

DRAINAGE MEETING  
DISTRICT HOWARD #46  
DECEMBER 1, 2020

The Story County Drainage District Trustees met in the Public Meeting Room of the Story County Administration Building to consider action on an Engineer's Report (on file in the Auditor's Office) concerning issues in Drainage District Howard #46. Members present were Linda Murken, chair, Lisa Heddens, and Lauris Olson. Also present were County Engineer Darren Moon, Outreach and Special Projects Manager Leanne Harter, Drainage Clerk Scott Wall, Supervisor-elect Latifah Faisal, and Kent Rode and Tyler Conley from Bolton & Menk, Inc.

Murken called the meeting to order at 9:00 a.m. and stated it was being held virtually on the Zoom videoconferencing platform due to the ongoing COVID-19 pandemic and the attendant risks of meeting in person.

Heddens moved, seconded by Olson, to approve the agenda. Motion carried unanimously (MCU).

Rode presented the Engineer's Report which was prompted by a written request from district landowner A.J. Christian. Howard #46 has two separate main tiles, both of which outlet into Bear Creek. Christian's request dealt specifically with Main Tile A which serves the south part of the district but the report examined the watershed of the entire district. Using LIDAR coverage to determine elevations indicated about 40 acres east of the district and another roughly 40 acres near the Main Tile A outlet that are not in the district but are benefitting from its facilities and should be annexed. The district's northern boundary ends at the Story/Hamilton County line but the watershed extends well north into Hamilton County and the report recommends that area (382 acres) be annexed as well which would create a joint district with Hamilton County.

Murken said the watershed appeared to overlap another district in Hamilton County. Were there properties that did not belong in that district (Hamilton #165/46) that should be in Howard #46 instead?

Rode said the watershed map is based on ground elevations only and shows where surface water is flowing. There could be private tile that directs the subsurface water to the Hamilton #165/46 facilities. Some of those lands could also be tiled to Bear Creek in Hamilton County. If such additional tile exists that could impact the size of the area to be annexed.

There are numerous blowouts in Main Tile A, predominately in the last quarter mile to Bear Creek. This is pasture land where blowouts are less of an issue than they are on cropland which may be part of the reason the situation has gotten as bad as it has. That land is also not in the district but is recommended for annexation. There are a lot of trees nearby and two beaver dams in Bear Creek that are backing up the water at the tile outlet. While Bear Creek is outside the district boundaries and cannot be cleaned or straightened, anything that impedes the district's drainage (the dams) can be addressed.

While Main Tile B does not appear to have the same problems as Main Tile A both are undersized by modern standards. The current drainage coefficient is less than a quarter inch while new systems use at least one half inch and even a one inch coefficient in depressional areas. The coefficient is the amount of water the tile drains from the land in 24 hours. Since Christian's request was directed at just Main Tile A any problems with Main Tile B could be left for a later time. Note that when a public hearing is held we could learn about problems with Main Tile B.

Christian's request proposed bypassing the last quarter mile of damaged tile and re-routing Main Tile A into Bear Creek above the damaged sections. The surrounding terrain and the amount of fall in the creek at this location preclude this as a solution and the outlet should be left where it is.

The report recommends addressing the entire length of Main Tile A as Bolton and Menk believe it is all in poor condition. It also recommends improving the tile. The estimated cost of a repair is \$503,000 and of an improvement is \$584,000 which is a relatively small difference for a large increase in capacity. The landowners served by Main Tile B will share in the costs of the Engineering Report and reclassification (about \$24,000). An improvement and/or an annexation will require a reclassification of the district and an improvement will require that landowners have farmed wetland certifications done for their land. Rode does not believe that farmed wetlands will be a factor in Howard #46 but if there are any that are affected by an improvement, mitigation is required and it is expensive (\$15,000/acre). Along with wetlands the report includes strategies for improving water quality which can either be undertaken by the district or by individual landowners.

Murken had several questions regarding the report. Is she correct that the cost of the improvement includes the cost of the repair? It is not another \$584,000.

Rode said that was correct. The difference between the two options is \$81,000.

Murken asked about the condition of Main Tile B. Does it have similar problems to those with Main Tile A?

Rode did not know of any problems with Main Tile B but they were not directed to examine that tile. If there is a public hearing landowners served by Main Tile B could introduce problems with that tile. Because of the age of both tiles we can assume that the condition of both tiles are similar but there have been no indications of problems from landowners served by Main Tile B.

Murken asked how long a repair or improvement could be expected to last.

Rode said the original clay tile has a design life of about 100 years. The repair or improvement would use reinforced concrete pipe and should last at least 100 years and likely 150 years or more.

Murken said this district looks like it should have been two districts. Why is it just one?

Rode said Murken was correct but there is no way to know what the thinking was in 1911. If the district is reclassified as recommended by the report, the end effect will be the same as if there were two separate districts as there would be two assessment schedules.

Murken asked why the land in Hamilton County wasn't included when the district was established.

Again Rode said there is no way to know but it may have simply been that it was easier not to involve a second county in the formation of the district.

Murken asked for clarification on wetlands assessments. Are they only needed in the case of an improvement and who does them?

Rode said that was correct and they are done by the National Resource Conservation Service.

Murken asked how many landowners are affected by this project.

Rode did not have that information available. *(Note: There are 63 tax parcels currently in Howard #46 and 21 landowners though some landowners may hold lands under different names. This is for the entire district. From the map included with the report it appears that 8 landowners rely on Main Tile A, including the area to be annexed near the outlet.)*

Olson said she couldn't get the acres in the report to match with her calculations. She is coming up with 1,506 acres for the Main Tile A watershed and 5,000 acres or more for the entire district.

Rode said the acres appear in the cost estimates in Appendix C. There are 549 acres served by Main Tile A and 1,034 acres served by Main Tile B for a total of 1,583 acres for the entire district including the proposed annexations.

Olson said she would like to see a cost estimate for a repair without the annexation or the reclassification along with what is already in the report.

Rode said a repair would not require a reclassification but he would still recommend a reclassification due to the inequities in the district.

Murken asked about the areas in the district that are not reached by the main tiles which only cover a small part of the areas they serve.

Conley said Murken is correct that the main tiles do not extend to the full extent of the watershed. There is an assumption that those areas are served by private tiles which tie into the main tile but we don't know where those private tiles are. The watershed is based on surface flows as determined by ground elevation data.

Heddens asked if the acres given in the report included the areas to be annexed.

Rode said that is correct. There are 452 acres recommended for annexation with 382 of them in Hamilton County.

Olson said she would like to see more details for the areas served by the two main tiles and for the annexation. She is not comfortable with the level of detail in the report with respect to costs per acre and cannot support the report in its current form.

Heddens asked if Olson would accept the report if it is amended prior to a public hearing.

Olson replied that she would like to see the costs per acre for the district in its current configuration and the costs per acre if the annexations were done for both main tiles. What is the cost for a repair of A without reclassification or annexation? With reclassification? With reclassification and annexation? What is the cost for an improvement of A with and without annexation understanding that this will involve a reclassification and that only the landowners served by A will pay for the work? When this is presented to the landowners they should be able to compare every possible scenario. She will support the report if this information can be added before the hearing.

Conley said that could easily be done without having to rewrite the report. It is just a few changes to an Excel spreadsheet. They can show the costs the way Olson is requesting.

Olson moved, seconded by Heddens, to accept the Engineer's Report on Howard #46 with the revisions to the estimate of costs discussed today. MCU.

Rode said a public hearing could be held not less than 40 days from today. He has conflicts the first two Tuesdays in January but is available of the 19<sup>th</sup>.

Olson asked if Rode is talking about a daytime or evening meeting. She prefers an evening meeting as it is easier for the landowners to attend. She also thought there might be a conflict with an Iowa State Association of Counties (ISAC) meeting on the 19<sup>th</sup>.

Rode said the evening works for him and he could attend a January 12 evening meeting as well.

Faisal said ISAC is running its New Officer School on January 13 and 14.

Murken said January 19 will give a little more time to have the amended report ready for the landowners to have access to it.

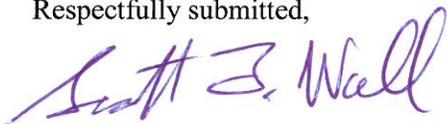
Heddens moved, seconded by Olson, to hold a public hearing at 6:00 p.m. on January 19 to present the Engineer's Report to the landowners in Howard #46. MCU.

Olson moved, seconded by Heddens, to direct Bolton and Menk to send letters to the landowners in Howard #46 requesting that they have farmed wetlands determinations done for their lands within the district and that they provide maps of their private tiles on those same lands. MCU.

Olson said that she wanted the trustees to be mindful of the situation in Drainage District Grant #5. There are strong similarities between that district and this one and she said the trustees need to be sure they know exactly what they are voting for and that the engineer understands what the trustees intend when they make decisions on what to do in Howard #46.

Heddens moved, seconded by Olson, to adjourn. MCU. Meeting adjourned at 9:57 a.m.

Respectfully submitted,



Scott T. Wall

**From:** Darren R. Moon <[DMoon@storycountyiowa.gov](mailto:DMoon@storycountyiowa.gov)>  
**Sent:** Tuesday, May 12, 2020 10:41 AM  
**To:** Kent Rode <[Kent.Rode@bolton-menk.com](mailto:Kent.Rode@bolton-menk.com)>  
**Subject:** FW: Sent from Snipping Tool

Kent,

It looks like I may need to turn this one over to you to take a look at it with the landowner and come up with options. What do you think about shortening the district tile creating new outlet? He is proposing a new outlet near the green text in the photo. Can this even be legally done? You would be cutting off access to the property owner at the end of the tile. This is DD#46 and it already has two different tile outlets.

Story County Engineer  
837 N Ave.  
Nevada, IA 50201  
515-382-7359  
[dmoon@storycountyiowa.gov](mailto:dmoon@storycountyiowa.gov)

**From:** A.J. Christian <[adam.jon.christian@gmail.com](mailto:adam.jon.christian@gmail.com)>  
**Sent:** Tuesday, May 12, 2020 10:06 AM  
**To:** Darren R. Moon <[DMoon@storycountyiowa.gov](mailto:DMoon@storycountyiowa.gov)>  
**Cc:** Mid-Iowa Machine <[mid-iowamachine@gmail.com](mailto:mid-iowamachine@gmail.com)>  
**Subject:** Fwd: Sent from Snipping Tool

Darren,

Per our conversation, I'm sending you an email reference the repair and or proposed reconfiguration of the existing county tile outlet in Section 15 of Howard Township.

The current county tile starts at 115th St between 590th and 600th Avenues and runs southwest through Sections 10 and 15 before exiting into Bear Creek on the north edge of Roland.

My brother and I attempted to fix a small suck hole next to an intake that sits in the fence line between ground owned by my uncle (Thomas Synhorst) and the Carpenter Brothers Inc but were unable to complete the project because there were issues with the county tile that were discovered during our work. When we got down to the intake and county main, we found that it was approximately 2/3 full of water and barely moving. We spoke with Kim Larson who farms the Carpenter ground and he allowed us to look for the outlet, which according to the county tile map, should exit into Bear Creek in the far south east corner of the Carpenter farm. However, after speaking with Harold Hovick, the tile actually exits approximately 1000 feet south of the property line shared between the Carpenters and Hovick.

While looking for the exit, the following issues were discovered in the section of tile on the Carpenter and Hovick ground.

- Large sink hole in Hovick's pasture (approximately 25'x25'x6' deep).
- Tile outlet sitting approximately 2/3 submerged in the creek.
- Multiple places in the Hovick pasture where it appears the tile has partially collapsed but now yet sucked the dirt down.

-Numerous trees that are most likely growing into the tile and impeding flow.

I am kindly requesting that an engineer take a look at the issues to see what can be done to get the county tile functioning properly again. I would also like the county to take a look at our intake issue (which I believe you are already doing).

See attached map of the issues listed and a proposed solution that I believe would be much cheaper than repairing the 1000 + feet of tile that appears to have been neglected for quite some time.

Respectfully,

A.J. Christian

Sent from my iPhone

