

DRAINAGE MEETING  
DISTRICT GRANT #13  
OCTOBER 5, 2015

The Story County Drainage District Trustees met in the Public Meeting Room of the Story County Administration Building to consider the effect of an Iowa Department of Transportation (IDOT) project to replace and widen the Interstate 35 (I-35) bridges over the Skunk River on lands owned by Bradshaw Farms in Drainage District Grant #13. Members present were Rick Sanders, chair, Paul Toot, and Wayne Clinton. Also present were County Engineer Darren Moon and Drainage Clerk Scott Wall, three representatives of the IDOT – Scott Dockstader, Dave Claman, and Tony Gustafson, and Bruce Bradshaw, manager of Bradshaw Farms.

Sanders called the meeting to order at 9:00 a.m.

Wall said Bradshaw had called him with concerns that the I-35 project will increase the risk of flooding on his farm ground in Grant #13. Wall referred Bradshaw to Moon who then recommended that the district trustees call this meeting.

Sanders pointed out that a couple of years ago Grant #13 was severed and the lands west of I-35 were removed from the district. The current district extends no farther west than the west side of the interstate.

Bradshaw manages his family's land east of I-35 and north of the Skunk River. They have 200 acres bordered by the river on the south and the Grant #13 open ditch on the west. They also have land west of I-35 but Bradshaw did not believe the IDOT project would affect those properties. The group gathered around a map of Grant #13 placed over an aerial photo and Bradshaw had brought several smaller aeriels as well. The Skunk River has dikes on both sides east of I-35 and has had them as long as he can remember. There is a break in the dike where the I-35 east ditch empties into the river and another break just upstream from where the Grant #13 ditch enters the river. There is a berm on both sides of the Grant #13 ditch but it has at least one low spot on the east side that lets water out onto Bradshaw's land when the river floods and the ditch backs up. Bradshaw is concerned that the I-35 project will increase the amount of water entering the ditch and the berm will collapse entirely causing more widespread flooding on his ground.

Bradshaw said the IDOT is planning to route the water west of I-35 through culverts running under the highway just north of 260<sup>th</sup> Street. The water would then run south to the Skunk River in the ditch along the interstate. His concern is that in a large flood event as in 2010 the water will continue west from the culverts to the Grant #13 ditch then flood his land east of the ditch through the low spot in the ditch berm. The berm on the west side of the ditch is higher than on the east. The east side should be built up to match the west.

Dockstader asked Bradshaw if he was worried that the IDOT will be putting water into the ditch that doesn't get into it today. That is Bradshaw's belief.

Moon said he would like to clarify that Story County does not have any dikes along its drainage ditches. The berms were probably created by dumping spoil from previous cleanouts of the ditch along the ditch banks. The dikes along the Skunk River are not a district issue and Moon doesn't know where they came from.

Wall said there was an Army Corps of Engineers project around 1900 to straighten the Skunk River from just south of Ames to the Polk County line and beyond. He believes the dikes were a part of that project. The Skunk River straightening is part of another drainage district – Skunk River #4. That has been an

inactive district meaning that while it has not been dissolved no work has been done in it for several decades. It was last levied in 1921.

Sanders said when we severed Grant #13 it was because there was no way for the water west of the highway to reach the Grant #13 ditch. All the water on the west side reached the Skunk River by flowing south in a ditch on the west side of I-35. If the IDOT is now going to direct water under I-35 and into the district are we going to have to annex the severed lands back into Grant #13?

Claman is a hydraulic engineer for the IDOT. He said that I-35 currently overtops in a 25-year flood. This happened in 2010 and came close last August. The interstate should not overtop for anything less than a 50-year flood. The goal of the new project is to prevent the interstate from overtopping in anything less than a 100-year flood. The Department of Natural Resources (DNR) limits the impact a project can have on upstream land owners so IDOT cannot simply raise the highway and not let any water through. The new bridges will allow more water to pass through but they still needed to add more area for upstream water to drain to the east. The remnant dike east of I-35 has two gaps so when the river comes up the land east of the highway will be inundated regardless of whether water is coming under the highway north of the river or not. The culverts will drain into the ditch on the east side of I-35 then follow the ditch south to the river. If the river floods like it did in 2010 the lands in question will be inundated regardless of what the IDOT does. If there is a weak spot in the Grant #13 ditch bank the river will back up into the ditch and find that weak spot. This is a district maintenance issue, not an IDOT issue.

Sanders said he is with the IDOT on the Skunk River not being an issue for them to resolve. What he is hearing are concerns about additional water entering the Grant #13 ditch north of 260<sup>th</sup> Street.

Bradshaw said when the river floods like it did in 2010 there is no way the ditch on the east side of I-35 will contain all the water. It will spread out and go everywhere. That is what happened 5 years ago and the water got onto Bradshaw's land through the weak spot along the Grant #13 ditch. When it floods like that everything is under water up to the fence posts.

Claman said that is the situation today and the project on I-35 won't change that. It will be the same.

Sanders said the Grant #13 ditch is an issue for a different day. Today we are trying to see if the IDOT project is going to affect drainage in Grant #13 and what he is hearing is that it won't. It may not make things any better but it won't make them any worse either.

Claman said they cannot change the amount of water. What they can do is change the hydraulic pressure at certain points such as the bridges. The amount of water in any given event will not change. In an event like 2010 the water overtopped I-35. In a similar event after the I-35 project the water will flow through the culverts instead but it will be the same amount of water that reaches the east side of the highway.

Bradshaw said in smaller events there is still water in the fields east of I-35. Where is that coming from? Claman said it is backing up the ditch from the Skunk River. Again, that isn't going to change.

Sanders asked about the project's diverting water into Grant #13 from outside the district. His understanding is that you can't bring water into a district from outside but doesn't the IDOT have the right to direct water that impacts its right-of-way?

Moon said that was partially correct. There is a second issue here which is that this area is covered by a second district – Skunk River #4 which encompasses the project area and part of Grant #13. Because the water in a flood is coming from the Skunk River as part of Skunk River #4 the IDOT can redirect that water.

Sanders asked where Skunk River #4 was.

Wall replied that it starts just south of Ames and encompasses an area of up to half a mile wide on either side of the river all the way south to the county line. We haven't done anything in Skunk River #4 since a levy in 1921 but the district still exists.

Claman said in a local rain event no water will flow under the interstate. It will be handled by the ditch on the west side. In a flood event the water is going to flood both sides of the interstate regardless of what the IDOT does.

Sanders said our concern as trustees should be whether anything the IDOT is doing will cause a problem in Grant #13. There is no question that there is a problem but will the I-35 project contribute to that problem? What he is hearing is that the project will have no effect on what is already happening in Grant #13. If that is the case we need to investigate options for repair or improvement in Grant #13 but that is a conversation for a different time.

Bradshaw said he did see a potential impact from the I-35 culverts on Grant #13. If the new culverts go in then in an event like 2010 the water that would have overtopped I-35 will pass through the culverts, overflow the eastern ditch and run east to the Grant #13 ditch north of where it crosses 260<sup>th</sup> Street. That water, coming down the ditch from the north will add to the water backing up from the Skunk River and it will break out to the east onto his 200 acres.

Sanders said he still doesn't see that IDOT is contributing to problems in Grant #13. He asked Moon if he agreed with what IDOT is saying about their project.

Moon concurred with IDOT. Regardless of what they do there is an opening to the Skunk River at the Grant #13 ditch which there has to be for the ditch to function. In a major flood event the Skunk is going to back up into the ditch just as it always has. He doesn't see how the IDOT can affect that.

Bradshaw said additional water coming under the interstate and hitting the west side of the Grant #13 ditch at 260<sup>th</sup> Street is going to damage that ditch and the road as well since there will be more water than the bridge on 260<sup>th</sup> Street can handle.

Sanders said it is still the same amount of water. If it overtops the interstate or flows under it there will still be just as much water east of I-35 in a flood in 2020 as there was in 2010. He still doesn't see that IDOT is changing anything with regards to Grant #13. What the trustees need to do is evaluate the Grant #13 ditch to ensure it can handle a normal flood event and correct any deficiencies so the ditch is up to original specifications.

Wall said the next step for the trustees would be for the county drain crew to look at the Grant #13 ditch to determine whether there is a problem. If there is they make the call as to whether they can handle it "in-house" or it needs to be bid out. If it is more than they can handle then we get to the point of deciding if it is a repair or improvement and if an engineering study and report will be necessary.

Sanders proposed that we acknowledge that IDOT's project will not add water to Grant #13. If we can agree on that then we need to see if the Grant #13 ditch meets original design specifications. The trustees are required, by law, to maintain the ditch to its original specifications. They can improve the ditch as well but that is a whole different animal. If the ditch needs to be repaired that's easy – we go in and fix it. If the ditch is meeting original specifications then the trustees have to decide if it should be improved.

Bradshaw said he could agree to that but he wants everyone to understand that there will be a flood that inundates all the land, including the interstate. It's going to happen. Will a 15' box culvert be able to handle that much water?

Claman said there will be four 15' box culverts.

Sanders said if we were experiencing something like North Carolina is having right now nothing is going to make any difference. Everything will be underwater. What the trustees need to address are normal rain events. None of our districts can handle extreme flooding – that is not what they are intended to do.

Claman noted that there was a Supreme Court decision that found there is no real or perceived prescriptive right to lands downstream of a road project with respect to normal drainage. In other words, if the road wasn't there the land owners have to accept the natural drainage and if the road were to be removed the landowners can't sue the DOT for removing what is, essentially, a dike as such an action is simply reverting the area to its natural state before there was a road. By court decision the IDOT is not obligated to provide any real or perceived benefit to downstream properties.

Sanders said the IDOT may not be providing a downstream benefit with this project but they are not contributing to any flooding problems downstream either.

Bradshaw said the last time the ditch was dredged the spoil was placed on the east side of the ditch north of 260<sup>th</sup> Street and on the west side of the ditch south of 260<sup>th</sup>. That is why the banks are lower adjacent to his land and that is why he would like to see the banks raised along his land. His tenant farmer doesn't want to farm the land anymore because the risks are too great for it to be economically viable.

Moon asked how water from Bradshaw's land gets into the ditch now. If the district builds up the ditch banks is that going to trap water on Bradshaw's 200 acres?

Bradshaw wanted to know why the IDOT was going to remove the old Skunk River dike on the north bank between I-35 and the Grant #13 ditch. That would let more water from the river into the area between the ditch and the highway.

Claman said the dike is already broken in two places so water goes around it anyway. Removing the remnant dike will allow the land to drain more efficiently when it does flood.

Sanders asked Bradshaw how any of that would affect his land east of the ditch.

Bradshaw said he wouldn't be able to answer that question without consulting an engineer. His biggest concern is his 200 acres east of the Grant #13 ditch. He thought he'd seen somewhere that the IDOT was going to build up the ditch embankment north of 260<sup>th</sup> Street and if they were paying for that they should pay for building up the embankment along his land south of 260<sup>th</sup> as well.

Claman said they were not building up the ditch embankment. As it is now the embankment has high spots and low spots. The project will bring it all to a consistent grade by lowering the high spots and raising the low spots. This is being done to make the flow into the ditch more consistent and help protect 260<sup>th</sup> where the ditch passes under the road. The ditch to the south of 260<sup>th</sup> has no bearing on any of the work the IDOT is proposing.

Sanders reiterated that his findings from this meeting are that nothing the IDOT is proposing will have any effect on Bradshaw's land. If the water gets high enough to come through the culverts and back up

from the Skunk River it will be the same amount of water as would be there without the culverts and the water overtopping the interstate. He asked Toot and Clinton if they had anything to add.

Toot said he hadn't heard anything to convince him that the IDOT was doing would affect future flooding. If we have an event like 2010 or 1993 everything that flooded then will flood again. The trustees' only responsibility is to make sure the Grant #13 facilities are in as good a shape as they can be. He has questions as far as the dike or embankment along the ditch is concerned but nothing more for the IDOT.

Clinton thinks the most important thing here is that everyone has gotten together and is on the same page. At the end of the day he hopes that all parties understand that there will be unforeseen events in the future but for normal conditions nothing anyone is proposing today will negatively impact Grant #13.

The IDOT representatives departed at 10:05 a.m. as there were no further questions for them. Sanders thanked them for taking the time to sit down with everyone and consider Bradshaw's concerns.

Sanders asked Moon and Wall to initiate an analysis as to whether the Grant #13 ditch is meeting original specifications and if it is not, what has to happen.

Moon said that area in question is inside the 100-year flood plain so the district may be prohibited from doing anything to raise the banks along the open ditch. If we are simply repairing the ditch we can probably do that but going beyond those specifications may not be possible. That's a conversation we'll need to have after we determine if the ditch is functioning as intended.

Bradshaw asked how the IDOT was able to improve the ditch north of 260<sup>th</sup> Street.

Moon said they were not improving the banks but simply taking them to a consistent level.

Sanders said the trustees could do the same thing to the south – smoothing out the banks but maintaining the existing average height. The original plans certainly didn't call for the ditch banks to rise and fall.

Moon said he doubted we would find anything in the records about the ditch embankments. They were probably level with the surrounding land to begin with and have been built up by spoil from the bottom of the ditch when the ditch was dredged.

Toot said if the berm was created by dredging of the ditch in the past is it now a part of the ditch or is it just the spoils. Near the Mississippi and Missouri Rivers there are levee districts but we don't have those here.

Sanders said, be that as it may, we need to look at the Grant #13 records, see if there is anything there that can help us going forward, and come back to the trustees with a report.

Moon asked Bradshaw what will happen to water on his land if we fill if any gaps in the dike. How will water drain off his land?

Sanders clarified with Bradshaw that his only concern is what happens to the water coming through the new culverts. If it runs south along the interstate it doesn't matter but if it flows east to the Grant #13 ditch it may be an issue. Bradshaw agreed that was the case.

Sanders said what the Trustees need to be sure of is in a normal rain event the district can handle the water and if it can handle a larger event that would be great.

Moon didn't anticipate it taking very long to research the Grant #13 records and go out in the field to look at the ditch.

Bradshaw asked do the trustees not see any problem with the water coming from the culverts reaching the ditch and eroding the berm.

Sanders said it depends on the event. His concern is when the flooding reaches a point that the I-35 ditch can no longer handle it all. That is when it will start spreading over the adjoining lands and moving towards the open ditch. That is what Bradshaw is concerned with. What Sanders heard from the IDOT is that their facility will be able to handle normal flooding.

Sanders appreciated Bradshaw bringing his concerns to the trustees and he hoped he felt we had the full conversation he wanted, even if he didn't get the result he wanted.

Clinton moved, seconded by Toot, to adjourn. Motion carried unanimously. Meeting adjourned at 10:20 p.m.

Respectfully submitted,

Scott T. Wall