

MINUTES OF REGULAR MEETING**CHAMPAIGN COUNTY CARBON SEQUESTRATION ACTIVITIES TASK FORCE****102 East Main Street****Urbana, IL 61801****DATE: September 3, 2025****PLACE: Shields-Carter Meeting Room****102 East Main Street****TIME: 5:30 p.m.****Urbana, IL 61801****MEMBERS PRESENT:** Christopher Stohr, Andrew Rehn, Eric Thorsland, Jon Cagle, Ted Krachmer**MEMBERS ABSENT:** Pam Richart, Bailey Conrady, Debra Feinen, Allen Wehrmann, Lucas Conrady**STAFF PRESENT:** John Hall, Jacob Hagman**OTHERS PRESENT:** Randall Locke, Jen Locke

1. Call to Order

Chris Stohr called the meeting to order at 5:31 p.m.

2. Roll Call and Declaration of Quorum

The roll was called. A Quorum isn't present, but no action will be taken at the meeting per Dr. Stohr.

3. Approval of Agenda/Addendum

Mr. Cagle motioned to approve the agenda, seconded by Mr. Thorsland. The motion passed via voice vote.

4. Approval of Minutes from May 28, 2025

Dr. Stohr said he had a few minor corrections for the minutes and encouraged everyone to submit minor edits. Mr. Thorsland motioned to approve the minutes, seconded by Mr. Cagle. The motion passed via voice vote.

5. New Business – Review of Draft Carbon Sequestration Amendments for Champaign CountyDr. Stohr mentioned an article from The Washington Post about burying carbon underground (<https://www.washingtonpost.com/climate-solutions/2025/09/03/carbon-capture-storage-limit/>). Dr. Stohr stated that the writer concludes that there's a lot more carbon that needs to be buried than there are currently places to bury it.

Dr. Stohr thanked Mr. Hall for all the effort he has put into the draft of the carbon sequestration amendments. Dr. Stohr said the present members of the task force have physical copies of the draft amendment along with some maps that were used when preparing the ordinance. Dr. Stohr continued that he also handed out some questions he came up with regarding the ordinance. Dr. Stohr stated that no

1 action would be taken at the meeting about the draft amendment. Dr. Stohr asked the members present if
2 they had any questions or statements about the ordinance.
3

4 Mr. Thorsland said that he found a couple of typos. Mr. Thorsland stated that the standard table included
5 in the amendment is missing information for the zoning districts. Mr. Thorsland said the amendment
6 shows CR (Conservation Recreation), Ag, & Ag, and he believes those Ag zoning districts are AG-1 and
7 AG-2. Mr. Thorsland said the missing information is likely a formatting issue. Mr. Hall thanked Mr.
8 Thorsland for the correction. Dr. Stohr asked if there were any other questions or statements. Mr.
9 Thorsland asked Mr. Hall to discuss the ordinance at a high level before addressing questions.
10

11 Mr. Hall said the difference between the two draft ordinances is simple. Mr. Hall continued that one
12 version only protects the Mahomet Aquifer, which is a sole source aquifer, and the other version
13 includes all major sand and gravel aquifers as mapped by the Prairie Research Institute. Mr. Hall said
14 the maps handed out show major sand and gravel aquifers and state the definition of major aquifers. Mr.
15 Hall said the other map is statewide, but it makes it hard to localize Champaign County. Mr. Hall stated
16 that he included the Land Resource Management Plan (LRMP) maps to understand better the extent of
17 major sand and gravel aquifers in Champaign County. Mr. Hall said the LRMP was accepted by
18 Champaign County in 2010.
19

20 Mr. Thorsland said the state law that was passed only protects the Mahomet Aquifer, and he wants to
21 know if the Board wants to do more than the law requires or comply with it. Mr. Thorsland stated he
22 wants to protect all sand and gravel aquifers. Mr. Thorsland continued that companies in the industry
23 might say it's a ban in the whole county, but the map shows that it can be done, just that the Board
24 doesn't want it to happen where there's water that people drink. Mr. Thorsland said he knows people
25 drink water in other places, but those are localized wells.
26

27 Mr. Thorsland said in his experience, when American Water did its well drilling near residences, they
28 worked with everyone whose water was sucked dry as soon as the pumps were turned on. Mr. Thorsland
29 stated that an innovative company would come in and do the same thing by working with residents to
30 mitigate anything bad before needing to clean up after the fact. Mr. Thorsland thanked Mr. Hall for his
31 work on this text amendment. Mr. Hall said that all of the standards used were from Ms. Richart. Mr.
32 Hall continued that he has additional questions for Ms. Richart every day because the information she
33 provides is just the tip of the spear on what people need to be aware of, and she offers essential work.
34 Mr. Thorsland said he agreed and added that he also leans towards protecting the water that feeds the
35 aquifer.
36

37 Dr. Stohr said the difference between protecting the Mahomet Aquifer and all sand and gravel aquifers
38 is the principal sticking point for the ordinance. Dr. Stohr said he has reservations about the term
39 "protecting the Mahomet Aquifer." Dr. Stohr took out a model of the Mahomet Aquifer and invited
40 everyone to examine it. Dr. Stohr stated that the model was created by Barb Stiff, which shows the
41 valley where the Mahomet Aquifer is located, along with occurrences of sand and gravel aquifers.
42

43 Dr. Stohr explained that the model displays the location of the Mahomet Aquifer, which flows from
44 Indiana into Iroquois and part of Vermilion counties, and extends under Champaign County, bending
45 toward Decatur and connecting with the Wisconsin glaciation. Dr. Stohr said the Mahomet Aquifer
46 continues into the Mississippi Delta.
47

48 Dr. Stohr said he brought the model to demonstrate that the Mahomet Aquifer lies within a bedrock
49 valley, which will be studied, and the results will provide more knowledge about the actual topography

1 and subsurface relief. Dr. Stohr said the verbiage of the ordinance protects “this” and “that” but “not
2 this,” even though all of the parts are within the Mahomet Aquifer valley.

3
4 Dr. Stohr stated that Al Wehrmann pointed out that the HTEM presentation at the last meeting only
5 showed slices of the area around the Mahomet Aquifer, along with displaying the basic boundaries of
6 the Mahomet Aquifer. Dr. Stohr continued that Dr. Mwakanyamale-Gilkie presented information
7 explaining that the areas previously thought to be sand and gravel aquifers also contain silt and clay,
8 which are less permeable to water. Dr. Stohr said he would like to see the ordinance protect not just the
9 Mahomet Aquifer, but the entire Mahomet Aquifer bedrock valley where the aquifer resides. Dr. Stohr
10 said the ordinance preventing CO2 from being stored under the valley would provide additional
11 protections. Dr. Stohr continued that including the entire valley would also address the concern about
12 designated aquifer boundaries and the proximity of sequestration to the aquifer.

13
14 Dr. Stohr said the maps show “little blobs” in areas of Sadorus, Pesotum, Crittenden, Carman, and Ayers
15 townships, which the HTEM did not scan since the scanning primarily occurred over areas known as
16 Mahomet Aquifer regions. Dr. Stohr said he wonders if there are connections with the sand and gravel
17 aquifers in the southern part of the county and the Mahomet Aquifer. Dr. Stohr stated he encouraged
18 members of the task force to reach out to elected officials, especially (state) Senator Faraci, about
19 getting additional funds for HTEM scanning of southern Champaign County.

20
21 Dr. Stohr referenced the LRMP map, which shows sand and gravel aquifers, and added that Mr.
22 Wehrmann said “sand and gravel aquifers” isn’t a technical term; nor is the common phrase “major sand
23 and gravel aquifers,” but it is less ambiguous. Mr. Thorsland asked Dr. Stohr if the definition for the
24 ordinance change to “Aquifer Valley” would also include the sand and gravel blobs that concern him.
25 Dr. Stohr referred to Mr. Locke to answer that.

26
27 Mr. Locke said that it's his understanding that the blobs wouldn't be included in the Mahomet Aquifer
28 Valley. Mr. Locke continued, saying that the blobs could be included based on the opinions of other
29 experts with a better understanding of bedrock geomorphology. Mr. Locke stated that it's unlikely to
30 include all sand and gravel above the Mahomet Aquifer Valley. Mr. Locke said that the new designation
31 would raise questions about how far the valley extends, where the valley stops, and what if the valley
32 doesn't have sand and gravel aquifers. Dr. Stohr said it might be a tributary to the bedrock valley, which
33 might not have sand and gravel or have sand and gravel aquifers that can be currently identified by
34 current geophysical means.

35
36 Mr. Thorsland expressed concern that waiting for more data would result in an endless cycle, and the
37 task force needs to establish something productive, definable, and that can garner some form of
38 acceptance. Mr. Thorsland said that he believes that the “major sand and gravel” definition is the closest
39 thing to what is wanted. Mr. Thorsland continued that, including verbiage about the need for a complete
40 geologic mapping if a site is selected. Mr. Thorsland said if it's discovered that a proposed site is within
41 the Mahomet Aquifer Valley, that means a new site is needed. Mr. Thorsland said having site-specific
42 geologic mapping requirements would provide a double layer of protection. Mr. Thorsland stated that
43 the result would be an amendment that's definable, within reason, and has a secondary protection when
44 the site's proposed.

45
46 Mr. Rehn stated that the LRMP map was created using publicly available data, and he recommends
47 using that map as guidance for the text amendment. Mr. Rehn said this would allow maps to be updated
48 as more data is received, but that doesn't happen very often, so it provides a stable framework for the
49 text amendment. Dr. Stohr stated that the LRMP map lacks details, and Mr. Rein noted that, based on

1 the data, the map should contain as much information as its resolution allows. Mr. Locke stated that the
2 printed version of the LRMP map has a scale of 1:500,000, which is an inappropriate scale for use at the
3 local level or in siting determinations. Mr. Rein said that if the task force is limited to the 1:500,000
4 scale, he doesn't believe they'll ever pick anything correctly. Mr. Rein said that if the state decided to
5 regulate the Mahomet Aquifer based on a 500-foot contour, it would have to make a decision. Mr. Rein
6 continued that it is up to the task force to create a line to ensure clarity for the text amendment. Mr. Rein
7 continued that if this is the data they have, and it's good data, he believes it should be used. Mr. Rein
8 said the data is powerful, and if the task force is slightly wrong, it would be unfortunate for some
9 developers.

10
11 Mr. Cagle stated that, based on Mr. Thorsland's comments, a geological survey is required. Mr. Cagle
12 continued that using the map as a starting point, and when the survey comes in, it can be decided if the
13 developer would be over the aquifer, and if they are, that would stop the sequestration.

14
15 Mr. Thorsland said using the LRMP map gives developers a broad brush of where not to start looking
16 for sequestration sites. Mr. Thorsland continued that site-specific clauses in a text amendment would
17 catch anything that is missed on the large-scale map. Mr. Thorsland stated that the distances being
18 considered are nuclear bomb distances, not horseshoe distances. Mr. Thorsland said that if a developer
19 finds a landowner who's interested and thinks they have the geology, the next step would be to conduct
20 a study and find out that the land isn't suitable; hopefully, they would have a second location they could
21 use. Mr. Thorsland clarified that "not good" means the area is either sand or gravel, or within the
22 Mahomet Aquifer Valley.

23
24 Mr. Locke said that he's not on the task force, he wants to be judicious in responding to questions, and
25 he's happy to provide information. Mr. Locke stated that bedrock mapping is conducted at a 1:24,000
26 scale, which is a finer scale than those in the aggregate. Mr. Locke said that the boundaries of the 500-
27 foot contour line are much better defined and more technical than blobs. Mr. Locke continued that,
28 according to the metadata with the LRMP coverage, the regional data is not suitable for site or small-
29 scale use. Mr. Thorsland inquired whether it would be feasible to use the secondary scale as a standard
30 for the close-up study of a proposed site. Mr. Thorsland stated that the 1:24,000 scale is the industry
31 standard. Mr. Locke said that the 1:24,000 scale means that 1 inch represents approximately 1,000 feet.
32 Mr. Locke continued that the secondary scale is not perfect, but it's more suitable for the task force. Mr.
33 Thorsland inquired about incorporating that scale into the site-specific study, which is required once a
34 carbon sequestration site is proposed.

35
36 Mr. Hall said that he was having a hard time following the conversation. Mr. Rein asked what data set
37 was being discussed, whether it was part of a geospatial database, and if the higher-resolution
38 information was being discussed. Mr. Locke said he's referring to the bedrock data, which is typically
39 used by the US Geological Survey and includes topographic and bedrock information. Mr. Locke stated
40 that the 1:24,000 scale is generally used. Mr. Cagle asked if the state had landed on their definition due
41 to the accuracy of the data. Mr. Locke said he was trying to distinguish between two different map
42 scales, and the bedrock data may have more detailed information than the sand and gravel aquifer data.
43 Mr. Locke continued that he'd have to go back and check the bedrock data, which might be more
44 accurate than the 1:500,000 scale, as it could be 1:100,000 or 1:250,000.

45
46 Dr. Stohr said the discussion relates to a conversation he had with Mr. Rein. Dr. Stohr continued that an
47 outline or diagram, such as the LRMP, is a good representation similar to the State's sand and gravel
48 aquifers map. Dr. Stohr stated that in the text amendment, they can state that no sequestration can occur
49 within the bedrock valley or beneath the Mahomet Aquifer, and that it would be up to the developer to

1 demonstrate that they are not beneath the protected area.

2
3 Mr. Rein said the text amendment should also include a requirement that the developer submit sufficient
4 funds for an independent geological review conducted by a geologist hired by the county board. Mr.
5 Rein asked if any of the additional steps would be worth it for something that might not come up,
6 because he doesn't believe any developer would want to sequester if their project might be nixed. Mr.
7 Rein said he would be okay with the developer paying for an expert because it's essential to protect the
8 county board and the community.

9
10 Dr. Stohr stated that Mr. Hall included verbiage in the draft ordinance that allows the county to engage
11 an expert, and the text will list several types of experts that might be involved for different tasks, ranging
12 from drainage tiles to vegetation management. Dr. Stohr said he hopes to review the verbiage before the
13 next meeting to determine if it is satisfactory or if it requires further amplification or revision.

14
15 Mr. Rein gave the example of going to assess a possible site and finding a layer of sand and gravel. Mr.
16 Rein asked how anyone knows if that area connects to the Mahomet Aquifer, and whether a geologist
17 would be confident enough to answer whether the site is or is not. Mr. Rein said it sounds like the task
18 force is being asked to collect more data to find out if sand and gravel are connected to the Mahomet
19 Aquifer or not. Mr. Rein also wondered if the discussed glacial outlays also connect to the Mahomet
20 Aquifer. Mr. Rein stated that if the task force is being asked these questions now, how are they supposed
21 to regulate and have a permit application process that addresses these questions?

22
23 Dr. Stohr said that Mr. Rein posed interesting questions, which relate to a previous point brought up by
24 Mr. Thorsland about obtaining enough data. Dr. Stohr continued that there's a lot of uncertainty in
25 geologic work, and that's part of the reason why additional data gathering and measurements are made.
26 Dr. Stohr said it's still up to the applicant to demonstrate that they are not located under the Mahomet
27 Aquifer or within the designated Mahomet Aquifer Valley, and it is unlikely to be a concern of the
28 county board how the developer accomplishes that. Dr. Stohr said approval is needed from the US EPA,
29 the Illinois EPA, and other federal and state agencies to get permits.

30
31 Mr. Hall said it needs to be clear if the ordinance refers to the Mahomet Aquifer or the Mahomet
32 Aquifer bedrock valley. Mr. Hall stated it isn't clear to him what people are referencing when they say
33 "other major sand and gravel aquifers," because there currently aren't any mappings of those aquifers
34 that can be trusted.

35
36 Dr. Stohr said one version of the ordinance states "sand and gravel aquifers as determined by the Prairie
37 Research Institute." Dr. Stohr said they have references to the Mahomet Aquifer, which he believes
38 should be kept, and he likes the slight change to the Mahomet Aquifer bedrock valley. Dr. Stohr said the
39 "blobs" on the maps are areas about which they know little and are seeking suggestions from the Prairie
40 Research Institute on what to call them.

41
42 Mr. Cagle said that, given the general uncertainty and the level of regulation that is likely to be instilled,
43 why can't the task force recommend a county-wide ban on sequestration? Dr. Stohr said he spent
44 decades researching landfills, sanitation, hazardous waste, and radioactive waste. Dr. Stohr continued
45 that people do not really seek to possess those items, but they are part of society. Dr. Stohr stated that
46 the county doesn't want to have random or open dumping of toxic materials in locations like creeks and
47 other bodies of water. Dr. Stohr continued that undesirable waste has to go somewhere, and he thinks
48 they are doing their best to find areas where there's the least risk.

1 Dr. Stohr said that carbon in the atmosphere has been a warning for at least 50 years, but human
2 behavior hasn't changed. Dr. Stohr stated that carbon sequestration is one of the strategies for helping
3 remove harmful chemicals from the atmosphere. Dr. Stohr continued that the Washington Post article he
4 mentioned at the top of the meeting discusses how only a few places are suited for carbon sequestration,
5 and the Illinois Basin happens to be one of those places, which is why the Manlove gas field is located
6 where it is. Dr. Stohr said that having the field where it is helps provide people with natural gas all year
7 round, even though it poses a risk. Dr. Stohr continued that, unfortunately, an incident with the gas field
8 will result in millions of dollars being spent to provide water to families impacted.

10 Dr. Stohr said the task force shouldn't suggest a blanket prohibition because some areas in the county
11 might be less risky for carbon sequestration. Dr. Stohr stated that those areas should require a Special
12 Use Permit. Dr. Stohr continued that requiring a Special Use Permit provides a high level of protection,
13 not as much as prohibition, but it puts the onus on the developer to meet all the carbon sequestration
14 requirements.

16 Mr. Thorsland said he was concerned that a blanket prohibition would lead to unintended consequences.
17 Mr. Thorsland continued that as soon as the county says, "You can't do that," some developer would
18 likely argue that they want to do it, potentially opening the county up to litigation. Mr. Thorsland said he
19 doesn't want to put the county in a position of defending something when they are trying to do
20 something good. Mr. Thorsland stated that if the county does a blanket prohibition, someone's going to
21 decide that the Board is trying to be a bunch of crunchy hippies wearing Birkenstocks in Urbana and just
22 messing up everybody's profit margins.

24 Dr. Stohr called on Jen Locke for comment since she is a lawyer. Ms. Locke stated that a one-year
25 moratorium is currently in place, starting in January 2025. Ms. Locke said that there is strong support for
26 a county-wide blanket ban. Ms. Locke continued that the county board would argue that if a ban were
27 put in place, it would lead to more legal challenges. Ms. Locke stated that specific terms are needed, and
28 waiting for more data will result in blanket extensions after blanket extensions, and that's not sufficient
29 either. Ms. Locke said that consensus data could be used, but consensus definitions need to be clear so
30 that a developer can understand. Ms. Locke said she agreed with the spirit of the valley, it needs to be
31 definable.

33 Dr. Stohr called on Mr. Krachmer, as he had been quiet during the meeting. Mr. Krachmer said he didn't
34 have much to add, but he agrees with the spirit of the discussion so far. Mr. Krachmer said his employer,
35 American Water, is interested in protecting the Mahomet Aquifer. Mr. Krachmer continued that there's
36 a lot of unknown outside of the American Water boundaries, and added that they are in favor of
37 economic development and economic activity, but he didn't think they would support a blanket ban.

39 Mr. Cagle asked why the risk of litigation is not the same if someone wants to do carbon sequestration,
40 as opposed to doing it around Sidney. Mr. Cagle said that nothing appears on the LRMP around Sidney,
41 but if the geological study comes back and discovers something significant there, and the county expert
42 says that sequestration can't happen in that spot, would that not invite the same type of litigation? Mr.
43 Cagle continued that the developer would likely return and claim that their expert states everything is
44 fine, and it's the county's expert who is wrong. Mr. Cagle asks why the risk is different.

46 Ms. Locke said that laws can fail for being overbroad, and a blanket moratorium would be much more
47 likely to be overbroad than having a special use requirement. Ms. Locke said there could still be
48 litigation, but there are already dueling experts, which is different from "we want to do this and your
49 rule says absolutely not." Mr. Thorsland said if the county has a blanket ban and a developer comes in

1 and wants to pick a spot not designated as a sand and gravel aquifer, and their experts say the location is
2 fine, they could go before the county and say that they found a safe place for sequestration and could
3 challenge the blanket ban. Mr. Thorsland said the Special Use Permit would serve as an additional filter,
4 and if the developers find a suitable spot, the county would receive the data; if the place isn't
5 appropriate, the developers would be aware and would find another spot. Ms. Locke said that the
6 ordinance could be updated as new data comes in, either from developers or from HTEM scans.

7
8 Mr. Rein said he's not sold on the idea that two geologists butting heads is going to provide a clear
9 answer. Mr. Rein stated that the Mahomet Aquifer has been studied for a long time, and he's not saying
10 the geologists don't do a good job, but this is a complicated question. Mr. Rein said the Mahomet
11 Aquifer is deep underground and consists of a mixture of rocks and sand, which makes it either a sand
12 and gravel deposit or a major sand and gravel deposit, the definition of which still needs to be legally
13 established, allowing for informed decisions to be made. Mr. Rein stated that it seems the discussion
14 gets messy, which is why he thinks a map is needed; if experts receive new information, the map can be
15 updated accordingly. Mr. Rein said that if resolution on the maps is a problem, one solution could be
16 putting a buffer space equal to the resolution. Mr. Rein said it's an overly protective and safe approach,
17 which is reasonable and could be defended. Mr. Rein said he would prefer to provide a map, but the
18 buffer seems practical and implementable.

19
20 Dr. Stohr said that when approaching a boundary line on a map, it only indicates the likelihood of that
21 area being one thing or another, and in only a few places can you determine something with more
22 certainty. Dr. Stohr continued that between those known places are points of uncertainty, and geologists
23 don't just "connect the dots"; they use other techniques, such as cartography and understanding how
24 streams and valleys form underground. Dr. Stohr stated that it would be problematic to have a small-
25 scale map that is often incorrectly enlarged and used as a boundary map.

26
27 Dr. Stohr said there will be disagreements among scientists on some points, but part of the process is
28 sifting through the minor or insignificant points and focusing on the central questions at hand. Dr. Stohr
29 stated that it's essential to have a clear, written definition covering items such as the Mahomet Aquifer
30 Valley, the Mahomet Aquifer, or the Banner Formation. Dr. Stohr continued that some of the verbiage
31 could be problematic because the Glasford Aquifer extends beyond the Banner, and may or may not
32 have connections at different points, and those locations are unknown.

33
34 Mr. Rein said that he believes the task force is facing numerous unknowns. Mr. Rein said it's fair to say
35 that the county board is concerned about water and wants the task force to be cautious. Mr. Rein said the
36 task force is debating locations near the borders of townships and the importance of allowing a
37 developer to sequester in those areas. Mr. Rein said he doesn't think that is a good use of time and feels
38 that a lengthy debate before the county board will also be worthwhile. Mr. Rein continued that the task
39 force isn't supposed to determine the border scientifically. Mr. Rein said he would love to see more
40 HTEM scanning of the county and working with (State) Senator Faraci to secure funding for that
41 project. Mr. Rein said it's not up to the county board to weigh every single moment, and developers
42 should be given maps that offer some certainty and possibly advice about how their current location
43 might be problematic, but an area nearby might be fine.

44
45 Ms. Locke asked how big a buffer would be needed based on the current map resolution. Ms. Locke
46 continued to ask if 10 feet, 100 feet, or a half-mile would be a big enough buffer.

47
48 Mr. Locke stated that buffers were discussed at the last meeting, and he believes they would be
49 detrimental for several reasons. Mr. Locke said that from a scientific perspective, if you pick a number,

1 it means something; otherwise, it is just arbitrary. Mr. Locke continued that, from a mapping
2 perspective, it depends on the map and what might be considered uncertainty of where something is or
3 isn't.

4
5 Mr. Thorsland said that, given the scale of the data, the size of the buffer would be enormous, as a
6 1:500,000 scale corresponds to an 8-mile buffer. Dr. Stohr said this is part of the reason why he
7 suggested protection for the Mahomet Aquifer Valley. Mr. Thorsland asked if the valley is better
8 defined, and Dr. Stohr replied that it's getting better defined, with the HTEM report expected to be
9 finished by the end of the year.

10
11 Mr. Locke said that when discussing scale, he's happy to provide additional content for the task force.
12 Mr. Locke addressed Mr. Rein's comment about updating maps. Mr. Locke said that maps provide
13 boundaries, which serve as a starting point, and can be continually updated with additional information.
14 Mr. Locke said if the task force considers using a map, it needs to be published, authoritative,
15 thoroughly reviewed through the scientific process, and on an appropriate scale. Mr. Locke continued,
16 saying that, related to litigation, adding a buffer or an inappropriate scale can be as tenuous as an
17 incorrect map and could be viewed as a blanket ban. Mr. Locke stated that discussing the scale is
18 essential in the context of what would be suitable for siting, so using an existing, published map is his
19 recommendation.

20
21 Mr. Locke stated that Dr. Stohr is attempting to utilize the Mahomet Aquifer Valley definition as a
22 means to protect a larger area; however, this approach raises questions about the contents of the valley,
23 specifically whether it consists of sand and gravel or something else. Mr. Locke said he believes the
24 discussion needs to focus on risk, specifically what increased risk is occurring and what the ordinance is
25 doing to mitigate it. Mr. Locke continued that he thinks there is a difference in risk assessment between
26 vertical and horizontal placement of sequestration wells. Mr. Locke asked how the ordinance is
27 decreasing risk, based on the available information about a known condition in an area or a reasonable
28 approximation, given the best available information that has been published.

29
30 Mr. Rein asked how to solve the scale issues because he feels that's a sticking point.

31
32 Mr. Locke said the "sand and gravel aquifer" is not an appropriate name, but he understands the
33 philosophy behind it because it indicates general areas where developers should avoid, as there isn't a
34 defined boundary. Mr. Locke continued, saying that it shows concern for an area and, if necessary,
35 requires additional study from a developer to confirm whether sand and gravel are located in that spot,
36 but it could also bring further problems. Mr. Locke said that one can't get around the scale problem
37 without additional data, and the reason the maps are published at a particular scale is that there is
38 insufficient data to do so at a better scale. Mr. Locke said that for general planning, they use a 1:2,000 or
39 1:5,000 scale, while typical geologic maps are best scaled at 1:24,000, which is 10 times the scale of a
40 zoning map, and 1:500,000 is well beyond that scale. Dr. Stohr compared the scale to using a state
41 highway map to navigate a city.

42
43 Mr. Thorsland stated that the task force has a map with a scale, some definitions in the ordinance, and
44 two different ordinances with different titles, specifically "Sole Source Aquifer" and "Sand and Gravel
45 Aquifers," as defined by the maps. Mr. Thorsland asked why the ordinance can't be called a prohibition
46 over the sole source aquifer (Mahomet Aquifer) AND all major sand and gravel aquifers, as defined by
47 maps, and only permitted with a Special Use Permit that requires further study of the particular site
48 using current technology and needs independent review. Mr. Thorsland said this would require
49 developers to go through the Zoning Board of Appeals, the Environment Land Use Committee, and the

County Board. Mr. Thorsland stated that as technology improves, so will information about proposed sites. Dr. Stohr said he liked the suggestion, and the proposed ordinance wouldn't require much change.

Mr. Hall said he didn't think any change would be needed. Mr. Hall continued that he's under the impression that a verbal description of what the major sand and gravel aquifer is necessary, while the location of the Mahomet Aquifer is well defined. Dr. Stohr stated that it appears the task force lacks a definition of "major sand and gravel aquifer," which is Mr. Wehrmann's preferred term.

Mr. Cagle asked about the legend on the LRMP map for showing the Mahomet Aquifer and wanted to know why that map couldn't be used. Dr. Stohr said the LRMP shows a lot of information for the northern part of Champaign County, but doesn't cover the southern part of the county.

Mr. Rein references the ordinance definitions and said that general statements aren't helpful. Mr. Rein said that major aquifers are defined as geological units capable of yielding 700 gallons of potable water per minute. Mr. Rein continued that potable water is defined as containing less than 250 milligrams per liter of dissolved solids. Mr. Rein stated that it's possible that the LRMP map was generated using well data that reflected that information, and some lines were drawn to indicate the boundary. Mr. Rein said the task force could likely come up with a description that scientists will use to debate what constitutes a major aquifer, which is what lawyers want. Mr. Rein stated that when developers test at proposed sites to see if they yield 700 gallons of potable water per minute and have 250 milligrams or less of dissolved solids.

Mr. Locke said that there isn't a specific thickness because the material itself varies in quality to produce water. Mr. Locke continued that it's possible to have a 10-foot thick unit that doesn't make 700 gallons per minute, which is a state-defined boundary for a high-capacity well. Mr. Locke said that if the quality of the material in the unit is less porous or permeable, it might require a 20 or 30-foot-thick layer to produce as much water. Mr. Locke stated that definitions are based on production, not physical characteristics of the unit.

Mr. Rein asked if a developer could drill a series of holes at a site, pump out the water, and then answer the question about production. Mr. Locke said he assumes the boundaries on the LRMP map are as they are because there has been an assessment of the thickness and materials, as well as the mathematically determined amount of water that location would be expected to produce. Mr. Rein asked if the data wasn't collected using actual pump tests, or was it derived from cores that were extrapolated to determine the amount of water produced. Mr. Rein said it appears the task force has moved away from using the LRMP map and has landed on a "don't do it in certain areas unless you prove that you're not over the aquifer."

Mr. Locke stated he never said to go away from the LRMP map. Mr. Rein said the map is helpful, but it might mean that developers drill right next to a boundary. Mr. Locke said he envisions using the LRMP map since it scales and is a published map. Mr. Locke stated that the map might be a bit old, but it gives a starting point for citing. Mr. Locke continued that when developers obtain a Special Use Permit, they utilize a definition, such as the one the task force is working on, which requires further study in that area. Mr. Locke said that if the site fails to meet expectations, that's something that can't be waived. Mr. Locke said that if the site is suitable, then sequestration can occur. Mr. Locke stated that the task force should start with something that has a line on it, and other qualifiers can be added during the Special Use Permit process.

Mr. Krachmer inquired whether the LRMP map has undergone peer review and is generally recognized

1 as accurate. Mr. Locke stated that the map is the best available map of sand and gravel aquifers that has
2 been produced; however, it is not advisable to use it at a local scale. Mr. Rein said that developers will
3 use the map to see where they can go and start their site research, and see what they find. Mr. Locke said
4 the developers would know to avoid townships over the Mahomet Aquifer, but the people down in
5 Raymond Township might have developers knocking on their doors.

6
7 Mr. Rein said that he feels like he's switched sides when it comes to maps. Mr. Rein said the task force
8 is going in the direction of not needing a map and using phrases like "Don't do it under the Mahomet
9 Aquifer. Don't do it under any major sand and gravel aquifer." Mr. Rein stated that developers will drill
10 some wells, test what they find, and hopefully not have to argue in court when the experts disagree. Mr.
11 Rein continued, saying that perhaps this is where the task force needs to land with the ordinance. Mr.
12 Rein stated he assumes developers will spend millions of dollars to put together a project, will look at
13 the map, and pick a non-aquifer location. Mr. Rein stated that the task force needs to look at definitions
14 closely.

15
16 Mr. Locke said that the current state requirements for exploratory wells produced by private companies
17 do not require them to submit information to the state Geological Survey. Mr. Locke stated that they
18 usually obtain information for private water wells, but those don't reach the depth necessary for
19 sequestration.

20
21 Mr. Cagle stated that information can be controlled at the County Board level because they are the ones
22 who determine how the ordinance is written, and the task force should do the same now. Mr. Cagle
23 continued that they're the ones who decide what developers must do, and they are the ones who select
24 the experts to review the data. Mr. Cagle stated that developers should give the money to the county, and
25 the county should do the testing. Dr. Stohr asked where Mr. Cagle got that information from in the
26 packets. Mr. Cagle stated page 46, and said the verbiage is, "Submission in the application, applicant
27 shall submit a certified check to Champaign County for \$250,000 used to cover the county's costs,
28 including but not limited to cost of third party experts, geologists, and landscape architects."

29
30 Mr. Hall said that if the county is paying for the expert, it will get the data. Mr. Hall said the suggestion
31 seems to be that if test boring is done for a sequestration facility, the data must be submitted to the
32 Prairie Research Institute. Mr. Hall asked if the county could require that. Dr. Stohr said he believed the
33 data collected would need to be forwarded to the US EPA, which has ultimate jurisdiction over Class VI
34 wells. Mr. Rein said he wasn't asking for regulation of the data, just that it be shared with others who
35 collect data, so everyone has access to the data.

36
37 Dr. Stohr said it sounds like the task force is nearing an agreement. Dr. Stohr stated that before the next
38 meeting, he will meet with Mr. Hall and others to finalize the verbiage for the ordinance. Dr. Stohr
39 continued that hopefully, at the next task force meeting, a vote can be taken to send the ordinance
40 verbiage to the ELUC before it is sent to the ZBA, and then it returns to the ELUC.

41
42 Mr. Rein said that they should be careful with the definitions, as he doesn't want a situation where
43 developers poke holes in the Mahomet Aquifer because the verbiage doesn't accurately define what is
44 being protected.

45
46 Ms. Locke inquired about the timeline, noting that it is already September and the one-year moratorium
47 will need to be extended. Dr. Stohr expressed his appreciation for the work being done by the staff,
48 thanking Mr. Hall and Ms. Richart for their efforts. Dr. Stohr also thanked Mr. Hagman for his work on
49 the meeting minutes.

1
2 Dr. Stohr said they would proceed to the next agenda item, which is public participation.
3

4 **6. Public Participation**
5

6 Mr. Locke said he submits all comments made previously during the meeting. Mr. Locke said that he
7 had two comments related to Ms. Locke's moratorium question. Mr. Locke stated that there are not
8 currently any wells proposed within Champaign County, and it takes two or three years to go through
9 the Class VI permitting process with the US EPA, which means no imminent plans and people would
10 know well in advance. Mr. Locke said the second comment pertained to how to submit comments or
11 additional information to the task force regarding ordinance verbiage and whether the comments would
12 be submitted after the new text is prepared.
13

14 Dr. Stohr said verbiage suggestions are welcome at any time, and he will try to incorporate them into the
15 new draft. Dr. Stohr stated he expects even more comments about verbiage after the latest draft is sent
16 out before the next meeting. Dr. Stohr said he hopes to have a quorum at the next meeting, allowing the
17 task force to vote on the ordinance.
18

19 Mr. Locke thanked the task force for allowing him to provide comments and answer questions.
20

21 **7. Next Meeting TBD**
22

23 **8. Adjournment at 6:57 pm**