

**Minutes
Storm water Committee Meeting
New Berlin City Hall
3805 S. Casper Drive
Council Chambers
February 10, 2004**

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

Present: Alderman Bullerman, Mayor Wysocki & City Engineer J.P. Walker

Excused: Alderman Gallagher, Alderman Wilkens

Others Present: Eric Nitschke (Division Engineer), Cathy Schwalbach (Storm Water Engineer),
Ray Grzys (Director of Utilities and Streets), Chuck Trevorow (Stormwater Supervisor)

Meeting called to order at 4:45 pm by Alderman Bullerman and a quorum was declared

Item SW 01-04 Approval of the January 14, 2004 minutes

Motion by Mayor Wysocki to approve the January 14, 2004 minutes. Second by JP Walker, and upon voting, the motion passed unanimously.

Item SW 25-03 Communication from Marquette Drive Residents

Motion by Mayor Wysocki to remove this item from the table. Second by JP Walker, and upon voting the motion passed unanimously.

Eric Nitschke read the request for the Stormwater Committee to give formal approval of the recommendation for private rain garden installation for the purpose of alleviating downstream drainage concerns.

Mr. Nitschke read the rationale. On November 11, 2003, the drainage concerns along Marquette Drive were addressed by the Stormwater Committee. The recommendation by Staff to share the cost of concrete invert with the residents in order to lower water levels in the ditch line, and to allow for easier maintenance to the ditch was not approved by the Committee. Discussion ensued as to other options, and the cause of the majority of the water flowing through the ditch as being the sump pump discharge at the upstream end of this area. Staff was directed to investigate other options for improvement, while concentrating on resolution of the sump pump discharge. Several solutions were evaluated, with one solution standing out as the optimum and only feasible option which would alleviate downstream drainage concerns. The installation of a rain garden is that option, and has been recommended by Staff to the residents in a letter dated January 29, 2004. Members of the Committee have been copied on this communication and the attachments included. Staff is asking for closure of this issue.

Mr. Nitschke handed out the cost analysis for the alternative analysis for the four options.
Alternatives Analysis for Marquette Drive Sump Pump Discharge

Option #1: Concrete Invert Downstream

Description: Concrete Invert installed from driveway of 12635 to East end of 12535 W. Marquette Drive.

Benefits:

1. Decrease in water elevation in the ditch line ranging from 1.5" to 3".
2. Increase in speed of water dissipation from the sump pump.
3. Easier maintenance of bottom of ditch line with concrete base to mow against.

Costs: \$4938.30 borne by City.
\$4938.30 borne by the residents according to property frontage.

This option was previously voted down by the stormwater committee at a previous meeting.

Option #2: Pipe Storm Sewer to Retention Pond to Country Estates Retention Pond

Description: Install underground storm sewer system to route discharge to the Retention Pond on Outlot #1 of Country Estates Subdivision.

Benefits: Elimination of visible sump pump discharge and standing water in the ditch in dry weather conditions.

Costs:

1. Engineering Design regarding pond capacity. No pond specifications are available. This pond was installed before the City Stormwater Ordinance was in effect. The pond would have to be analyzed as to its ability to accept additional stormwater.
2. **Engineering Design regarding the storm sewer system from Marquette Drive to the pond.**
3. **Materials: 1000 feet of concrete pipe @ \$28.25/ft = \$28,250.00**
4. Construction Costs.

This option would require negotiation between the Marquette Drive residents and the owners of the pond, which are the 110 residents of the Country Estates Subdivision.

This option would not be feasible due to the cost and the impact on a private storm water facility that was not designed for the additional volume generated on Marquette Drive.

Option #3: Pipe Storm Sewer to 124th Street Crossing

Description: Install storm sewer to run the sump pump discharge to the downstream outlet point at 124th Street.

Benefits: Elimination of visible sump pump discharge and standing water in the ditch.

Costs:

1. Materials: 1620 feet of concrete pipe @ \$28.25/ft = \$45,765.00.
2. Construction Costs.
3. Engineering Analysis and Design.

This option would not be feasible because of the cost and the increased flow rates at the downstream discharge point.

Option #4: Rain Garden

Description: Install a rain garden at the source of the discharge.

Benefits:

1. The sump pump discharge to the ditch line would be greatly reduced.
2. A rain garden would help to alleviate concerns for the West Nile Virus in acting to attract enemies of mosquitoes.
3. Cost is small for the great benefit received.

Costs:

1. Installation: A rain garden can be installed by the resident, which costs only time.
2. Plantings can be purchased at a cost of approximately \$300.00 to \$500.00 for a 100 square foot rain garden. Costs would vary according to size of the rain garden and the plantings selected. Plants can also be transplanted from current locations to further reduce the const.

This option is highly feasible and is recommended since the benefits are great compared to the cost. The rain garden is ideal for sump pump and downspout discharges.

Eric Nitschke stated that staff and residents are looking for closure on this issue. Alderman Bullerman stated that on January 29th, packets were sent to the residents affected by this issue and he stated that residents were welcome to ask questions.

Mary Joas, 12635 W. Marquette Drive stated that she is a full-time teacher and asked the names of the staff members of the Stormwater division? Mr. Nitschke said that Cathy Schwalbach and himself, Eric Nitschke were working on this issue. She asked how much experience Mr. Nitschke had with rain gardens, and if he had any courses or training or was he relying on the expertise of others? Mr. Nitschke answered that he was working with the DNR, and did research on rain gardens, but has never installed one himself.

Ms. Joas asked how many years rain gardens have been in existence and if there was any statistical information on their success or benefits of people that used them? Mr. Nitschke answered that the concept was relatively new, and he had supplied lists of people in Wisconsin that are using rain gardens with success. Ms. Joas said that she had researched the DNR and other websites for statistics and found that the purpose cited in those articles was to control polluted runoff where ground is covered with a hard surface, pavement, alleys, sidewalks, etc. She stated that rain gardens are used to filter out pollutants, which she said was not a problem on Marquette Drive. Ms. Joas stated that the purpose of a rain garden was to increase water quality, not to reduce water quantity.

Chuck Trevor and Cathy Schwalbach arrived at 5:05 pm.

Ms. Joas stated that she is an accomplished gardener with many gardens and plants already in her yard and that the soil is primarily clay. Ms. Joas stated that for rain gardens to be successfully, most of the clay must be replaced by compost, topsoil and sand at least 3 feet deep. If a rain garden is properly installed, she stated that there is a 30% reduction in water quantity.

Eric Nitschke responded that sump pump discharge and stormwater runoff are different things. Sump pump discharge is a slow process and that is why there is so much water in the ditch. He asked if she had moved her sump pump since she had lived there? Ms. Joas answered no.

Ms. Joas questioned staff as to who would help the residents maintain rain gardens in the winter? She stated that she does not have time to work on a rain garden, and that it will take 3 years to get a rain garden established.

Mr. Nitschke responded that he got the point that she does not want a rain garden, but that they were at a crossroads. He stated that the Stormwater Committee had to find a way to best use the money in the budget to handle the majority of the bases. Options 2 and 3 will drain the stormwater budget, and that money could be used to help more people. Mary Joas said that this was a 9-year problem and that they want the same opportunity to have the problem taken care of.

Mayor Wysocki stated that the tone of the meeting was to give direction of what should be done. Mayor Wysocki said that rain gardens were used on residential lots to handle soaking up rainwater. He agreed with Mr. Nitschke that this is not a Stormwater issue, but a continual sump pump issue. He responded to Ms. Joas statement that a 30% reduction was by event. He added that he appreciated the work that staff put in and asked them to look at the code for a possible rebate on a broader scale. Mayor Wysocki added that even if a concrete invert were installed, it would still be wet.

JP Walker echoed Mayor Wysocki's comments. He stated that the issue is sump pump discharge and that he reviewed rain garden data. He added that he has installed a rain garden in his yard and attached it to his downspout. He built up the soil by adding on top.

Alderman Bullerman summarized that there are four options, but that staff recommends we either choose option 1 to install a concrete invert or option 4 of installing a rain garden.

Mayor Wysocki asked if some of the other residents at the meeting would like to talk.

Mike Ostovich of 12621 Marquette Dr stated that he is a journeyman plumber. Mr. Ostovich stated that he does not think a concrete invert will work and that the problem was not from storm water runoff, but from a sump pump discharge. He said that there is ice up to the top of the driveway, and it is starting to heave up parts of the road. He suggested a variance to pipe to sanitary sewer. Alderman Bullerman said that is not possible with MMSD.

Mr. Ostovich suggested a storm sewer. Mr. Nitschke stated that because of the shallow depth, a storm sewer may freeze and will back up and cause more problems.

Mr. Ostovich asked if we could pipe the storm sewer to Desoto instead of 124th Street? Mr. Nitschke responded that this would pipe the problem into the neighbor's area (option 2).

Mr. Ostovich asked about a catch basin? Again, Mr. Nitschke answered no since it is sump pump discharge.

Mary Joas asked where staff planned on planting the rain garden? She did not want it in the front yard that was shaded by a beautiful old oak tree. Mr. Nitschke responded the east side of the driveway in an elongated shape between the two property lines. He added that the sump pump discharge would have to cross the driveway. Ms. Joas responded that the sump pump runs 6-8 times per hour and this would cause the planting in the rain garden to erode or flush out. Mr. Nitschke said that stones could be used to dissipate the flow energy. Mary Joas said that she already has a downward slope around the house, and plants and bushes for absorbing water.

Mayor Wysocki said that even with a concrete invert, there would be the same affect in the winter with the water in the ditch freezing. Eric Nitschke said that the concrete invert would be easier to maintain with steamers, but that general maintenance would be required.

Alderman Bullerman asked if the residents would like to do option 1 instead of 4? Mary Joas responded that option 1 should have been done 9 years ago when concrete inverts were not a cost to the residents.

Alderman Bullerman stated that a concrete invert would be an improvement to the property He asked if there were any other options and what the recommendation of staff was? Eric Nitschke said that the 5th choice was not to take any action, but that the staff wanted to have some closure on this issue.

Alderman Bullerman said that the City would pay for half of the invert and that the 4 residents would split the other half of the cost (\$4,938.30). Mr. Ostovich asked if the inverted culvert were only in front of these 4 homes, wouldn't this move the problem down to the 3 houses after? Mr. Nitschke stated that downstream has more slope and this would help convey water through the area. He added that a concrete invert will move along past the flat spot, and alleviate the problem of not having proper slope to reditch.

Carol Ostovich of 12621 W. Marquette Drive stated that her mother lives 2 doors down and was 86 years old and couldn't afford to pay for this. She asked if an invert were installed, would you have to dig deeper? She stated that it was hard to cut grass now?

Eric Nitschke asked the address of her mother's house? Ms. Ostovich answered 12535 W. Marquette Drive. Cathy Schwalbach stated that the address was the last home that they looked at and that they were looking at putting in the culvert on the west side of the culvert with the east side as an option. Ms. Schwalbach stated that if it were just installed on the west side, her cost would be under \$200. Mr. Nitschke responded to the previous question and said that the ditches would not be any deeper. He stated that there should be a slope of 1 ½%, but this area is .5% slope.

Alderman Bullerman asked what is the policy for paying for this work? Can payments be broken down over time? Cathy Schwalbach stated that there is no policy yet on this issue. Eric Nitschke added that at the previous meeting it was stated that the City normally would not pay for any concrete inverts, but this is an exception to the policy and the City would pay for half.

Alderman Bullerman stated that Option 1 would be to override the original policy with the City paying for half and the 4 residents paying the other half of installing a concrete invert. He stated that Option 4 would be to

install a rain garden. The other alternative was to do nothing, and wait for additional time to research; however, he stated that there will be 2 new aldermen on the committee this year that may not agree with option 1.

Cathy Schwalbach stated that all four residents must agree to option 1, and that not all 4 residents were in attendance.

Mayor Wysocki said that they need to make a recommendation as a committee. He suggested that they do option 1 with option 4 as a still viable option. He stated that the staff needs to send a copy of the minutes to the residents and make a formal option. Mayor Wysocki stated that he recommended options 1 and 4 and would like Mary Joas help in designing the rain garden. Alderman Bullerman stated that he agreed with Mayor Wysocki to recommend options 1 and 4, but that when staff goes back to the residents, all 4 must agree.

Mary Joas again questioned where the rain garden would be located? Mayor Wysocki stated on the east side of the driveway.

Cathy Schwalbach interjected that there is assistance available from the DNR, and that there is a rain garden network or other assistance that can be hired. Mayor Wysocki added that we must make this a functional rain garden. JP Walker added that the resident had a lot of experience in the gardening area, but an expert could be of some help.

Eric Nitschke stated that he would like to make a point for the record that even if a concrete invert is installed, the issue will still be a problem in winter time. He added that nothing could be done by the Street Department to steam this out if it is frozen. Mr. Nitschke said that a concrete invert is not an end all, it is just easier to maintain. Mayor Wysocki asked if anyone looked into the possibility of burying the sump pump drainage and run it down the slope, but stated in winter this would also freeze. Eric Nitschke responded that a buried hose can be more difficult to work with, as it can be a home for mice, is just as likely to freeze up in winter, and would take longer to dig up the pipe to maintain it..

Mary Joas stated that she had a question as to when the policy was made that the cost of this invert had to be paid for by the resident? Is this policy dated after this issue was first brought up? Mr. Nitschke answered yes. Ms. Joas responded that the City knew about the problem 9 years ago. Mayor Wysocki asked if Chuck Trevorrow knew what the original project called for, and why some areas had concrete inverts and others not? Mr. Trevorrow said that he did not know the history of the project, as he was working in the Utility Department at the time.

Motion by Mayor Wysocki to have the staff send out registered letters to all four residents to ask if they are willing to implement option 1 with the caveat that all four residents would be in agreement, and with the homeowner installing a rain garden as stated in option 4. Second by Alderman Bullerman and the motion passed unanimously.

Mayor Wysocki stated that staff should research this issue to see if this was ever brought before an official board, commission or committee. If so, he would consider 100% funding of the invert.

Motion by Alderman Bullerman to look at the Grant Update issue at the next meeting. Second by Mayor Wysocki and upon voting the motion passed unanimously.

Mayor Wysocki thanked the staff for the public informational meetings on the Stormwater projects.

Motion to adjourn by Alderman Bullerman . Second by JP Walker and upon voting the motion passed unanimously. Meeting adjourned at 5:56 pm.