



**CITY OF WAUKESHA**

**Administration**

201 Delafield Street, Waukesha, WI 53188  
 Tel: 262.524.3701 fax: 262.524.3899  
 www.waukesha-wi.gov

<b>Committee:</b> Board of Public Works	<b>Date:</b> 9/7/2017
<b>Common Council Item Number:</b> ID #17-1317	<b>Date:</b> 9/19/2017
<b>Submitted By:</b> Fred Abadi, Director of Public Works	<b>City Administrator Approval:</b> Kevin Lahner, City Administrator
<b>Finance Department Review:</b> Rich Abbott, Finance Director RA	<b>City Attorney's Office Review:</b> Brian Running, City Attorney
<b>Subject:</b> Review and approve alternative for the Greenmeadow Sanitary Infrastructure Improvements project.	

**Details:**

The 2011 Sanitary System Master Plan, prepared by Donohue, recommended examining the cost effectiveness of gravity interceptors to eliminate pump stations and force mains. In 2012, AECOM followed up by preparing a broad interceptor sewer cost comparison analysis for several pump stations including the Greenmeadow pump station. AECOM determined that replacement of the Greenmeadow pump station with a gravity interceptor was cost effective.

In 2016, the Department of Public Works solicited for proposals and hired Donohue & Associates to provide engineering design services for the replacement of the Greenmeadow pump station as it has reached the end of its useful life. Donohue has completed the alternatives analysis portion of the project. The analysis shows an initial cost of \$10,075,000 for the replacement pump stations/force mains alternative while the lowest cost gravity interceptor alternative is approximately \$13,942,000. At year 20, which is the life of pumps and other components in a pump station, the present worth of the pump stations/force mains is approximately \$14,422,000 and the lowest cost gravity interceptor alternative is approximately \$14,073,000. At year 40, which is a DNR time frame for reviewing the cost effectiveness of interceptor projects, the present worth of the pump stations/force mains is approximately \$18,161,000 and the lowest cost gravity interceptor alternative is approximately \$14,140,000. Gravity interceptor sewers have an effective useful life of at least 60 years.

Both options were evaluated using criteria such as cost, safety, reliability, construction risk, traffic impacts, odor generation, and maintenance were also considered by seven Department staff members. The results indicated a clear scoring margin for the interceptor vs. the pump stations/force main of 112.4 to 81.1.

**Options & Alternatives:**

Either the pump stations/force mains alternative or gravity interceptor alternative may be chosen. The pump stations/force main has a lower initial cost. The present worth of each alternative is approximately equal at year 20. After this time, the gravity interceptor alternative has a lower present worth.

**Financial Remarks:**

Greenmeadow Sanitary Infrastructure Improvements design expense:  
 Interceptor Option - \$416,794



Pump Station / Force Main Replacement Option - \$400,869  
Only one of the two options will be chosen.  
Account 7399.68290 71440 – Pump Station Upgrade / Elimination

**Executive Recommendation:**

Recommend approval of interceptor alternative for the Greenmeadow Sanitary Infrastructure Improvements project.