**MEMORANDUM**

TO: Project File, City of Jeffersonville, South Pump Stations/Force Mains Project, SRF Project # WW10 01 35 03

FROM: Jack Fisher

DATE: December 6, 2012

RE: Green Project Reserve (GPR), Business Case

**Summary:**

• Jeffersonville is proposing the construction of the Lentzier Creek Pumping Station (LCPS) and gravity interceptor to eliminate five pumping stations to improve operation and maintenance as well as the power usage efficiency for the conveyance of wastewater to its North Wastewater Treatment Plant (WWTP). The LCPS will contain two pumps controlled by variable frequency drives. This project will also reduce the length of the force main for the Riverport Pump Station by approximately one-third, effectively lowering its cost of operation. The South Pump Stations and Force Mains project considers the proposed gravity interceptor an eligible Green Project Reserve component since it will eliminate five pumping stations. The proposed gravity sewer will have the ability to effectively convey wastewater to one centralized location along with reducing electrical energy and other resources throughout the system.

 If Jeffersonville does not construct the project as designed, they would be required to make other improvements to the collection system in order to divert flow from the Downtown WWTP to the North WWTP. In evaluating the improvements necessary to accommodate replacement of the pumping stations; making upgrades to the existing infrastructure; and addressing additional capacity needs throughout, a cost comparison was prepared. The cost comparison showed that the “As Designed” costs at $9,756,155 was more cost effective than the “Alternative Analysis” (i.e., comprised of nine improvements projects) at a cost of $11,249,480 or a difference of $1,493,325. Based on this difference, the proposed 9,200 foot gravity interceptor at a cost of $967,306 should be considered a Green Project Reserve Component. In addition, an analysis based on the amount of energy consumption that will be reduced with the elimination of the pumping stations an annual energy savings of approximately $73,000 will be produced.

• Estimated State Revolving Fund Loan Amount is $11,865,000.

• As Bid Construction Cost for both the North and South Pump Stations & Force Mains $10,961,508.

• Estimated GPR portion cost of loan associated with the gravity interceptor is **$967,306** and **$25,000** for planning and design costs for a total of **$992,306**. This represents 8.3 % of the estimated loan amount.

**Conclusions**

• By constructing the proposed gravity interceptor, the city will realize a savings of approximately $73,000 per year in energy consumption and show a payback of 14 years. This payback period is within the useful life of a gravity interceptor at 50 years.

• Jeffersonville will construct approximately 9,200 feet of gravity interceptor at a cost total cost of $992,306, which is approximately 9 percent of the total project cost.