

Water Monitoring Internship

Anna Boersma, Civil Concentration, Summer 2010



Employer

The Milwaukee Metropolitan Sewerage District (MMSD) is a governmental agency that provides wastewater treatment and flood control to over 1.1 million people in the Milwaukee area.

This summer was especially working for the MMSD because the Milwaukee area received the second highest rainfall ever recorded.

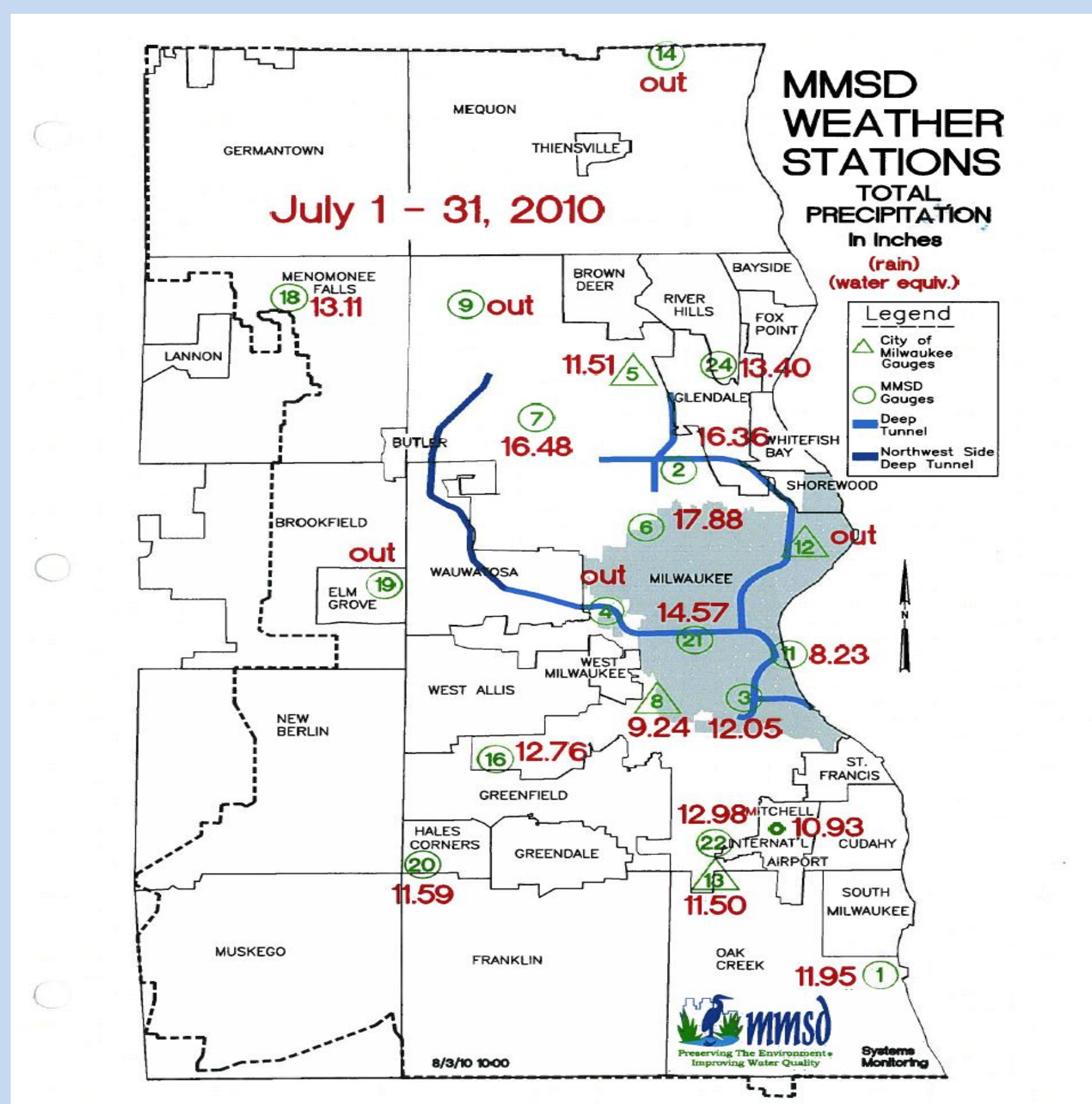


Figure 1. A map showing the rainfalls during the month of July in the Milwaukee area.



Figure . A bridge after one of the heavy rainfalls.

My Job

I interned in the water monitoring department. The department monitors all the intercepting sewers in the Milwaukee area. It also takes samples of the sewage, to know what pollutants are entering the wastewater treatment plants. I worked on many of the department's crews. Some of my jobs included

- downloading flow data from sensors in various manholes
- storm water sampling
- groundwater sampling
- industrial sampling, to regulate what the industries put into the sewers
- inspecting diversion and intercepting structures to verify the water is flowing properly
- measuring the height of rivers and surcharges in manholes after heavy rainfalls
- measuring groundwater levels and taking water samples around Milwaukee's deep tunnels



Figure 3. Inside a box culvert for an inspection..

River Monitoring

I also worked on a joint project between the MMSD and United States Geological Survey (USGS). The purpose of the project is to measure the health of Milwaukee area rivers through continuous water quality data and water sampling. The work included calibrating, setting up, cleaning and calibration drift checking of sondes, which measure conductivity, turbidity and dissolved oxygen. The project also included sampling the water monthly and after heavy rainfalls.



Figure 4. One of the sondes.



Figure 5. A monitoring hut for the USGS/MMSD project.

