

**City of Kansas City, Missouri**  
**Shoal Creek/ Birmingham Basin Coordinating Committee Meeting #3**  
**The Gatehouse at Shoal Creek Preserve**  
**8515 N. Sycamore Avenue Kansas City, MO 64157**

**January 22, 2007**

**Summary Meeting Notes**

***Basin Coordinating Committee Members in attendance:***

Pete Hall, Curry Investment Company  
Eugene Harkins, Citizen  
Dave Hawes, Gracemor/Randolph Community Council  
Larry Janacaro, Lawson Bank  
Dave Mecklenburg, Northland Regional Chamber of Commerce  
Dwight Sampson, Green Haven Neighborhood Association  
Wendy Sangster, Missouri Department of Conservation  
John Spears, Ameristar Casino  
Karen Swope, Ravenwood Summerset Neighborhood Association

***Wet Weather Solutions Program Staff & Consultants & KCMO Staff in attendance:***

Terry Usina Boyer, ASTRA Communications  
Scott Cahail, KCMO Water Services Department  
John Fairfield, KCMO City Councilman  
Jeff Henson, Black & Veatch/ KC-One  
Lynn Hinkle, ASTRA Communications  
Terry Leeds, KCMO Water Services Department  
Galen Miller, Burns & McDonnell/ KCMO Overflow Control Program  
Rick Mayo, CTE/ KCMO Overflow Control Program  
Colleen Newman, KCMO Water Services Department

## Opening

The meeting commenced at 4:00 P.M. Terry Leeds, KCMO Water Services Department, welcomed participants. Community Panelists were introduced and welcomed. Leeds discussed the purpose of the meeting and discussed the meeting materials handed out.

Leeds reviewed the Wet Weather Solutions Program goals and the basin meeting process with the attendees. The goals are the wet weather solutions program are to:

- *Minimize loss of life and injury and reduce property damage due to flooding.*
- *Improve Water Quality.*
- *Maximize economic, social and environmental benefits.*

Leeds also discussed the purposes of the meeting:

- *Obtain more specifics on problems in your basin*
- *Obtain results of your basin priorities from meeting #2*
- *Discuss strategies that best achieve priorities*
- *Reminded attendees of #4, needing recommendations*

Leeds then began to discuss the results of the basin priorities exercise that was conducted at the last basin meeting. For the Shoal Creek/ Birmingham Basin Coordinating Committee, members ranked the priorities as the following:

- *Very Important:* Minimize property damage due to flooding;
- *Important:* Minimize loss of life and injury due to flooding;
- *Desirable:* Protect water quality; Maximize community benefits; Support aquatic life in streams; Improving the aesthetics of streams; Maximize environmental benefits;
- *Neutral:* Minimize impacts on neighborhoods; Simplify the implementation and operation.

Leeds asked the attendees if they felt that the results were accurate.

**Attendees said yes.**

Galen Miller then asked the attendees if they had any general comments, questions, or concerns about the meeting process or other technical questions.

**Participant Question:** We were advised that widening of N. Brighton would impact the creek behind their homes- 56<sup>th</sup> Place and Mill Creek.

**Participant Comment:** The Ravenwood Neighborhood could be impacted by any work closer to the neighborhood.

**Participant Question:** In reference to the basin priorities exercises, how will the voting by each basin be pulled together?

**Staff Response:** There are 8 firms looking at technologies that will fit with basin preferences.

**Participant Comment:** Neutral responses- concerned about response of neutral on “minimize impact on neighborhoods” as unrealistic.

**Staff Response:** We will have a public process during the time of construction design phases. We will have more input.

**Participant Question:** How long will it be before you start?

**Staff Response:** MDNR will be receiving our work plans by July 2008; once the plans are approved the regulators would like to see it completed in 15 years. We think it may be more realistic to take 25 years.

**Participant Comment:** Some of the costs may not be something we ever address. Part of our concern is what does the EPA expect us to do so we can identify solutions.

After the open discussion, Jeff Henson explained what causes risk to people’s safety & property:

- Too much rain for the system to carry including too much water can cause streams and rivers overflow onto adjacent lands or overtop bridges,
- Too much water can cause the constructed storm drain system to back up into streets and homes.

Jeff Henson showed a map of the stream setback ordinance and buffer, proposed 100-year floodplain buffer. The stream buffer protects against flooding, loss of life, improves water quality. It can be multi-purpose and low cost to have a stream buffer. The impact on individual homeowners still needs to be studied. Also we will need more meetings with attorneys that represent developers to work with them to work through the details to meet everyone's needs. Multi-purpose benefits include slowing flooding down, improve water quality, and recreational opportunities. The KCMO Planning Department is currently updating their zoning ordinances and the stream buffer will be included in those updates.

In the Shoal Creek/Birmingham Basin drainage system there are 33 bridges and other structures not meeting current design standards. There are 14 pipes not meeting standards and 24 open channels with deficiencies. There are 76 homes in the 100-year floodplain of which 70 are in Mill Creek watershed.

Henson stated that the 100-year floodplain can change based off of development. Stormwater management's recommendations are more aggressive than the 100-year floodplain, but working with developers will probably scale the standards back to the 100-year floodplain. Structural damage was a high priority. Some ways to reduce structural damage are:

- *Stream Setback in undeveloped areas*
- *Property buyouts*
  - Voluntary vs. Mandatory
  - Residential vs. Commercial
  - How to prioritize?
    - Storage or increased conveyance capacity
    - Do you make the bridge opening bigger?
    - Do you store more water upstream?
  - Flood-proofing
    - Commercial only or residential too?
    - Education, incentives or a combination?

Henson asked the group how they felt about addressing structural damage due to flooding by buying out properties.

**Participant Response:** Depends if it's your home!

**Participant Response:** Voluntary—you don't force them out.

**Participant Response:** One issue is downstream side. Gladstone works on Mill Creek, moving downstream. Detention basins are advancing. We need to look at something that simple.

**Staff Response (Henson):** Part of work is to look for these regional detention basins. The buyout is pretty sensitive.

**Participant Response:** Difficult because some homes are paid off.

**Staff Response (Henson):** City could be buyer on homes when they sell.

Henson continued by discussing possible ways to minimize loss of life due to flooding:

- *Making stream crossing able to convey the 100-year storm.*

- Do you make a bridge opening bigger?
- Do you store more water upstream?
- *Warn people of dangers of flooding.*
- *Barricading areas that are prone to flooding.*

**Participant Question:** Have you analyzed basin detention vs. bridge/culvert replacement?

**Staff Response:** In the Line Creek basin they are talking about multiple smaller vs. larger, fewer basin detention facilities.

**Staff Response:** If you can move detention basin away from pristine streams to other locations we can preserve more.

**Participant Question:** The Stream Setback Ordinance will affect developers. The City will be faced w/light rail in Line Creek. Will there be the same requirement for this development? Is Missouri Department of Transportation (MoDOT) going to put retention in the clover leaves? I think rain gardens should be placed on MoDOT property. The public needs to know not just them complying. Rain barrels and rain gardens across subdivisions really add up to help.

**Staff Response:** Will the City do the same on its projects? KC-One recommends this. Training with City staff includes discussing new development including no increase in peak flows downstream. Inclusion of Best Management Practices (BMPs) such as bio-retention cells etc.

**Staff Response:** We did meet with MoDOT on stormwater management devices on their property. They seemed to be positive and agreeable. The next step would be to identify specific priorities. Zona Rosa is an example of doing this.

**Participant Question:** Can a neighborhood association get assistance for a group to learn and place rain gardens properly?

**Participant Question:** Why not require new subdivisions to use rain gardens and rain barrels?

**Participant Response:** Some generic overlays are difficult to get incorporated in the zoning process.

**Staff Response:** Drainage design standards adopted are now being tailored to each stream.

**Participant Comment:** In some current cases, collapsing yards, etc.—new buffer should prevent this.

**Participant Comment:** You can't build in the FEMA floodplain.

**Staff Response:** The Stream Buffer Ordinance extends beyond the FEMA floodplain.

**Participant Question:** Any thought on developers clear-cutting? Can we control?

**Staff Response:** Low-Impact Development methods suggest preserving trees. The outer zone of the setback ordinance tries to identify and preserve.

Henson continued the discussion on stormwater. In the basin, stormwater that shouldn't be in the sanitary sewer system is backing up into homes. Some problems with the stormwater system include:

- *Much of our constructed stormwater systems are undersized to handle the amount of stormwater they receive.*
- *Obstructed or damaged structures due to lack of adequate investment in maintenance of these systems.*

Like many cities, our community has built buildings in areas that tend to get flooded. We've paved streams and built homes and buildings in the floodplains. In more recent years, we've allowed structures to be built but they are elevated. This practice has only served to widen these floodplains creating higher risk to adjacent properties.

As our city grows, so does the amount of stormwater running off of hard surfaces such as parking lots, rooftops, streets and sidewalks. Additional hard surfaces means there is less green space where rainwater used to fall and soak into the ground.

Our own properties may contribute to flood damage.

- We could have poor grading causing water to enter of our homes.
- We may not be retaining enough water in our yards – this is one of the reasons we are promoting the building of rain gardens and installation of rain barrels.

Henson continued by discussing water quality. Henson stated there are three sources of water pollution:

- Untreated wastewater
- Treated wastewater
- Untreated stormwater runoff

There are many contributors to pollution in our urban streams, lakes and rivers. Wastewater from our homes and businesses eventually ends up in our streams. The wastewater that is carried to the wastewater treatment facilities is treated and discharged according to state & federal regulations.

During wet weather, the sanitary sewers overflow discharging untreated sewage to streams, lakes and rivers. These are called sanitary sewer overflows. Rainwater, snowmelt runs off the land carrying pollutants and ends up in our streams, lakes and rivers. This is called non-point source pollution.

Henson described the overall approach to improving water quality that includes stormwater and wastewater:

- Prevent future problems and address existing ones.
- Prevent pollution.
- Treat water where it falls.
- Keep water from entering the system.
- Maximize utilization of existing system.
- Reinvest in existing system.
- Build new facilities.

From this point forward, new development will be required to treat stormwater runoff using the Best Management Practices (BMP Manual) as part of the new stormwater standards recently adopted. This does not apply now to redevelopment. The program team is recommending that redevelopment also treat stormwater runoff.

Galen Miller continued the discussion by talking about the sewer system in this basin and those systems that flow to KCMO (South to Richards Gebaur, Johnson County, 155<sup>th</sup> Street, Liberty, Gladstone, Riverside, Weatherby Lake). Miller reminded participants that the combined sewer system area is bounded by State Line on the west, Blue River on the east, Missouri River on the north and 85<sup>th</sup> Street on the south.

Miller also explained that the Fishing River, Rocky Branch, Todd Creek Treatment Plants all drain toward the Northern. Everything else drains south to the same plants as the combined sewer system and areas to the south. The west side of the basin drains to the east to Line Creek Pump Station then to the West Side Treatment Plant or to Buckeye Pump Station; ultimately to the Blue River treatment plant. The sewer system of Kansas City is one system with common problems around the whole city.

The challenges of capacity and untreated sewage releases exist as Northland growth was never factored in to being pumped south of the river to those treatment plants.

Miller showed a map of responses to the Wet Weather Solutions Program Public Opinion Survey responses of people having sewer back-ups. The dots on the map show that there are problems all over the city, including the Shoal Creek/Birmingham Basin.

Phil Burns, Project Engineer, presented specific information on the Shoal Creek sewer system. Shoal Creek sanitary sewer system is similar to the stormwater system. We are looking at inputs into our system- Gladstone and Liberty to name a few. The basin is bounded by 291 Highway, Missouri River, Hodge Park and Gladstone. Surface water flows toward Mill, Shoal and Little Shoal Creeks. As they come together there are more flows and the same with sanitary sewers. Burns stated that the average dry weather flows show plenty of capacity at around 50%.

Average wet weather flows-light rain not much. Heavier rain increases to 2 to 3 times over capacity. At pump station we have overflows. The sewer system during wet weather flows appears to be adequate except for a couple of reaches. All in all separated sanitary sewer is sufficient to get to the pump station.

**Participant Question:** What amount of rain causes overflows?

**Staff Response (Burns):** 5" in 24 hours causes a 3 times capacity overflow.

**Participant Question:** How often do we hit capacity?

**Staff Response:** Detail analysis is needed.

**Participant Question:** How often does pump station overflow?

**Participant Question:** Do we build detention at pump stations?

**Participant Question:** What about when more build out occurs?

**Staff Response (Burns):** We are looking at this now.

**Participant Question:** If these are sanitary sewer systems why are they affected by rainfall?

**Staff Response:** They leak through cracks and joints, manhole lids, sump pumps and downspouts. Also smaller systems—roots, blockages tend to be challenge in this basin--- not inadequate pipes.

Miller continued the discussion by presenting possible ways to reduce sewer overflows:

- *Keep water from entering the system*

- Develop/redevelop in a more environmentally-friendly way
- Store water above ground
- Reduce rainwater that shouldn't be in the system
- *Optimize system performance*
- *Store the water*
- *Treat the water*

There are ways that citizens can help. Citizens can install rain barrels, plant rain gardens, keep water on your property, make an amenity, and disconnect downspouts and sump pumps. People have a big impact. The Citizen Action Kit gives lots of information.

Lynn Hinkle spoke to the attendees regarding the next meeting. The meeting will take place March 5<sup>th</sup> from 4-6p.m. Hinkle stated that the next meeting is where the rubber meets the road. A public open house will take place May 3<sup>rd</sup> where the public will be able to view the plans. You are the first filter. Need to hear from you to do the right thing in your watershed. The message to recruit is "its one system"- Northland sewage pumps south across the river.

Galen Miller wrapped the meeting up by sharing information on when the next meeting will take place. He encouraged participants to come and look at the displays and ask additional questions if needed after the meeting had adjourned.