GWMP Attendees & Discussion Summary - September 3rd

ATTENDEES

Mike Archer – NGPC

Katie Cameron, ENWRA/UNLCSD

Laura Johnson, DWEE

Madeline Johnson, DWEE

Becky Shuerman, NE Ext.

John Nelson, NE Ext.

Ruby Rolland, NGPC

Nate Taylor, City of Plattsmouth

Kevin Huxhold, City of Elmwood

Alicia Greise, City of Elmwood

Mark Hogue, Cass Rural Water #2

Bryce Andeson, AWS Well Co.

Joel Jones, City of Louisville

Jim Chapel, Cass County

Matt Joeckel, UNL

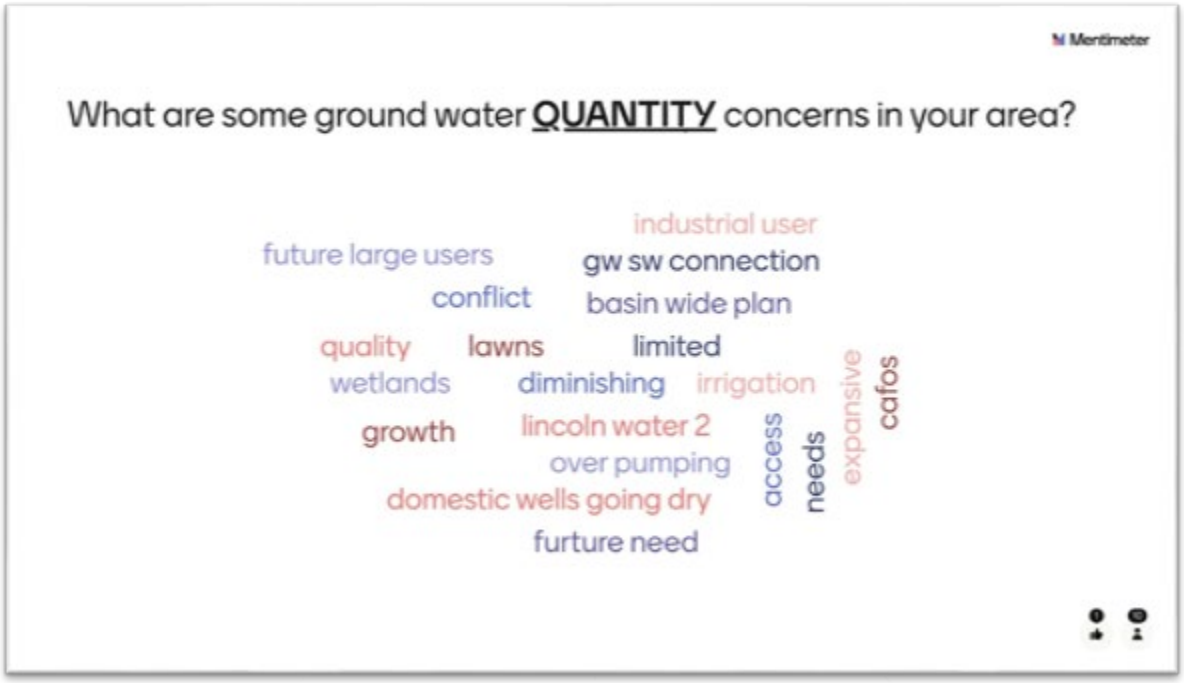
Gary Aldridge – Director

DISCUSSION SUMMARY

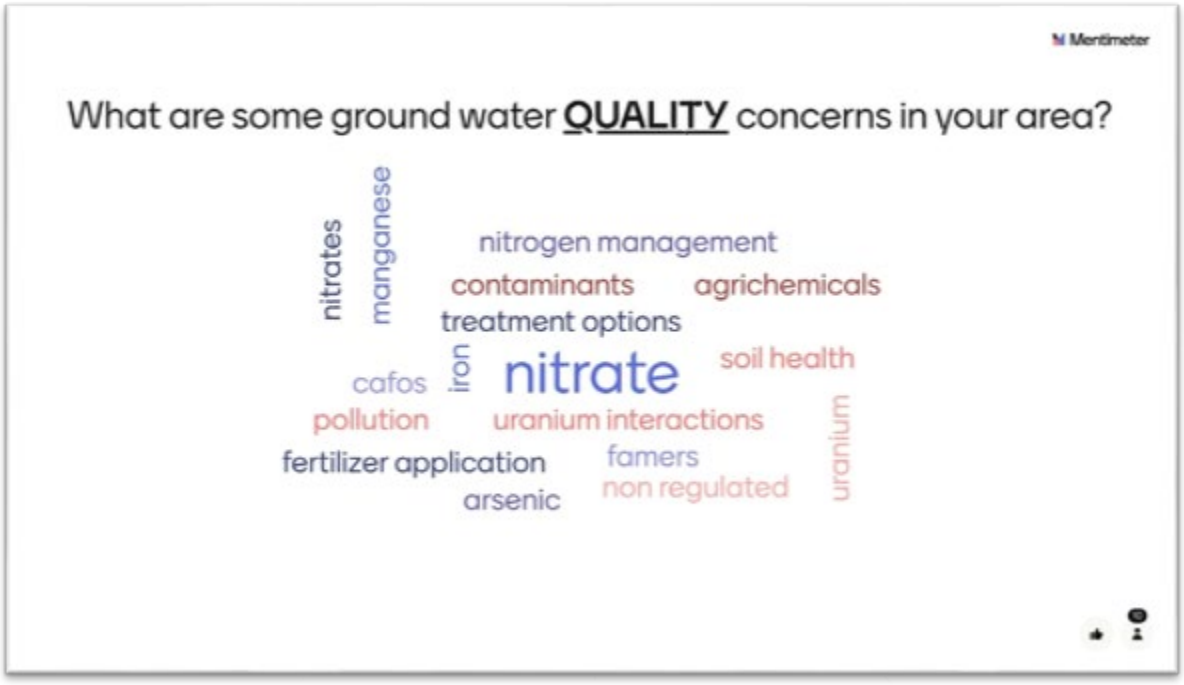
- During the discussion of what is in the current GWMP regarding water quantity, a participant asked if there is a baseline level for ground water quantity triggers.
    - There is a long-term average of the entire data set LPSNRD maintains. Several dozen wells are monitored continuously.
    - If water levels decline by 8 percent of the saturated thickness, that would draw attention and NRD would closely monitor. If it stays that way for two years, that would be a trigger.
    - They haven't come close to that trigger since the last GWMP update in the 90's.
    - Saturated thickness is tracked for each well based on the average static ground water level minus the bedrock elevation and changes in individual wells over time.
- During the discussion of what is in the current GWMP regarding water quality, a participant asked what is the number of wells for phase I?
    - It was noted that Phase I doesn't have a trigger as all areas within the NRD are considered to be in Phase I, a trigger doesn't apply until Phase II.

- During the discussion of Geology and Hydrogeology 101, it was noted that the results received from Airborne Electromagnetic Survey (AEM) data will provide the NRD a tremendous amount of detail that wasn't previously available.
    - We know the geology of the area is variable due to past glacial advances and retreats.
- During the presentation on current ground water quantity data, it was noted that the NRD is working to use the AEM data to better understand water quantity issues.
    - A participant asked if the maps are publicly available. It was noted that they are not available yet but will be available to the SAC after review and updating.
    - One participant asked if these maps would show you the best possible spot to drill when trying to find a new well? It was noted that the maps would not provide as fine of detail needed but would show what areas may be better than others.
    - The soil infiltration layer is it based on both the root zone and vadose zone. It uses the first layer of the most recent ground water model.
    - Recharge zone shows what was calculated for the ground water model – can look year by year at what happened but the map is showing the total average.
    - A lot of studies are looking at how contaminants move through the vadose zone/soil/unsaturated zone. Things aren't only moving straight down – they are moving down and horizontal, or down and at an angle.
    - One participant asked if there was any predictability there, if you can tell where the contaminants may settle?
        - This is not entirely predictable at this time, but using the general direction of ground water flow would best represent the direction contaminant may move horizontally.
    - A participant noted that it's important to be clear about the limitations of the data and what is actually being stated.
        - A how-to-use guide is being developed for the interactive map.
    - A participant brought up recharge rates, noted that the amount that gets into that first layer of soil is absorbed and insignificant – are we really capturing how much is going to end up back in the aquifer?
- Open discussion

- One participant noted that the GWMP hasn't been updated for 30 years and wondered if it coincides with the proposal of the Lincoln pipeline? No there may be some overlap, but this plan to update the GWMP was started years ago.
    - GWMP is a comprehensive plan – needs to be consistent as we update our ground water rules and regulations. A plan update is due, and better information is available (modeling, AEM flights, etc.)
- One participant asked about the Lincoln well field: Does the City of Lincoln get to put the well field in because they need it, or do they need to come to the NRD? Does their size/need trump the GWMP? Are they governed on what they can take out of the ground?
    - The City of Lincoln will have to go through the NRD's permitting process for new wells.
- Participants were asked to participate in a Word Cloud activity using Mentimeter to express their ground water concerns.



    - There was not one singular concern from the group that stood out more than the others, but some concerns included access, future large users, irrigation, and others.
- Participants were asked to participate in a Word Cloud activity using Mentimeter to express their ground water quality concerns.



- The highest concern of the group for water quality was nitrate contaminants. Other concerns were equal and included soil health, arsenic, pollution, among others.