

MINUTES OF REGULAR MEETING

CHAMPAIGN COUNTY ZONING BOARD OF APPEALS

1776 E. Washington Street  
Urbana, IL 61801

DATE: November 15, 2018 PLACE: Lyle Shields Meeting Room  
1776 East Washington Street  
Urbana, IL 61802

MEMBERS PRESENT: Catherine Capel, Frank DiNovo, Ryan Elwell, Debra Griest, Jim Randol,  
Marilyn Lee, Brad Passalacqua

MEMBERS ABSENT: None

STAFF PRESENT: Susan Burgstrom, John Hall

OTHERS PRESENT: Tannie Justus, Timothy O'Connor, Charles White, Pat Fitzgerald, James  
Meadows, William McKee, Shawn Walker, Kara Walker, Aaron Esry, Tom  
Huddleston, Jonathan Leech, Patrick Brown, George Gunnoe, Jeff Justus,  
Erica Justus, Laurel Bergren, Ernst Nemeth, Doug Nesbitt, Lisa Nesbitt, Paul  
Littleton, Matt Herriott, Scott O'Neill, Ted Hartke, Daniel Herriott, Marjorie  
Tingley

1. Call to Order

The meeting was called to order at 6:30 p.m.

2. Roll Call and Declaration of Quorum

The roll was called, and a quorum declared present.

Ms. Capel informed the audience that anyone wishing to testify for any public hearing tonight must sign the witness register for that public hearing. She reminded the audience that when they sign the witness register they are signing an oath.

3. Correspondence

None

4. Approval of Minutes (July 26, 2018)

Ms. Capel entertained a motion to approve the July 26, 2018, minutes, as submitted.

Ms. Griest moved, seconded by Mr. Passalacqua, to approve the July 26, 2018, minutes, as submitted.

1 Mr. DiNovo stated that he must abstain from the vote to approve the July 26, 2018, minutes because he was  
2 absent from the meeting.

3  
4 Ms. Capel asked the Board if there were any required additions or corrections to the July 26, 2018, minutes,  
5 and there were none.

6  
7 **The motion carried by voice vote.**

8  
9 **5. Continued Public Hearing**

10  
11 **Case 898-S-18 Petitioner: Bay-Wa r.e. Solar Projects, via agent Patrick Brown Request to authorize a**  
12 **utility scale PV Solar Farm with a total nameplate capacity of 150 megawatts (MW), including access**  
13 **roads and wiring, in the AG-1 and AG-2 Agriculture Zoning Districts, and including the following**  
14 **waivers of standard conditions: Part A: A waiver for a distance of 1,175 feet between a PV Solar**  
15 **Farm and the CR Conservation Recreation Zoning District in lieu of the minimum required one-half**  
16 **mile (2,640 feet), per Section 6.1.5 B.(2) b.; and Part B: A waiver for not providing a Decommissioning**  
17 **and Site Reclamation Plan that includes cost estimates prepared by an Illinois Licensed Professional**  
18 **Engineer prior to consideration of the Special Use Permit by the Board, per Section 6.1.1 A. 3.; and**  
19 **Part C: A waiver for not entering into a Roadway Upgrade and Maintenance Agreement or waiver**  
20 **therefrom with the relevant local highway authority prior to consideration of the Special Use Permit**  
21 **by the Board, per Section 6.1.5 G. Other waivers may be necessary. Location: In Sidney Township**  
22 **the following sections are included with exceptions as described in the legal advertisement: Sections**  
23 **11, 12, 13, 14, 15, 22 and 23, Township 18 North, Range 10 East of the 3<sup>rd</sup> Principal Meridian.**

24  
25 Ms. Capel informed the audience that anyone wishing to testify for any public hearing tonight must sign  
26 the witness register for that public hearing. She reminded the audience that when they sign the witness  
27 register they are signing an oath. She asked the audience if anyone desired to sign the witness register  
28 and there was no one.

29  
30 Ms. Capel informed the audience that Case 898-S-18 is an Administrative Case and as such, the County  
31 allows anyone the opportunity to cross-examine any witness. She said that at the proper time, she will  
32 ask for a show of hands for those who would like to cross-examine, and each person will be called upon.  
33 She requested that anyone called to cross-examine go to the cross-examination microphone to ask any  
34 questions. She said that those who desire to cross-examine are not required to sign the witness register  
35 but are requested to clearly state their name before asking any questions. She noted that no new  
36 testimony is to be given during the cross-examination. She said that attorneys who have complied with  
37 Article 7.6 of the ZBA By-Laws are exempt from cross-examination.

38  
39 Ms. Capel stated that she would like to provide a statement regarding cross-examination and testifying.  
40 She said that all of us are here doing a specific kind of work and she asked that everyone respect the  
41 witnesses, the Board, the petitioners, and the process, because we are all doing our best.

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Ms. Capel asked Mr. Hall to review the memorandum with the Board.

Mr. John Hall, Zoning Administrator, distributed Supplemental Memorandum #2 dated November 14, 2018, to the Board for review. He said that memorandum reviews a Supplemental letter from George Gunnoe, BayWa r.e. Development Manager (Attachment B); Revised Site Plan sheets and Landscape Plan sheet (Attachment C); and PowerPoint presentation regarding drainage (Attachment D). He said that there are major changes revising the Decommissioning Plan to include soil testing in response to toxicity concerns from the solar panels and adding vegetative screening along the northern fence line in response to concerns from neighbors living north of the railroad tracks.

Mr. Hall stated that new sheet L1, page 11 of Attachment C, goes back to the petitioner’s revisions to reflect ordinance requirements on the landscape plan that was with the November 14, 2018, sheet. He said that there had been more than 1,000 feet of landscape screen required along the south side of the railroad that had been added, and with the revised landscape sheet included as Attachment A with Supplemental Memorandum #3 dated November 15, 2018, they have decreased the spacing of the landscaping to make it more dense so that only one row of landscaping screen is required. He said the screen is proposed to be all Eastern Red Cedar planted at six feet on center with a front planting of Big Bluestem or switchgrass, and from a staff perspective this meets the ordinance requirements, although it does not meet the NRCS standard. He said that we now have a landscape plan prepared by a Professional Landscape Architect and they understand that if the Eastern Red Cedars die out they must be replaced, so he believes that the new landscape plan meets the ordinance requirements. He said that also attached to the Supplemental Memorandum #3 are the following three new special conditions that are based on the testimony provided at the last public hearing:

- L. Within the boundary of the solar farm, the petitioner shall replace the main tile for the Drainage District Number 1 of the Town of Sidney and no Zoning Compliance Certificate shall be authorized by the Zoning Administrator until written acceptance of the replaced main tile has been received from the Drainage District Number 1 of the Town of Sidney and all required “as-built” drawings showing the location of the main drainage tile within the boundary of the solar farm have been filed with the Illinois Department of Agriculture and the Champaign County Soil and Water Conservation District.**

The special condition above is required to ensure the following:

**To ensure conformance with the freely made obligation to replace the main tile of the Drainage District Number 1 of the Town of Sidney.**

- M. Within the boundary of the solar farm, the petitioner shall replace all privately owned underground drainage tile that are identified and encountered, consistent with the “like kind” replacement proposed in the cover letter from Huddleston**

1 **McBride Land Drainage of Rochelle, Illinois, that was received October 24, 2018,**  
 2 **and with the petitioner’s testimony regarding pattern tiling and consistent with both**  
 3 **the Champaign County Storm Water Management and Erosion Control Ordinance**  
 4 **and with the Agriculture Impact Mitigation Agreement and no Zoning Compliance**  
 5 **Certificate shall be authorized by the Zoning Administrator until all required “as-**  
 6 **built” drawings showing the location of all drainage tile within the boundary of the**  
 7 **solar farm have been filed with the Illinois Department of Agriculture and the**  
 8 **Champaign County Soil and Water Conservation District.**

9  
10 The special condition above is required to ensure the following:

11 **To ensure conformance with all relevant requirements for replacement of**  
 12 **underground drainage tile within the area of the special use permit.**

13  
14 **N. The petitioner shall maintain the privately owned underground drainage tiles**  
 15 **within the boundary of the solar farm for the lifetime of the special use permit**  
 16 **including any repairs that may be necessary for up to one year after**  
 17 **decommissioning and site reclamation.**

18  
19 The special condition above is required to ensure the following:

20 **To ensure maintenance of underground drainage tile within the area of the**  
 21 **special use permit for the lifetime of the special use permit.**

22  
23  
24 Mr. Hall stated that special condition N. does not include the drainage district tile because it should not  
 25 be impacted by the decommissioning and site reclamation. He said that it can be added, but it is not  
 26 anticipated that the decommissioning and site reclamation would impact that tile. He said that if there is  
 27 a representative from the drainage district in the audience tonight, he would like them to sign the witness  
 28 register and provide comments regarding special condition N. He said that it would be easy to add the  
 29 drainage district tile and he is fairly certain the petitioner would not be opposed, but as he was  
 30 composing the special condition, he attempted to make it as simple as he could.

31  
32 Ms. Capel asked the Board if there were any questions for Mr. Hall, and there were none.

33  
34 Ms. Capel asked the petitioner if they would like to make a statement regarding their request.

35  
36 Pat Fitzgerald, attorney for the petitioner, stated that at the prior meeting they referenced that there were  
 37 several areas that they wanted to provide more detail; therefore, they have invited several experts to  
 38 attend tonight’s meeting to give an overview of the project and answer questions that the Board or the  
 39 audience may have regarding particular issues related to the proposed project. He said that the first  
 40 expert is Jonathan Leech, who will discuss sound and how it relates to the BayWa development.

1  
2 Mr. Jonathan Leech, 621 Chapala St, Santa Barbara, California, stated that his professional background  
3 in acoustics includes being a member of the Institute for Noise Control Engineers since 2008, an  
4 apprenticeship with an acoustic engineer in 2004 followed by some graduate work at Penn State in their  
5 graduate acoustics program, and he has essentially been participating in acoustical engineering in some  
6 form over the last 12 years. He said he was retained by BayWa r.e. to prepare the acoustical report for  
7 the proposed project, and the report was provided to the Board for review. He said that he realized in  
8 reading through the report in preparation for this meeting that an important reference that he would  
9 typically provide in a report such as this are typical sound levels in decibels (dBA) at various points  
10 surrounding the property. He said that may be challenging to put those levels in terms of something you  
11 are accustomed to on an everyday basis. He said that one of the most common ones that he likes to  
12 reference is conversational speech; so, if he was standing about three feet from you speaking in a normal  
13 voice, it would be about 65 dBA. He said that when we perceive noise, we reduce by half the volume or  
14 sound pressure by each 10 dBA. If his normal speaking voice is reduced by half, half of that would be  
15 55 dBA, and half of that again is at 45 dBA. He said that what they concluded in the report is that for all  
16 existing residences which are in close proximity to the boundaries of the project, the highest noise level  
17 they would experience would be an average of 38 dBA. He said that this is very far below normal  
18 speech levels and would be about the same level as a whisper. He said another thing to look at in terms  
19 of health effects of noise exposure, the Environmental Protection Agency did a landmark study in the  
20 late 1970s when they were trying to evaluate with an increase in urban density and sound levels and  
21 urban spaces, what would be an appropriate level to protect human health for sustained exposure day in  
22 and day out as people are walking to work and being exposed to an urban environment on roadways. He  
23 said they came up with a standard of 70 dBA as a maximum exposure level for a sustained period of  
24 time to avoid hearing damage and other effects from noise exposure; so that is an exterior type of  
25 standard. He said that for an interior standard, where you would prefer not to be disturbed overnight  
26 when you are trying to sleep or in the evening when you have come home from work and do not want to  
27 be irritated by noise, the EPA established a level of 45 dBA. He said that is a 24-hour average, where  
28 during the daytime a level of up to 50 dBA on an hourly basis is allowed, and overnight a level of up to  
29 40 dBA on an hourly basis is allowed. He said that in comparing the project noise level of no greater  
30 than 38 dBA, we see that this level would be perfectly consistent with the EPA standard for even an  
31 interior exposure. He said that people nearby could leave windows open overnight and would not have a  
32 noise exposure level above what the EPA and most communities have established as an indoor target to  
33 make sure people get a good night's sleep and are not subjected to irritation from noise and noise  
34 sources.

35  
36 Ms. Capel asked Mr. Leech to indicate what the highest noise level would be, noting that Mr. Leech has  
37 been talking about averages.

38  
39 Mr. Leech stated that an average for an acoustic equation is somewhat different because it is a  
40 logarithmic function first. He said that in our case, the average comes essentially from the inverters,  
41 which have fans in them to cool the housing that the electrical equipment is stored in. He said that as the

1 fan comes on, there is a little peak of about 5 dBA for one or two seconds until the fan settles into a  
2 steady operation, and then when the temperature drops and is suitable within the container it reduces to  
3 nothing at that point.

4  
5 Mr. Fitzgerald asked Mr. Leech if he could share any noise reduction measures that BayWa is  
6 implementing.

7  
8 Mr. Leech stated that in the first analysis they did, the noise level at the highest, most impacted residence  
9 came to about 44 dBA, which is still within that allowable level as far as EPA is concerned and should  
10 not be very noticeable above background levels. He said that BayWa wanted to make certain that there  
11 would be no possibility for noticeable noise impacts from the project and so they have proposed to equip  
12 each inverter with a silencing muffler that will lower it from that original 44 dBA level down to the  
13 maximum 38 dBA level that he described previously.

14  
15 Mr. Fitzgerald stated that BayWa is open to a condition for sound mitigation such as Mr. Leech has  
16 described.

17  
18 Mr. Elwell asked Mr. Leech to provide an idea of what the ambient decibel rating is for this area.

19  
20 Mr. Leech stated that they did four 24-hour measurements on each of the cardinal directions leading  
21 away from the project site to establish that range. He said that they found during the day, depending  
22 upon where the location was, adjacent to Bryant Street the daytime range was 60 to 65 dBA; along Main  
23 Street, 67 to 73 dBA; and on CR 2400E and CR2200E, the range was from 49 to 63 dBA. He said that  
24 during the day, existing noise levels were significantly higher, along roadways primarily, than the project  
25 would generate.

26  
27 Mr. Hall told Mr. Leech that he wanted to verify a special condition for the petitioner, which states, "The  
28 petitioner shall install sound reduction kits from the inverter manufacturer to each of the inverters in the  
29 solar farm so that operational sound levels will be no more than 39 dBA at all existing residences within  
30 1,500 feet of the project site." He said that as he reviewed the noise study, the study identified sound  
31 levels no higher than 38 dBA, so he thinks staff probably mistyped that 39 dBA and it should be 38 dBA  
32 to be consistent with what the noise study is.

33  
34 Mr. Leech stated that is correct. He said they had a target of 39 dBA and when they fitted all of the  
35 inverters with that silencing kit, it turned out that the highest level was 38 dBA.

36  
37 Mr. DiNovo stated that he disagreed with that; he said that 39 dBA came from the most stringent  
38 standard that was recommended to staff and the Board. He said that he thinks it should stay at 39 dBA  
39 and we should have that much cushion.

40

1 Mr. Hall stated that his only point is that the evidence before the Board right now is that no noise level  
2 will exceed 38 dBA. He said it is up to the Board to establish what the condition should be, and it is up  
3 to the petitioner to accept that condition. He said we have 39 dBA written in the condition, but that is  
4 not supported by the evidence.

5  
6 Mr. Passalacqua said that if they seem comfortable with 38 dBA, he is more comfortable with less, and  
7 he would agree with the study.

8  
9 Ms. Capel asked if there were any more questions or discussion from the Board or staff, and there were  
10 none.

11  
12 Ms. Capel asked the audience if anyone would like to cross-examine Mr. Leech.

13  
14 Mr. Ted Hartke said that currently the study says we have  $L_{eq}$  noise. He asked Mr. Leech if that is an  
15 average, or mean noise.

16  
17 Mr. Leech stated that it is an equivalent level noise, which is commonly referred to as an average noise.

18  
19 Mr. Hartke said that at times, in between trains and train horns honking, besides the 5 to 10-minute  
20 period when the trains are going by, what is the daytime noise level during those time periods.

21  
22 Mr. Leech stated that those levels are represented by the range of averages, what the study has depicted  
23 in Table 2 are the average ranges of 60 dBA on the low end to 65 dBA on the high end. He said that the  
24 total absence of trains might be better represented in the evening period. He said that if we assume the  
25 train frequency drops off, then the nighttime range is probably more indicative of the lowest noise levels  
26 present without traffic or trains.

27  
28 Mr. Hartke referred to Table 2 on page 16, location LT3, which appears to be located on CR 2400E. He  
29 said that at nighttime, it gets as low as 36 dBA, and asked if that was during the harvest period. He said  
30 that maybe the 85 dBA noted was from when a combine came by.

31  
32 Mr. Leech stated that the harvest activity would have been a daytime activity, not a nighttime activity, so  
33 looking for the lowest measured noise level at any period during the day not as an average, but as a  
34 single-point instantaneous measurement, that 36 dBA represents that instantaneous measurement when  
35 basically nothing was happening around the measurement point.

36  
37 Mr. Hartke noted that the study period was from September 26 through September 27, 2018. He asked  
38 Mr. Leech if these instruments were only out there during that 24-hour period.

39  
40 Mr. Leech said that was correct.

41

1 Mr. Hartke asked if there was a wind speed measurement taken at that time.

2

3 Mr. Leech said no, there was not.

4

5 Mr. Hartke asked if there was an acoustician present during that 24-hour period. He asked if there was  
6 an acoustician or another person taking notes or marking time periods during measurements.

7

8 Mr. Leech said that typically 24-hour measurements are unmanned, and we do not have an acoustician  
9 there around the clock for those measurements. He said it is a little too labor-intensive to actually have  
10 an observer and they count on the accuracy of the instrument during that 24-hour period. He said that  
11 the short-term measurements are always manned measurements, so the acoustician is there for the  
12 duration, taking notes for those.

13

14 Mr. Hartke asked if when the readings are taken, he imagines Mr. Leech has the dBA recorder, and  
15 asked if he also had the audio recorder there as well, to identify when there is a spike in the noise, if it is  
16 a car or train that went by.

17

18 Mr. Leech said that typically they do not do that for the 24-hour measurements.

19

20 Mr. Hartke asked if this study follows the IPCB standards for collecting data and recording noise for a  
21 noise study.

22

23 Mr. Leech said yes.

24

25 Mr. Hartke asked Mr. Leech if he is aware that the IPCB noise standards for collecting noise data using  
26 observed measurements is that you have a person sitting, recording noise events as their noise recording  
27 is ongoing.

28

29 Mr. Leech stated that he is aware of that, and that occurred during the short-term measurements and  
30 when the instruments were set up for the long-term measurements, and when they were collected for the  
31 long-term measurements. He said that the acoustician was in the general area during those 24-hour  
32 measurements, noting weather patterns. He said that the observation notes can be found in the table  
33 about some of the activities that were happening in the area.

34

35 Mr. Hartke asked Mr. Leech if there was a table in the study about noise events.

36

37 Mr. Leech said that would be under Table 2 on page 16, where there are indications of what sound  
38 sources there were while measurements were being taken. He said there are noise source notes in  
39 column 1. He said that the noise sources present during sound measurements were traffic on adjacent  
40 roadways and harvest activity near two locations.

41



- 1 Mr. Hartke asked Mr. Leech if on September 26<sup>th</sup> there was harvesting ongoing near the LT1 and LT3  
2 receivers.  
3
- 4 Mr. Leech said there was noted harvest activity in the vicinity, which was felt to be immediately adjacent  
5 to those meters during some point in that 24-hour period.  
6
- 7 Mr. Hartke asked Mr. Leech if they are basing the ambient noise level on a one-day event when there  
8 was harvesting going on immediately next door.  
9
- 10 Mr. Leech said that they believe that harvesting is a common activity that occurs in the area, not  
11 something that is completely uncommon, and is therefore representative of average sound levels, yes.  
12
- 13 Mr. Hartke asked Mr. Leech how many days per year he thinks farmers harvest immediately next to a  
14 house or a receptor.  
15
- 16 Mr. Leech asked Mr. Hartke how many days he thinks there is activity using the same equipment for  
17 doing the plowing of the fields and the planting of the seeds using the same equipment and the same  
18 types of patterns. He said again that he would say it is representative of the noise patterns you would find  
19 in the community.  
20
- 21 Mr. Hartke asked where the location of the measurement is supposed to be made according to IPCB  
22 standards for measuring noise.  
23
- 24 Mr. Leech stated that for two land use zones where the use is in one zone and the receiver is in another  
25 land use zone, it is at the property line between those two zones.  
26
- 27 Mr. Hartke asked Mr. Leech where the predictive noise levels shown in the sound study were measured  
28 to.  
29
- 30 Mr. Leech stated that the predicted sound levels for residences which are immediately adjacent to the  
31 boundary for the project were calculated at the property boundary between the project property and the  
32 residences. He said that for the requirement that says that sound must be calculated out to a distance of  
33 1,500 feet for residences that are not immediately adjacent to the subject property boundary, they used  
34 the location of the residence itself because there are closer property boundaries that were already  
35 evaluated for immediately adjacent residences.  
36
- 37 Mr. Hartke asked Mr. Leech, for those residences within the project area, if those noise levels of 38 dBA  
38 or 39 dBA were for their property line.  
39
- 40 Mr. Leech said correct.  
41

1 Mr. Hartke said that's good. He asked Mr. Leech if the information provided to us say that the noise  
2 levels for nearby properties within the solar farm is at their property lines.

3  
4 Mr. Leech stated that the measurements for the residences adjacent to the property line outside the  
5 boundary of the solar facility were taken at the property boundary of that residence relative to the solar  
6 project property boundary.

7  
8 Mr. Hartke said that he would like to compliment Figure 4 from the sound study; he thought it was very  
9 useful to have the one decibel contour lines shown on this drawing. He asked Mr. Leech how many days  
10 per year does he think the solar inverters will be making up to 35 to 39 dBA at the homes.

11  
12 Mr. Leech said that would depend on the days of full sun exposure because on cloudy days, it will not  
13 make any noise at all. He said he does not have the climatological information at his fingertips to tell  
14 you how many days of full sun exposure there are at this facility. He said that might be something that  
15 one of the BayWa representatives can help you with.

16  
17 Mr. Hartke asked Mr. Leech if he thinks that the 38 to 39 dBA noise level were reached for 200 days per  
18 year would be tolerable, safe, and have no impacts on the neighbors.

19  
20 Mr. Leech said that is most definitely his belief because, as he said, the EPA standard for indoor, not  
21 outdoor, exposure where there is expected to be a peaceful living environment without noise, irritation,  
22 sleep disruption, and conversation disruption is at 45 dBA. He said that this 38 or 39 dBA falls below  
23 that.

24  
25 Mr. Hartke asked Mr. Leech where is the 45 dBA noise limit that he says is a safe sleep level.

26  
27 Mr. Leech said it is designed to avoid sleep disruption, challenges or impediments to holding a quiet  
28 conversation when you have reached home after a hard day; it has been adopted by EPA and it has been  
29 adopted by many communities across the United States as their indoor noise standard.

30  
31 Mr. Hartke asked Mr. Leech if he was familiar with any of the previously submitted information on  
32 noise levels and noise concerns that have been given to the County Board for this project or any of the  
33 ZBA hearings to establish the zoning rules.

34  
35 Mr. Leech stated that he did not fully review all the documentation that was prepared for establishment  
36 of the Zoning Ordinance.

37  
38 Mr. Hartke asked Mr. Leech if he was aware of what the World Health Organization says 40 dBA is a  
39 not to exceed noise level to avoid disturbance of sleep.

1 Ms. Capel told Mr. Hartke that he is going pretty far off the track of cross-examination. She said that we  
2 are addressing the proposed project tonight and not addressing the Ordinance.

3  
4 Mr. Hartke said that this is their first opportunity to ask an acoustician questions about noise levels.

5  
6 Ms. Capel said that Mr. Hartke is in cross-examination, and he is limited to asking questions about Mr.  
7 Leech's testimony. She said that Mr. Leech has not testified about the Ordinance.

8  
9 Mr. DiNovo stated that he thinks that Mr. Hartke's question is within a reasonable scope of cross-  
10 examination, because it goes to the expert's familiarity with published noise standards.

11  
12 Mr. Hall said that is not what cross-examination is about; cross-examination is about the testimony. He  
13 said that those are good questions to pose to the Board. He said that Mr. Hartke can ask the Board, and  
14 then the Board can ask the petitioner if they so desire.

15  
16 Mr. Hartke asked if there was anything in the noise study that says that 45 dBA is safe for sleep  
17 interruption.

18  
19 Ms. Capel told Mr. Hartke that she believes the witness testified that is the federal standard, and she  
20 does not think he testified that it was the information they were using.

21  
22 Mr. Leech stated that the 45 dBA standard comes from the first reference cited at the back of the report,  
23 and that is the USEPA 1974 "Information on levels of environmental noise requisite to protect public  
24 health and welfare with an adequate margin of safety."

25  
26 Mr. Hartke asked Mr. Leech if the 1974 USEPA noise study was the one where they responded to  
27 community response levels for different noise levels; he thinks they call it the noise level study.

28  
29 Mr. Leech stated that the USEPA study was aimed at community noise levels, which are averages  
30 weighted in the evening, to ensure the avoidance of sleep deprivation and other irritation from  
31 community noise. He said that community noise is defined as all noise sources, near and far, occurring  
32 in a community on a 24-hour basis, weighted in the evening and the overnight period, such that if you  
33 had an incident of noise at 35 dBA, they weight it by 5 dBA for the period 7 to 10 p.m. to make it a 40  
34 dBA reading. He said for an overnight reading, they add 10 dBA to the actual reading, to make certain  
35 that there is a wide margin of safety and an assured avoidance of irritation from noise levels in the  
36 community for people who are trying to sleep, trying to have normal conversations, trying to get away  
37 from noise that they experience in their workday environment.

38  
39 Mr. Hartke asked if Mr. Leech had ever heard of the noise standard where many acousticians discuss the  
40 advisory and the warnings.

41

1 Ms. Capel told Mr. Hartke that she does not believe that Mr. Leech testified to that.

2

3 Mr. Hartke asked if he could ask questions about qualifications.

4

5 Ms. Capel said that Mr. Hartke could ask the Board about qualifications and he could ask the Board a lot  
6 of the questions he is interested in asking, but she thinks that Mr. Hartke has drilled down fairly far into  
7 the testimony that Mr. Leech offered. She told Mr. Hartke that he is welcome to ask the Board, and the  
8 Board will ask the witness.

9

10 Mr. Hartke asked Ms. Capel when he would have the opportunity for him to ask the Board to ask the  
11 question.

12

13 Ms. Capel stated it would be when he is giving testimony.

14

15 Mr. Hartke asked if the acoustician would make another trip from Santa Barbara, California to answer  
16 those questions.

17

18 Ms. Capel said that presumably, he will be able to do that tonight.

19

20 Mr. Hartke asked for clarification, if he asks the Board, then they will follow up by asking the  
21 acoustician. He said he thinks it is fair to ask them now so that the acoustician has time to look up stuff,  
22 so he is not totally off guard.

23

24 Ms. Capel stated that she thinks we need to proceed with this hearing, and that this is not the proper time  
25 for Mr. Hartke to ask for this information.

26

27 Ms. Lee asked if all of the information in our report is also the testimony of Mr. Leech, not just his  
28 words here tonight.

29

30 Ms. Capel stated that it is, but the information that Mr. Hartke is asking about is not in the report.

31

32 Mr. Hartke stated that the aim of his questions is to establish that this is a quiet, rural community, and an  
33 increase of five decibels or more is intrusive.

34

35 Ms. Capel told Mr. Hartke that he is providing testimony and not asking questions.

36

37 Mr. Hartke said he had no further questions for this witness, and he would present all his questions to the  
38 Board, who could then ask the acoustician later tonight.

39

40 Ms. Capel asked if anyone else would like to cross-examine Mr. Leech, and there was no one.

41

1 Ms. Lee said that Mr. Leech testified that he did not think harvest activities went on during the night, but  
2 it does; they have lights on combines, and they do harvest during the nighttime, not just during the  
3 daytime. She said that different equipment makes different sound levels; a combine has one sound level,  
4 but when you are planting a crop the noise is much less, in her opinion. She said that the way equipment  
5 works these days, you are not going to have very many harvest days adjacent to a property. She said that  
6 harvest in any one location might take three days, and planting one day, so at most you have 4 days out  
7 of 365 days.

8  
9 Mr. Hall said that he would remind the Board that the critical thing here are the predicted noise levels  
10 with the solar farm, every day of the year.

11  
12 Mr. Fitzgerald stated that Tim O'Connor would address the soils.

13  
14 Mr. Tim O'Connor, 17907 Schmidt Road, Mt. Carroll, IL, stated that he has a degree is in Biological  
15 Science from Southern Illinois University, and he has his own business, Fields of Green, which has been  
16 thriving for 22 years, where he basically installs and maintains grasslands. He said that his first job was  
17 at the University of Illinois at Turner Hall in the plant physiology department and he is looking forward  
18 to visiting his old boss tomorrow. He said that he is present tonight to provide information, and address  
19 concerns and questions related to the vegetation, ground cover and soils for the proposed project. He  
20 said that he was able to gain permission from the landowners and visit the proposed locations to take soil  
21 samples. He said that there are beautiful soils in Champaign County and he consistently probed the soils  
22 18 inches down for good samples. He said that he is from northern Illinois and they may have a couple  
23 of inches of good soil, but the subsoil is not good. He said that letting the soils lay fallow is one of the  
24 best things that can happen to the soil, and there are so many advantages; increase the soil till, microbial  
25 activity, organic matter, which is currently 3-3.5 and hoping to find a 4 or a 5, soil pore space, soil  
26 aeration, soil microflora, lessen compaction, and lessens soil erosion. He said that having the land  
27 sitting fallow in a sod situation, where there is still soil moving during rainfall but not near as much  
28 when the soil is tilled or cultivated, is the best situation for building the soil's health and at the end of the  
29 project the good soils will be even better.

30  
31 Ms. Capel asked the Board if there were any questions for Mr. O'Connor, and there were none.

32  
33 Mr. Hall asked Mr. O'Connor if there is way to predict what the soils would look like in 25 years after  
34 laying fallow under the vegetation that is being proposed. He said Mr. O'Connor stated that the soil's  
35 organic matter was 3-3.5 and he is hoping to find a 4 or a 5. He asked Mr. O'Connor if the soil's  
36 organic matter statistic is likely to increase over the life of the proposed solar farm.

37  
38 Mr. O'Connor stated yes, because as you have all the sod increasing the bio-mass, and instead of  
39 harvesting it and pulling it out of the soils, it decomposes and breaks down into organic matter, so it is  
40 possible that the statistic could increase one point or more.

41

1 Ms. Capel asked the Board and staff if there were any additional questions for Mr. O'Connor, and there  
2 were none.

3  
4 Ms. Capel asked the audience if anyone desired to cross-examine Mr. O'Connor, and there was no one.

5  
6 Mr. Fitzgerald stated that Paul Littleton would address the landscaping that is proposed for the BayWa  
7 development.

8  
9 Mr. Paul Littleton, 2613 South Rising Road, Champaign, stated that he studied landscape architecture at  
10 the University of Illinois, and is a registered state of Illinois Licensed Architect who is employed by  
11 Brown Woods. He said that he prepared a landscape plan for the Board that complied with the  
12 Champaign County Ordinance. He prepared a schematic landscape plan, sheet L1, indicating green  
13 bands around the perimeter where the landscape buffers would be established between a residence on the  
14 north side and the solar farm itself. He said that the buffer is made of one row of evergreen shrubs,  
15 Eastern Red Cedar, that would be planted at 6 feet intervals providing a solid screen along the fence line.  
16 He said that in front of the evergreen shrubs, Big Bluestem is proposed to be planted and contained in  
17 the 20 feet distance between the adjacent land use and the solar farm. He said that the 20 feet area is  
18 adequate for the first few years for maintenance, such as mowing, but once the cedars are fully grown the  
19 maintenance would drop off. He said that having the natural or native grasses in front allows for  
20 maintenance in case any of the cedars die and need replaced and is an easement to allow that  
21 maintenance and the grasses would grow back. He said that the ground cover area inside of the fence  
22 and within the buffer would be the same materials in accordance with the County Ordinances and  
23 acceptance of the landowners. He said that the grasses would be mowed at a level of 8 to 10 inches and  
24 there would be no controlled burns due to the sensitive equipment. He said that noxious weeds would be  
25 treated with spot spraying, but the ground cover should take hold and choke out noxious weeds. He said  
26 that if there is an occasion where noxious weeds do break through the ground cover along the fence and  
27 the edges of the solar panels, they would be spot sprayed as well. He said that Eastern Red Cedar is a  
28 hardy native plant and it is expected to do very well here due to the climate and soils. He said that  
29 Eastern Red Cedar is commonly seen along highways and hedgerows and is ideal as a habitat for birds  
30 and wildlife. He said that the cedar and native grasses are hardy, so in the event of overspray or drift by  
31 agricultural applications they would be minimally impacted versus a more deciduous trees or sensitive  
32 shrubs. He said that he expects the landscape to do well overtime and will be low maintenance. He said  
33 that the cedars are dark color in texture and they have beautiful color in the fall, but during any other  
34 season they will blend well with the surroundings as a natural component. He said that Eastern Red  
35 Cedar trees are expected to grow 16 to 18 inches per year, but its mature height is generally 20 feet and  
36 they will bush out. He said that switch grass is soft in texture and the Big Bluestem grows 6 to 8 feet in  
37 height at maturity and is a beautiful burgundy color that provides birds and insects with food. He said  
38 that as the landscape progresses with age, he expects it to overtake the seven-foot fence and grow nicely,  
39 overcrowding any native or invasive species that might come to the site.

40

- 1 Mr. Passalacqua asked Mr. Littleton if the Eastern Red Cedar is resistant to the fungus that many pines  
2 got over the last couple of years.  
3
- 4 Mr. Littleton asked Mr. Passalacqua to indicate which fungus he is speaking about. He said that white  
5 pines and spruces have been lost all over the place due to a fungus and insects, but cedars are pretty  
6 bulletproof.  
7
- 8 Ms. Lee asked Mr. Littleton if the Eastern Red Cedars have an adverse effect on apple trees.  
9
- 10 Mr. Littleton stated that both cedar and apple trees can get rust, which is a microbe.  
11
- 12 Ms. Capel stated that she has cedar and apple trees on her property, and there needs to be about 600 feet  
13 between the two species of trees.  
14
- 15 Mr. Littleton stated that he did not see any orchards near the facility.  
16
- 17 Ms. Lee stated that the nearby residents could have apple trees on their property.  
18
- 19 Ms. Capel stated that this might be a good question to ask the individuals who own property near the  
20 solar farm.  
21
- 22 Ms. Capel asked the Board and staff if there were any questions for Mr. Littleton, and there were none.  
23
- 24 Ms. Capel asked the audience if anyone desired to cross-examine Mr. Littleton.  
25
- 26 Ms. Lisa Nesbitt asked Mr. Littleton if the nine apple trees on their property would be affected by the  
27 cedar trees, and if so, what would be a safe distance.  
28
- 29 Mr. Littleton stated that their offset is 1,000 feet.  
30
- 31 Ms. Nesbitt stated that the area for the proposed cedar planting is not 1,000 feet from her apple trees, it  
32 may be half of that. She asked Mr. Littleton if he had any recommendations as to how they could solve  
33 this problem.  
34
- 35 Mr. Littleton stated that he has proposed the Eastern Red Cedar, but it is not the only plant that would  
36 work. He said that the problem with rust is everywhere and the wind could easily carry it 500 feet.  
37
- 38 Ms. Nesbitt asked Mr. Littleton if her apple trees encounter the rust, then potentially they could spread it  
39 somewhere else.  
40
- 41 Mr. Littleton stated yes.

1  
2 Ms. Nesbitt stated that if there is a problem, who would she contact to work this situation out.

3  
4 Mr. Passalacqua stated that Ms. Nesbitt's apple trees may already have it.

5  
6 Ms. Nesbitt stated no.

7  
8 Mr. Passalacqua stated that they may not have it now, but they might next year before the Eastern Red  
9 Cedar trees are planted. He said that he sees the rust in his grass a lot.

10  
11 Ms. Capel stated that cedar/apple rust is a very specific disease and it goes back and forth between the  
12 two species. She said that the general distance between the two species is 600 feet, but there are apple  
13 trees which are resistant although most are not.

14  
15 Ms. Nesbitt asked if the rust would kill an apple tree or is it a seasonal disease that is treatable with a  
16 spray.

17  
18 Ms. Capel stated that it is not treatable with a spray and it will either kill the tree or create poor  
19 production.

20  
21 Mr. Fitzgerald stated that BayWa would welcome a special condition find appropriate landscaping that  
22 would work with the neighbor's concerns and needs. He said that their intent is not to create problems  
23 with the neighbors, and BayWa would be happy to work with the Board and the neighbors regarding the  
24 landscape plan requirement.

25  
26 Mr. DiNovo asked Mr. Littleton to indicate alternatives to the Eastern Red Cedar.

27  
28 Mr. Littleton stated that it is preferred that the landscape buffer next to the fence have evergreens, and  
29 Black Hill Spruce or Serbian Pine would be good alternatives because they are hardy in this area. He  
30 said that they would avoid using Blue Spruce trees as an alternative. He said that the alternative for  
31 evergreens is fairly limited, but they could make some variations.

32  
33 Mr. Elwell asked Mr. Littleton if the Black Hill Spruce or Serbian Pines are similar in growth to the  
34 Eastern Red Cedar.

35  
36 Mr. Littleton stated that they do not grow as quickly as the Eastern Red Cedar, but the Black Hill Spruce  
37 and the Serbian Pines branch out and then grow up. He said that either choice would be a good  
38 alternative for the screen.

39  
40 Mr. Hall asked Mr. Littleton if the landscape plan could be revised when any landowner within 1,000  
41 feet contacts staff indicating that they have apple trees.



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Mr. Littleton stated yes.

Mr. Jeff Justus stated that he considers cedar trees like plants and they might die off early. He asked Mr. Littleton to indicate the plan for those trees that prematurely die.

Mr. Littleton stated that the notes on the landscape plan, L1, indicate a maintenance plan to remove dead or diseased shrubs/grasses from the site and replace with a new shrub/grass. He said that the proposed planting is one every six feet; therefore, as one tree dies another can fill in to address that.

Mr. Justus stated that spot spraying for noxious weeds was mentioned during testimony. He asked Mr. Littleton if he had a specific trade-name product that would be used.

Mr. Littleton stated that a broadband, such as Round-Up, would be used, but the specific chemical would have to be determined in the field.

Ms. Capel asked the audience if anyone else desired to cross-examine Mr. Littleton.

Mr. Daniel Herriott asked Mr. Littleton to indicate how deep the roots for the Eastern Red Cedar and the grasses would go into the soil.

Mr. Littleton stated that the grass roots would go below the frost line, 24 inches.

Mr. Herriott asked Mr. Littleton if there were any concerns regarding the roots impacting drainage tiles. He said that on occasion they have to clear out tiles due to the roots of trees and grasses along a hedgerow.

Mr. Littleton stated that a drainage expert is present tonight to testify about drainage.

Mr. Fitzgerald concurred with Mr. Littleton regarding the presence of the drainage expert tonight.

Mr. Elwell asked Mr. Hall if the decommissioning plan includes the removal of the Eastern Red Cedars.

Mr. Hall stated that he is not sure if removal of the trees and grasses is part of the decommissioning plan, but he will research that question.

Mr. DiNovo stated that he would imagine that the removal of the trees and grasses is up to the landowner, because they may want to keep them.

Mr. Hall stated that is a possibility, but the County's position should be to have this established ahead of time. He said that the County should not be removing cedar trees just because the landowner wants them

1 removed, and he would hope that there would be a policy in the decommissioning plan requiring  
2 removal of the screening or not.

3  
4 Mr. DiNovo stated that it could just be left up to the landowners.

5  
6 Mr. Hall stated that someone must provide money in the decommissioning plan to do that, unless he is  
7 indicating that the removal should be up to the landowners.

8  
9 Mr. DiNovo stated yes. He said that this is not something that the County should be worried about,  
10 because the landowners are the ones negotiating and signing the leases to the solar company.

11  
12 Mr. Hall stated that his point is that it should be clear so that there is no question later.

13  
14 Mr. Elwell stated that there might be more land disturbance during the removal of a 20 feet tree from the  
15 ground.

16  
17 Mr. Hall stated that he cannot imagine that it would be easy to pull a 20 feet tree out of the ground.

18  
19 Mr. Passalacqua stated that it is not easy to sod bust a prairie either.

20  
21 Ms. Capel asked the audience if anyone else desired to cross-examine Mr. Littleton.

22  
23 Mr. Ted Hartke stated that he believes that the landscape plan is awesome. He asked Mr. Littleton if  
24 BayWa would consider consulting with the neighbors that are closest to the areas that will have the  
25 buffer around them to see if they would like a certain type. He asked if BayWa would be open to having  
26 a variety of species so that if there is a fungus or disease it would not take out the entire buffer. He  
27 asked if BayWa would be open to allowing the neighbors to determine the type of species or at least  
28 mixing the species up a bit.

29  
30 Mr. Littleton stated that, within the guidance of the County Ordinance, he does believe that the petitioner  
31 would be open to species diversification for the buffer.

32  
33 Ms. Capel asked the audience if anyone else would like to cross-examine Mr. Littleton.

34  
35 Mr. Jeff Justus stated that switchgrass is a wonderful plant and he has it planted in his Conservation  
36 Reserve Program land. He said that he understands that there would not be any controlled burns at the  
37 project site, but by an unfortunate act of mother nature, a minute spark could start a wildfire. He said  
38 that he recently had lightning strike his home and he is very lucky that he has a home, so he knows that  
39 even though it is a one in a million chance, it does happen. He said that switchgrass does have a  
40 timeframe of 10 to 15 years before it runs its course and may not be a forever planting that will thrive to  
41 the term of the solar farm.

1  
2 Mr. Littleton agreed. He said that the lifespan of grass is not forever, and the maintenance plan includes  
3 the replacement of those grasses.  
4  
5 Mr. Justus asked Mr. Littleton if he fully understands what it would take to replace that grass.  
6  
7 Mr. Littleton stated that it would take some effort.  
8  
9 Mr. Justus stated that it will take a lot of effort because he has personally tried to do it and it is costly,  
10 especially when there are cedar trees and fences existing. He said that it will not be as easy to plant the  
11 second time as it was the first time.  
12  
13 Ms. Lee stated that a train going by could switch a fire from one side of the track to another.  
14  
15 Mr. Fitzgerald stated that the solar farm ordinance requires a standard agriculture mitigation agreement  
16 with the Illinois Department of Agriculture and Section 13 deals with the clearing of trees and brush. He  
17 said that Section 13 indicates that the landowner is entitled to determine if the trees and shrubs are to  
18 remain on their property.  
19  
20 Mr. Ted Hartke asked Mr. Littleton if the landscape also covers the interior portions of the fence.  
21  
22 Mr. Littleton stated that species for the ground cover have not been chosen yet but will at a later time  
23 when there are more specifics for the project. He said that currently it falls within the ordinance of the  
24 County and needs to be discussed with the landowners. He said that they do not want deep rooted plants  
25 that would interrupt the tile system, so a variety of fescue may be used.  
26  
27 Mr. Hartke asked if pollinator plantings would be utilized.  
28  
29 Mr. Littleton stated that the groundcover could include species that could be mowed and kept at 8 to 10  
30 inches and pollinators, flowers, could be mixed in to attract bees and ants.  
31  
32 Mr. Hartke asked if the project would have a lot of pollinator seed.  
33  
34 Mr. Littleton stated that he would do the best he can.  
35  
36 Mr. Hartke stated that pages 89 and 92 indicates that the pollinator plants have been marked out in red.  
37  
38 Mr. Littleton stated that he is not familiar with those pages.  
39

1 Ms. Griest asked Mr. Littleton if the groundcover/seed mix would only be for the perimeter areas and is  
2 not for the interior area. She said that as she read the information it appeared that it was for both, but  
3 Mr. Littleton's testimony seemed to indicate that it is not.

4  
5 Mr. Littleton stated that groundcover/seed mix would be the same for inside the fence and between the  
6 fence and the 20 feet buffer limit, but for consistency, it is all the same.

7  
8 Ms. Griest stated that the area under the panels is included as well.

9  
10 Mr. Littleton stated yes.

11  
12 Ms. Griest stated that the landscape plan attached to Supplemental Memorandum #3 dated November  
13 15, 2018, is the plan that is being proposed.

14  
15 Mr. Littleton stated yes.

16  
17 Ms. Griest noted that she was very impressed by the mix of pollinators included in the groundcover  
18 proposal.

19  
20 Ms. Capel asked the audience if anyone else desired to cross-examine Mr. Littleton, and there was no  
21 one.

22  
23 Ms. Capel asked the Board and staff if there were any additional questions for Mr. Littleton, and there  
24 were none.

25  
26 Mr. Fitzgerald stated that Thomas Huddleston would now address drainage issues.

27  
28 Mr. Thomas Huddleston, 9504 Fowler Rd, Rochelle, Illinois, stated that he owns and operates three  
29 drainage companies in Illinois, and he is a third-generation contractor. He said that he and his partner  
30 have operated these drainage companies for 42 years, so they are well-versed in drainage issues and are  
31 very passionate about agricultural drainage. He said that he became interested in solar energy when it  
32 first came to Illinois, and how to meet the goals of AIMA and the individual counties to maintain this  
33 farmland in perpetuity. He said that refers to after decommissioning solar farms as well as during solar  
34 farm production. He referred to the first presentation slide which showed a 1998 aerial of the project  
35 area and said that this was when the soil induction and moistures were such that you could actually see  
36 all the indicators of hydric soils within the site itself and you could envision the number of drain tiles  
37 that probably existed within the 1,600 acres. He said there are 3 primary drainage principles that they  
38 like to evaluate and approach in the design with the solar farm process, also shown on the slide. He said  
39 the first is surface conveyance. He said that obviously they must be concerned with conveying the  
40 drainage from the lands of others when making drainage improvements to and through this site to the  
41 active waterways themselves, and they do that by evaluating surface flows. He said that they actually

1 raise the bottom bar of the solar farm fence about one foot up along the perimeter, so they can let surface  
2 residues flow from the solar farm. He said that they also identify water courses within the solar farm and  
3 those water courses would be mowed on a more frequent basis in efforts to provide a good, efficient  
4 conveyance ratio across the surface. He said the second principle is mutual sub-surface main line drain  
5 tiles, which come in different standards and forms. He said there are two drainage districts, one by the  
6 Village of Sidney and the other down by the southeast corner of the project area. He said he has talked  
7 with both drainage districts and they are aware of where the districts' mains are located and the districts'  
8 specifications. He said his proposal to the developer is for his company to work with those drainage  
9 districts' commissioners and evaluate what their system is doing now, and the potential for their system  
10 to do for offsite landowners in the future. He said they will look at what upgrades the system might need  
11 in terms of main line size as well and will provide maintenance easements, so the drainage districts can  
12 get in to maintain or modify the drain tiles. He said that the legal mutual drain lines are basically  
13 covered by Illinois Drainage Code, and those are drain tiles that were put in over 100 years ago. He said  
14 that those tiles were the ones that broke the hydric soils into fertile farmland. He said they run across the  
15 lands of many, and each individual has the right to connect to those mutual lines. He said it is important  
16 to maintain those lines for all to be able to drain into. He said that they will identify those main lines and  
17 put those into protective maintenance corridors and replace those lines in a procedure called like-kind  
18 replacement, where they actually take the tile out and put polyethylene dual-wall perforated pipe back in  
19 its place. He said that Frito Lay has a licensed drain that Frito Lay must have laid for some reason many  
20 years ago that takes their water, and his company needs to provide the benefit to continue to drain the  
21 way they do now. He said that the third principle is onsite, or parcel drainage. He said that each one of  
22 these parcels has its own network of sub-mains, laterals, and small-diameter field tiles called field  
23 laterals which reach up into different areas of a farm and drain those soils, so they can stabilize and grow  
24 a stable crop.

25  
26 Mr. Huddleston referred to the second slide and said that they are going to evaluate the drain tile  
27 systems. He said that this is only an example plan of the methodology that is used. He said that they  
28 basically model the farm as if they were going to lay drain tile within it, and then they cut a series of slit  
29 trenches across to locate the drain tiles. He said that they then use electronics and probing to actually  
30 probe the drain tiles out on 20 foot intervals, GPS the locations, evaluate those, and then put them on the  
31 master plan so they know exactly where those drain tiles are and exactly what they do for the local farm  
32 itself, and whether they extend to the lands of others that benefit from that drain tile as well.

33  
34 Mr. Huddleston referred to the third slide and said that this is an example of early tiling, which exists  
35 mostly in Illinois and the Midwest. He said that this is what they call random drainage, which occurred  
36 over 100 years ago when the land was broke and the farmers laid drain tiles wherever it was wet, and the  
37 year after that if the crop did not prosper, they came back and laid even more drain tiles. He said that  
38 when his company lays drain tiles today, they see drain tiles on top of drain tiles. He said they see some  
39 abandoned and working, some that are laying right next to each other, some that are laid on slight  
40 systems, and some that run randomly around the farm site providing drainage for certain areas. He said

1 that the old-fashioned way of tiling certainly works today, although we have better methodology today,  
2 and he is going to cover how to bring these systems up to date and to a new standard.

3  
4 Mr. Huddleston referred to the fourth slide and said that he took an example of a 120-acre farm on CR  
5 900N. He said that the image shows where they believe random drain tiles are installed; there are several  
6 tiles across the farm that actually run into the lands of others and interior laterals all tied together and all  
7 dependent one on another. He said they are all covered by the Illinois Drainage Code.

8  
9 Mr. Huddleston referred to the fifth slide showing how a typical solar array might be installed on the  
10 project area and said that the array might conflict with a lot of these mutual drain lines. He said that  
11 sometimes for smaller scale solar farm projects, his company identifies the drain tiles and replaces them  
12 by like-kind replacement, meaning they go in and physically take the tile out and then put a brand new  
13 tile right in the same ditch. He said that the reason they do that is so they can pick up any feeder laterals  
14 that the investigation might not have picked up and have those incorporated into the system. He said  
15 that they are thus insured when they leave the field that they have a new, dual-wall polyethylene pipe  
16 that they can warranty for over 40 years and that will not fail and run for that period and the years to  
17 come.

18  
19 Mr. Huddleston referred to the sixth slide which shows their proposal. He said he is part of an industry  
20 of drain tile contractors throughout the state, and two of his contractor friends happen to be local here:  
21 Seevers Drainage and Scott & Dan Day Drainage. He said he has met with both of them, and they have  
22 worked out what they believe is the right standard for this tract of land. He said that rather than replace  
23 all the existing tiles on the site, they are going to pattern drain everything in this site. He said that they  
24 will do a study of all the existing drainage tiles, the soils, and needs for drainage, and then they will  
25 determine the location of the piles where the solar racking will be placed. He said that they will then  
26 geometrically coordinate them to design a pattern system around those piles; those pattern systems  
27 generally have an interval of 80 to 90 feet, and all tie into a common main line. He said that in this case,  
28 this happens to be a mutual drain line that starts at the ditch and runs cross-country and caters to some  
29 folks upland. He said that they are going to ask the developers to break the grid and put a corridor along  
30 this main line so that they can maintain it. He said that this line runs at a skew, not in a linear  
31 coordination with the racking itself. He said that they are very conscious of drainage from the lands of  
32 others, to be sure that they provide the right for them to continue to drain, they provide the right for his  
33 company to upgrade the size of that drain tile and put in a material that will be ready for many  
34 generations after the solar farm is decommissioned. He said that these systems are essentially NRCS or  
35 industry designed, and the only difference from other pattern drainage systems they have put on any  
36 other farm is that they are adjusting the geometrics so that they are not in conflict with the solar  
37 installation.

38  
39 Mr. Huddleston referred to the seventh slide and said that in summary, their plan is to meet all of these  
40 drainage principles: surface conveyance, to make sure they convey drainage across these parcels,  
41 especially from the ingress lands of others; to respect, identify, and inspect all mutual drainage lines that

1 benefit the lands of others; and lastly, to install these pattern systems exclusive to the project area so that  
2 when the solar farm goes away, each farmer will have his own pattern drainage system that will be  
3 exclusive to that person's property lines. He said that all lines within the project area will be reinstalled  
4 with polyethylene pipe. He said to answer someone's question from earlier in the meeting, the plan with  
5 the hedgerows is to lay a water-tight gasketed pipe; Advantage Drainage Systems makes a polypropylene  
6 pipe that has a thick wall solid pipe with a smooth wall on the inside and corrugated outside. He said it  
7 is a heavy pipe with a double gasket in it that will not allow roots within the pipe itself. He said they  
8 will be able to traverse through the landscape plantings when we are picking up the waters of others with  
9 a pipe that won't have roots to impede those flows. He said that at all points along the perimeter of this  
10 site where tiles extend to the lands of others, they will install an online, onsite riser pipe that has a slotted  
11 bottom and tees into the line and extends up above the surface. He said that a cap can be removed to  
12 observe the flows, and it also adds some air to the system, which is good for ventilation for flows. He  
13 said that it also makes for good neighbors; it identifies exactly where one person's drainage goes into  
14 another's, so if there is ever a question about not draining through the solar site, they will be able to pull  
15 this riser pipe and observe the flows. He said if there is a problem, it is on him to make sure to find what  
16 the problem is; they certainly don't expect a problem with all brand-new pipe. He said that the pipe has  
17 the 40-year warranty that is in place not only for the solar farm but for many generations afterwards. He  
18 asked if there were any questions.

19

20 Ms. Lee asked Mr. Huddleston to indicate how far apart the pattern tiling is.

21

22 Mr. Huddleston responded that typically they install them 80 to 90 feet apart, sometimes 100 feet. He  
23 said that when he laid out this site, 90 feet worked just about right with the piles they had.

24

25 Mr. Fitzgerald said that he appreciated the fact that Mr. Huddleston mentioned a 40-year legal warranty,  
26 but reasonably, how long should this drainage improvement continue to provide benefit to these  
27 properties in the surrounding area.

28

29 Mr. Huddleston said that his company is one of the largest customers of Advanced Drainage Systems  
30 (ADS), which provides polyethylene pipe worldwide he believes. He said he sat down with their  
31 material engineers and told them he needed pipe that his company could warranty for 40 years plus. He  
32 said their engineer said that wasn't a problem, and that they would go through a design of the pipe itself.  
33 He said that ADS has the ability to turn up the resin weights when they make this pipe, so they can turn  
34 up the gram weight and make the pipe a little thicker if they need to. He said they are going to design  
35 the pipe so that his company can meet a long warranty period. When he asked ADS, they said they  
36 thought 100 to 200 years, although no one has been around that long to find out. He said the pipe has  
37 been in since 1972, and he can say that the polyethylene pipe that was professionally installed in the  
38 right groove with the right kind of trencher is flowing just as good today as it did when it was originally  
39 installed. He said that clay drain tile, interestingly enough, especially the ones that were in for 100 to  
40 120 years or so, actually work fine. He said that the problem is, back 100 years ago we did not have  
41 ASTM ratings for testing materials, so the contractors or farmers were just going to clay pits and mining

1 clay, so structurally they were not really testing and did not really have the integrity standards within the  
2 clay that we do today. He said that today we have perfect control of our materials and we know better  
3 how exactly to predict and how to warranty longevity to the pipe itself.  
4

5 Mr. Passalacqua asked if it was perforated pipe with a silt sock on it.  
6

7 Mr. Huddleston said that when plastic pipe first came out, they could get it in 100-foot rolls, and they  
8 thought this was the best thing ever, then all of a sudden, they came out in 1,200, 1,400, and 2,100 foot  
9 rolls and they could just roll it out as quickly as they could string it along the ground. He said they  
10 decided to just put the filter fabric on everything. He said basically it looks like a lady's nylon hose; it's  
11 a fabric that goes on the outside of the pipe and keeps silts and sands mostly from getting in the pipe. He  
12 said about two years later they started to get some calls, dug some pipe up, and were some of the first  
13 people to find that the filters were slicking out – they were getting a bio mat from the fine filters and not  
14 draining. He said that their industry has since recognized that filters are meant for running sand and not  
15 for Drummer and Flanagan soils, which are 90% of our soils in this area. He said that the only time they  
16 plug in is if they get into a lens of running sand, and then they plug in the filter and run it until the  
17 operator sees that we are out of it and then we pull the filter and continue the regular pipe.  
18

19 Ms. Capel asked the Board and staff if they had any questions, and there were none.  
20

21 Ms. Capel asked if anyone would like to cross-examine Mr. Huddleston.  
22

23 Mr. Ted Hartke referred to the green line in the right side image on the slide that says Preliminary  
24 Drainage Evaluation. He said he assumed that the green line is the ridgeline that separates the two  
25 drainage areas, and asked Mr. Huddleston if everything west of that ridgeline was going to be pattern  
26 tiled.  
27

28 Mr. Huddleston said yes. He said that he just took an example of a parcel and patterned it out; it is in a  
29 different watershed, and it goes in a different direction.  
30

31 Mr. Hartke asked Mr. Huddleston if he thinks that once he puts his pattern tile in, everything on the west  
32 side of that ridge will drain excellent and drain quicker than it has done before.  
33

34 Mr. Huddleston said yes, he is very confident of that.  
35

36 Mr. Hartke asked if Mr. Huddleston could quantify how much quicker it might drain – a third better,  
37 50% better.  
38

39 Mr. Huddleston said that the idea behind pattern drainage is that it is consistent drainage throughout the  
40 whole site, so we want to drop the water table down to the root zone within 48 to 72 hours, so that is  
41 always our goal.



1  
2 Mr. Hartke said, so within 48 to 72 hours of a huge rain event, we should be dewatering really well.

3  
4 Mr. Huddleston said yes and explained that one reason that his company does not like to put surface  
5 drainage on subsurface systems is that in a significant rain event, they want to encourage surface flow  
6 and conveyance across the top as quickly as possible so that the drain tiles can simultaneously pull the  
7 water table down. He said that once the surface flows are off the sites and in the active channels and  
8 ditches, then the drain tile system already has a jump on pulling the water table down.

9  
10 Mr. Hartke asked if all the land that is west of that green ridge drains toward the west to the large ditch  
11 near the railroad and then crosses the railroad.

12  
13 Mr. Huddleston said yes, correct.

14  
15 Mr. Hartke said that he has a huge concern for the Board to consider. He asked if they have considered  
16 how much more drainage and water this is going to send toward downtown Sidney and all the residents  
17 on the south half and through the center of Sidney.

18  
19 Mr. Huddleston said yes and said he would explain where the improvement is to the hydrology of Sidney  
20 and to the hydrology of the ditch on the west. He said that drain tiles bring the water table down during  
21 the period between the significant rain events; in doing that, you create a tremendous amount of  
22 retention within the soil bank itself. He said that now you have three to four feet of soil with open pores  
23 that are ready to receive flows, so the flash flooding or flash sheet runoff is much less, because the soils  
24 themselves hold the water and then release them at a duration.

25  
26 Mr. Hartke asked if Mr. Huddleston was aware of how long the Village of Sidney has been flooded by  
27 backwater, where it will just not drain out.

28  
29 Mr. Huddleston said no, but he lives in a community just like Sidney, so he is aware of small town  
30 issues with flooding, and especially flash flooding. He said that most of the floods are caused by the  
31 agricultural watershed, so in all cases, if the agricultural watersheds are controlled and maintained, it  
32 will certainly help the floods and flash floods within small towns.

33  
34 Mr. Hartke asked Mr. Huddleston if the developer would be open to meeting with any hydrologic or  
35 other engineer that the city may select to discuss the exact impacts of what they might predict could  
36 happen to make sure this is not a detriment for Sidney and make their flooding worse.

37  
38 Mr. Huddleston stated that he is not the developer, he is the drain tile contractor.

39  
40 Mr. Hartke asked Mr. Huddleston if he would be open to discussing the things that he has testified to  
41 with the Village of Sidney engineers.

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Mr. Huddleston said that they are very confident of their drainage tile systems and would be glad to discuss them with whomever our developer would like them to.

Mr. Hartke said that he is an engineer too, and he loves drainage, as long as we are careful with downstream people as well as the upstream people.

Ms. Capel asked if anyone else would like to cross-examine Mr. Huddleston.

Mr. Daniel Herriott asked Mr. Huddleston if there is any concern of fescue, rye grass, or any of the plant choices the developer is proposing getting into tile.

Mr. Huddleston stated yes, and they had a lengthy discussion with the developer about that today. He said that all the solar farms want to put deep-rooted grasses and forbs and such in. He said that his company happens to do a lot of restoration work, and they have a proprietary patent on a system with a set of valves they use to turn areas into wetlands restoration. He said that prairie plants are planted in those systems as well, and they had instances when those deep-rooted grasses got into their tile system. He said back about 16-18 years ago during a drought, they had corn roots in some of their tiles. He said that tiles don't like roots, as you well know. He said that they have discussed the issue and they think it is important to come up with a mix of grasses that don't go in their drain tiles. He said that within the actual area where there will be actual ground cover, they will come up with a blend of grasses that will meet all the goals but not cause a failure to the drainage and farmland.

Mr. Herriott stated that Mr. Huddleston said that he has had an interest in solar farms ever since they came to Illinois, and he has worked with them in the past. He asked if rain coming off the solar panels would increase the surface water flowing off the solar farms, and if so, how does he mitigate that for the neighbors downstream who are still growing crops.

Mr. Huddleston said that it does not. He said that runoff coefficient of turfs is very much slower than actual row crops, particularly on frozen ground conditions. He said they are not causing any more pervious area on the surface itself, and these are well drained, so they have a very deep-water table now that can hold a lot of water. He said we should be able to get a 1 to 1.5-inch rain before you even see any runoff, which may not be the case in some areas right now that are not well tiled.

Mr. Herriott asked Mr. Huddleston how often he replaces mains with like kind tile as opposed to upgrading tile, during a system tile drainage project.

Mr. Huddleston said he does that all the time; he said they redo the mains in almost every project. He said that they also redo the mains because the guy upstream wants to tile out someday and he will come and talk with them, and his company will do some quick calculations and try to upgrade. He said that normally, the typical standard in Illinois is that if he is pattern tiling a farm, and has a 12-inch tile going

1 through the neighbor's farm, and the neighbor up above asks what it will take for him, and Mr.  
2 Huddleston says it will take a 15 inch tile, then the neighbor normally comes down and pays for the  
3 difference between 12 inch and 15 inch tile. He said that way, they are able to get the right size mains in  
4 place so that other people have the opportunity to pattern drain it sometime. He said that is the same sort  
5 of procedure that they will be proposing on this project.

6  
7 Mr. Herriott said he is concerned about the District main size over to the east. He gave an example that  
8 if it was a 21-inch tile, and the District says it needs to be a 30-inch tile, and Mr. Huddleston's company  
9 goes through there and only puts a 21-inch tile in, and Mr. Herriott is trying to pattern tile upstream. He  
10 said that his drainage would be fine, but downstream might get hurt – he said he is concerned about the  
11 company doing like-kind replacement rather than an upgrade to a larger tile.

12  
13 Mr. Huddleston stated that he spends most of his time doing exactly that. He said that whenever they go  
14 in to pattern drain one field, they need to make sure to upgrade the mains, especially the mutual mains,  
15 to run through a size that would be sufficient. He said that he has talked with the Drainage District  
16 Commissioners at the Farm Bureau about this. He said that his company is certainly open to proposing  
17 to replace those lines. He thinks they are clay lines that are not in very good shape, so they would like-  
18 kind replace them. He said they have two methods – sometimes they take excavators and cut them out  
19 and put a brand new one right in place and hook the laterals; other times they take a trencher and can lay  
20 up to 24 or 30 inch tile and lay it parallel, then they come back and dig out the old main, pick up all the  
21 laterals coming from the other direction and hook them in the new main. He said that both procedures  
22 are fine, it just depends on the area. He said that he expects there would be quite an interest in seeing that  
23 these mains are upgraded.

24  
25 Mr. Herriott stated that it is his concern; drainage districts do not typically have a whole lot of money,  
26 and speaking from experience, sometimes you are talking 10 to 20 years to start replacing that main. He  
27 said that his question to the developer is if they are willing to upgrade those mains if the drainage district  
28 cannot.

29  
30 Ms. Capel asked if anyone else would like to cross-examine Mr. Huddleston.

31  
32 Mr. Chuck White, Sidney Village President, asked Mr. Huddleston how much sooner he thinks all the  
33 water draining into the ditch will get to Sidney with the drain tile improvements.

34  
35 Mr. Huddleston said he thinks it will help. He said that the area shown east of the green line is all  
36 tributary to the Village's main line system. He said that if his company creates soils that can hold more  
37 water in retention and release them slower, then the Village won't get the flash floods that it normally  
38 gets today. He said that farmland loves water, but we just don't want too much of it, so they want to  
39 wetten up the soils and release what they can't use.

40

1 Mr. White said that he understands all that. He said that there is a river that runs north of the Village of  
2 Sidney, and when the water gets backed up, he has seen it stay flooded for 4 days. He asked if Mr.  
3 Huddleston thinks his tiling system will help that.

4  
5 Mr. Huddleston said that he thinks that is more regional flow. He said that he thinks Sidney's problem  
6 is the same as Rochelle's problem; it is not farmers, in a lot of cases it is urban sprawl that affect  
7 impervious areas and how they are treated. He thinks that comes from something that they might not  
8 have control over, but he thinks it certainly will help.

9  
10 Mr. Jeff Justus stated that right now in the main tile line shown on the screen as a red line running  
11 northeast off the subject property, if we get a big rain, water has to wait its turn to go into the ditch. He  
12 asked Mr. Huddleston if his tiling system will help or hinder that.

13  
14 Mr. Huddleston stated that today we have the ability to model how much water the ground needs to hold,  
15 and how much they need to dissipate it, and those models tell us what size the main lines and drain tiles  
16 need to be. He says his company uses a standardized model that they all use and has been shown to  
17 work through experience and tests. He said that normally what happens in common drain tile systems is  
18 the higher folks drain first because they have higher elevations. He said that if the mains are properly  
19 sized, then the lower folks can drain simultaneously. He said that this is probably a factor of the mains  
20 being too small, but maybe also the mains aren't as efficient. He said that clay tiles start to break in and  
21 shift, and the flow coefficient gets very rough inside. He said that this polyethylene pipe is faster and  
22 more consistent than clay and comes in 14 and 20 feet lengths, so they don't have joints all the way  
23 through. He said that after they remodel and lay these pipes, the pipes will all be sized correctly, and we  
24 know that the new pipes will carry the flow that the models say they will.

25  
26 Mr. Justus said that Mr. Huddleston mentioned that the mains would be dual-wall and asked if single-  
27 wall would be used on the small types of pipes.

28  
29 Mr. Huddleston said that normally when they go out into a field, they either plow or open trench, and  
30 they use their open trenchers to come in and cut the outside tiles in right away, so they can identify if  
31 there is tile going outside, or if there is a big tile they need to deal with. He said that when they know  
32 they have a sector of land that is controlled, they call that a green space and they know it is okay to plow.  
33 He said that with plowing, they don't know what they hit, whereas with trenches they know exactly what  
34 they hit. He said that by using both methods, they are always pretty successful.

35  
36 Mr. Justus asked what the plan is if it is a private line; it does not seem very cost efficient just to rip it  
37 up, especially if it is not that old either.

38  
39 Mr. Huddleston said that a line is only private if it stays within the limits of your own farm. He said that  
40 a line traveling outside is a legal mutual drain, and if it was, the landowner is liable for the benefit that  
41 you achieve with a mutual line and for the performance of that line. He said if he allows that line to fail,

1 and shows negligence in maintaining that line, then you could take him to court, and a judge would give  
2 you a judgment, where you could come onto his land, trespass on it and fix it whether he likes it or not,  
3 and further, you could sue him in civil court to recover your costs for any other liabilities you may have  
4 suffered. He said that Illinois Drainage Code is pretty tough, and it needs to be because we all need to  
5 work together and prosper commonly together; in other words, with any mutual or district line, they treat  
6 it the same way as the Illinois Drainage Code would.

7  
8 Mr. Justus asked Mr. Huddleston to disregard whether it is a private line or not and gave an example that  
9 the current line was installed in the last 10 years or so. He asked Mr. Huddleston if they are just going to  
10 destroy it, which to him would seem kind of like a waste.

11  
12 Mr. Huddleston said no, they have a map of newer patterned tile, and they will make their tile lines meet  
13 up with the geometries of the developer's piles. He said that drain tiles actually work better the longer  
14 they are in.

15  
16 Mr. Justus asked if all the tile they will use is virgin resin tile.

17  
18 Mr. Huddleston said yes, they are made of virgin resins, and they will all be high quality pipe. He said  
19 they buy from a couple of manufacturers, and they all have the ability to turn up the gram weight to  
20 whatever his company's specifications are. He said that contractors all have their favorites, but he thinks  
21 the manufacturers all seem to follow the same standards. He said that he promises that if his company is  
22 going to go to the work of doing all this, they are going to put good tile in.

23  
24 Ms. Capel asked if anyone else would like to cross-examine Mr. Huddleston, and there was no one.

25  
26 Ms. Capel asked if there was further discussion from the Board.

27  
28 Mr. Randol stated that he does not have experience with field tile, but he has experience with water and  
29 sewer mains, tying in laterals, and busted pipes. He said that sometimes it's Friday afternoon close to  
30 quitting time, or close to lunch hour, and if there is not a supervisor on site, shortcuts might be made.  
31 He asked Mr. Huddleston if he or someone will always be on site with his crew when working.

32  
33 Mr. Huddleston said yes, whichever of the companies, his, Seevers, or others, they all have their  
34 signatures on them at the end of the day. He said that if they miss a lateral, it will show up the next  
35 week. He said that his company's vision is to develop a system that has a 40-year warranty, until after  
36 this solar farm is decommissioned. He said that all the systems and maintenance have got to perform for  
37 40 years without them going back out there. He said they would have a difficult time going back out  
38 there when the solar panels are there, so they are going to have a very strict guideline to make sure that  
39 after 40 years, the system is in place so that it can last for the generations after that.

40

1 Mr. Fitzgerald stated that this concludes testimony of experts regarding the BayWa proposal. He said in  
2 summary, in its simplest form, the BayWa proposal meets the County's 38-page ordinance, with three  
3 minor waivers, which are waivers that the County has already granted to other solar developments within  
4 the last 30 days. He said that BayWa understands, however, that it is not enough just to check the boxes  
5 and submit the application. He said that BayWa has a very strong desire to be a good corporate citizen, a  
6 good neighbor, and to that effect, in their deliberations this evening or whenever they occur, he hopes  
7 that the Board reflects upon some of the testimony heard so far. He asked the Board to think about the  
8 initial site plan that BayWa proposed over the summer, which met with fierce opposition by the Sidney  
9 residents. He said that BayWa responded by totally redesigning and moving the solar farm east away  
10 from the residential subdivision. He asked what BayWa has done with sound and said that they  
11 voluntarily agreed to include sound mitigation that exceeds the Ordinance; they are voluntarily doing  
12 more than what is required of them. He said that one thing that we have talked a great deal about with  
13 Patrick Brown and George Gunnoe is the best prime farmland. He said that he is fortunate to be part of  
14 a family that has a Centennial Farm, and he has tried to share with Patrick, George, and the BayWa  
15 company just how important farmland is to those of us in Champaign County. He said that what the  
16 Board has heard in tonight's testimony and in the November 1<sup>st</sup> testimony is this land assemblage that  
17 BayWa has put together is all with private landowners. He said it is private landowners that are making  
18 an economic decision about what is in the best interest for them and their family, and voluntarily they  
19 have chosen to take part in this proposed solar development that is in front of the Board. He said that the  
20 Board heard this evening a soil expert testify on the record that this is not a permanent conversion; they  
21 are not tearing down paradise and putting up a parking lot and a Target. He said that this is a temporary  
22 alternative land use that we fully anticipate will return to agricultural production. He said that you heard  
23 the soil expert tell you that the land will not be harmed, and the land, the best prime farmland, will  
24 actually be better at the conclusion of the solar farm. He said you have heard our landscape expert  
25 testify and show you graphically what is being proposed. He said it is a very extensive landscape plan,  
26 and Brown Woods is a local contractor that most of you probably already know of, and if you don't, you  
27 can certainly very quickly check their work product, and he thinks you will find that it is very high. He  
28 said perhaps the most important thing that BayWa is doing is what Tom Huddleston just testified to, and  
29 that's the drainage improvements. He said that we are talking about an expense in excess of one million  
30 dollars that BayWa is voluntarily embracing to undertake and that level of investment is not required by  
31 the Ordinance. He said that it is something BayWa, in an effort to be a good corporate citizen and  
32 perhaps more importantly, a good neighbor, is willing to do, and that is a benefit that is long going to  
33 outlast this solar farm. He said that you heard Tom reference 100 years and he would venture to say that  
34 is a lot longer than any of us in this room are going to be around. He said that is a pretty strong  
35 testament, but it is consistent with a company that is going to make in excess of a \$150 million dollar  
36 investment in our community. He said they are hopeful they can make that investment and make that  
37 investment with the consent and authority of the County, and it starts with this Board.

38  
39 Ms. Capel called for a five minute recess.

40  
41 **The Board recessed at 8:50 p.m.**

1 **The Board resumed at 8:55 p.m.**

2

3 Ms. Capel stated called William McKee to testify.

4

5 William McKee, 2254 CR 1000N, Sidney, asked how close the solar panels would be to the railroad  
6 track on the north side. He said that this is the biggest group of solar panels they are putting out and his  
7 house is 120 feet from the railroad track. He asked how far back the solar panels will be from the  
8 railroad track.

9

10 Ms. Capel stated that the Board would be able to ask the developer Mr. McKee's question once public  
11 testimony is done tonight.

12

13 Mr. McKee said that they have them proposed almost all the way around him. He said another thing he  
14 noticed is that they are going to use 20,000 gallons of water to wash the panels; that is in the little group  
15 of panels on the other side of his house. He asked if they are going to drill wells, or how are they going  
16 to get that water. He said that if it takes 20,000 gallons of water for the little solar farm by his house,  
17 how much is it going to take to clean this larger solar farm, and where are they going to get all that  
18 water. He said that he just put in a new well, which is 30 feet deeper than his old well, so the water is  
19 getting a little shorter out there, and he wants to make sure that they are not going to take his water.

20

21 Ms. Capel asked if anyone would like to cross-examine Mr. McKee, and there was no one.

22

23 Ms. Capel asked the Board if they had any questions for Mr. McKee, and there were none.

24

25 Ms. Capel called Chuck White to testify.

26

27 Mr. Chuck White, 309 S Bryan, Sidney, stated that the Board addressed the question he had about trees.  
28 He said that in the Decommissioning Plan, he does not recall there being a price for taking out trees. He  
29 said that we have talked about prime farm ground before, and he brought in a chart at a previous meeting  
30 that talked about bushels per acre. He said that he looked it up again today; the average bushels of corn  
31 per acre is 221 around this three-county area, and he showed the chart indicating that Sidney is one of  
32 the best around. He said that 1,200 acres would produce 265,200 bushels of corn per year, which taking  
33 out that much corn doesn't seem like much, but when you put it through the 20-year project, that is  
34 5,304,000 bushels taken out. He said he knows the ground might be a little better after 20 years, but in  
35 one way or another we are going to pay for it. He said that if you take out that many bushels, your food  
36 prices will go up. He said he does not remember the exact numbers of how many homes this project  
37 would take care of for electricity, and he remembers BayWa saying they would like to keep as much  
38 local as they can, but he still feels like BayWa is pushing its electricity toward manufacturers and such  
39 more out of the county. He looked up that Champaign County roughly has 80,665 homes, and when you  
40 add businesses and schools in and everything else, he would think that if they want to keep it local, do  
41 something with the county to aggregate the electricity for this project, and that might be one-third of

1 their usage that they need to get rid of. He said that maybe then we would feel like we are getting  
2 something for this project.

3  
4 Ms. Capel asked if anyone would like to cross-examine Mr. White, and there was no one.

5  
6 Ms. Capel asked the Board and staff if they had any questions for Mr. White, and there were none.

7  
8 Ms. Capel called Lisa Nesbitt to testify.

9  
10 Ms. Lisa Nesbitt, 2232A CR 1000N, Sidney, asked if BayWa would drill wells to get their water. She  
11 said she would echo a lot of what Mr. White said and she tried to do some quick math and it is a lot of  
12 bushels of grain not being sold, which are typically sold either in Sidney, in Tolono, possibly some of it  
13 goes to Andersons, possibly some to Frito Lay; it's local there. She said that those are local people who  
14 work there, and if you drop enough bushels, which she knows this is just one solar farm, but it's a big  
15 one, and then we add in the others, she doesn't know how many total there are, she knows how many  
16 Thursdays in a row she has shown up and she's getting kind of tired of it, and if they all get approved, it  
17 is going to be a lot. She said she knows they talked about how much money is going to come into the  
18 community; mostly you are talking about hotels and restaurants for the construction crews. She said  
19 long term, BayWa said 14 jobs, but she wants the Board to know that there are also going to be some  
20 jobs lost. She said that this amount of acreage, and this is conservative, represents over \$637,000 that is  
21 not being spent at United Prairie, Crop Production Services, which is now called Nutrien, local seed  
22 dealers, that's your inputs. She said your chemical dealers, the guys who run your spray rigs, the trucks,  
23 are local people who right now have jobs, and some of them could lose their jobs, and that has to offset  
24 that bringing in of jobs. She asked what 14 full-time people would  
25 do on a day like today when there is snow on the ground, there's no sun, there's nothing to mow from  
26 Halloween to the end of April. She said there is also an effect on farmers in the area; she cannot speak  
27 for all of them because she does not know all of them, but several of these landowners are what we call  
28 absentee landowners. She said that they don't farm it now, they more than likely cash rent it; that is not  
29 the case for all the people she knows, some of them are personally farming the land and they can make  
30 their own decisions. She said that the people who are currently cash renting the ground are going to lose  
31 those acres. She said that if even 600 of the acres are taken away from people who farm, they have to go  
32 out and find other landowners to rent that off of, and what that does is drive up cash rents, and that is  
33 because there is less land to get, more farmers who need it, and now they have to outbid their neighbors,  
34 which is going to run everybody's cash rent prices up and in turn drive everyone's costs up. She said  
35 that margins are already pretty slim. She said she does not think that they can tell anyone outside of their  
36 leased area what they can and can't do, but routinely of late, when we have wet summers in particular,  
37 fungicides and herbicides are flown on when it is too wet. She said that fungicides drift a little, but if it  
38 gets on your neighbor's field, it is a benefit, but if it gets on these solar panels, she is guessing that they  
39 are not going to like that too much. She said that it may be more of a pain for the farmers around them  
40 than they realize.

41



1 Ms. Nesbitt stated that they are Ameren customers, and pay a two to three percent fee on their bill that  
2 Ameren is using to go out and locate renewable energy. She said that they have a goal, or maybe it is a  
3 mandate, to get 25 percent renewable energy by a certain year. She said that she thinks that if they are  
4 going to do this and you are going to give up some of the best land in the world, because they did say  
5 they have 8 locations, probably one of those does not have this good of land. She said that Mr. Brown  
6 had mentioned that he has been at this for a year, and she sympathizes with him because it is his job, but  
7 she hopes to outlive this solar farm although there are people in this room who won't. She said that the  
8 decision they are making is very long term, and it is very important to those who have to be neighbors of  
9 this. She said they are all going to go back to California or wherever they came from and they are not  
10 going to have to bother, but we and the farmers around it are going to have to bother. She said she does  
11 not know what the landowner contracts say, she does not know if they have to file those, and she does  
12 not know if there are any landowners here; in the past meetings she has not seen any here. She said that  
13 if she were them, she would have a lot of questions for BayWa that she would be checking on based on  
14 research she has done.

15  
16 Ms. Nesbitt stated that she would appreciate it if the Board could pin them down or make them say the  
17 will sell a certain percentage to Ameren. She said that part of the reason they picked our area was that  
18 substation, the addition to that substation, and all the new lines that run out there in all directions. She  
19 said that if they are going to put this project there and ship it all the way to the east coast, and if they are  
20 going to make Ameren outbid another buyer in another state and then all our bills go up, then we are  
21 getting hit from both sides here. She said that she is just trying to look for some benefit, and she is not  
22 finding it. She said that on the screens, it is not her business, but she suggests that the wording should  
23 say that all the plant screening material should be removed as part of the Decommissioning Plan, except  
24 where the landowner wants it left alone.

25  
26 Ms. Capel asked the Board and staff if there were any questions for Ms. Nesbitt, and there were none.

27  
28 Ms. Capel asked if anyone would like to cross-examine Ms. Nesbitt, and there was no one.

29  
30 Ms. Capel called Mr. Hartke to testify.

31  
32 Mr. Ted Hartke, 1183 CR 2300E, Sidney, stated that as part of decommissioning, BayWa wants to use  
33 some of the residual salvage value of the panels, and said that he thinks that is a far-fetched possibility.  
34 He said that BayWa claims that the technology will improve, and they will find some sort of use for  
35 these panels and asked that the developer provide a list of exactly what some of those uses are going to  
36 be, whether they crush the panels up and turn them into asphalt pavement or mix it with concrete to  
37 make roads. He said or perhaps, they pay \$25 per panel to deliver them to a recycling plant, and for that  
38 cost of \$25 per panel, when there are approximately 600,000 panels in this project, that is \$1.5 million.  
39 He said that is a cost, not a credit. He said that he thinks we discussed the part about the pollinator  
40 plants that have been eliminated from some of the recent paperwork and he would like the landscaping  
41 or planting company to figure out why the pollinator words were eliminated from the most recent memo

1 #2 tonight. He said he would like to know what the phone number is for the complaint hotline, and the  
2 process if we see something wrong, whether the hotline will ring into the County Board office or if it  
3 rings into an onsite answering machine at a maintenance building. He said that he thinks if there is an  
4 emergency, he knows they can call 911, but he would like to know the number of the complaint hotline  
5 and have it posted at a few entrances on the fence. He said that he is still a little bit concerned about the  
6 pattern tiling and he feels that there is still a possibility with the pattern tiling, with the trunk lines  
7 attached with better tile materials, that will improve and speed up the dewatering of the site. He said  
8 that he understands that there is potential for the water to be stored in the tiles for a while instead of just  
9 running off the surface; however, when he has driven by these fields, lots of times he will see a lot of  
10 heavy, deep ponding and to him it looks like that water can stay in those fields until they have time to  
11 finally slowly drain away instead of suddenly with high-speed dewatering of the site come into the town  
12 of Sidney. He asked if the east and west sides of this site have excellent tile and the pass-through tiles  
13 are improved as well, will the outlet downstream of Sidney worsen the backwater running back into the  
14 Village of Sidney and cause what he calls reverse flooding, which is what causes Sidney's flood issues  
15 most of the time.

16  
17 Mr. Hartke stated that he has some concerns about access roads to the site and would like to know if the  
18 plan is to bring these materials from Interstate 74, which possibly could send all the construction traffic  
19 through downtown St. Joseph. He would like to know if the materials are coming off Interstate 74 from  
20 the east, whether they would get off at Illinois Route 49 either at the Fithian exit or Ogden exit and send  
21 traffic through downtown Ogden, possibly causing problems for those two small towns. He said if the  
22 materials are coming from the west and they decide to get off the Interstate in Urbana, he wonders if  
23 Illinois Route 130, which would include problems in both Urbana and in the town of Sidney, if that  
24 could be a potential problem. He said that if they do come through Route 49 from the south and run  
25 these all past the Homer grade school, he has some concerns about how many truckloads of material will  
26 be coming through those small towns. He said that on April 5<sup>th</sup>, he presented the normalized USEPA  
27 study from the 1970s showing a colored graph with black dots, and those were the lists of 1970s EPA  
28 studies where they measured noise in comparison to the community reactions to the noise, and he  
29 wanted to point out that widespread complaints from constant noise start at 33.5 dBA. He said this is for  
30 quiet areas, not urban areas, and on April 26<sup>th</sup>, at a Sidney town hall meeting at the Sidney fire station,  
31 Patrick Brown proclaimed that "you will never hear the noise from the panels." Mr. Hartke said that  
32 those were his exact words. He said that he is very impressed that BayWa has decided to keep the noise  
33 levels at 38-39 dBA, he thinks that is very good; however, he was very disappointed in the noise study.  
34 He said that the noise study before us has a Table 2 that talked about where they did pre-construction  
35 noise studies over a one-day period where it appears that harvesting was going on. He said that he grew  
36 up on a farm, it's a Centennial farm, and he knows what he is talking about how long it takes to go  
37 harvest and things. He said that his brother can knock out 80 acres in a day, so he spends about a day  
38 next to peoples' houses combining. He said that they have a Kinze planter, he thinks it is a 36-row  
39 planter, that he has never used, but it is huge, and they can knock out a 40-acre field in about 2 hours.  
40 He said that the other times when fertilizing or spraying is going on, he thinks the truck is done in about  
41 an hour because the boom is about 200 feet wide. He therefore is very disappointed that the acoustician

1 picked perhaps the noisiest day to measure this noise range. He said that they call this the ambient sound  
2 level, and they have some numbers here that are off the charts; they say that maximum noise is at 94 and  
3 74 dBA, and that has to be the noise level immediately directly in front of the train with the train horn  
4 going. He said that the homes that are going to be impacted by this project are not immediately next to  
5 the train with the train horn going; they are out in the middle, some of them 1.5 miles from the train  
6 tracks. He said that these homes are not next to the highway that goes to Longview, they are not next to  
7 the highway that goes to Homer, the residents he is worried about are shown on the study map as R2,  
8 R6, R5, and R4. He said that he is very surprised by the high noise levels that came off the study. He  
9 said that when the acoustician was in front of us, Mr. Hartke asked him why the noise levels predicted  
10 were for the property lines at the residences, and he feels that it is not exactly clear that the noise levels  
11 were measured at the property lines or whether they are at the house itself. He is of the thinking that  
12 people own all of their land and he thinks that noise levels should be less than 39 dBA all the way to the  
13 property line for the entire project, and he asks that the developer certify to that. He said that he is very  
14 pleased that the developer is open to putting up noise huts, and he is also very pleased to see the  
15 developer's site layout plan showing the inverters at the very center of the project. He said that the  
16 Board should ask the acoustician if he used the proper wind and noise filter, which is like a big, huge  
17 sponge for the top of his microphone. He said that perhaps that would explain the shockingly high  
18 ambient noise levels that are shown in this report in Table 2. He said that the attorney for the developer  
19 said that the proposal meets all the ordinance requirements to a T; however, Mr. Hartke does not believe  
20 that the acoustician who has spoken to us tonight has followed the IPCB noise measurement protocol  
21 standards, which include observed measurements. He said that the observed measurements mean that  
22 during the duration of the noise study, a person takes notes of noise events such as a train or car going  
23 by, a barking dog, or any kind of item that happens; the observer makes a mark for that noise with a time  
24 stamp. He said that the acoustician stated that these were unattended meters; with an unattended meter,  
25 a bus could pull up and park next to it, and he might think it was a tractor, but it was a bus. He said it  
26 could be a curious person who parked next to it for a long time and watched the meter go and didn't  
27 know that he was messing up the study. He said that is why the Illinois Pollution Control Board  
28 standards says that those measurements have to be monitored the whole time. He asked if there was an  
29 audio recording along with the meter recording and the acoustician said that there was no audio  
30 recording, so you get this machine that just spits out like an equalizer would with bumps and noise, and  
31 it is just data, but it has no way to tell what that is. He said that a person can guess what it is if they want  
32 to do an octave band frequency analysis to see if it is a train horn or cows mooing. He said that he thinks  
33 that this noise study falls on its face when Mr. Fitzgerald claims it meets the standards to a T, because it  
34 did not follow IPCB measurement protocol standards. Mr. Hartke said that Dr. Paul Schomer, whom he  
35 has mentioned in the past, was a graduate student when the noise standards were created and was on the  
36 panel that did those in the 1960s. He said that in the past Dr. Schomer has testified in hearings and  
37 courts that an unattended noise measurement was - Mr. Hartke cannot remember the term he used, but  
38 said it was the same as junk science - junk in, junk out. He said that the acoustical noise study regarding  
39 ambient noises is completely bogus and he is very disappointed in the locations where they chose to put  
40 the pre-construction study. He said that he has a lot of confidence that the drainage for the project is  
41 going to be great, and they are going to spend millions of dollars doing this drainage work; but this noise

1 portion of it he believes has been belittled and ignored, and that part of it has been disappointing. He  
2 said that he wants the Board to ask the developer to submit the spec sheets on the toxicity of the panels  
3 to determine exactly the make, model and content of the panels. He said there is a note in the  
4 decommissioning plan that the developer must conduct a soil analysis at the time of decommissioning;  
5 he thinks that if these things are causing problems and leaking in the soil, or any contamination, we  
6 should know that before they decommission the project. He said that perhaps maybe halfway through  
7 after 10 or 15 years, would be good. He said that he does not see any requirements that as soon as the  
8 solar panel is discovered to be damaged, whether they get burned or damaged from a storm, those need  
9 to be removed immediately, and he does not think that is too much to ask. He said that the developer  
10 tonight needs to be asked if the panels can be put in a landfill, and more specifically, can they be put in a  
11 landfill in Illinois. He said that this will make it clear to us whether these things are considered toxic or  
12 hazardous material.

13  
14 Ms. Capel stated that there were three minutes remaining in the meeting limit per the by-laws. She  
15 asked the Board if there is a motion to extend the meeting.

16  
17 **Mr. DiNovo moved, seconded by Ms. Griest, to extend the meeting until 10:00 p.m. The motion**  
18 **passed by voice vote.**

19  
20 Mr. Hartke said that the bottom line, what got his attention with this job was the noise levels. He said  
21 that he has probably used up some good will toward the Board and has gotten some negative feedback  
22 from the Board as well. He said he hates to say it is the devil's advocate in him or trying to defend his  
23 neighbors because they don't know what is going to happen, but he feels like he can kind of predict what  
24 is going to happen here. He said that his ultimate goal is that everyone gets to sleep in their home and  
25 are not woken up at 6 in the morning, and they are not flooded out of their Sidney business or residence.  
26 He said that he very much appreciates the fact that the developer is going to bring the noise levels down  
27 to 39 dBA, and he would like to figure out how our County can add some teeth into that. He said, for  
28 instance, if it is found that some kids are waking up or neighbors can't have fun in their garden anymore,  
29 what is the County going to do, what is the plan; is there a fine, do they have to shut the equipment off,  
30 do they have to provide more noise barriers. He said that he feels like in the wind farm, when the wind  
31 company said "hey, we had our acousticians say it's fine, and the County Board approved it, so sue us"  
32 and he was all by himself and didn't have the money to sue them. He said his neighbors could not afford  
33 it and he was set up for failure and he left his home.

34  
35 Ms. Capel asked if there were any questions for Mr. Hartke from the Board or staff.

36  
37 Mr. Elwell asked, with the study that was presented tonight, is there a protocol that is required by your  
38 licensure for how the tests are done, and if so, is there a governing body. He said that it seems like it has  
39 been presented that it does not have to be manned and then there is testimony that says it has to be  
40 manned. He said it seems there should be something from the State of Illinois that indicates that it has  
41 to be one way or the other.

1  
2 Mr. Hartke said that he did not know it would become an issue, and when he asked the acoustician, he  
3 was surprised that he did not man the station during his one-day study. He said that he would be glad to  
4 send the Board the IPCB noise measurement protocol instructions that tell you exactly what you are  
5 supposed to do.  
6  
7 Mr. DiNovo stated that IPCB serves a regulatory function and he presumes that those protocols are there  
8 to provide guidance for establishing whether an existing noise source complies. He said that there is no  
9 official guidance from IPCB for how to conduct a prospective noise study.  
10  
11 Mr. Hartke said that the difference is that IPCB does not tell you how to predict noise in a regulatory  
12 way, and that is why you have modelling and such. He said that the IPCB noise, whether it is pre or post  
13 construction, it doesn't matter when you are measuring the noise, in order to be recognized as legitimate,  
14 acceptable noise studies, they have a list of things that you must do for that to be held up and acceptable.  
15  
16 Mr. DiNovo said that part of that is to establish what is acceptable as evidence in what is essentially a  
17 legal proceeding; it is not necessarily to define what is acceptable science outside a legal proceeding. He  
18 said that in order to establish the provenance of the noise meter data in a legal proceeding, you need  
19 someone to stand there and testify that they observed this meter continuously for the entire period. He  
20 said that is a different evidentiary burden than modelling something in advance and coming up with a  
21 reasonable estimate about what it is likely to be. He said that he does not think that failure to follow  
22 those IPCB protocols in and of itself is a problem; if there are other issues about the suitability, the  
23 number of observations to establish the ambient noise levels, the location of where those measurements  
24 were taken, he is not concerned. He does not see how the IPCB standards themselves are particularly  
25 relevant. He said that he is not prepared to buy the idea that somebody pulled up next to a noise meter  
26 and parked there for six hours, and he can imagine if you look at the data you can tell pretty easily where  
27 there were transient events, just from the raw data, that something happened here that spiked the sound.  
28 He said that he is not buying the idea that somebody actually had to be standing next to the meter for 24  
29 hours in order to establish that; the data itself will show you if there were unusual occurrences. He said  
30 that we can get into what occurrence it was, he is not sure it really matters, whether it is a harvester or  
31 somebody clearing brush in his yard a quarter mile away with a chainsaw. He said there are lots of  
32 sources of noise around and he doesn't think the IPCB standards themselves are relevant to judge the  
33 quality of the noise study.  
34  
35 Mr. Hartke said that he does not know why the County has IPCB standards in the Ordinance. He said  
36 that he questions whether the Board would even think it fair to do the base noise modelling immediately  
37 adjacent to the railroad on two of the four meters, instead of having it at some of these quieter  
38 residences, where they actually are the houses he is concerned about. He said that between the  
39 combination of not following the measurement protocol and the choice of where they put these noise  
40 meters, he would classify that as cheating. He said he thinks that this noise study should be rejected.  
41

1 Ms. Capel asked the audience if anyone desired to cross-examine Mr. Hartke.

2  
3 Ms. Tannie Justus stated that she also questioned the noise study levels, because we are out in the  
4 country, it's quiet, so how can the numbers be that high. She said, but then she started paying attention  
5 to her surroundings – four dogs that bark a lot, her husband has a semi that idles a lot in her yard, the  
6 noise the wind makes, etc., and she questions what Mr. Hartke is saying, and said that the country is not  
7 as quiet as she thought it was.

8  
9 Ms. Capel asked the audience if anyone else would like to cross-examine Mr. Hartke.

10  
11 Mr. Leech stated that the noise levels on these roadways, such as South Bryant Avenue, are very  
12 consistent with what we would expect to see from a noise level reading, which is one of the reasons that  
13 he was not surprised by the readings they got during a 24-hour period and is why he did not question the  
14 results. He said that for busy roadways such as that, you would expect to see a decibel level between 60  
15 and 65, and for a 2-lane highway, which is the roadway facility adjacent to LT2, you would expect to see  
16 a 70 to 75 dBA reading.

17  
18 Mr. Hartke said that his point was that next to these roadways is not where these homes are at – they are  
19 in this project, and specifically, these homes are away from the highway.

20  
21 Ms. Capel asked the audience if anyone else would like to cross-examine Mr. Hartke.

22  
23 Mr. Chuck White asked Mr. Hartke about truck traffic during construction, did he realize in the draft  
24 study on page 15, letter C, indicates 1,920 trucks during construction.

25  
26 Mr. Hartke said no, he had no idea, and had not studied that part of it.

27  
28 Ms. Capel asked the audience if anyone else would like to cross-examine Mr. Hartke, and there was no  
29 one.

30  
31 Mr. DiNovo asked if Mr. Leech could be recalled to follow-up, since he may not be here at a subsequent  
32 meeting.

33  
34 Ms. Capel called Mr. Leech to testify.

35  
36 Mr. DiNovo asked Mr. Leech if he is familiar with the World Health Organization's recommendations  
37 regarding noise.

38  
39 Mr. Leech stated yes, their recommendation of 40 dBA is a nighttime recommendation, so between the  
40 hours of 10 p.m. and 7 a.m. they recommend noise levels not above that in order to avoid sleep  
41 disruption. He said their daytime recommendation is 55 dBA. He said that even though we have

1 applied the nighttime standard because it is more restrictive, what would actually occur is that during  
2 certain portions of the year, the longer days of summer, we would have those inverters maybe starting to  
3 run at 6 a.m. with the first hour of sunlight, which is considered nighttime. He said that is about the only  
4 hour that we are under that nighttime restriction and the rest of the time these are only operating during  
5 daylight hours.

6  
7 Mr. DiNovo asked Mr. Leech to explain how he selected the metering locations for the ambient noise  
8 study.

9  
10 Mr. Leech said that they typically select one of the closest residences in each direction from the project  
11 boundary. He said that to the west, that happened to be a residence along South Bryant Street, to the  
12 north those were residences along the 2-lane highway that runs east-west on the north side of the project;  
13 on the south side it is a home just outside the boundary of the project; and to the east it is a home that is  
14 along CR 2400E.

15  
16 Mr. DiNovo asked Mr. Leech if there is a professional organization or government body that publishes  
17 guidance for these types of studies in establishing ambient noise levels.

18  
19 Mr. Leech stated that the American Society of Testing Methods (ASTM), has specific environmental  
20 noise criteria that is used for environmental noise as ambient background levels for proposed projects,  
21 and the method that they used meets that ASTM standard.

22  
23 Mr. Elwell asked Mr. Leech to indicate a standard that would require someone to be present during the  
24 24-hour test.

25  
26 Mr. Leech stated that typically for background noise levels, the ASTM standards calls for a 24-hour test  
27 so that they can see the fluctuation of noise levels around the clock to get a better idea of traffic patterns  
28 and unusual industry patterns that might affect what they would expect to see, but those 24-hour  
29 measurements in the ASTM standard are not required to be observed throughout that period. He said  
30 that having a person stand next to meter for a 24-hour period is not something that is seen in the  
31 industry.

32  
33 Ms. Capel asked the Board if there were additional questions for Mr. Leech, and there were none.

34  
35 Ms. Capel asked staff if there were any questions for Mr. Leech.

36  
37 Mr. Hall asked Mr. Leech if there is a complaint, would it be expected to see 24-hour onsite monitoring  
38 if they are called out to measure sound in order to determine if there is a violation.

39  
40 Mr. Leech stated that if there is a complaint filed and there is a need to verify compliance, at that point  
41 and time they would expect to have someone monitor the sound meter at all times.

1  
2 Ms. Capel asked the audience if anyone desired to cross-examine Mr. Leech.  
3  
4 Ms. Lisa Nesbitt asked Mr. Leech if the numbers are an average over a 24-hour period.  
5  
6 Mr. Leech stated no, the calculated numbers are an hourly average, so when the equipment was running  
7 the average noise level in a given hour is indicated.  
8  
9 Ms. Nesbitt asked Mr. Leech if the study indicates the noise that was captured during a 24-hour period.  
10  
11 Mr. Leech stated yes, the ambient noise levels were captured over a 24-hour period and the noise data is  
12 indicated for each hour throughout the 24-hour time period of what the noise levels were - the minimum,  
13 maximum, and average value.  
14  
15 Ms. Nesbitt asked if this information is indicated in the packet. She said that since they live close to the  
16 railroad, they are aware of the train schedule and she will be able to see the difference in the noise due to  
17 a train.  
18  
19 Mr. Leech stated that the information is included in the packet and Ms. Nesbitt would be able to see the  
20 fluctuation in the noise levels by the hour at the four locations that were monitored.  
21  
22 Ms. Nesbitt stated that if there was a train every hour it would bump up the average noise level. She said  
23 that generally the area is as quiet as it is in this meeting room when everyone is quiet, but when the trains  
24 go by and when her dog barks 5 a.m. to warn them, there will be two minutes of increased noise.  
25  
26 Mr. Leech stated that if there were an actual train each hour, then the maximum of 95 dBA would be  
27 indicated each and every hour, and we did not see those fluctuations.  
28  
29 Ms. Nesbitt stated that there is no train that passes every hour.  
30  
31 Mr. DiNovo asked if the appendices of the noise study are available online.  
32  
33 Ms. Capel stated that they are not included in the Board's packet.  
34  
35 Mr. DiNovo asked if they are in the Department of Planning and Zoning's office for the public to  
36 review.  
37  
38 Ms. Burgstrom stated no.  
39  
40 Ms. Capel stated that Table 2 is in the packet, but the raw data has not been received by staff or the  
41 Board for review.



1  
2 Mr. Patrick Brown stated that the raw data can be delivered electronically.

3  
4 Mr. Elwell stated that he googled a graphic representation of what common noise levels are, and the  
5 information indicates that rainfall is normally between 45 and 55 dBA, is that correct.

6  
7 Mr. Leech stated that it depends upon the intensity of the rain and the location that it is occurring. He  
8 said that if the rain is falling on a plowed field or crop, then it would not be as loud as if it were falling  
9 on hard surfaces.

10  
11 Mr. Elwell stated that typical speech has a noise level of 55 to 65 dBA, and busy city traffic has a dBA  
12 of 85.

13  
14 Mr. Leech stated that those noise levels are correct.

15  
16 Ms. Capel asked the audience if anyone else desired to cross-examine Mr. Leech, and there was no one.

17  
18 Ms. Capel called Patrick Brown to testify.

19  
20 Mr. Patrick Brown stated that he appreciates the effort that staff, the Board, and the audience are putting  
21 into this project. He reminded the Board that the ambient analysis that has been thoroughly discussed is  
22 not the project, and we are not analyzing the Village of Sidney's noise problems. He said that BayWa  
23 provided a report to indicate what the solar farm would do, and the only reason why they did an ambient  
24 is because the ordinance requires it as follows: "the pre-development 24-hour ambient background sound  
25 level shall be identified at representative locations near the site of the proposed PV Solar Farm." He  
26 asked the Board and the audience to stop discussing the ambient noise and to please discuss the  
27 proposed solar farm.

28  
29 Mr. Brown stated that he wanted to clarify a point. He said that after all the hearings that everyone sat  
30 through and discussed 40 dBA and everything that Mr. Hartke testified about, they went back and  
31 decided that he does not agree with it and he never agreed with it in the ordinance, and he will stand  
32 outside of this meeting room and indicate the same thing, and he always stated that he would deal with at  
33 the project. He said that when the issue came up during the project, he made the commitment to be at 39  
34 dBA or below, not 38 or 37 dBA, but 40 dBA was the limit and he agreed to be 39 dBA or below. He  
35 said that the noise study shows some of the highest at 38 dBA, and he believes that is some of the  
36 misconception that he committed at 38 dBA, but he said 39 dBA or below because it is under 40 dBA.  
37 He said that if the special condition could indicate below 40 dBA or 39 dBA and below, however staff  
38 wants to write it, then he will commit to that special condition. He noted that he does not agree with the  
39 special condition, but during development he must make people happy. He said that he is trying to do  
40 what the community wants because there are a lot of citizens concerned about the noise and he will  
41 commit to the special condition. He said that Mr. Hartke spent a lot of time convincing everyone what

1 the acceptable dBA should be, and even though Mr. Brown does not agree with it, he is willing to  
2 commit to it so that they are good neighbor and corporate citizen.

3  
4 Mr. Hall stated that the special condition indicates the following: the petitioner shall install sound  
5 reduction kits so that operational sound levels would be no more than 39 dBA at existing residences  
6 within 1,500 feet from the project site. He asked Mr. Brown if he is agreeing that 39 dBA is an  
7 enforcement level, so that if 10 years from now staff receives a complaint staff would hire their own  
8 noise consultant to go out and follow the IPCB standard identifying a noise level above 39 dBA, which  
9 is a violation. He said that currently, the special conditions have not been structured, and we want to  
10 know that it is 39 dBA or below upon construction. He said that if we are agreeing that the dBA for the  
11 perpetuity of the project is to be 39, staff could strengthen the special conditions to relieve us of any gray  
12 areas.

13  
14 Mr. Brown stated that he would be willing to accept that as an ongoing special condition, because he is  
15 not going to represent BayWa by saying that they will do this and then later down the road allow it to be  
16 later contending that they agreed to keep it under a certain noise level. He said that if he is testifying that  
17 he will do something, then that is what will be done. He said that he is positive that Mr. Hartke will  
18 come out to visit the solar farm and when he does, Mr. Hartke can submit any complaints that he may  
19 have. He said that as a married man, he would be very appreciative if this case could be wrapped up  
20 tonight, although he does not know if that is possible and would understand if it needed to be continued  
21 to one more meeting.

22  
23 Ms. Capel asked the Board and staff if there were any questions for Mr. Brown, and there were none.

24  
25 Ms. Capel asked the audience if anyone desired to cross-examine Mr. Brown.

26  
27 Mr. Hartke asked Mr. Brown if he would stand by his comment to many people who attended the  
28 firehouse meeting, that they would not be able to hear any noise from the solar farm.

29  
30 Mr. Brown stated that he does not believe that such a comment was part of his testimony.

31  
32 Mr. Hartke asked Mr. Brown if he has been contacted by any of the neighbors who do not desire to live  
33 next to the solar farm to see if BayWa would purchase their home.

34  
35 Ms. Capel stated that Mr. Brown did not present any such testimony.

36  
37 Mr. Hartke stated that when he presents a project to this Board, he is just going to submit the plans and  
38 not say anything, that way he does not have to answer any questions. He asked Mr. Brown to indicate  
39 what BayWa would do if they received a complaint regarding noise.

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41 Mr. Brown stated that they would do whatever the County requires to remedy the complaint.

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Ms. Capel entertained a motion to extend the meeting.

**Mr. Elwell moved, seconded by Mr. DiNovo, to extend the meeting to 10:05 p.m. The motion carried by voice vote.**

Ms. Capel closed the witness register.

Ms. Griest stated that Mr. Hall discussed the special condition regarding noise and indicated that the evidence did not support 39 dBA but did support 38 dBA. She said that page 26 in Appendix 7, under the conclusion, the last paragraph reads as follows: “The assessment of operational noise with the inverters equipped with this sound reduction kit concludes that operational sound levels would be less than 39 dBA *L<sub>eq</sub>* at all existing residences within 1500 feet of the project site.” She stated that she would support the special condition to indicate less than 39 dBA, not 38 dBA.

Ms. Capel stated that Mr. Brown indicated that he was comfortable with less than 40 dBA or 39 dBA as the standard.

Ms. Capel stated that that the Board has been talking for quite some time that the evidence does support less than 39 dBA, and that is what she would support as well, not less than 40 dBA.

Mr. Hall recommended that special condition I.2 indicated in Supplemental Memorandum #2, on page 11, be revised to indicate the following: The petitioner shall install sound reduction kits from the inverter manufacturer to each of the inverters in the solar farm so that operational sound levels will be less than 39 dBA at all existing residences within 1,500 feet of the project site.

Ms. Griest agreed with the revision.

Mr. Brown agreed with the revision as well.

Ms. Capel entertained a motion to continue Case 898-S-18 to the November 29, 2018, meeting.

**Mr. DiNovo moved, seconded by Ms. Lee, to continue Case 898-S-18 to the November 29, 2018, meeting. The motion carried by voice vote.**

**6. New Public Hearings**

None

**7. Staff Report**

1 None

2

3 **8. Other Business**

4 **A. Review of Docket**

5

6 Mr. DiNovo asked if the cases docketed for the December 27<sup>th</sup> meeting would be rescheduled to a later  
7 hearing.

8

9 Mr. Hall stated that there are currently two cases docketed for the December 27<sup>th</sup> meeting, and those two  
10 petitioners have been very courteous with the scheduling of cases this fall.

11

12 **9. Audience participation with respect to matters other than cases pending before the Board**

13

14 None

15

16 **10. Adjournment**

17

18 Ms. Capel entertained a motion to adjourn the meeting.

19

20 **Ms. Griest moved, seconded by Mr. Randol, to adjourn the meeting. The motion carried by voice**  
21 **vote.**

22

23 The meeting adjourned at 10:05 p.m.

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26 Respectfully submitted

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31 Secretary of Zoning Board of Appeals

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