Concerns regarding CCS activities above, near and beneath sole source aquifers in Illinois

Carbon Capture and Storage/Sequestration [CCS] is one of several strategies wanted to reduce human-caused atmospheric carbon dioxide [CO2] and climate change.

Champaign County should support the state plan for CCS, but promote additional protections for planned projects over [beneath], affecting, or near sole-source aquifers such as the Mahomet Aquifer. However,

1. Protection of the groundwater quality and sustainable supply is paramount particularly for sole source aquifers. Sequestration of CO2 beneath sole source aquifers poses an uncertain risk to water quality.
2. Boundaries of the sole-source Mahomet Aquifer are not well known yet although HTEM investigations are underway and more are planned in coming years.
3. The geology and hydrogeology of the Mahomet Aquifer is not well-known nor is the recharge area[s] of the aquifer.
4. Subsurface geologic structures [bedrock faults, folds, etc.] in and around the Mahomet Aquifer Valley are insufficiently known.

WHAT TO DO.

1. Consult with state legislators to determine how implement adequate protections including
    a. An independent investigation of the Manlove Gas Field leak is warranted.
    b. Amend the Safety and Aid for the Environment in Carbon Capture and Sequestration Act to provide sufficient funding for both regulatory and independent geologic investigations and reviews, monitoring and reporting, and multiple public presentations with updated information and public input at least annually. CCS applications should include contingency plans for leakage from the geologic storage and pipelines with detailed plans and sufficiently funded bonds for the life of the storage.
    c. Create a Mahomet Aquifer Watershed Water Authority with ability to raise funds and exercise legal regulation.

2. Accelerate HTEM and seismic studies of surficial and bedrock geology of the Mahomet Aquifer. Insufficient knowledge of structural, surficial and bedrock geology makes safety assessment of the CCS facilities problematic.
3. The county has concerns including: the need for extensive geologic investigations for safety analysis; special provisions are wanted for extensive monitoring, maintenance and public reporting during and following CCS injections; and independent validation of modeling used for CCS predictions.

RESOLUTION

1. A 6 month moratorium on the injection of CO2 through a sole source aquifer, or the underground storage of CO2 under a sole source aquifer, while the county looks at concerns, the feasibility of a prohibition, and need for a special use permit for those activities. The moratorium can be renewed or extended if more time is needed.

Conduct ZBA hearings and CB action the resolution.