

# **Proposal for Preparing a Comprehensive Amendment on Carbon Sequestration Activity**

- 1. Establish a Carbon Sequestration Activity (CSA) Ordinance Task Force.** A Task Force is needed to work through the technical issues involved with a developing a comprehensive text amendment on Carbon Sequestration Activities that will replace the temporary moratorium adopted on 1/23/2025 (see the Appendix).

The Task Force should include a range of expertise sufficient to deal with the technical issues (see the Background). The Task Force should ideally be no more than approximately 10 individuals including no more than two members of ELUC and also including representatives from the Illinois State Geological Survey (ISGS), Illinois State Water Survey (ISWS), and other scientists and/or engineers with particular knowledge of the Mahomet Aquifer, and relevant public interest groups.

The Zoning Administrator should be an ex-officio member and the Planning and Zoning Department should provide staff support to the Task Force. Meetings to be held at County offices at a time most convenient to Task Force members.

- 2. Mission Statement or Objective of CSA Ordinance Task Force.**

Protect the public health and safety by identifying the likely impact of carbon sequestration activity on the quality and safety of groundwater resources in Champaign County and develop a Draft comprehensive ordinance(s) to regulate carbon sequestration activities within Champaign County.

- 3. Timeline for development of a comprehensive amendment on Carbon Sequestration Activity.**

- a. CB appointment of CSA Ordinance Task Force: March 20, 2025
- b. Monthly Task Force Meetings:
  - (1) Understand Mahomet Aquifer geology, HTEM geophysics, hydrogeology and boundary of the Mahomet Aquifer and tributary drainages (at least two meetings). Note that mapping

of the physical and geologic boundaries, properties, and extent of the Mahomet Aquifer using HTEM geophysics is underway and a Draft map of the results is anticipated to be available by the end of 2025.

- (2) Develop a Map of Risk for Mahomet Sole-Source Aquifer Contamination Potential (at least two meetings). The map should consider the following risks:
  - High Risk. Directly beneath the Mahomet Aquifer. A release of CO<sub>2</sub> into Mahomet Aquifer would have irreparable consequences.
  - Medium Risk. Proximate but not beneath Mahomet Aquifer. A release of CO<sub>2</sub> into the Mahomet Aquifer would have adverse consequences.
  - Low Risk. Distant but not remote from boundaries of the Mahomet Aquifer. A release of CO<sub>2</sub> into aquifer would not likely have adverse consequences.
- (3) Develop a Draft comprehensive Zoning Ordinance text amendment that will regulate carbon sequestration activities in Champaign County (at least two meetings). Once the Draft amendment is approved by ELUC, the Draft amendment should proceed to a public hearing by the Zoning Board of Appeals.

## **BACKGROUND**

### **Consideration[s] for Ordinance Restricting and Zoning Construction and Operation of Carbon Dioxide Sequestration in Champaign County**

Carbon Capture and Storage [CCS] including carbon dioxide sequestration are part of a strategy for reducing atmospheric CO<sub>2</sub> which has increased since the mid-1700s and considerably over the past 40 years. The Intergovernmental Panel on Climate Change [IPCC] Sixth Assessment Report (AR6): Climate Change 2023 stated that “Human-caused climate change is already affecting many weather and climate extremes in every region across the globe.” Furthermore, “Some future changes are unavoidable and/or irreversible but can be limited by deep, rapid, and sustained global greenhouse gas emissions reduction.” A CCS project primarily for research and demonstration of long term indefinite sequestration has been conducted for nearly a decade at an Archer Daniels Midland [ADM] facility in Decatur, IL.

In response to the scientific warning and federal incentives ILGA 103 SB 1289, The Safety and Aid for the Environment in Carbon Capture and Sequestration Act (SAFECCS Act) was enrolled in 2023 to facilitate CCS projects in Illinois. The SAFECCS Act sets forth provisions regarding: “...ownership and conveyance of pore space; integration and unitization of ownership interests; surface access for pore space owners; compensation for damages to the surface; and additional landowner rights” regarding this novel, relatively new enterprise.

Applications for development of several CCS projects over, proximal and near to the sole-source, Mahomet Aquifer in East Central Illinois; the 2016 accidental release of methane stored in the Manlove Gas Field; and two [2] incidents involving CO<sub>2</sub> gas escape from UIC Class VI wells at the Archer Daniel Midlands CCS project – raise concerns about the impact of CCS projects which might be constructed in Champaign County.

In the absence or paucity of ordinances to provide guidance it is incumbent for the Environment and Land Use Committee to consult expert authorities and study the potential impact of CCS activities on public health and safety including potential to contaminate the sole source Mahomet

Aquifer and other water bearing strata and aquifers in Champaign County. Such considerations will be used to draft ordinances to zone, restrict, limit and control CCS construction, operation and related activities.

*February 1, 2025 Chris Stohr*

## APPENDIX

### Safety Moratorium on Carbon Sequestration Activity

Approved by Full Board January 23, 2025

#### 1. Add the following to Section 3. Definitions:

**CARBON SEQUESTRATION ACTIVITY:** the injection of one or more carbon dioxide streams into underground geologic formations for long-term storage. This definition does not include carbon pipelines, as defined in the Illinois Safe CCS Act, found at 415 ILCS 5/59.

#### 5.5.1 Purpose and Intent

The purpose and intent of this Safety Moratorium on CARBON SEQUESTRATION ACTIVITY is as follows:

A. Temporarily prohibit CARBON SEQUESTRATION ACTIVITY, as defined in Section 3, within the boundaries of Champaign County.

B. For the purpose of allowing the Champaign County Board time to conduct research on the impact of carbon sequestration activity on the quality and safety of groundwater resources, so that the Champaign County Board may adopt comprehensive ordinance(s) regulating the sequestration of carbon within its borders.

#### 5.5.2 Duration of this Moratorium

This Safety Moratorium on CARBON SEQUESTRATION ACTIVITY will expire in 12 months, or 365 days, after its effective date.

#### 5.5.3 Activities Impacted by this Moratorium

A. Any CARBON SEQUESTRATION ACTIVITY, as defined in this moratorium, that is proposed after the effective date of this moratorium will not be approved by Champaign County until the expiration or revocation of this temporary moratorium.

B. Any CARBON SEQUESTRATION ACTIVITY that is pending, as of the effective date of this moratorium, will be held in abeyance until the 12 month-long moratorium has expired or been revoked.