

# PIPELINE ORDINANCE TEXT AMENDMENT PROPOSAL

Scott County Board of Supervisors

July 6<sup>th</sup>, 2023



## WHAT HAVE WE LEARNED?

- Pipeline and Hazardous Materials Safety Administration (PHMSA) says new regulations are needed and will be issued but we do not know what or when they will be.
- PHMSA continues to say that siting and routes are determined by the states (IUB).
- Dept. of Energy has a plan to build 90,000 SF of CO2 pipelines across the nation to achieve net zero carbon emissions.
- In the mean time, pipeline applicants are moving forward with the IUB with a 50' federal guideline.
- A pipeline company has sued the IUB in response to them being required to provide an emergency plan.
- Staff have heard that the CO2 pipeline coming through Scott County will be 16" - 20" in diameter. This is much larger than the 6" pipeline going through Story County.

## UPDATES ON COUNTY ZONING

- Story County has removed a lot of the emergency plan requirements.
- Story County and Linn County have also removed the formula used to determine setback distances in relation to pipeline diameter.
  - Story County has proposed a flat  $\frac{1}{4}$  of a mile setback from all dwellings, residential, commercial and industrial districts, and other land uses where many people gather.
  - Linn County is considering an ordinance that goes to a flat setback distance as well, without the formula, but will be retaining certain emergency plan requirements.

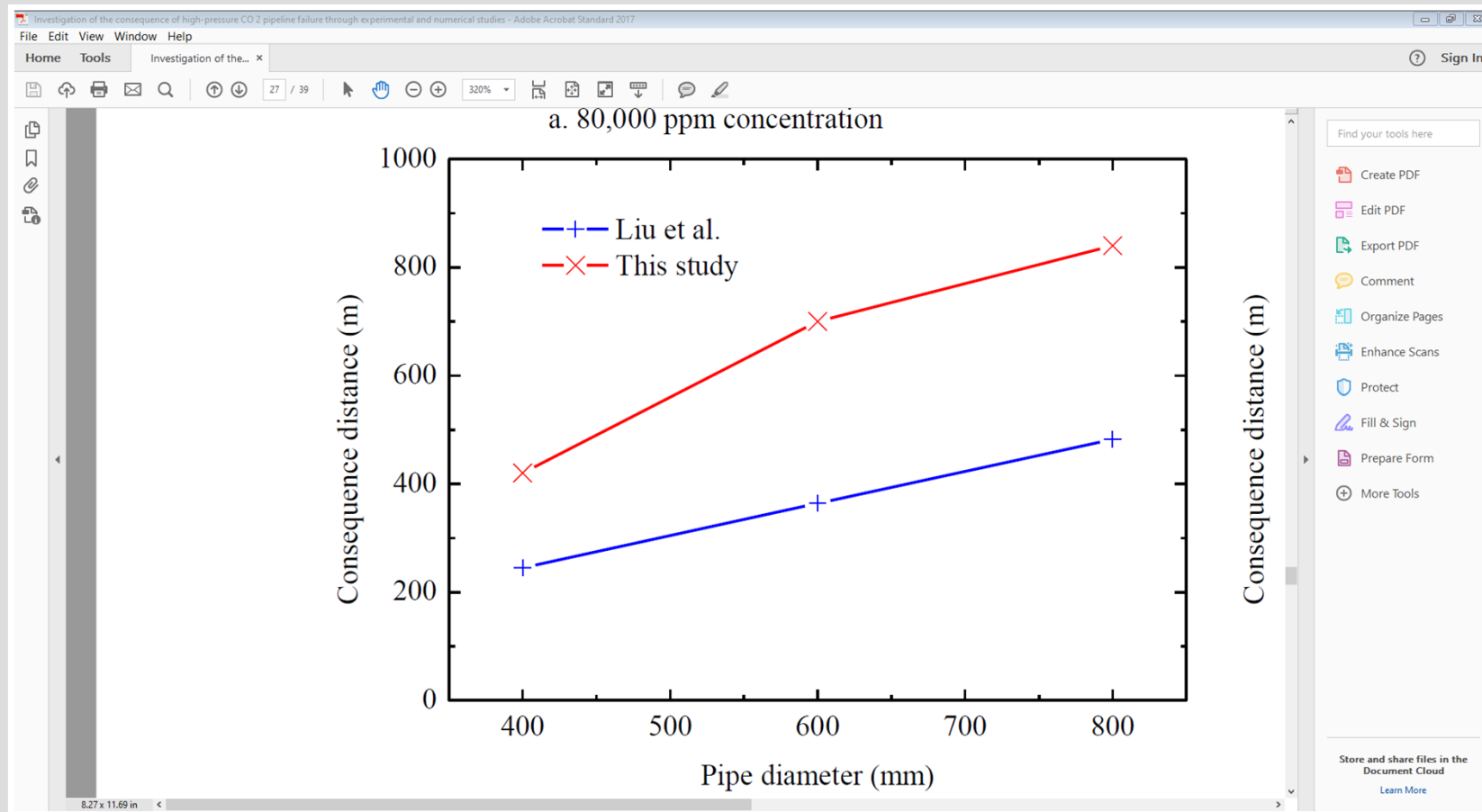
## SAFETY CONCERNS AND SCIENTIFIC STUDIES

- Study by Mazzoldi (Lawrence Berkeley National Lab, Berkeley, CA) 2015
  - Hazardous concentrations of CO<sub>2</sub> at downstream lengths from tens of meters to several hundreds of meters are possible.
  - ESD valves should be considered in order to reduce pipeline leakage risk.
- Study by Liu, Godbole (University of Wollongong, Australia) 2019
  - Pipe diameter size and wind speed can drastically affect how the CO<sub>2</sub> spreads during a rupture.
  - Previous studies had predicted too short of a radius of concentrated levels of CO<sub>2</sub>.
  - Considered type of pipeline break, wind speed, diameter of pipe, and found that all three variables will change CO<sub>2</sub> content of the air, distance and dispersion speed over time.
  - Ultimately concludes that the distance where a population could be poisoned from a CO<sub>2</sub> pipeline is as far as 1,180 ft for a 7.8" wide pipe, 2,460 ft for a 15.75" wide pipeline, or 3600 ft for a 23.6" wide pipe.

# WHAT SETBACK IS RIGHT FOR SCOTT COUNTY?

Consequence distance suggested in study for a 500 mm (19.7") pipeline: 550 m (1804')

Staff have suggested a 1600' setback based on this information.



## HOW SETBACK IS APPLIED

- 1600' from all dwellings.
- 1600' from all zoning districts other than A-G and A-P
- 1600' from sensitive land uses such as, retirement and nursing homes, family homes, schools, childcare homes and centers, group homes, hospitals, detention facilities, human service facilities, campgrounds, day camps, cemeteries, stables, amphitheaters, shooting ranges, golf courses, stadiums, parks, houses of worship, auditoriums
- 1600' from confined animal feeding operations (CAFOS) subject to the master matrix process. This language should be clarified further.

## ORDINANCE TEXT

- Amend Section 6-4(B) FARM EXEMPTIONS of the Zoning Ordinance for Unincorporated Scott County by editing:
- A special exemption applies to certain matters regulated by the Iowa Utility Board. The exemption from complying with the ordinance applies to public utilities and associated structures and equipment. Exempted public utilities are urged to comply voluntarily with the zoning requirements and Scott County Land Use Policies. This exemption does not include communications towers for telephone, cellular, and cable television companies, and other public and private towers as referenced in Section 6-9 D.(1) herein below.



## ORDINANCE TEXT

Amend Section 6-5 DEFINITIONS of the Zoning Ordinance for Unincorporated Scott County by editing:

- **Section 6-5(98) PIPELINE** All parts of those physical facilities through which a gas or liquid moves in transportation, including pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies.
- **Section 6-5(101) PUBLIC UTILITY** A public utility as defined in the Iowa Code Chapter 476.1 and municipally owned waterworks or wastewater facilities, waterworks having less than two thousand customers, joint water utilities established pursuant to Iowa Code Chapter 389, rural water districts incorporated and organized pursuant to Iowa Code Chapters 357A and 504, cooperative water associations incorporated and organized pursuant to Iowa Code Chapter 499, districts organized pursuant to Iowa Code Chapter 468, or a person furnishing electricity to five or fewer customers either by secondary line or from an alternate energy production facility or small hydro facility, from electricity that is produced primarily for the person's own use.

## ORDINANCE TEXT

Amend the Zoning Ordinance for Unincorporated Scott County by adding a new Section 6-6 W as follows:

### **6-6. GENERAL REGULATIONS PROVISIONS**

**W. Hazardous Liquid Pipelines: Hazardous liquid pipelines are allowed in A-P and A-G districts, subject to the requirements of this section. These standards do not apply to existing pipelines.**

**I. Setbacks Required.**

- A. A setback of 1,600 feet shall be required from all dwellings, areas zoned R-1 (Single Family Residential), R-2 (Multi-Family Residential), CAD-R (Community Area Development Residential), CAD-PVC (Community Area Development Parkview Commercial), C-1 (Neighborhood Commercial), C-2 (Commercial and Light Industrial), I (Industrial), and I-F (Industrial Floating), retirement and nursing homes, family homes, schools, childcare homes and centers, group homes, hospitals, detention facilities, human service facilities, campgrounds, day camps, cemeteries, stables, amphitheaters, shooting ranges, golf courses, stadiums, parks, houses of worship, auditoriums and structures containing a confined animal feeding operation large enough to be subject to the master matrix process.
- B. A setback of 1,600 feet shall also be required from city boundaries and areas identified as “To Be Annexed” on the Future Land Use Map.
- C. The setback shall be measured from the pipeline to the closest point of the building or property line, depending on the identified use type.

## ORDINANCE TEXT

### 6-6 W Continued:

- 2. Emergency Plan. A copy of an emergency response or preparedness plan shall be submitted to assist with the County's emergency response planning. The plan may be a preliminary or draft version of an emergency response plan that would meet the requirements of the federal Pipeline and Hazardous Materials Safety Administration. The County will determine whether the information in the plan is sufficient for the County to plan its own emergency response and may request additional information.
- 3. Authorizations Required. Any person proposing to construct a hazardous liquid pipeline shall obtain all required federal, state, and local permits and any private easements or other land use permissions prior to commencing construction and submit documentation of such authorizations with the permit application.
- 4. Petition for Reduced Setback. Any person proposing to construct a hazardous liquid pipeline can apply to the Scott County Zoning Board of Adjustment for a special use to allow a hazardous liquid pipeline with a reduced setback from that required in Section 6-6 W(1)A. The application should include a detailed third party report prepared by a qualified professional engineer that includes plume modeling and other relevant information on why the required setback is excessive and how the proposed reduced setback will be safe.

## ORDINANCE TEXT

- Amend the Zoning Ordinance for Unincorporated Scott County by editing Section 6-9 B(5) as follows:
- Public utilities and gas/commodity pipe lines and associated structures and equipment, including substations and hazardous liquid pipelines which shall meet the standards of Sec 6.6 VV, which includes required setbacks and other requirements. All structures of the utilities which exceed 35 feet shall be located where disruption of agricultural, residential or commercial activity is minimized. The base of towers shall be located at least the distance of the height of the tower from any existing, and adjacent neighboring structure(s).