

MINUTES OF THE STORMWATER MANAGEMENT COMMITTEE

Meeting of: Wednesday, July 30, 2014
Leawood City Hall, Main Conference Room

COMMITTEE MEMBERS PRESENT:

Thomas Robinett, Chair, CHAIR and Councilmember Ward 3
Julie Cain, Councilmember Ward 4
Pat Dunn
Debra Filla, Vice Chair and Councilmember Ward 1
Skip Johnson
Carole Lechevin
Jim Rawlings, Councilmember Ward 2
Curt Talcott

COMMITTEE MEMBERS ABSENT:

John Kahl

STAFF PRESENT:

Joe Johnson, P.E., Director of Public Works
David Ley, P.E., City Engineer
Julie Stasi, Administrative Services Manager

Chair Robinett called the meeting to order at 7:35 AM.
Introductions of members.

FIRST ITEM OF BUSINESS: Previous Meeting Minutes

ACTION: Jim Rawlings Motioned to approve the Minutes from April 30, 2014.
Skip Johnson seconded the Motion; all attending members in favor.
Motion passed.

SECOND ITEM OF BUSINESS: New Business: Review flooding concerns in rear of properties in the Cherry Creek Subdivision; area of 128th Catalina.

Joe Johnson displayed pictures of the area of concern. The property owner called and talked with Councilmember Azeltine and staff went out and met with the property owner of 4012 W 128th Street. (Chuck Cantor Resident, although he could not make the meeting today) There is an area inlet in the back yard and a swale that kind of drains through the area. The inlet is an old style inlet built back 20-25 years ago, with a flat top to take in water. There are a couple of these. We have replaced one or two of these and put in our standard area inlet. The problem is (and you will see in the picture). When the subdivision was originally built. The low spot ran over the top of the inlet along the property line and continued downstream. As of now, since the houses have been constructed the low spot does not run that way. The inlet now sits off to the right of the low area and in heavy rains, water comes down and bypasses the inlet, continuing downstream. These area inlets are not that efficient to begin with and really not efficient when they are not in the bottom of the swale.

When we spoke to the property owner, when this was first built, my guess is the homes on one side sat up a little higher than the others. When they were constructed most likely they flattened out the yards for each lot. And over time, the swale was just pushed further away. When it was all finally said and done, there is a nice swale, but it does not sit where it did in the beginning.

There is another area inlet shown in the pictures and you can see a nice defined swale that runs down the fence line, but the bulk of it gets bypassed. Not sure if the water mark on the fence is from a flood or from the irrigation spray line on the fence. The water does get high up on the fence.

One of the bigger issues is that as the water comes down, it splits around a tree and then towards another inlet. It is hard for the residents to keep any sort of ground cover or grass in the area. The water strips all the vegetation. Eventually it gets to one of the inlets and then takes a left turn and heads out to the street. None of the houses get flooded, it's just a matter of trying to collect the water and put it into the storm sewer system. There is, I think 54" concrete pipe that runs under the ground.

Our storm sewer system starts upstream near 127th & Mission Road. The water is not getting into the storm sewer and there is more overland flow than what was anticipated; because the area inlet structures are not that efficient (as far as getting the water into it) and then at the one location, the area inlet sits off to the side of the swale instead of being in the bottom of it. There is not much opportunity for water to get there. So we end up with more overland flow in smaller storms than originally intended.

Julie Cain-mentions that she lives in the area and knows first hand there is a lot of water out there when it rains. One homeowner closer to 127th & Catalina had a deck built over an area inlet. After living in their house for many years, they never had had water in their home until recently. Joe Johnson-advised that the work the City did north of that particular area, increased the pipe size. So that was not believed by staff to be what caused their basement flooding in that area.

Carole Lechevin-asked after hearing the comment about the grading when the houses were built, was it the developer that caused this issue with the swale moving?

Joe Johnson-No, he thinks when they were done putting in the infrastructure, it was right. (built correctly to the plan). As the homes were built individually, is sure there were a number of builders in there. When the first builder came in, they probably made a little modification. Then the next one came in and did their work, trying to match and maybe make a little bit more improvements. Thinks over time when all the houses were finally built, the swale just got pushed a little bit. It doesn't take much, it's not that far off, but it's off now.

Carole Lechevin-So did the City not inspect and make sure that the grading was done then?

Joe Johnson-Back in that time of these builds, when they issued a building permit, they probably just did a final inspection on the site grading to make sure there was proper fall. But no one paid attention to those other details like we do today.

Curt Talcott-Storm drainage now has a bigger picture designs have changed too.

Joe Johnson-We've gotten smarter now to make sure things stay and are put in place the way they are supposed to be to today's design standards.

Joe Johnson-We did look at trying to grade it out now, but there would be four properties involved to try to put that swale back. The solutions we talked about was installing inlets. We are looking at two options. We could place a manhole over the existing pipe and stub a pipe out (points to location) and add an area inlet or drop an area inlet on top of the existing line upstream of the existing inlet. One thing we would have to look at, one of the houses nearby has a walk-out, so it is fairly flat in that area, and we would not want to put an area inlet in and berm it up to help the water get to it and then create a back up into the nearby home. So we would need to survey the area and look at it.

The two options would be to place an area inlet right on top of the existing pipe or come down stream and place an inlet off to the side and then tie back into the existing storm sewer system. One option we estimate would run around \$16,000 and the other about \$30,000 (for construction and restoration).

Deb Filla-Can you go back to the photo. What becomes real clear as you look through the photos of

the area, the concept of native grasses, deep roots, vegetation is no where in anybody's landscaping plan for whatsoever. Did I miss anything? I just see a lot of turf grass.

Joe Johnson-Correct that is 99.9% of what we see.

Deb Filla-I'm not not supportive of doing either one of the solutions you have, but it seems to me this is a great opportunity for what is going on with the couple. If you go up to where there is kind of that circle area-it just seems to me if whether you put in a berm or pond that in the spring or the fall when you get the rains and you have a feel and you are also making tadpoles and salamanders and you are also using this as an opportunity to gather these neighbors and educate them on how every little bit they help keep it in their yards and slow it down and clean it up. It would be beneficial. The City can do it's part but everybody needs to participate. I would really like to see this as part of the education. Where we start sending out information. Where we have multiple people being a part of the solution; instead of it always falling on the City with hardscapes.

Carole Lechein-I would agree. When you talk about reducing overland flow that is the opposite of what green infrastructure tries to do. We want to keep overland flow and let it absorb into the soil. Just because there is water standing and you can't grow your turf grass doesn't mean you can't grow anything. So looking at a green infrastructure solution might be much cheaper in this area and reduce what comes out of the City's pocket.

Julie Cain-I hate to be or sound negative too, but, like I said-I've lived here since 1992 and there is all sorts of examples of (and this one doesn't happen to line up) but there are all examples in this neighborhood, in every neighborhood there are all sorts of examples where we get rain where the water is going to pool up. Including my own backyard. I worry too why this one doesn't line up, we can see all these reasons. But there are so many examples of this. I worry where we do something here it is going to make it worse downhill. Maybe it won't but I don't know why we would choose this particular one just because this particular resident happened to call. He is not getting-none of them are getting water in their homes and never have. And we know how many houses in Leawood we have water in houses. I hate to spend \$16,000-\$30,000 here and there is no water in the house.

Carole Lechein-Is the issue standing water and a little bit of erosion?

Joe Johnson-No it moves through there pretty good. What happens is downstream (showing pictures). Along the fence line where it falls.

Julie Cain-As a priority and in spending money, we have to prioritize the houses that are actually getting water (in houses). This is at times a high rain, granted they do not line up with the inlet, but I do not see this as a priority. Where we spend thousands of dollars on when we have other people having their houses flood.

Deb Filla-If we are going to spend thousands of dollars I'd prefer to see a one for one match with our BMP and explain that program to everyone and say we'll match every dollar you spend and here's the solution that is green. It reduces your mowing, it's going to help every aspect and every neighbor is going to benefit. Lets start the education process, slow it down and clean it up. Let it absorb and if it still continues to be a problem we could look at a hardscape solution but everybody has to contribute to this. Keep your own water in your yard.

Curt Talcott-Unfortunately you are probably at a point where you are so far down the system and there is such a large volume of water, a couple of BMP's aren't going to do much. It would have to be systematic all the way up. Likely any kind of native plant here would get washed out.

Deb Filla-No, I think if you just try to do that you are just trying to turn off that one water leak, it's too late, and too much. I want to go all the way back up the swales and gut that other area in the circle. Systematically go in and call out a plan, ask everyone to participate or we can just move the BMP

program along with City money and do it ourselves. Whatever you think would work. Maybe we could do the bulk of it ourselves and educate homeowners about what kind of vegetation to plant and get some great prices to do it. Then if you do this on a large scale you would also be helping out the other folks where you said they blew the storm inlet there on Catlina. How big is your homes association?

Julie Cain-156.

Debra Filla-Maybe educate the homes association to participate in a BMP Project. We need to create more pervious surfaces.

Joe Johnson-In looking at what we have today, I do not know how affective that would be. Even if you did it for every house. We are talking about 40, 50 acres that ends up draining through this area and it starts east of Mission Road. When you look at how the homes are set and you look at drainage area it is very hard to put something on your lot that is going to capture all the water on your lot. You are only going to capture a very small percentage of your total lot and that is going to continue downstream.

Deb Filla-But the point being, that is what Kansas City Missouri is doing and they have a certain percentage that they are counting on-green solutions to take care of this problem. Obviously there is something quantifiable about it. When it comes down to it, I think I agree with Julie, I think people have to assume some ownership to what happens to the water.

Joe Johnson-There is not a flooding issue of homes here. It is more of a nuisance issue in trying to get the water into the storm sewer like it's supposed to be. Whether a project is done or not-it doesn't have a detrimental impact on either the homes or the properties. So if there is some landscaping that can be done to make that area look nicer-you could put rocks down there and people have done that before. If they can't get the turf to grow, put large enough stones in there so it doesn't get moved when the water comes through. There are a lot of options without having to put an inlet on top or adjacent to the pipe to capture the water.

Chair Robinett-Going back to what was said earlier, it is a matter of prioritization. This does not look like one of the things we need to be spending money on in lieu of some of the more serious issues where people are getting water into their houses.

Deb Filla-I would love to team up with Julie and the home owners and grab our experts and talk about what can be done.

Chair Robinett-We could at some point work with the Homes Association there and see if there is an interest and we could provide advise or some help.

Julie Cain-I think at least we should come back to them and give them an answer. At the least say this is a concern, but unfortunately not a high enough priority compared to others. Maybe we can offer a class to the HOA or something to offer suggestions.

Pat Dunn-Not to be a downer on this, but one question. What do you say to the homeowners who say, it's the City's stormwater system and the inlet doesn't work? If we need an inlet there why aren't you making sure the inlet works? What do we say to them about that?

Joe Johnson-We have talked to the resident about it. When this whole thing got built, it was right. I do not know what happened over time.

Pat Dunn-so we say it's your fault?

Joe Johnson-No we don't say that.

Pat Dunn-I'm just trying to follow through. If it's my yard and it's the City's stormwater system and

you've got an inlet back there that doesn't work because it's not in the right place. I'm having a hard time understanding why it's my responsibility that the inlet doesn't work.

Curt Talcott-And there's a public storm sewer system and it's beyond the means of one property owner. That's the one thing- it is beyond the means of just one property owner to be able to handle the problem by himself. He cannot-it's beyond the means of the average property owner to be able to do something when you are talking about 40, 50, 60 acres of drainage area. And one other point I want to make is, what Kansas City Missouri is doing for green infrastructure is not handling large storm events, they are handling very small storm events and it is more about water quality and not water quantity.

Pat Dunn-don't get me wrong. I'm all for what Deb is suggesting as far as trying to make incentives and have people put in more natural systems to deal with it. I'm thinking more about the particular problem we've got here. It's our stormwater system and we have an inlet that apparently we thought was important to have but it's twelve feet off line. I do not know how we answer that we know know it's off line but we don't really care.

Chair Robinett-I think we have to tell them we've looked at it and again it's about priority. We would be willing to discuss some options and there may be a solution other than just the two we talked about here on the part of the City. Where you could get some things to help.

Curt Talcott-We're not saying we don't care. We're saying that as a priority standpoint, there is not home flooding there, so we need to prioritize it with others that have issues. If it was flooding there, we would all probably be thinking differently about this one.

Pat Dunn-I'm just thinking as the home owner. If my question is simply it's your system, it's your inlet and it doesn't work, why aren't you fixing it? I'm not hearing an answer that makes sense to me. That's all.

Deb Filla-To that point and merging the whole conversations together it seems that is a good point raised. Which is to say that we would be willing to put this out there and if people were willing to help.

When we prioritize this, it is going to be at least five to seven years out before we can deal with it. But there are things that you can do now that might help the situation. We can talk about those things with those involved. Maybe at a gathering at the house.

Pat Dunn-If we say we'll fix it but not now, that's different then saying we're not going to fix it.

Skip Johnson-That's my thought. I don't think we're saying we're walking away from it, it's just not a priority right now with all the others we have that are worse.

Joe Johnson-Well if you approve it now, it's still going to be funded that far out. It would be funded through the 1/8 cent sales tax which is placed before the Governing Body and the Capital Improvement Project discussions. Right now, new projects are scheduled out into 2017. And that is a \$60,000 projects into 2017.

Jim Rawlings-Since there is no house flooding, have we ever done a project that didn't address or correct flooding in homes? We've talked about other places where we corrected issues.

Joe Johnson-Oh yes. We have a location in the Pavillions this year where stormsewers were built and discharge goes onto a residential property creating a big mud hole. We approved that project 4 or 5 years ago and are going to do it this year. We will extend our storm sewer and fix that. Then we had one in Patrician Woods where the storm sewer daylights and is eroding the channel.

Jim Rawlings-So those projects had a significant ponding, erosion an grading issues; more than what we are seeing here.

Joe Johnson-Yes those two are worse than this. There is funding through Johnson County SMAC which takes care of funding for the big projects-the ones that flood properties. Then the City has it's

1/8 cent sales tax and the idea was to look at projects that would not qualify for the SMAC Projects and they would have the opportunity to have funding through the 1/8 cent sales tax.

Deb Filla-That is coming up for expiration. We would have to have that refunded.

Joe Johnson-Everything is always subject to future funding. Even the projects we have listed for 2017, the assumption is that tax gets continued. If not, then those projects come off. And the property owner knows. I've told them that if approved, they are looking at 3 or 4 years down the road before this would be able to be funded (even at this dollar amount). Unless there is another pot of money, my assumption would be it would come out of the 1/8 cent sales tax fund. We are looking at 2017, 2018 at the earliest that a project like this would happen.

Pat Dunn-Am I correct in assuming too Joe that this is part of our stormwater system that is really never going to change unless we make minor adjustments like this along the way? Unless there is some major project that comes around.

Joe Johnson-Yes. These are concrete pipes, so there is nothing in the City's CIP ever to come in and dig it up and replace it and put larger pipes in.

Pat Dunn-Not like what you do in conjunction with a street repair.

Joe Johnson-And this is concrete, not corrugated, so this wouldn't fall into our stormwater project where we are replacing steel pipe. Theoretically we are not going to do anything to the pipes here at all. The most we would do is go back in and reconstruct the area inlets or in this case put a new one in in the area that sits in the bottom of the swale to capture the water.

Deb Filla-That is another option, if you are going to talk about going in there and tuning up the dirt, what if you went in there and re-swaled it?

Joe Johnson-We could go in there and regrade it. We would probably spend more money though as we would impact four or five properties instead of one or two properties in doing that. We did look at that. That was our first thought to regrade. We would rip up fences, landscaping to grade it properly.

Deb Filla-What about a reality check. In that we will not be able to fund this for several more years. In the mean time, here are some things they can do. And explain the BMP program, try to involve everyone in that swale area and reassess it in three years. By that time, things will have a chance to grow. We could certainly explain some of the alternatives available.

Jim Rawlings-I understand what you are saying, but if that was my property I'd have been putting sod in there along time ago and landscape it.

Deb Filla-We have the BMP program where we have the matching dollars. \$1,000 for a swale through Johnson County Stormwater Program.

Curt Talcott-You really wouldn't want to put a BMP down at the bottom of that swale there. It's too much water.

Carole Lechevin-Are there other options?

Deb Filla-I'm talking about going all the way up. I understand that we wouldn't want it just at the bottom of the swale. There's also a lot of trees there and it's not getting enough sun too, to grow things. They have an inlet there, so there is probably nothing we can do at this one location shown.

Joe Johnson- Well if you did nothing you would be looking at trying to have a swale here and then line it with rock and stone. Large enough stone so it would not get washed away.

Deb Filla-It is the same thing of how you got here. With building changes and little bits are changed. Then another building/home comes in and they make little changes. If you reverse that thought process (a little bit here a little bit there) the part here (and as engineers), you understand it better

than I do. We always say it happens “a little bit here and a little bit there”, a little bit more pervious surface. Another house built and another, but if it happens bit by bit, can't we do anything to counteract that? Does none of that make a difference?

Jim Rawlings-You are seeing the results of a bit by bit, so you have all this water running down hill. A bit by bit fix here and there isn't going to fix it. It's got to be done all at once.

Deb Filla-We just keep turfing and hardscaping, and none of the natural stuff makes a difference is what you're saying.

Jim Rawlings-I didn't say that.

Deb Filla-When does it make a difference? I always hear that push back that it doesn't take care of volumes of water but we didn't have flooding until we put in pervious homes and driveways and roads. So when is the break point? Are we so far past it that it doesn't make a difference?

Curt Talcott-Well the break point for something like this would have been to leave this a natural drainage way and not have the storm sewer. There is a certain amount of undoing you can't undo. You are probably never going to get buy off to go back and turn this into a natural drainage way.

Deb Filla-What does that mean? Explain that to me. Where do you go back up as far as you can see and do what?

Curt Talcott-This big valley like that, those were lined with natural drainageways. Before development there was no storm sewer at all. Houses and things, you're right pervious surfaces increase the runoff. And so you have more stormwater. What we have done is gone in and build in the natural drainage ways. And a lot of City's now have these. There is a certain volume you get to or certain acreage where there is a natural drainage way setback and so you wouldn't be allowed to go in and build houses so close.

Carole Lechevin-a buffer.

Curt Talcott-A buffer so to speak. You basically need to go back and start putting a rain garden or some other kind of BMP in every single lot in the whole subdivision.

Deb Filla-Exactly.

Carole Lechevin-And that can be done.

Curt Talcott-And that can be done and in this case, it still might not be enough.

Deb Filla-So you could put a rain barrel-2 rain barrels in every yard and you start putting in long rooted plants and some of the natural drainage you are talking about-rocks. That seems to be the long term permanent solution for what we need to be doing as a first everywhere in the City. Because building more hardscape does not really help. It just keeps putting more costs to the City and it never gets back to the little bit everybody can do to contribute.

Skip Johnson-If you could convince everybody in the subdivision to do that but for the City to go back and retro fit everyone.

Carole Lechevin-so it needs to be the homeowners association that takes the initiative. But we as a City can advocate those sorts of solutions.

Debra Filla-So lets say we have ten homes and each could put a \$1,000.00 contribution to this swale or whatever we do for Johnson County BMP Program. And we match the dollars. Now we have \$20,000-what would that do?

Joe Johnson-The county's system is each individual property owner has to do it themselves. So you would be doing it on your property. And you wouldn't be doing it in the swale you would be doing it up around your house to capture the water before it got to the swale.

Curt Talcott-So you might get 10 rain barrels in that subdivison for that.

Joe Johnson- BMP's are great things, but BMP's are done when developments are new. So you can

design it to get the water to the BMP. Now whether you collect it in the storm sewer or whether you collect it in a rain garden or whatever else, in looking at a developed area when you are trying to go on each individual home.

Carole Lechevin-So you are saying retro fitting isn't the way to go?

Joe Johnson-I think the reason Kansas City Missouri uses the street right of way is because they are capturing the water that comes right off of the street. You have a targeted area. If you put it along the right of way, water drains off your street. It drains into their bio-swales or gardens. What KCMO is trying to do is looking at capturing that first flush and they are trying to control the volume of water because they are trying to keep it out of the combined sewers.

Curt Talcott-Yes, they are doing it for storms that are basically an inch or less.

Deb Filla-Is there no known way of capturing the water that comes off of your impervious surfaces in your yard?

Dave Ley-For homes that come in that add over 400 square feet of impervious areas are required to do BMPs and we have hundreds of them in the City. What they are doing, they typically catch a downspout and they are piping it over to either an underground gravel chamber or storage or they are doing rain gardens. We have most of them buried. Most are large buried gravel pits that have filter fabric. Pipes are directed from the house. Like if they are putting in a pool they will have edge drains along their pool and then they are piping it over to the underground storage area. It's filter fabric wrapped large rock. Piped into it and then there is an overflow pipe.

Deb Filla-if it is not that big of a home, like my home, is there no way to capture the water.

David Ley-Well you would do the similar thing. A lot of these yards if you look at these, they are sheet flowing right from the yard to the swale, you can't put it in the swale. So you would have to connect your down spout over to an area to do your BMPs and that is just added cost. It's not just grading or putting in a rain garden, you would have to funnel or direct the water flow to that area. That is the biggest/toughest challenge.

Julie Cain-When did we start imposing that kind of stuff?

David Ley-I think it was in 2009, within the last five years.

Julie Cain-So pretty recently.

Curt Talcott-Mission Hills has taken it a step further, they have gone to any kind of re-do now you have to do a storm drainage study for your lot and show that you are not increasing your runoff at volume or quantity at all your peak flow or the total volume off your lot if you do it. Same type of thing where we have all these individual rain gardens or large storage areas. They are getting to be large underground vaults so to speak of gravel and things where they are tying the system in and now they are having problems where it is leaking out into the next property causing foundation issues and things like that.

David Ley-the one thing we found out, you can't put them in swales. The first couple we had were installed in swales and swales are un-maintainable. All the water is getting in there and clogging up the storage.

Debra Filla-And how much of our stormwater is creeks and dry beds?

Chair Robinett-Seems like in this specific issue it is just rain and we need to explain to them where it falls in our priorities. As far as the bigger picture this area could be part of the big picture where it is education and explain what the options are.

Julie Cain-One other point in this particular case. If that is 30 to 40 acres like you said Joe, and along 135th, this is all undeveloped, but once it gets developed we will have way more impervious?

Or no?

Joe Johnson-No.

David Ley-Actually 135th doesn't drain through here.

Joe Johnson-But any new development has a requirement that the runoff of the site today cannot be any more than when you develop your site.

Julie Cain-Well that's good. Because I was thinking the big picture-other than the Price Chopper, that area is all undeveloped.

Joe Johnson-Even the Price Chopper. It has a huge half a million dollar underground stormwater storage system. Back in 1992/1995. Villaggio is the same way it has 1.5 million dollars worth of underground storage. Any new development. You can design the BMP's and you can send the stormwater to it so you have water quality and water quantity control. To retrofit. Kansas City Missouri talks about 10,000 rain gardens. I do not know how affective that is and I do not know where they are at. It would be nice to have a study to see what the volume run off was before and then after so you can see. You could end up spending thousands of dollars for each BMP and at the end of the day, you may save 1 cfs of water.

Julie Cain-But it is water quality as well right, because they are dealing with the EPA?

Curt Talcott-It is a double benefit. They are dealing with such small storms in their Combine Sewer Overflow, (CSO) runoff. Their target cso is the same number as their water quality. It happens to work out nicely that they get the double benefit for it. Their primary goal is to reduce the volumes. They are dealing with 1.7 inches of rain basically and even with that they are only capturing about 40% of the volume from that small storm. But that is enough to give them about a 60% reduction in runoff from that same storm. In order to be able to make a difference in the volume of runoff you need to be able to capture 30 to 40% of the total volume of runoff; to make a significant difference in peak flows. When you start talking about 30 to 40 acres of runoff and then you start talking about a 10 year storm that is dropping 3 inches of rain and probably 3 ½ inches of rain are pure runoff then that type of storm you are talking about 3 ½ inches over 40 acres. Take all that volume, that's BMPs spread out. You would have to have that much volume and you are talking about a huge number of BMPS to make a significant difference in the volume at a location like this.

Joe Johnson-The size of the BMP's would probably need to be about the size of your driveway. Because you have to find some place to put that on your property to have an impact that we would want.

Deb Filla-And the rain barrels would be a part of that?

Joe Johnson-Well you can, but rain barrels if you have an hour rain and in 10 minutes the rain barrels are full. So now your last 55 minutes are all runoff because your rain barrel has filled up. And if you don't empty your barrel between rains, it is the same thing that we've got. You get a rain and the yard gets saturated, your rain barrel gets full. Next day you get another heavy rain, well now you get all runoff because your barrel is full. It's all runoff. It is really good if you have dry conditions and everytime it rains, then you get the maximum benefit, but we get rain for 3 or 4 days and the ground can't soak up any more, your rain barrel is full, the systems are full and it's just all run off now. That is where we get our biggest flooding.

Julie Cain-Do we have a number of rain barrels that we can have? Can we have two barrels on one house, is there a maximum number allowed per house?

David Ley-They can't be in the front. They can be on the side and in the back. It is in the Leawood Development Ordinance (LDO) we would have to look to see if there is a maximum number allowed per lot. I think you can do one for each downspout and in back.

Curt Talcott-I've seen where they've put them in series on a single downspout so once one fills up then it could go to the next.

Pat Dunn-I always start with what is the question we are being asked to answer. And the question here is do we have a responsibility to fix an inlet that doesn't work? And what we are talking about is how do we fix this erosion or any of the water running problems. I don't think putting a new inlet in as long as you have a hardscaped system, it's not going to change that significantly-is it?

Joe Johnson-No.

Pat Dunn-Okay, so. I mean these are all good ideas and I support Deb and the efforts to educate folks and work with them to do these solutions as well, if that's what they are trying to address. I have no problem in responding to these people that because of the impact of doing this, it is very low priority, so we are putting it out a ways down the line. But if the question we are being asked to answer is do we have a responsibility to fix part of our storm water system that doesn't work, I think the answer is "yes". It's our storm water system and it doesn't work.

Deb Filla-Let me ask. It doesn't work, or it doesn't work effectively. Go back to what will happen if you move it upland, then you are obviously changing the dynamics for the walk out. But will it fix the water flow?

Joe Johnson-The inlet will capture the overland flow more efficiently than what it does today. I don't know whether it captures much at all. It may only capture 10% of it. But you move the inlet to the bottom of the swale, then you are going to capture-it will allow the water to get into it until the system gets full then it's going to be all overland flow.

Curt Talcott-It would allow the pipes to work as designed.

David Ley-The problem is the downstream inlet. If you don't capture it, then you are adding twice as much water and then that inlet can't capture that water. So it compounds the fill as you go downstream. You will have more overland flow when you can't get into the pipe.

Joe Johnson-The pipe only has a certain capacity. When it is designed, generally the area inlets are designed in such a fashion to help systematically put water into the pipe system. So you don't end up at the very bottom of the hill trying to cram all the water in. What happens here is the water doesn't get in, so it tries to get to this inlet. I don't know that it is that effective in getting water in. From there it jumps the street and from the street it ends up going down hill. So you end up with more water over land than you had originally designed for.

Deb Filla-Whether it comes in down the street or whether it comes in over the yard and catches from the street drains, if you still have too much capacity by the time it gets down to the street down below, doesn't it have the same effect; whether it comes overland and from the street or in that pipe?

Joe Johnson-You have two situations. Once the pipe gets full, it's full. In heavy rains, the water is still trying to get into the pipe upstream (when it's full). So that creates a pressured system. So you are up here trying to get water and you are down below where the house got flooded and so just the head difference is trying to push water out of the pipe at the bottom at the end, which is where it pushed the top of their deck off and caused the house to flood. If you don't have a pipe system, your pipe system is not flowing full then you are able to capture more of that overland flow as you go downstream. So it reduces how much water you've got in your back yard. So instead of being 10 feet wide it's 15 feet wide because you are able to capture the water. Once the pipe is full it really doesn't make any difference. It's full and you are not going to put any more water into it.

Deb Filla-Looking at the map of the people regarding this assignment (not the house a few blocks away that had water blow their deck and flow into the house).

Joe Johnson-They may have the same issue, but Chuck is the one that called us. I think it's the volume of water that comes down. The side affect of that is that it erodes their back yard. They can't get anything planted. Everytime they do get things planted when they get a decent rain, it takes it downstream.

Chair Robinett-Lets go back. I think Pat summed it up pretty well. I think we do have a responsibility for our systems to work. But we have to prioritize things because it costs money and this is not one of them that is at the top of the list-it is somewhere down the road. As far as all of the green space and the erosion issues that is something that I think we will have to take up with individual property owners. That can be done through Homes Associations and if they want to step up and begin that program, that is fine, but I don't see that at this point. It may be a solution but I do not think it is a viable solution from the City approach and it still doesn't move it up on our priority. I think we have to go back to the property owners and explain what I think the consensus was here. If they would like to persue that we would be willing to help with information and education.

Julie Cain-Even if it's 2017 or whatever year you said. It means that we are accepting it in the que. We're not delaying it anymore right? Some of the houses again are in that same que that are getting water all the time. So we are not delaying anything, but theres a que here. We're not prioritizing we are just putting it in the que like we would everybody else because they happen to call.

Joe Johnson-Yes. If the committee feels this is something we ought to address then the project gets approved whenever we have funding again. Right now most of the funding in the 1/8 cent sales tax is used for a much larger project. A million dollar project then we would then prioritize those projects and this project would fall into whatever year that may be. We've got three (3) Preliminary Engineering Studies now for three (3) million dollar storm water projects, just down the street from this; where homes are flooding and the streets are flooding. So those three projects will be our priorities and this will fit in somewhere in the future when funding is available. And I've told them that. This would not be a project funded anytime soon if it's approved. It will compete with our other projects when we review the CIP and the 1/8 cent sales tax.

Chair Robinett-I would consider a motion then to put this on the list subject to funding and prioritization.

ACTION: Deb Filla Motioned to put this area on the list subject to funding and prioritization. Recognizing prioritization; that since there is no flooding of homes or streets the priority would be very low.

Julie Cain seconded the Motion.

Deb Filla amended the Motion to say also they want to make the offer that the Sustainability and Stormwater Resources would be happy to share with their neighborhood, information about things that they can do.

Pat Dunn seconded the amended Motion.

No further discussion. All present members were in favor. Motion passed.

Chair Robinett advised the group that he had to resign from the Council as he had taken a new job with Government Affairs with the Overland Park Chamber and a personnel policy of his employer is that he cannot hold a public office.

Committee Members Pat Dunn and Skip Johnson had to leave at this time (8:40).

THIRD ITEM OF BUSINESS: Staff presented the current working plan to the group of the **Green Street Pilot Project under design for the 8500 block of Belinder.**

David Ley advised the pilot project is being constructed with the 2014 Residential Reconstruction Project now under contract with Miles Excavating. Staff showed the diagram of what the structure will look like. Staff is reviewing proper plant materials that would work.

Committee Member Lechevin had some pointers from experience, not to use "Hydrangias" or "Little

Blue Stems”.

Staff appreciates Member Lechevin’s review/input on plant materials and asked if she might review the plant lists.

NO ACTION. This was an UPDATE and REVIEW ONLY for Staff/Committee.

Chair Robinett adjourned the meeting at 8:49AM.

Minutes transposed by Julie Stasi, Leawood Public Works Department