

Survey Internship

Anna Boersma, Civil Concentration, Summer 2009



Employer

The Milwaukee Metropolitan Sewerage District (MMSD) provides wastewater treatment and flood control to over 1.1 million people in the Milwaukee area. The MMSD operates two wastewater treatment facilities, one of which is the Jones Island treatment plant. The MMSD also provides flood control in the Milwaukee area through various projects that include widening rivers, creating large basins to store floodwater, and improving Milwaukee's sewer system.

My Job as an Intern

I worked on a survey crew doing many different projects and tasks. The three main projects included finding the amount of settlement at the Jones Island Wastewater Treatment Plant, determining the amount of contaminated soil at a flood control project, and marking sewers and conduits for diggers' hotline. I also worked on staking out a river that the MMSD was widening for flood control. I was also able to tour a large sewer being constructed by the MMSD.



Figure 1. A picture of me inside a sewer during its construction. The sewer is 17 feet in diameter and is 350 feet underground. There is a boring machine behind me..

Flood Control/Soil Contamination Project

One of the projects I worked on involved removing contaminated soil next to a river being widened for flood control. The soil contained sunken boxcars and oil drums filled with gasoline. I surveyed cross-sections to determine how much contaminated soil the contractors removed. The soil needed to be removed in order to widen and stabilize the river banks.



Figure 2. The soil contamination project before work began at the site.



Figure 3. The soil contamination project after the contaminated soil was removed. This picture shows the current restoration of the river bank. In the spring, grass will grow up and hide the fabric.

Jones Island Settlement

The project that I spent the most time on this past summer was at the Jones Island Treatment Plant, which has experienced a large amount of settlement. The settlement caused the concrete to sink up to five inches. This is problematic because it is causing pipes to separate. Our job was to find the exact location and extent of the settlement. This information was given to engineers so they could determine how to fix the settlement problem.



Figure 4. Jones Island Sewage Treatment Facility.

Conclusion

This internship was a great learning experience for me. Not only did I learn a lot about surveying, but I also learned a lot about the various flood control and sewage treatment projects happening in the Milwaukee area. I really enjoyed it and am glad that I could have this opportunity.

