Minutes of the Stormwater Management Committee Meeting
Meeting held: November 14, 2008

The Stormwater Management Committee met on Friday, November 14, 2008, at 7:30AM in the Main Conference Room at Leawood City Hall.

Committee Members In attendance were:
James Azeltine, Councilmember-Ward 4
William Chiles
Debra Filla, Councilmember- Ward 1
Mel Henderson
John Kahl
Carole Lechevin
Jim Rawlings (Chair); Councilmember- Ward 2
Alec Weinberg

Members absent:
Gary Bussing, Councilmember- Ward 3
Pat Dunn

Guests present:
Louis C. Rasmussen, Councilmember- Ward 2
Fareda Eddy, 11507 Cedar, Leawood, KS
Don Smith, 5209 W. 116th Street, Leawood, KS
Art Scott, (President of Edgewood Home Owners Association)
5304 W. 116th Street, Leawood, KS
Joan Kurz, 11512 Cedar, Leawood, KS
Larry J. Jones, 11512 Cedar, Leawood, KS
Albert Cinelli, 11509 Juniper, Leawood, KS
Barbara Pinsker, 11513 Juniper, Leawood, KS
Dick Noon, 11521 Juniper, Leawood, KS
Ron Rowladd, 11512 Juniper, Leawood, KS

Staff in attendance:
Joe Johnson, Julie Stasi

Chair Jim Rawlings welcomed everyone and began introductions of Committee and staff at 7:32 AM.

- **The first item on the agenda was to approve the minutes from the last meeting of October 10, 2008**. Mel Henderson made the motion to approve the minutes. Motion was seconded by Alec Weinberg. All were in favor, motion passed.

- **The next item on the agenda: Channel Erosion along the Creek Bank between City Hall near the Edgewood Subdivision.**
  Chair Rawlings mentioned that this was the topic of discussion at the last committee meeting and that many were going to take the time between then and now to take a look at the erosion/area. We have had that chance now and also there was discussion in relation of how to stop the erosion through natural plant sources or some sort of a more soft-scape. Chair Rawlings asked Joe Johnson to pick up the conversation where we left off.

Joe Johnson advised that at the last meeting, the committee had recommended with a motion that John Kahl and myself take a look at the area in the field to see if there was any immediate solution or landscaping that could be done now. Joe Johnson advised that they looked at it and the write up that was sent out tells of the points that were gathered and looked at in their review. One of the items to consider is the time of the year. The time now is really not conducive to doing landscaping or planting vegetation to stabilize the slope. The spring time would be better to plant any vegetation.

We did talk about the way that it looks today in the channel and you would have to do some preparation of the soil. Some clearing of the vegetation would be required. Joe Johnson introduced Committee Member John Kahl, who works for Terra Technologies (the company that did the recent work on the channel) to describe more of what they think.

Joe Johnson advised that he thinks the work the City has done on the south bank of the channel will stop the migration of the channel to the north. The concerns the property owners have is that the bank there does not have a lot of vegetation and it will continue to erode.

Joe Johnson advised on the north side you have grass lawns that come almost to the top of the bank. We have the same setup on the south side with City Hall, but we have a larger natural buffer between the channel and our grass lawn to control erosion of the runoff. There is very little ground cover on the north bank to prevent the soil erosion.

Joe Johnson advised staff has gone out and taken videos and pictures and are concerned about water sheet flowing of the lawns on the north side. It runs down the bank removing the soil particles.

John Kahl-Described the area and the project his company was involved in about a year ago. The water sort of sheet flows but there is a bit of concentration of the water, the way the yard naturally lays, the bare spot area tends to have a concentrated sheet flow. It does not uniformly enter the channel in sheet format all over the place. It is originating from sheet flow as there is not a large channel upstream collecting drainage from many-many-many acres, concentrating

together and then unloading at one specific point. There is a bit of flow concentration right at the stream bank. Last years project was to provide some additional stability to the channel.

There might not be anyone here that knows what the channel used to look like, but over time the channel had gone down and the banks had gotten very steep and it a fairly narrow channel and it was quite sinuous through there. So the situation was a matter of the water having to get 8, 10, 12 feet deep before it could spill out and begin to utilize it's flood plains. So the water would be very deep and flowing very quickly, very fast and depth and velocity create a high level of hydraulic sheer. Hydraulic sheer is basically what cause erosion. So the purpose of the project that was completed earlier this year (or late last year), the idea throughout was to try to open up those areas which would naturally occur over time without doing a direct impact to the channel itself. We were trying to remove some of the overbank area in particularly on the inside of the bend so that the water during a rain event (if the water would come up) rather than having to get 8 or 10 feet deep before it could spill out, and try to utilize it's flood plain it would only have to get 1, 2 or 3 feet deep and then there was a flood plain for it to utilize. With the expectation that when we changed that configuration, the actual alignment of the channel itself that we were intentionally leaving alone, might very well change, in various locations. The idea was as long as it remained within the channel corridor and didn't threaten any adjacent infrastructure, the channel could pretty much go anywhere it wanted to.

In a couple of locations where the erosion of the channel bank was closer to existing structures, some gabion wall systems were put in place to protect the outside of the bends. As there were a couple of places where the fence was about ready to get undermined. Throughout the rest of the channel, we would primarily rely upon that opening up of the channel conveyance. Right now the way the hydraulics work, during the design storm event, the water can only get three or four feet deep and that's all the water there is. Previously when the channel was more confined it would get quite deeper, but it didn't have as much volume that it had to fill up.

In looking at the site with Joe, one of the things we are beginning to see (which we kind of hoped would happen) is there used to be a bend that swung up against the Edgewood property. We had removed all that material on the inside of the bend and now the channel is trying to cut the corner on it's own. So it is basically trying to move itself away from the area of concern that we are discussing today.

John Kahl said there are several different options we could pursue; and they all have varying degrees of cost. John Kahl's first reaction is to ask, do we have some time? Is this something that needs an immediate action? He has been involved in a number of projects where streams do what they do over long periods of time. So for a project that has only been in place a year, is not giving

it much time to see exactly how the channel is going to react to those changes. It may take, 4, 5, 6, 8 10 years before you really recognize exactly what it is doing.

Deb Filla made the Motion to wait until spring and reassess the area.
Alec Weinberg seconded the motion.
John Kahl made a request to approve the Motion and add that a firm be hired (or Public Works Staff if that is something they can do) to survey and monitor the area and collect information of the slope and current conditions.
Alec Weinberg seconded the revised motion.

More discussion. Residents speak and offer their opinions.
Joan Kurz-Advised that she feels when the improvement was done, she thinks the direction of the stream has changed because before it went down the stream behind their property, now because they have come in and re-graded and there is high land, it pushes when it starts raining directly to their property; which is their issue at 11512 Cedar. That is what has caused the erosion. Pictures are from the Kurz/Jones Property at 11512 Cedar.

Joe Johnson-You can see where the channel used to go. It used to have a sharp bend to the north and then straightened out right before the pedestrian bridge. This put a lot of stress on the north side of the channel, in this bend.

When the contractor cut the south bank down, it was not graded all the way down the channel bottom. You usually leave about 12 to 18 inches up above the bottom of the channel. You do not want to get in the channel (The Corp doesn't want us to be in the channel) and that is why they call it flood benching. You come over and up a little bit and then you come out, so what they see with low flow, it still meanders north. With higher flows the new graded area allows the water to flow straighter reducing the stresses on the north bank. What we are trying to do in the heavier rains in this location with the wider channel is to allow the water to spread out and velocity to slow down reducing the stresses on the north bank. The channel is 25 to 30 feet across. The original channel used to be about 10 feet, so it is much wider.

Albert Cinelli-Voiced his concerns that when the rest of Park Place is developed there will be a bigger rush of water coming in to erode the area and thinks it will get worse as time goes on.
Dick Noon-As construction increases and there is more going on at Park Place, will not the flow of the water increase and if that is a Yes, then why don't we take that into consideration when we do these improvements?
Joe Johnson-Advised it was taken into consideration. We looked at what the flow would be or will be when Park Place is fully developed. We do-do that. So we don't take a look at it today and then five years from now say it's 50% done and then in another 5 years say more is done. We take a look at what water that site is going to produce if it got build today. And then using that flow, that

information was given to John at Terra Technologies to develop a plan to stabilize the channel.

Dick Noon-So are we going to have more flow as Park Place is built?
Joe Johnson-There should be more runoff. One of the things that is not built right now as part of Park Place, is there is a large water feature that is a 2 to 3 acre lake that sits on the south side of 117th Street that when the residential condos are built, is supposed to be put in. That will help with the stormwater runoff, so yes. Are we going to see a substantial increase? I don't think we are based on what we have built in the ground today, but yes, the assumption would be that there will be some additional runoff generated as the site continues to develop.

Councilmember Rasmussen-speaks and says he believes the creek is the City's responsibility as it is on our property. It is our responsibility as a City to maintain the channel and the City has not removed excess debris that is down there. Because of the debris, the water is damning up. If the debris was removed, the water could flow as it was designed to.

Joe Johnson advised that Parks Department has a tree they are going to remove.
John Kahl-It wouldn't be the worst thing in the world if there is a tree that is going to come down, rather than completely hauling it off, taking significant portions of it and laying it against the bank in the area of concern to promote some sedimentation in that area. There's a fine line between that and dumping grass clipping as grass clipping just wash away when the first rain comes up and do not allow anything to grow underneath as opposed to something like this.

Deb Filla asks to modify her Motion, to allow $1,000 for plantings to some of the residents in order to help stop sheer flow from up above. Possibly they could plant prairie grasses or something to help slow down the water coming in.
Alec Weinberg seconds the modified motion.
After his second, Alec Weinberg leaves the meeting due to another appointment.

Joan Kurz-Does not think that is the issue.

Carole Lechevin-Said John Kahl mentioned that native grasses have a vigorous root system and that is why those plantings are used. We tend to like to have our yards looking manicured with turf grasses and ornamental plantings, but those plants have a very shallow root system that almost work against stabilizing the ground underneath it when you are next to a stream type of conditions. So if you can take the opportunity to take 5 feet if you have it or 10 feet and do some native plantings, that will help stabilize the banks; because the erosion doesn't necessarily stop at the fence line. And that would help stabilize that area underneath it.

Art Scott-Thinks we are getting away from the issue. Mr. Scott thinks that the creek is going to try to swing out from around that curve. That is where the problem is; and the debris that is building up in the creek. The sheeting of the water from up above on the lots is not the issue. That is not creating this problem. The creek itself and the alignment of the creek is what is going to do away with the bank at some point. Can understand why we want to defer the issue and that is because it will cost money. The timing of that bank is not going to solve the issue, you're going to have to do something about the curve and the debris that is in the creek. It is the City's problem and we appreciate you trying to solve it.

Chair Rawlings asks Deb Filla to repeat her motion/s before any more members have to leave the meeting for other appointments.

Deb Filla makes a motion with the following four (4) provisions;

1. Have the Parks & Recreation Department accelerate their channel bank debris removal and move the fallen tree, over placing it so that it will assist in the water flow/buffer. Debris removal should be manual labor and not with heavy equipment.
2. Have $1,000 landscaping allowance provided for two (2) residents of 11512 Cedar and 11508 Cedar; using plants species suggested by John Kahl of Terra Technologies.
3. Have the Public Works Department Design Engineering Division perform a field survey of the creek area and its current slope conditions/measurements.
4. Relook at the area in July or August of 2009 to see if the City has or is taking the correct measures in the creek stabilization.

Motion was seconded by John Kahl.
Motion was agreed to by all members. Motion passed unanimously.

The residents were advised that this item will appear on the December 1st, 2008, City Council Meeting as a recommendation to the Council from the Stormwater Management Committee. That this was a recommendation only, and that the Council has the final approval of the issue.

- **The next Scheduled Meeting is December 12, 2008 at 7:30 AM, Leawood City Hall. (second Friday of the Month)**

Adjourned 8:47 AM.

Minutes Submitted by Julie Stasi, Leawood Public Works Department.
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