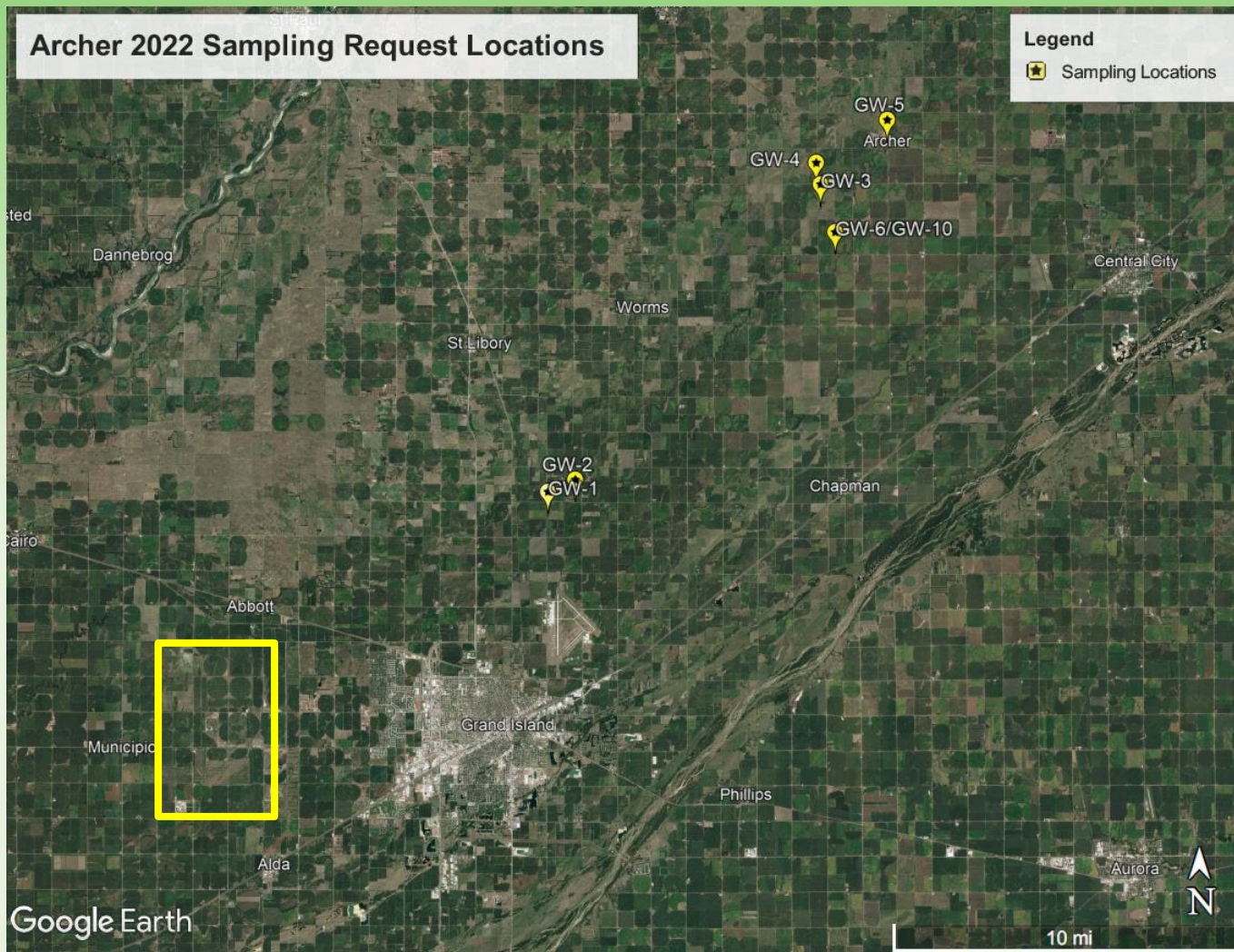


Pre-CERCLA Screening: Archer, Nebraska

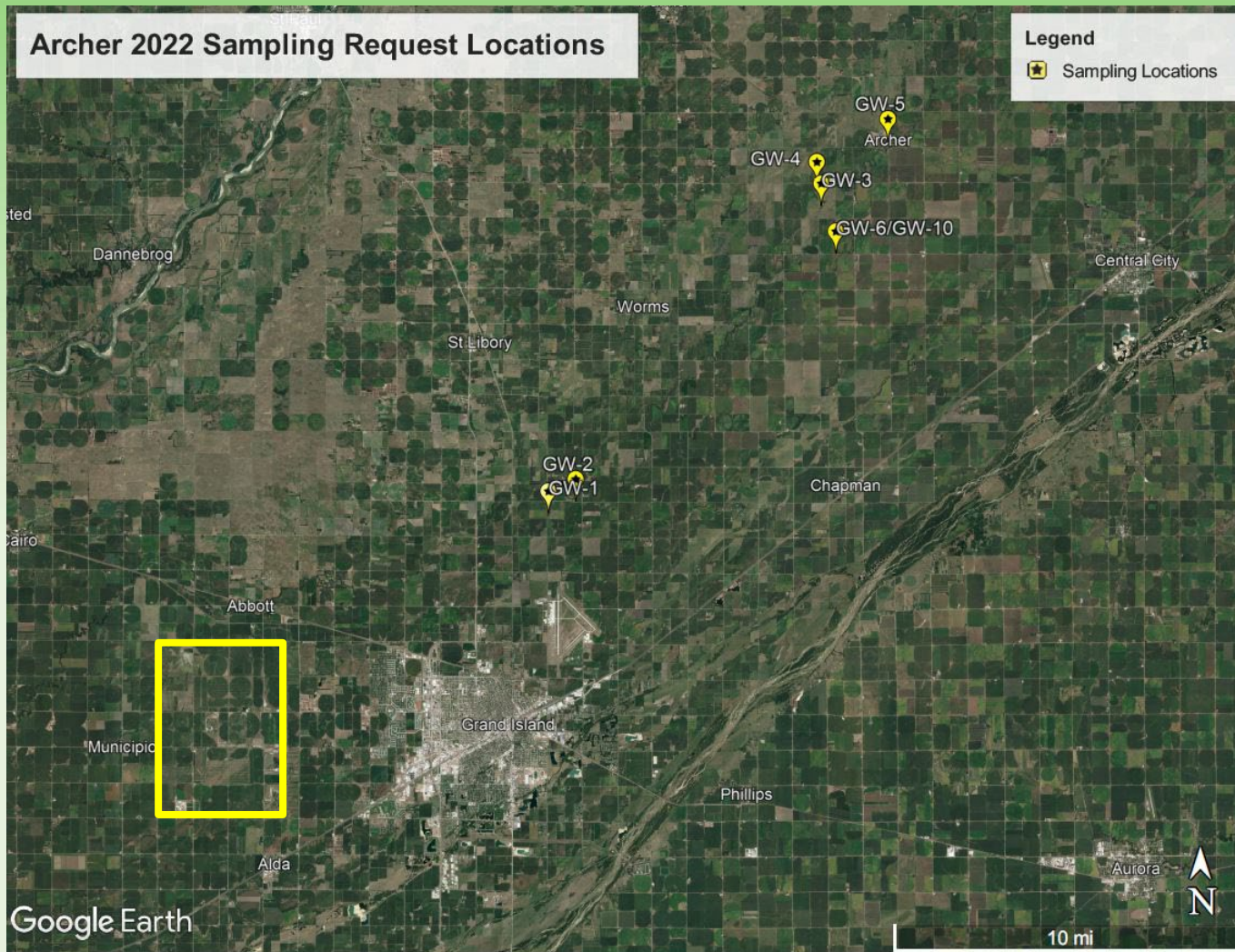
Sampling conducted:

April 11, 2022



BACKGROUND

- Community concerns regarding discolored well water
- Community concerns regarding the history of the former CHAAP and proximity to the sampling area
- Drinking water wells are the NDEE's highest concern based on the risk to human health
- NDEE secured funding from EPA's Superfund Program for sampling 7 wells, Pre-CERCLA Screen was conducted
- Olsson, Inc. was contracted to conduct the sampling



SCOPE

- Six locations were selected to be sampled, including one duplicate sample of GW-6, from a list of community members
- To address the CHAAP concerns:
 - **Explosives:** Associated with the former CHAAP facility, tested the same list of explosives that are sampled for on-site including TNT, RDX, HMX, etc.
 - **Perchlorate:** Associated with production in explosives, fireworks, flares, and fertilizers made with potash Chilean nitrate
- To address the discolored water concerns:
 - **Metals:** Arsenic, Uranium, Iron, and Manganese in high concentrations can lead to discolored water
 - **Nitrate**

Table 1 - Archer 2022 Sampling Request Analytical Results

	MCL, SMCL, or HA	GW-1	GW-2	GW-3*	GW-4	GW-5	GW-6	GW-10 ¹
Explosives	varies	ND	ND	ND	ND	ND	ND	ND
Perchlorate	15 ug/L	0.39	ND	ND	ND	ND	ND	ND
Arsenic	10 ug/L	0.41	1.6	15.8	3.1	2.4	9.7	9.9
Iron	300 ug/L	11.4	852	8790	988	3160	597	635
Manganese	300 ug/L (infants) or 1,000 ug/L (adults)	143	475	2050	487	324	521	525
Uranium	30 ug/L	28.9	27.0	1.5	1.5	0.21	0.069	0.058
Nitrate as Nitrogen	10 mg/L	3.1 mg/L	ND	ND	ND	ND	ND	ND

Units, which are either micrograms per liter (ug/L) or milligrams per liter (mg/L) are only shown in the second column

The maximum contaminant level (MCL) is for all chemicals except iron (secondary MCL, SMCL), and manganese (health advisory, HA)

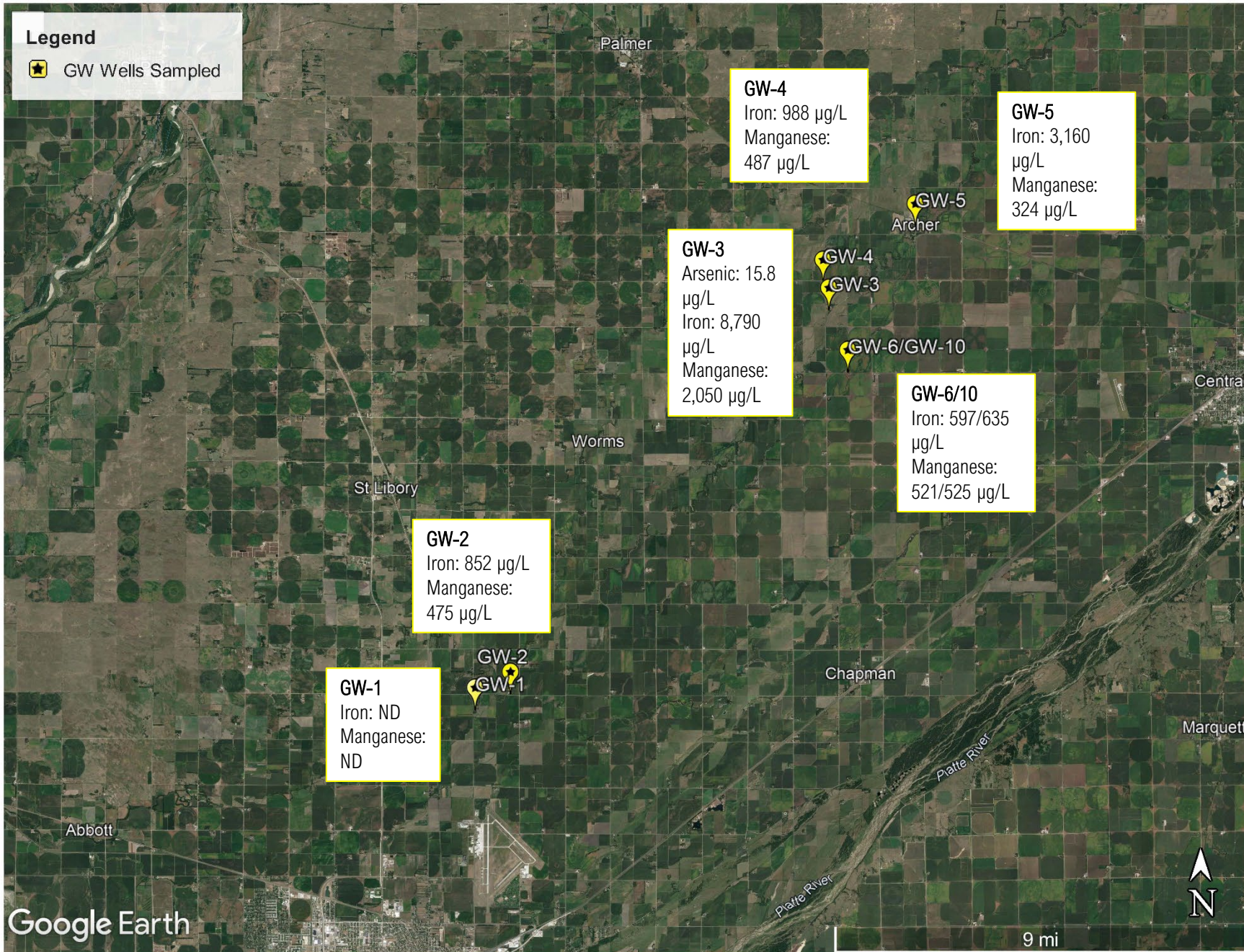
Shaded and bolded results indicate an exceedance of either the MCL, SMCL, or HA

ND = Not detected in sample above the detection limit

* = GW-3 is an irrigation well

¹ = GW-10 is a duplicate sample of GW-6

Metals detected in every well, with highest concentrations found in GW-3 (irrigation well)
Manganese and Iron identified in five wells above the HA and SMCL
Perchlorate and Nitrate found in GW-1, but below the Interim HA and MCL, respectively
No explosives found in any of the samples



SUMMARY

- The NDEE notified all the well owners of their results and as applicable, made recommendations regarding use and treatment options.
- Dr. Dan Snow, UNL stated the metals and nitrate results are consistent with his previous studies near the area.
- No further groundwater sampling is recommended based upon the results of the Pre-CERCLA Screening.

Questions?