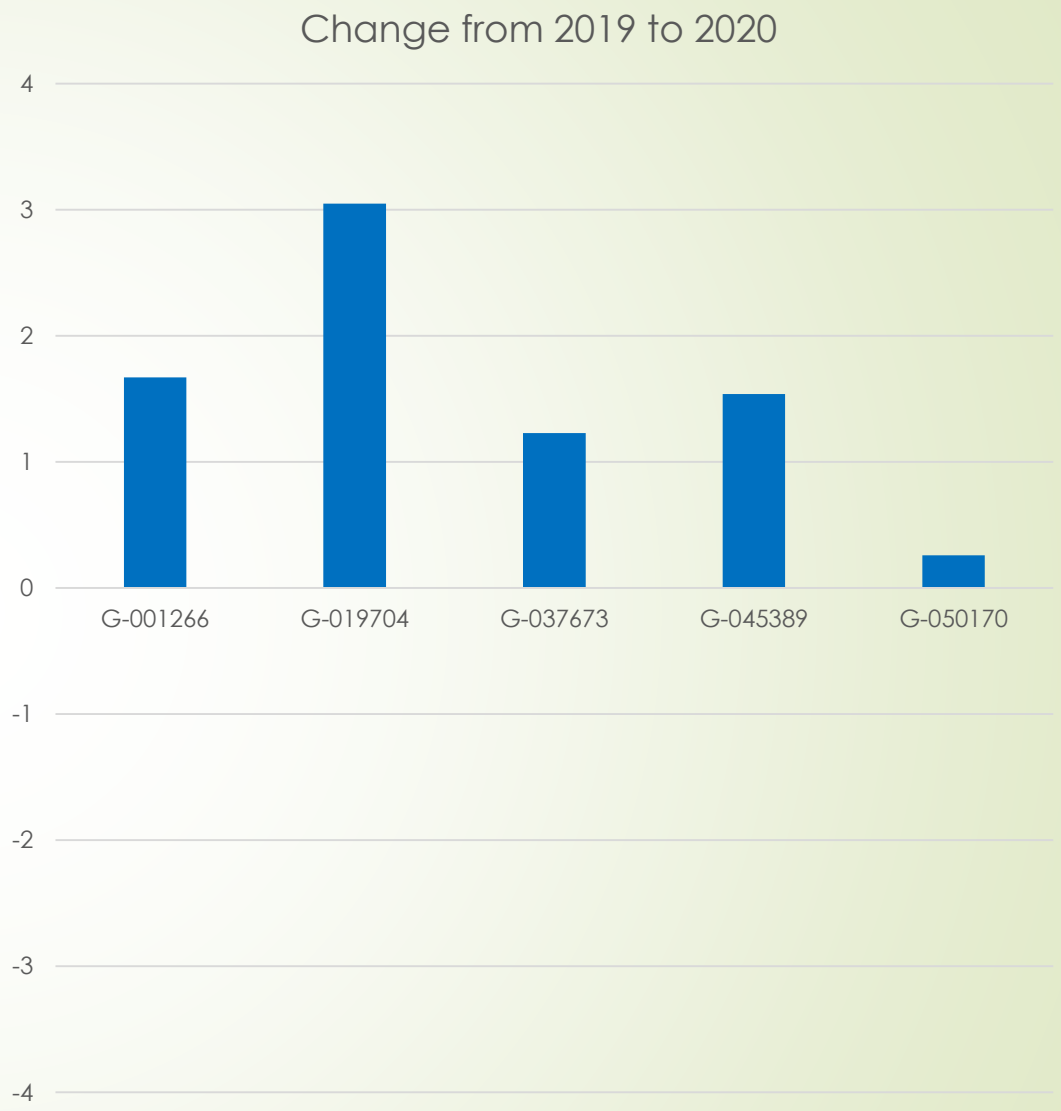
-5 Wells measured

-Water levels increased an average of 1.55'

-100% of wells increased

-3 wells recorded all time high readings

-On average, wells were 4.40' above historical median



MADISON COUNTY

-31 Wells measured

-Water levels increased an average of 0.38'

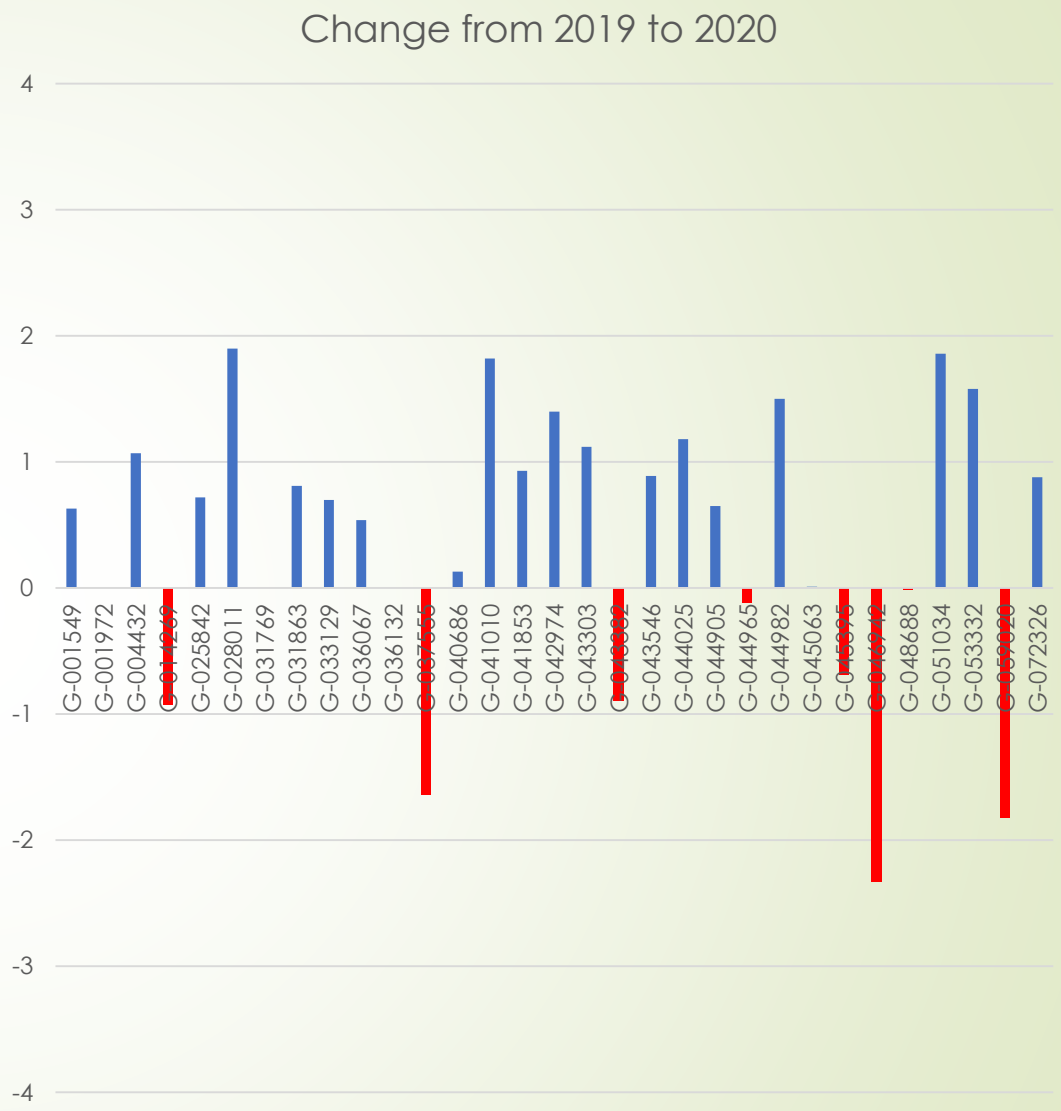
-25% of wells declined

-65% of wells increased

-10% of wells remained same (flowing)

-17 wells recorded all time high readings, 2 wells (flowing) matched high

-On average, wells were 5.63' above historical median



PIERCE COUNTY

-58 Wells measured

-Water levels increased an average of 0.45'

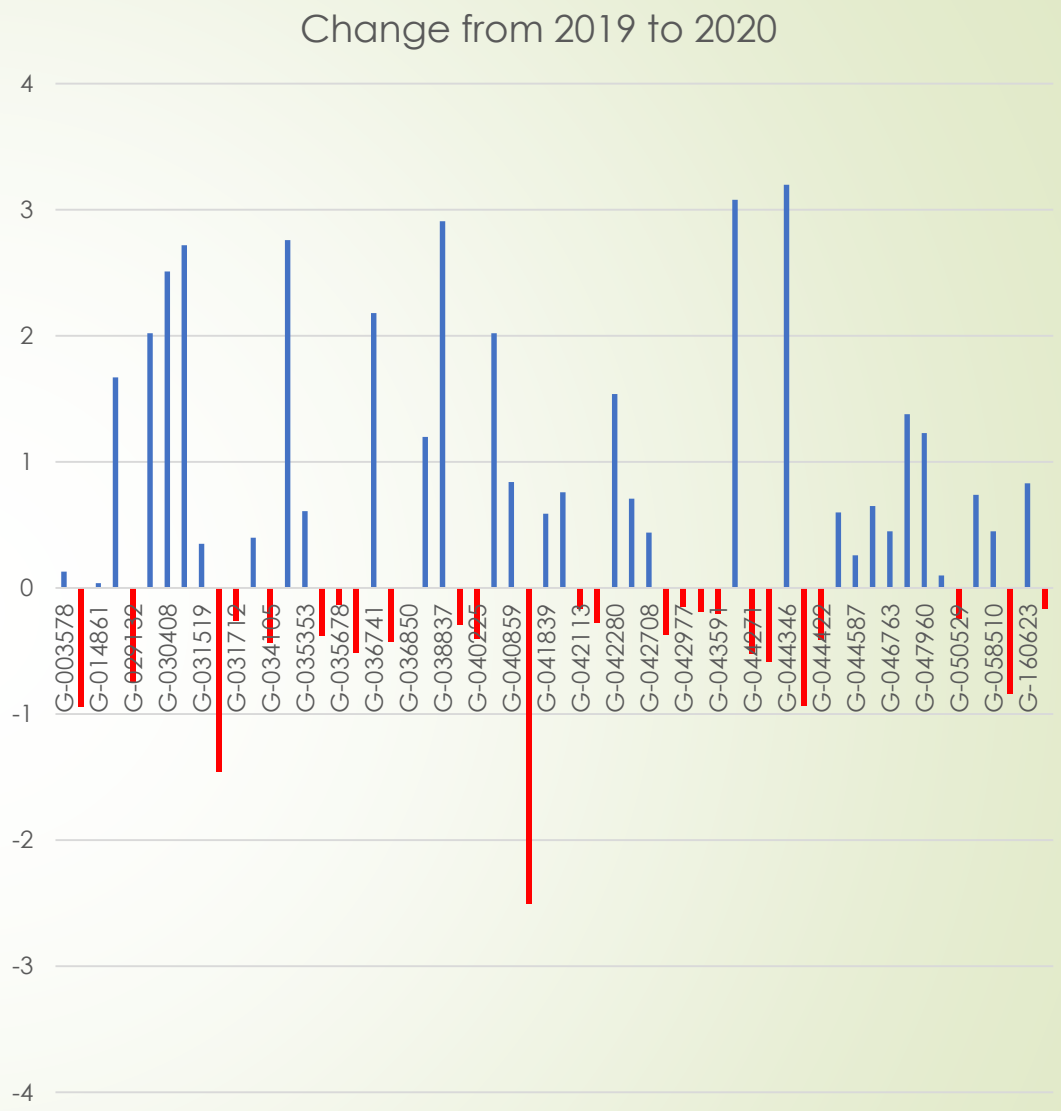
-43% of wells declined

-55% of wells increased

-2% of wells remained same

-31 wells recorded all time high readings

-On average, wells were 5.32' above historical median



PLATTE COUNTY

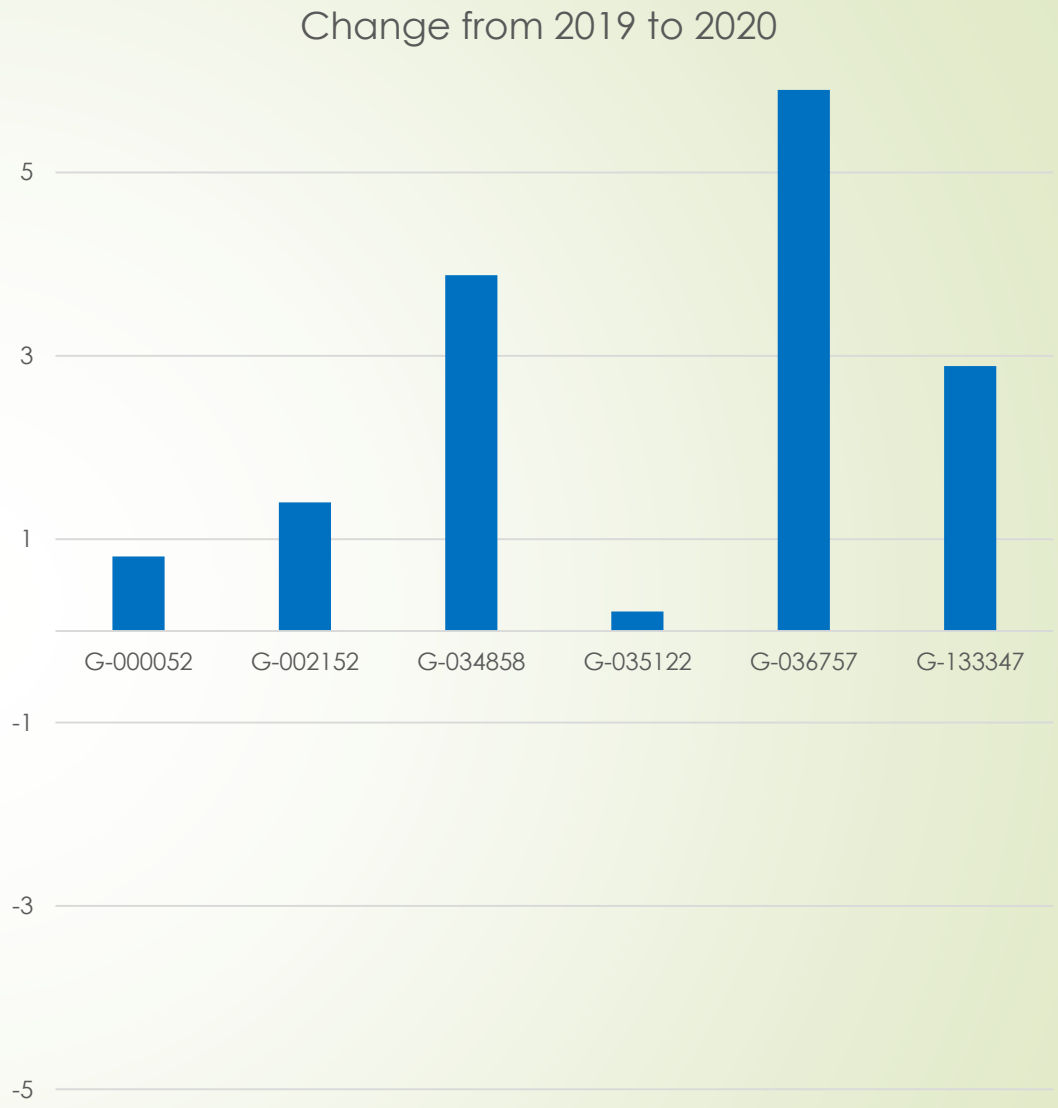
-6 Wells measured

-Water levels increased an average of 2.51'

--100% of wells increased

-5 well recorded all time high readings

-On average, wells were 10.43' above historical median



STANTON COUNTY

-16 Wells measured

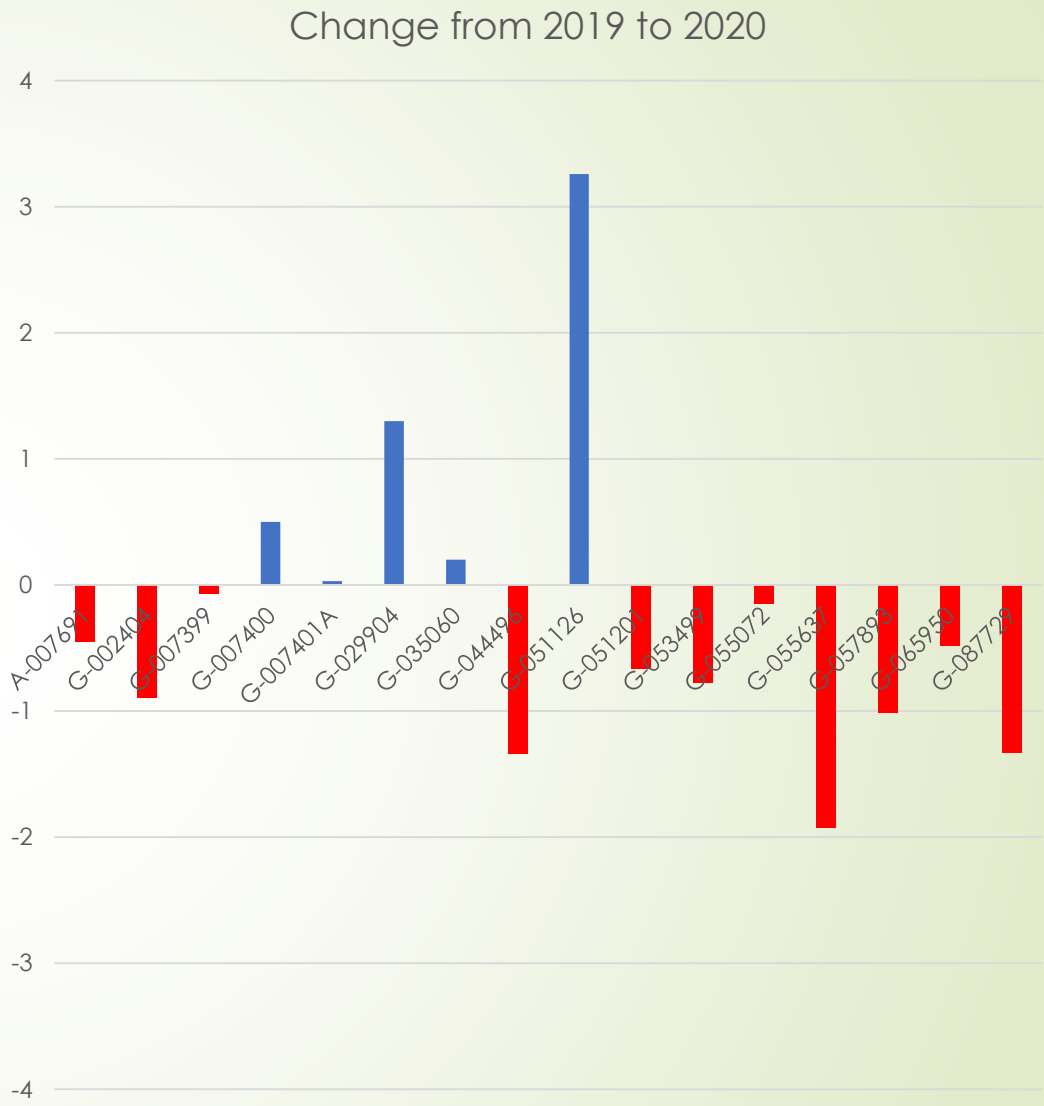
-Water levels decreased an average of 0.24'

-69% of wells declined

-31% of wells increased

-3 wells recorded all time high readings

-On average, wells were 2.46' above historical median



THURSTON COUNTY

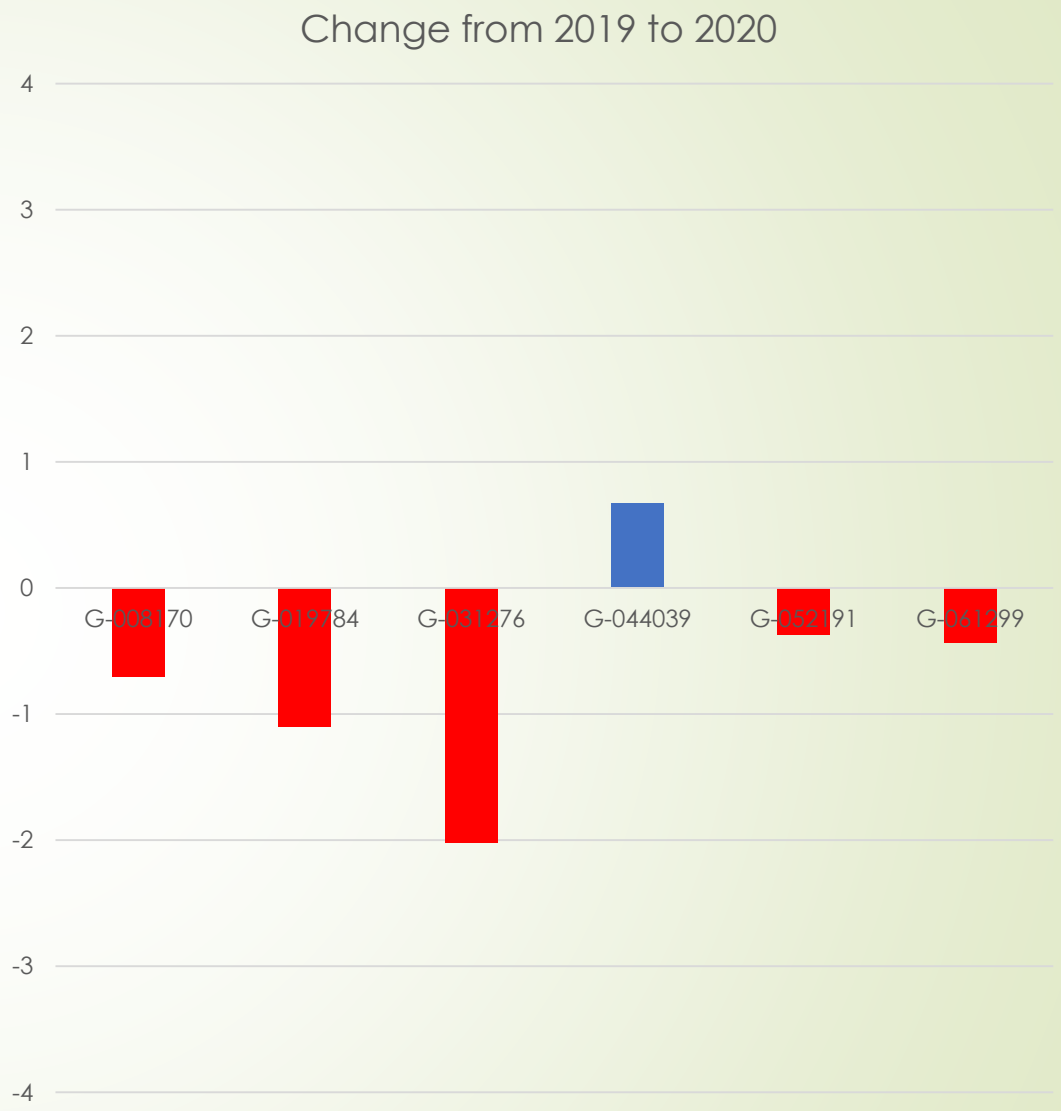
-6 Wells measured

-Water levels decreased an average of 0.66'

-83% of wells declined

-17% of wells increased

-On average, wells were 3.32' above historical median



WAYNE COUNTY

-19 Wells measured

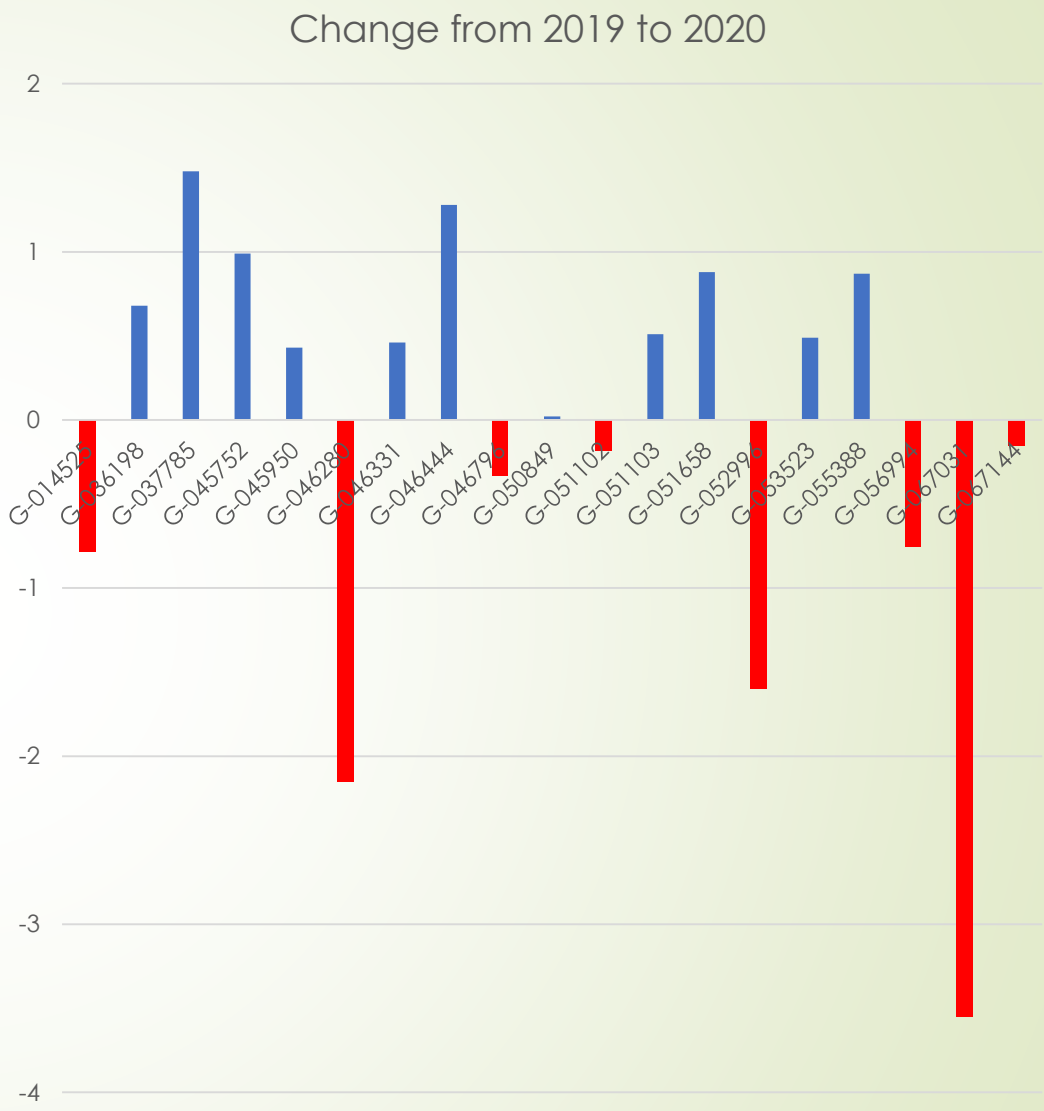
-Water levels decreased an average of 0.07'

-42% of wells declined

-58% of wells increased

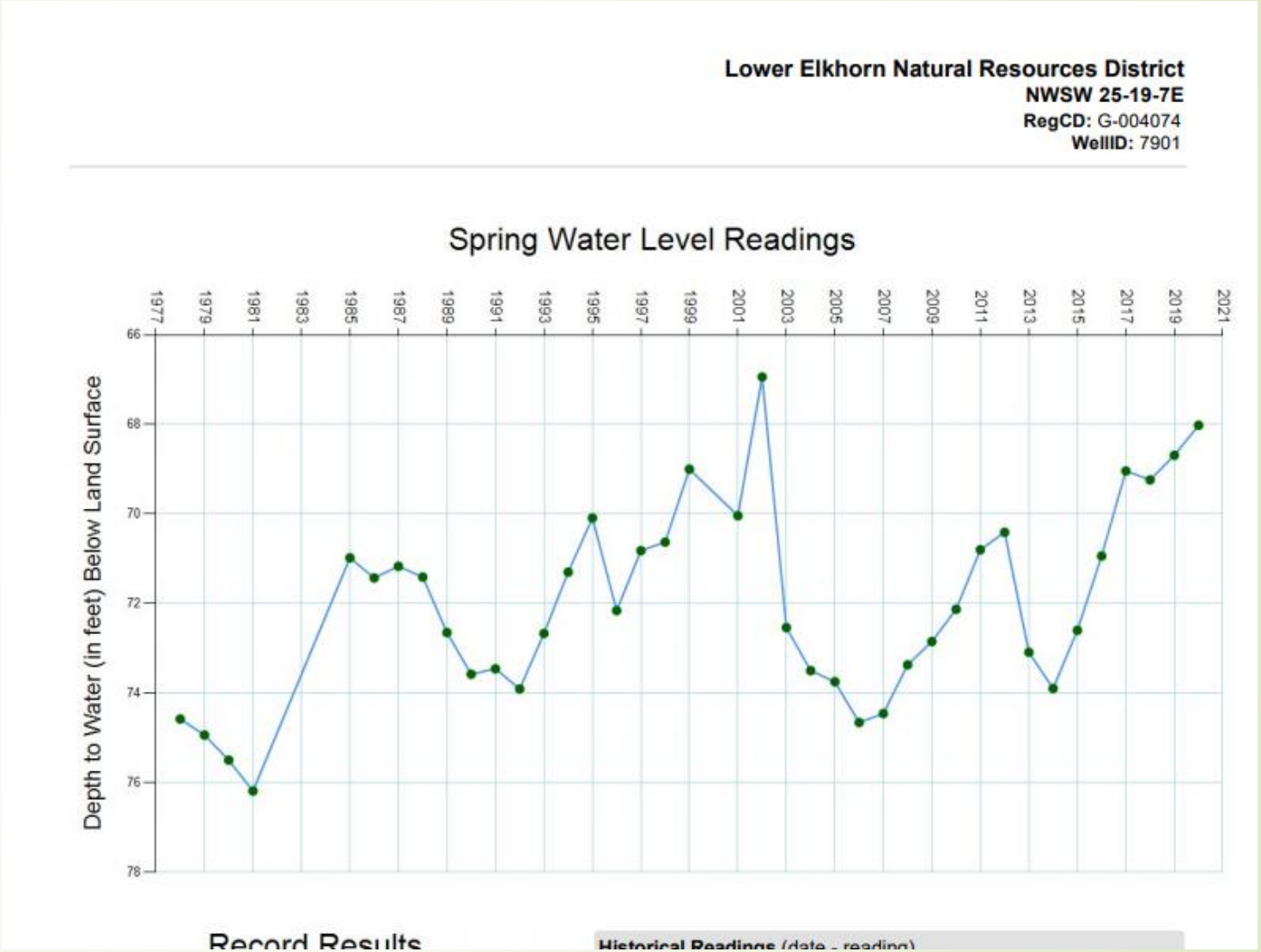
-6 wells recorded all time high readings

-On average, wells were 4.22' above historical median



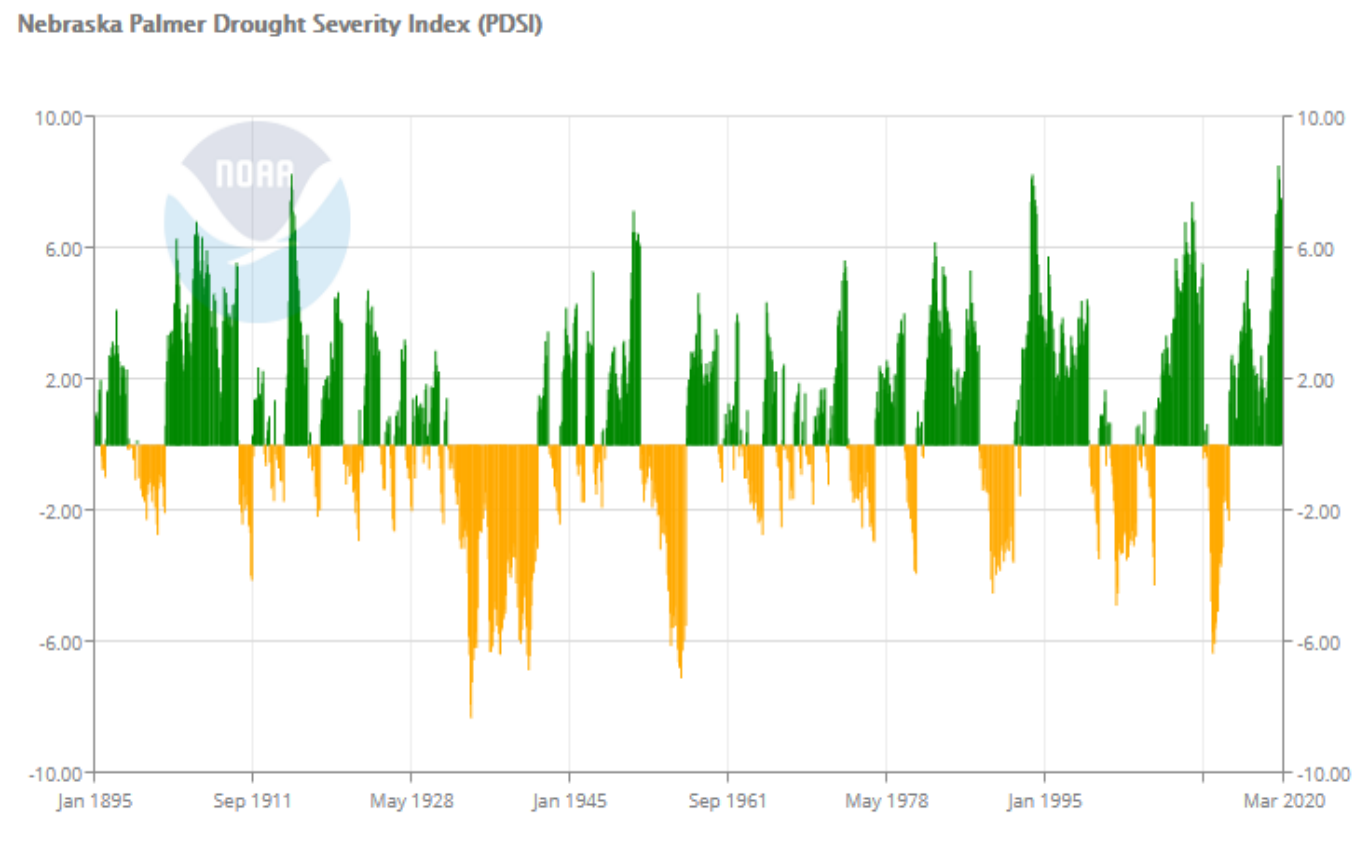
2020 SWL READINGS

- Many wells have been measured mid-70's
- Water levels are highly variable
- Ranges of historic highs and historic lows can be up to 40-50' in some areas.
- 43 wells have varied >20'
- 114 wells have varied 10'-20'
- 77 wells have varied 0'-10'
- *2 wells excluded because of limited data



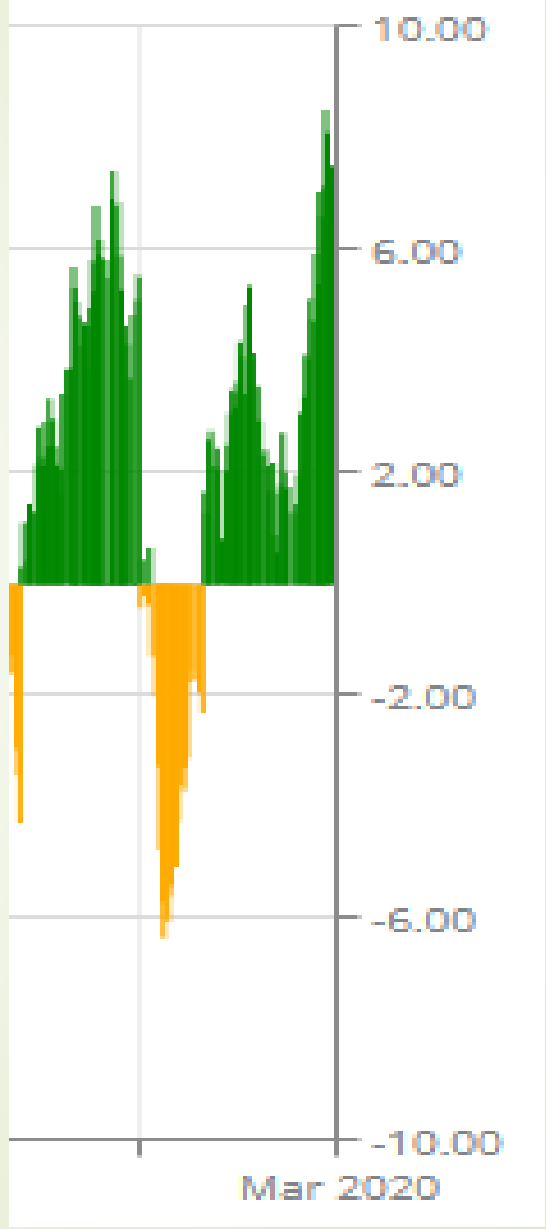
2020 SPRING STATIC WATER LEVELS

- The **Palmer Drought Severity Index** (PDSI) uses readily available temperature and precipitation data to estimate relative dryness. It is a standardized index that generally spans -10 (dry) to +10 (wet). There are limitations to the Index, but it is generally recognized as one of the best. The Index is used by NOAA, and is used for calculations in the U.S. Drought Monitor
- The included graph starts in 1895, and runs through March 2020: ~1500 total monthly data points. Please be aware, this is a monthly snapshot of the entire State of Nebraska, regional areas may vary
- All 12 months of 2020 were within the top 125 "wettest" months ever according to the PDSI
- SWL's recorded in 2020 reflected the ongoing recent weather
- Weather patterns and groundwater levels in Nebraska are a roller coaster!!



2020 LENRD SPRING STATIC WATER LEVELS
How quick can things change???

- Spring water levels in April 2012, looked great! Then……
- At that time, the LENRD still did fall readings in September & October
- On average, water levels fell almost 9’ across the district in those 5-6 months
- 22 SWL wells across the District dropped >20’ during these months
- 223 SWL wells are still in the rotation from 2012. Of those, 100 had what would have been their lowest ever reading in fall of 2012 during the severe, yet relatively short drought.



QUESTIONS OR COMMENTS?