

**Minutes
Stormwater Committee Meeting
New Berlin City Hall
3805 S. Casper Drive
Council Chambers
November 8, 2005**

Please note: Minutes are unofficial until approved by the Stormwater Committee at their next regularly scheduled meeting.

Present: Alderman Harenda, Alderman Hopkins, Alderman Hegeman, Mayor Chiovatero and Jim Kern

Others Present: Ray Grzys (Director of Utilities & Streets), Eric Nitschke (Division Engineer), Cathy Schwalbach (Stormwater Engineer), Chuck Trevorow (Stormwater Supervisor) & Sue Hanley (Office Coordinator Utilities & Streets)

Meeting called to order at 4:46pm by Alderman Harenda and declared a quorum with all members present.

SW 01-05 Minutes from October 11th Meeting

Motion by Alderman Hopkins to approve the minutes from the October 11th Stormwater Committee meeting. Seconded by Alderman Hegeman and upon voting the motion passed unanimously.

SW 19-05 Approval of Stormwater Utility Updated Five-Year Plan

Eric Nitschke said that this will be presented at the December Stormwater Committee meeting for general questions. He said that the Committee would have time to look over the plan and do some research before discussing it in depth at the January meeting.

SW 32-05 Drainage Request 12525 W. Marquette Drive

Motion by Alderman Hopkins to remove this item from the table. Seconded by Mr. Kern and upon voting the motion passed unanimously.

Mr. Nitschke as directed at the last Stormwater meeting, we are giving you a status report of the rain garden installation and sump pump discharge of the property at 12525 W. Marquette Drive. Staff met on site with the owner on October 17, 2005, and discussed the requirements with the property owner at that point. We inspected the site for the rain garden, and an issue that the resident brought up regarding the concrete invert.

A final inspection was made by staff after the October 31st, 2005 deadline given for the rain garden installation in the original notification. To date no rain garden has been installed and the sump pump discharge remains unchanged. There was a conflict and the resident disagreed with staff on what a rain garden is and staff has referred this to the City Attorney and staff is waiting for his recommendation on this area.

Alderman Hopkins asked if the rain garden was not to be constructed in the ditch correct? Mr. Nitschke answered no, the rain garden was to go in on the individual's property, and staff was willing for it to be installed in the yard with the back slope of the rain garden at the ditch edge. If the property owner looks for some variance where it would be located, as per past property owners, we would look at other ideas or concepts; even if the proposal were to put the rain garden in the ditch on the west side of the driveway because of where it lies on the slope. Similar to some residents on a peak of a hill where they have a culvert underneath their driveway, and the driveway literally splits the drainage both ways, and the culverts never used and it is heaving up, we allow for the culvert to be removed and have a driveway through there, pitched to have the water drain both ways.

Alderman Hopkins asked if the rain garden was installed on the property correctly, will it help with the flow downstream? Mr. Nitschke replied yes. What remains to be seen is if it eliminates their problem or provide some relief, but until the rain garden is correctly installed, there is no way of telling.

Alderman Hegeman asked how long it will take for the rain garden to take serious effect? Mr. Nitschke said at the very least, we would want to give it a full growing season. If it was planted this fall as was originally determined, by the end of fall next year we would have a very good idea where we were at. Mr. Nitschke said if it is planted

by next spring we would still be looking for some sort of determination by the end of the summer to give the plants one cycle, but the full effect will not be known for one year. He said according to Roger Bannerman of the DNR who has installed rain gardens, it takes about 1 year for the plantings to develop deep roots and get to the level to take in a lot of water. Alderman Hopkins asked if we are telling the gentleman down the road from her that he might have the problem for 1-2 years? Mr. Nitschke said yes, that is exactly what we are telling him. Since the rain garden was not installed and we are moving out of the season when those type of plant species and we are already into another growing season.

Alderman Hopkins said that concerns him because he has seen his property and asked what could we do? Mr. Nitschke said there are a couple of options available, including installing concrete invert to the furthest extent you can because once you move it off of his property, you continue to move it downstream. That was one of the original discussion we had at the Stormwater Committee meeting that made the rain garden so important. The concrete invert doesn't do anything other than to move a problem somewhere else. In the case we had, it alleviate the flooding, but it moved it downstream, ultimately the true problem causer, the sump pump, was not addressed. Mr. Nitschke said that there are several other options such as installing a stone trench, which would be a temporary solution for the condition, to keep water moving so that the resident could mow the lawn. That is a temporary situation in his opinion, because once you get to the next property, water has to build up in the stone trench to get through the next culvert and in wintertime, the water may get underneath the culvert and heave the culvert. Mr. Nitschke said another solution would be to revise plantings in the ditch and give it a more wet meadow species wild look, but that is not what the homeowners have now. Those are some of the options available for this conveyance issue, but ultimately the real option is to figure out the sump pump issue and get the rain garden going and if that situation drags out, what we did for the property owners in this immediate area, we would have to look at for the property owners downstream as far as concrete inverts.

Commissioner Kern asked when this issue would be resolved or how long would this drag out? Mr. Nitschke replied that in his opinion he feels that the owner has no intent of working with the City. Mr. Kern said there is a chance it could drag on further and they fight it. Mr. Nitschke said he could not put a finger on it on how long or short it would take, but hoped it would be resolved by the early planting season next spring. Alderman Hopkins said if we don't, he agrees that we want to find a way to fix it permanently, but if it is going to be dragged out a couple of years, we may want to talk to the property owner at least a couple of them down the road to see if we can do something on a temporary basis, because those properties were kept up extremely well over the years, and now something that the City has done has caused their ditches to become filled with water.

Mayor Chiovaturo said the cooperation that we are expecting from the homeowner is regarding the rain garden right and the issue is the sump pump right? Mr. Nitschke answered correct, that is the issue that originally presented that the property owners that got the concrete invert, there was a flat area near the sump pump on the upstream end and it flattened out, and the water would stand between 3 property owners. We had documentation that in heavy storm events, because of that flat area we were not meeting our own City requirements for water being maintained in the ditch line. It was actually spreading up the properties toward the homes. Mr. Nitschke said that staff's analyses of the area and engineering design showed, so by installing concrete inverts, it showed that efficiency of the ditches and the culverts was improved and we came much closer to meeting our requirements for conveyance. There was also the concern, and the issue that we heavily debated with the property owner coming in, as to if we put this concrete invert in, what is going to happen downstream, as we end up moving this water from where it stands and sits right now, to an area that is not accustomed to it. That is where the rain garden solution was brought in to try to direct the sump pump discharge to an area where plants would mitigate the amount of water coming out of that sump pump and significantly reduce what was flowing downstream. The rain garden was never installed and the concrete inverts was, and the concerns that were raised at the Committee level have now happened, where the water is moving downstream unimpeded and adversely impacting the neighbor's ditches on the downstream end.

Mayor Chiovaturo said the reason he is asking that the problem be caused from the continuous wetness from the sump pump. Mr. Nitschke said that when we get a lot of rain it is bathtub effect where the sump pump runs until it pumps out the granular soil and pumps it dry. What you are seeing in those photos after a rain, the sump pump runs continuously after a rain event that creates saturation of the soil. In this case, the sump pump runs for an extended period after a rain event, but in dry periods it runs much less.

Mayor Chiovaturo again asked if the sump pump is the issue, who don't we do anything about it? Mr. Nitschke replied that the idea was to pull the sump pump from the immediate ditch and pull it back into the rain garden to allow for the discharge. Typically when a sump pump is disconnected from a ditch it runs over land over grass and when you mow your grass, you only have a short blade, and your root structure is short, but in a rain garden

planting the root structure is deep. Alderman Harenda said that when the residents came in asking the City to pay for the whole cost of the invert, they ultimately agreed upon the 50/50 split but tied into that because of where the water was coming from on the one property and continuous flow that the motion was made to include the rain garden included in the agreement. He said that the resident has not replied to that and said we have more teeth in our ordinances now. Mayor Chiovero said that he thinks the City has the right to pull sump pump discharges since they are affecting properties and safety downstream. Alderman Harenda instructed staff to let the City Attorney know either way if we go that course or the other direction, he requested staff to communicate that to the City Attorney and discuss those options and relay it to the homeowner that we have the ability through our codes and ordinances to enforce this and this is creating a problem downstream. Mr. Nitschke asked the Committee to be cautious about it and why we have referred it to the City Attorney for his recommendation because the ordinance we have in place for the sump pump and the disconnect from our immediate conveyance system, to this point we have used only in new development. He said that facilities already in place have not been looked at, and if we start looking at them on a case-by-case basis, we may open ourselves to a multitude of complaints. Mayor Chiovero said if they are affecting property owners downstream, he does not have a problem with it. Mr. Nitschke said that these types of situations are why we did major projects, such as Buena Park and Gatewood where there are continuously running sump pumps. If want to go down this road, we have the policy and procedure set up, but are looking for the City Attorney's recommendation on what path to follow. Mayor Chiovero said that if we are looking for the City Attorney's recommendation, he doesn't know why we are discussing it, because we did our part, we put in the concrete invert, but she did not follow up with the rain garden, and in the meantime it has affected the properties downstream. Mayor Chiovero said that he thinks she is at the fault of our agreement and she needs to either put in the rain garden or pull back the sump pump. He said that we can discuss it until we are blue in the face, but if she isn't going to do it, what does it matter? Mr. Nitschke said that it was staff's intent to give the Committee an update per the Committee's request at the last meeting of where the situation was at. The issue was referred to the City Attorney once the deadline had passed.

Mr. Nitschke said that the memo was to update the Committee after the final inspection on October 31st, and that he would request the City Attorney to be at the next meeting. Alderman Harenda said that the agreement was specific and the homeowner did not install the rain garden. Alderman Harenda said that the concern he has, that when we approved the ordinance to pull back sump pump discharges, it may open Pandora's box, especially existing homes, such as his area where sump pump discharges have been into the culverts for years, but we need to take any complaints on a case-by-case basis and follow through with the City Attorney. He said the City met their obligation, and the other homeowners have met their obligations, but one homeowner did not and it is creating a problem. He agrees with staff to follow up with the City Attorney. Mayor Chiovero said that he knows they are all over the City, but they have never been raised to this level, that is why we are discussing it. Alderman Harenda said there were some in his district and it is up to interpretation how significant they are and it will have to be looked at in a case-by-case basis. Mayor Chiovero said that if the sump pump affects other properties, it is not right. Alderman Harenda said that in his subdivision, the majority of the homes have their discharges all the way out to the ditch lines, but nobody has complained about it either. Mayor Chiovero said that if they don't complain and are willing to live with it, but here is a burden that never existed, but now there is and we need to take action. Alderman Harenda said the Committee met the homeowner's halfway, and it is time that the homeowner follows through. Alderman Hegeman asked if the City Attorney gave a timeframe? Mr. Nitschke said that the City Attorney had just received the information, but he is always timely. Mr. Kern said what is the next step? Mr. Nitschke said we proceed with his recommendation. Mr. Kern asked if anything would happen before spring? Mr. Nitschke said that best-case scenario is we will be in the spring before anything is resolved. Alderman Harenda said that we might have to pursue the other option and eliminate the problem now. Mr. Nitschke said that staff would stay on top of this and have not just a report, but also a direction to go at the next meeting.

Motion to table by Alderman Hopkins. Seconded by Alderman Hegeman and upon voting the motion passed unanimously.

SW 33-05 Flooding at homes on the North Side of Coffee Road

Alderman Harenda read the requested action statement from Alderman Ament to request that the Stormwater Committee investigate the flooding of the yards on the north side of Coffee Road from 16380 W Coffee Rd to 16520 W. Coffee Rd.

Mr. Nitschke read the **Rationale:** I (Alderman Ament) held a meeting with the residents. Staff members that were present were Eric Nitschke, Ron Schildt, JP Walker and Greg Kessler. Based on that meeting it was determined that there are likely two causes for the flooding that has become more common and more severe over the last 5-7

years. The ditch was reconstructed a couple of years ago but was never completed. It is ugly, very difficult to maintain and a potential safety concern for vehicles on Coffee Road. The areas east and north are discharging more storm water than before. The only new development in that area that would likely cause this flooding is in the Industrial Park in the area of the Day Care Center. This problem began in the mid 1990's when the reconstruction of Calhoun Road redirected the flow of storm water but started getting worse in the last several years. The ditching project made things worse. These people have been asking for and being promised that this would be remedied year after year. Now at this last meeting the residents were told they will have to wait until at least 2007. I would add to this request that this project be put at the top of the list yet this fall.

Eric Nitschke gave a brief history and said that at the end of 2002, staff implemented a drainage list for projects and tracking system for concerns and in 2003 they received a request for Coffee Road to be ditched. It was determined to reditch the area. There was a resident that had a very shallow ditch and wanted to do some refilling in their yard to bring up the grade, so that water would not flow from the ditch to their front yard. Street crews reditched and reset some culverts that same year. When the drainage was done in 2003 there was a problem with a cross culvert just past these residents because there was no positive flow. Staff took up the analyses of that issue in 2004. If you ever drove down Coffee, you would see there is a hole on the north side of the road and typically standing water for days after rain. Over time, the channel that used to run from the north had filled in and was no longer functioning. We contacted the DNR because of our concern about wetlands and the DNR determined this to be a Class 1 wetland in the row, and they requested additional wetland delineations would be done to verify if we could get Chapter 30 permit since we would only be affecting a small area of wetlands, so that we could reditch. Staff could not obtain permission from the property owner to access the site, so DNR did not complete their delineation. In 2005, staff hired a survey crew to shoot surveys north and south down to Calhoun to determine how far we would have to go to achieve positive flow, and the it was determined in my (Mr. Nitschke's) analyses in Spring of 2005, it would have to be reditched on the south side of the road almost all the way down to Calhoun and then across the road and ditching up Calhoun to where Poplar Creek crosses in order to obtain positive drainage for this area. When we realized that the ditching would require more area than we had in our ROW because of the shallowness of the land and how far we had to ditch it, we decided to piggyback the drainage project with the Coffee Road reconstruction repaving project to save money on roadway maintenance and land acquisition. The plan is to work with the property owner to the south with the standing water to get positive flow down to Poplar Creek.

In the meantime, because we did not have positive flow, the sod and reseeded that the Street crews planted did not take and parts of the ditches became unmanageable and did not look very good. In the meeting with Alderman Ament, the residents had questions on how the ditch would be restored, how the standing water would be handled, and the water would be handled from the back portion of their homes. It is staff's opinion that the ditches as they stand in the front are working for rain events and functioning in conveyance mode, and keeping stormwater off their properties for the designed storm events. Once it gets to the bottom it does fill up to a point and starts discharging into the wetlands and out through another property, but as far as directly impacting the homeowners, the ditchline is functioning in a conveyance mode as our requirements call for. He said the backyard flooding that was reported, staff has been aware of. Staff has not addressed the backyard issue because it is not in the current 5-year plan nor in the proposed updated 5-year plan, but it is in the Stormwater Master Plan as a regional facility. Because of the priorities set by the Stormwater Master Plan, staff has not looked into it in great detail.

Alderman Hegeman asked how we can eliminate the backyard flooding? Mr. Nitschke said staff would have to do a region wide study, because you have a subdivision off of Top-O-Hill, and a subdivision on the north side of Coffee, and part of the Industrial Park that draining through the property that this all drains to the corner. These 3 large regions drain into the area, one of the problems is that it is very flat and one large property staff is not permitted to access, creates a similar situation as Marquette drive, and water backs up. It is a good reason that there is a high classification of wetlands in the area, because it is an area that water stands, and water does not drain very readily. Staff suggests the first thing to do is a study and based on the study, any type of work needed to be done would more than likely require a land acquisition and a regional facility due to the nature of the full buildout of the subdivisions that currently drain through the area. Alderman Hopkins asked if the projects on Coffee or Moorland would provide any relief for this area? Mr. Nitschke replied that the relief off of the projects off Coffee Road may be less standing water and a more maintainable ditch, but not much relief in the backyards.

Mr. Nitschke said the modeling done to this point is ditch design and what would be done this winter would be the entire section of the road reconstruction area. Some of the area would be curb and gutter, and turn lanes, that area would have to be remodeled. He said that he would suggest that the extensive modeling down on the far western section, from Calhoun back, because we don't have very much elevation or fall to deal with. He will have

to design conveyance system would have to be designed in a great area with just a little drop, probably resetting some culverts, re-ditching and land acquisition would be required there as well. Mayor Chiovatero said that the roadway project is scheduled for 2007 and asked the cost? Mr. Nitschke said he did not have a cost, but that if the projects are done individually, not in conjunction with the roadway project it would be more expensive. The only recommendation Mr. Nitschke had was that if the City is only dealing with the road ROW, the City would have to purchase at least an easement on the south side of the road from the farmer, and put the ditches past the telephone poles on the south side of coffee. To reditch all the way down to the cross culvert that is closest to Calhoun Road, reset the culverts on Calhoun and then reditch all of the way down Calhoun Road until we tie into Poplar Creek channel would be his recommendation, which is several thousand lineal feet of re-ditching, a significant project. For the second problem of the water on the backside of the property, his recommendation is to choose the one that solves the most problem, which are not confined to the stormwater issue, but would also have to consider zoning issues, conveyance, endangered species, and the like. Mr. Nitschke said that the Master Plan calls for three regional facilities in the area with costs ranging from \$1.7 to 8 million dollars.

Mayor Chiovatero asked if the ditches were ever completed? Mr. Nitschke answered that we ditched down to the first cross culvert and ran into the problem that there was no positive drainage for it, that was never completed but to truly complete it we had land acquisition, and/or Chapter 30 DNR permits. We never stopped doing the project, but everywhere we turned we ran into a hurdle. Mayor Chiovatero said that he agrees the ditches are hard to maintain, but asked if they are a safety concern? Mr. Nitschke replied that there is a safety concern if there is standing water greater than 6", if a car leaves the road and flips, a person can drown. There are numerous places throughout the City where we have this issue and that is why we have the drainage list. The safety concern has always been there and that is why when you ask what my recommendation would be for the ROW and the ditches would be to try to get the water on the south side. The north side is more land acquisition, because the south side of the road tends to stay low, whereas the north side actually goes up and there really isn't a ditch, and there is one more single family home on the north side of the road and we would have to cut back into their property to get this ditch to flow. He stated that Staff suggests waiting for the roadway project. As you know when we pulverize the road it adds 5-6" onto the road, and changes the ditch configuration, so we should piggyback on to the roadway construction project and work it into the Stormwater project as well.

Alderman Harenda said to recap you will be doing a modeling analyses of the upcoming road project which will tell you what you will be doing with the ditching issues on the south side of Coffee. Mr. Nitschke said it will set a design to work by, but it will not do the work in 2006 because the Stormwater Utility does not have it in the budget until 2007 when it is in the Roadway Reconstruction budget. Mr. Nitschke said this would be a CIP or a Drainage project. Alderman Harenda said that we are working to resolve some of the issues, but others will have to wait. Mr. Nitschke said that to finish the restoration of the ditches, we are cutting in a small rock trench on the western part of the ditches, to take the water into that trench, and put sod in the ditch and try to get something growing in that area. The hope was to do that still this fall, but it is weather dependent.

Alderman Harenda said that one of the previous culverts had filled in, but the property owner was not cooperative, can we obtain right-of-way access in the area and is it less expensive? Mr. Nitschke said that he did not believe the current property owner was there when most of the sedimentation took place. Aerial photos that we have of 35-40 years ago show a channel there. The 2nd issue is the DNR issue with the wetlands, and they won't let a drainage ditch go through a wetland without a lot of gnashing of teeth. If the area filled in naturally, the DNR would probably not allow a (general) permit.

Mayor Chiovatero said that the Stormwater Staff will do a modeling this winter, determine the ROW acquisition requirement and give the Committee a cost estimate. Mr. Nitschke replied yes once we have a design and amount of ROW necessary. Alderman Harenda asked when? Mr. Nitschke replied April/May. Mayor Chiovatero asked if there was anything the City could do to alleviate some of the issues, please bring them forward. Mayor Chiovatero asked if the flooding affected the properties and not the homes? Mr. Nitschke said that based on the meeting, the properties only were flooded. Alderman Harenda said that the Committee would wait for the update next spring, and asked staff to bring any concerns forward. Mayor Chiovatero added due to the agencies and involved issues, it is impossible to do the work this year. Alderman Harenda asked staff to send a letter to Alderman Ament so that he could address his constituents. Mayor Chiovatero said if there is anything we can do to alleviate the water, please do it.

Motion to adjourn at 5:50 p.m. by Alderman Hopkins. Seconded by Alderman Hegeman and upon voting the motion passed unanimously.

Respectfully submitted, Suzette Hanley, Office Coordinator Utilities and Streets