

MEMORANDUM



TO: WLSO Planning Committee
FROM: Paul Dombrowski
DATE: May 20, 2011
RE: Periodic Update – Facilities Plan
Woodridge Lake Sewer District

Recent Work Completed through May 20, 2011

Task 4 - Collection System Capacity Management (Infiltration and Inflow Evaluation)

- Areas for flow isolation were determined cooperatively with WLSO staff through site inspections and analysis of pump station data and historical information regarding known problem areas.
- ADS Environmental Services, working through our MBE subcontractor, Pereira Engineering, performed flow isolation work on April 28th and May 3rd. During this time approximately 4.2 miles of sewer pipe was inspected, including all of the lines in Subareas 7 and 8 as well as that portion of Subarea 6 south of the Clubhouse. Flow isolation work is performed during the early morning hours when sanitary flow is negligible to identify areas subject to infiltration. Results indicated that infiltration occurs in localized areas, including a number of pipe segments where sewers pass undeveloped lots suggesting laterals or cleanouts in these areas may not be sealed.
- Flow isolation work identified approximately 21,000 gpd of infiltration in these subareas of the collection system as detailed in the table below.

Location	Net Infiltration Rate (GPD)	Net Line Infiltration Rate (GPD per inch-mile)
Portion of Subarea 6 (South of PS #6)	7,056	18,300
Subarea 7	5,400	17,400
Subarea 8	8,640	26,800
TOTAL	21,096	62,500

- Based on the flow isolation results, Woodard & Curran has developed a list of pipe segments where Closed Circuit Television inspection will be performed. The locations were chosen based on the flow isolation results. Approximately 2.5 miles of sewer will be CCTV inspected in roughly 1000-ft increments.

Task 6 – Groundwater Disposal System Evaluation

- We met on site on March 31st with WLSO staff to discuss project, data needs, and inspect the site. Observations during site inspections noted which beds were wet and beds operating on that day.
- The isopach map was prepared to determine the thickness of unconsolidated deposits over bedrock.
- The raw data from various reports was reviewed and used to select several beds for short-term loading performance tests.



- WLSD personnel restored a number of buried valves to operation and assisted with cleaning beds before the short-duration loading tests.
- Our subcontractor, Colby Engineering, was on site to prepare portions of beds for short-duration loading tests.
- Short-duration loading tests were conducted during the week of May 9th. Initial review indicates that beds had variable responses to loading.
- We met with DEP personnel (Joe Wetteman) and WLSD staff on May 18th to review short-duration testing, discuss plans for formal testing and conduct a site visit.

Work Planned for May 23 through June 30, 2011

Task 3 – Define Service Area, Flows and Pollutant Loadings

- Review parcel mapping and database toward developing mapping and flow projection of existing vs. build out of District.

Task 4 - Collection System Capacity Management (Infiltration and Inflow Evaluation)

- NEPCCO, working through our MBE Subcontractor, Pereira Engineering, will begin the CCTV inspections during the week of June 1st, 2011.

Task 5 – Collection System SCADA System Evaluation

- Initiate the radio path study work to determine communication requirements between pump stations and the WPCF.

Task 6 – Groundwater Disposal System Evaluation

- Complete review of short-term loading test data.
- Complete work plan for long-term loading tests and submit to DEP for review.
- Contract with driller and complete installation of additional observation points for long-term test.
- Conduct long-term loading test and analyze data.