

# ST. JOSEPH, MISSOURI WATER PROTECTION PROGRAM

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## WHITEHEAD DETENTION BASIN PUBLIC MEETING

Wednesday, October 7, 2009

5:30-7:00 P.M.

Spring Garden Middle School, Library

St. Joseph, Missouri 64503

### MEETING NOTES

#### I WELCOME & INTRODUCTIONS

Bruce Woody welcomed participants and introduced City staff and the project team. He explained the purpose of this meeting and that the proposed detention basin is part of the City's Water Protection Program. One of the primary purposes of the Water Protection Program is to reduce combined sewer overflows.

#### II WHITEHEAD DETENTION BASIN OVERVIEW

Andrew Smith, Black & Veatch, gave a presentation regarding detention basins and their potential use in the Whitehead Basin.

Mr. Smith stated that the project goals are to provide flood protection, improve water quality, and tie-in with the combined sewer overflow improvements.

The hydrologic benefits of stormwater detention include significantly lower peak flows (flood control) and potential infiltration (aquifer recharge). The water quality benefits of stormwater detention include sediment reduction, nutrient removal, reduced downstream erosion, and enhanced habitat.

When considering where to site the detention basin, location within the watershed, topography, nearby structures, utilities, and roads are all factors that will be considered.

In addition to providing water quality and reduced flooding, a detention basin can also be an amenity that may have trails, parks, playgrounds, boating, and nature interaction opportunities associated with it.

Mr. Smith stated that the City will now evaluate detention opportunities and feasibility within the Whitehead Basin. Another public meeting will be held in late November or early December to present recommendations and receive feedback.

### **III QUESTIONS AND ANSWERS**

City staff and Program Team members encouraged participants to ask questions about the information that was presented.

**Question:** Where will these detention basins be located?

**Answer:** We are looking at several locations within the Whitehead Basin at this time but no decisions have been made.

**Question:** What years are you looking at in terms of floods? Are you looking at 1984 and 1952?

**Answer:** Yes. We are looking at historical flooding and rainfall. Design flood events similar to these years are being considered.

**Question:** Will you use flood gates to control the release of water?

**Answer:** No, that takes too much maintenance and is typically only required for much larger reservoirs. We could use a step spillway. Where it makes a difference how much water goes out based on flood stage and elevation of the pool.

**Question:** How do you plan to manage sediment?

**Answer:** There will likely be forebays above the actual basin. The sediment will need to be cleaned out with regular maintenance.

**Question:** Are any of the current basins in the watershed functioning properly and have they been maintained?

**Answer:** These are on private property and the City doesn't currently control the maintenance of these systems.

**Question:** What surface area are you trying to store?

**Answer:** We don't know at this point if there will be a permanent pool so that hasn't been determined.

**Participant Question:** What is the size of the watershed?

**Answer:** 13.5 square miles or approximately 8,600 acres.

**Question:** Is it more cost effective to fix the problem downstream at Quaker Oats?

**Answer:** We are looking at several factors when deciding where to place detention facilities. Cost effectiveness will be one of the factors.

**Comment:** The water in Whitehead Creek is just not as high as in the past.

**Question:** What are the qualifications of your team?

**Answer:** We are engineers and do this type of analysis as a business.

**Question:** How will it be paid for?

**Answer:** Right now the majority of Water Protection Program projects are paid for by wastewater user fees. We are not certain how the detention basin will be funded in the future. The City is looking at who causes the problems as a potential way to charge for stormwater projects. There are lots of options under consideration.

**Comment:** The City needs to make sure they have funds to maintain these facilities.

**Response:** The City is looking at net present life cycle value when evaluating the options. This includes the cost of maintenance. Funding for maintenance will be provided.

**Question:** How do you make sure the water held will be clean for fishing and swimming?

**Answer:** Pollutants attach to sediment. The forebays will catch the sediment prior to it getting into the water pool. Plantings also soak up the pollutants and maintain proper water quality. Water quality would need to be monitored.

**Question:** Would you consider putting the water into canals?

**Answer:** We don't plan to channelize or armor the channels.

**Question:** Does the City plan to limit growth?

**Answer:** The City regulates growth and development but doesn't plan to limit growth.

**Question:** How much water are you trying to store?

**Answer:** We aren't that far into the analysis yet and we will bring back the options at the next meeting.

**Question:** How many businesses were damaged and left as a result of the 1984 flooding?

**Answer:** Can't say how many left town or moved due to flooding. There was wide scale flooding.

**Question:** Is overflow control more important than flood damage reduction?

**Answer:** This project is aimed at addressing both problems. Combined sewer overflow control has been mandated by the United States Environmental Protection Agency (USEPA). Flood damage reduction has not.

**Question:** Will the City use eminent domain to obtain the land?

**Answer:** The City doesn't plan to use eminent domain for this project. They would purchase the land or purchase an inundation easement.

**Question:** Would it be used as drinking water supply?

**Answer:** No.

**Question:** Is this similar to the Blacksnake detention basin project and why isn't the City concentrating on Blacksnake?

**Answer:** There are two goals: reduction of combined sewer overflow and flood control for Whitehead. Blacksnake is primarily a flood control improvement that is a United States Army Corps of Engineers (USACE) project and is being studied slowly by the USACE. We are independently moving on the Whitehead study without the USACE because we can't wait on this one.

**Question:** Can we get models on Black & Veatch's website?

**Answer:** No. When we are ready to present findings, there will be information presented on the City's website.

**Question:** Will any basins be located in the County?

**Answer:** No decisions regarding locations have been made. We are still early in the study.

**Question:** Do we have flood inundation in undeveloped county?

**Answer:** There is some road overtopping during very large floods like 1993.

**Question:** By holding the water back in a basin, how much can you reduce combined sewer overflows?

**Answer:** The annual average flow through the combined system in Whitehead and Blacksnake is about 3 million gallons per day (peak flows are larger depending on the design storm event).

**Question:** How many times per year does the outlet overflow in the Whitehead basin?

**Answer:** It overflows every time it rains – approximately on average 78 times per year at the one outlet.

**Question:** Will you still build the stormwater diversion conduit?

**Answer:** Yes. The size of the stormwater diversion conduit will be impacted by the size and location of the basin.

**Question:** What is the timing?

**Answer:** We need to do these projects in an integrated manner; however, the Whitehead stormwater diversion conduit will be implemented early in the Combined Sewer Overflow Control Program. The first phase of the Program will take 20 years to complete and a second phase will likely take another 20 years.

**Question:** Has the county been contacted by this project?

**Answer:** This is a city issue funded by city funds. If a location outside city limits is formed and is feasible, then we will coordinate with the county.

**Comment:** The water flows naturally and it should be funded by the city not county.

**Question:** What is the timeline?

**Answer:** It depends on the feasibility study, however it could take 5-7 years to implement such a project.

#### **IV ADJOURNMENT**

The public meeting for the Whitehead Detention Basin adjourned at 7:00 p.m.

## MEETING ATTENDEES

<b>NAME</b>	<b>ORGANIZATION</b>
Brooke, Lloyd D.	Resident
Crawford, Becky	Land Owner
Dunn, Debby?	
Dwyer, Megan	Resident
Gach, Debbie	
Gann, L. Scott	Land Owner
Gaume, Francis	Resident
Grace, Tim	
Gullick, Ralph W.	Land Owner
Gullick, Vickie	Land Owner
Hebert, Reba	
Henkoski, Vic	
Hook, Ron	Buchanan Co. Commissioner
LaBlass, Barbara	St. Joseph Councilmember, District V
Massengale, Michael W.	Land Owner
Meyer, Mark	
Morgan, Duane	
Morgan, Faye	
Moylan, Theresa	
Palmer, Bill	Resident
Reeder, Kenneth	Resident/Missouri River Recovery Implementation Committee
Slawson, Tom	Resident
Sobetski, Mike	Lifetime Foods
Thomas, Ellis	Resident
Thompason, Dean	Land Owner
Thompson, Eva	Land Owner
Waithose, A.G.	