

MEMORANDUM

DATE: February 14, 2013

TO: Brian Dissette, City of South Haven
Roger Huff, City of South Haven
Amanda Morgan, City of South Haven

FROM: Christopher J. Cook, PE

CC: Cindy Clendenon, MDEQ
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RE: City of South Haven – Sewer Study Progress Report

Happy Valentine's Day! The following will summarize our progress to-date on the City of South Haven Sewer Study:

UTILITY MAPPING

We have completed this work. This task entailed compiling City record drawings, maps and field data into a comprehensive sanitary sewer system map. We converted city GIS information into AutoCAD for presentation, modeling, field investigation and study purposes. Draft final maps were submitted to city staff in November, following our presentation at the BPU meeting.

FIELD INVESTIGATION AND DATA REVIEW

Recently, we completed field work on the sewer lines to determine the size and slope of key runs and mapping that information for the modeling effort. We previously thought this would complete our work on this portion of the project but recently conducted further investigation of the sewers in the Peterson Ravine Interceptor upstream of Clinton Street to the city limits. As a result of winter metering we identified significant Infiltration/Inflow as a result of rains on December 20-21, 2012. Unexpectedly, a significant portion of the I/I appeared to be coming from the Peterson Ravine interceptor. Our investigation indicates some potential inflow sources from low lying

manhole castings upstream of LaGrange. We also identified possible degradation of a concrete weir in one of the manholes. Our investigation is continuing as of this date.

COMPUTER MODELING AND FLOW MONITORING

This task included flow meters at strategic locations in the system to be used for identifying infiltration and inflow and for calibration of the sewer model. The flow meters were removed on January 15, after the weekend rains. We extended the flow metering of Phase III in an effort to obtain data during a significant rain event. With metering now complete, efforts have transitioned to the computer modeling phase. Computer modeling, using calibration methods to adjust and fine tune the model, will ensure that the results closely match actual flows observed during metering. The results will be used to predict the system response during certain large scale wet weather events (25 year, 24 hour storm). Modeling work is underway and has been impacted by the findings mentioned above. Still, we expect to have results in February.

SMOKE TESTING

We completed smoke testing of several key areas in the south-central portion of the City in June and presented the results to the BPU in June and November. At this point we are considering additional smoke testing to address the interceptor area being investigated as discussed above.

SEWER TELEVISION

We have been reviewing televising completed by the city over the past several years. Our analysis indicates that some of this prior video inspection work can be utilized in this study. We determined which additional areas required video inspection and Plummer's has recently completed this work.

SRF PROJECT PLAN

We continue to work on the sections of the Plan that we can address, before all of the data is received. The first two sections have been drafted for internal review. We are roughly 50% complete with this task with the bulk of work expected to be completed this winter and spring before the July 1 deadline. We presented a PowerPoint update to the BPU in November.



OVERALL SCHEDULE

The schedule going forward is expected to proceed as follows:

Computer Modeling	February 2013
Project Plan Complete	May 2013
Public Hearings Conducted	May 2013
Final Plan Adopted	June 2013
Plan Submitted to DNRE	July 1, 2013

