

## **RAIN /FLOODING EVENT OF 6-7 & 6-8-08**

### **Summary**

On the weekend of June 6, 2008, in a time period of approximately 36 hours, the City of West Allis received recorded rainfall amounts of between 7.3 and 7.8 inches. The amount of rain was complicated by the fact that large quantities fell in very short time periods. All of the rain contributed to the surcharging of a considerable portion of the City's storm sewer system as well as the surcharging of the City's sanitary sewer system in various locations.

In virtually every situation, the surcharging of the sanitary sewer system was directly related to the fact that MMSD's interceptor sewers were also surcharged, which inhibited our system from properly draining into MMSD's lines. Similarly, the City's storm sewer system drains into the various creeks and rivers that run through West Allis and they too were charged which again, inhibited the City's system from being able to relieve itself in the designed outfalls along these watercourses.

Unfortunately, the combination of surcharged sanitary and storm sewer systems and the natural saturation of the ground during this very atypical two day event, resulted in numerous properties being negatively impacted by surface water entering homes, storm water entering homes and/or sanitary sewer water entering homes. Additionally, access to a number of areas in the City was severely restricted due to the necessity of having to close off city streets due to various streams overtopping roadways.

### **Saturday 6-7-08**

Late afternoon, thunderstorms and heavy rain were forecast for southeastern Wisconsin. At, approximately 4:30 p.m. a tornado warning was issued for Milwaukee County lasting until 5:15. During this period of time, the person "Watch" duty for the Sanitation & Street Division was contacted by Police to investigate reported incidents of water in basements. In addition, the person on "Watch" for the Building and Sign Division was also contacted with request to barricade certain roadways due to streams overtopping the streets.

At approximately 5:30, additional personnel from the Street and Sewer Section also reported for work to assist with the escalating flooding situation. A total of ten employees were available to answer and respond to citizen calls for assistance. Two employees of the Fleet Services Division also responded to assist with equipment failures resulting from the storm.

The Saturday evening/night event was the most damaging of the two days of rain. There was considerable surcharging of the City's sanitary sewer system and virtually all of the storm sewer system was also charged.

In every case where reports of sanitary sewer backups were reported, our investigation indicated that MMSD's interceptor sewers were surcharged inhibiting the City's system from discharging into the MIS. Areas immediately adjacent to these interceptor sewers were the most vulnerable to basement backups. In addition, older homes without sump pumps were also impacted. The ground surrounding their homes was quickly saturated and the water entering the drain tiles could not relieve itself quickly enough into the sanitary sewer system. This too resulted in backups within the basement.

On the west side of the City, all entrances to West Allis were closed off at various locations as a result of Root River, Underwood Creek and Hale Creek overtopping the roadways. Honey Creek, running through the center of the city also caused substantial problems. Honey Creek flows north, eventually discharging into the Menomonee River. The Menomonee River was surcharged, which, like the rest of the system, prevented smaller outfalls from entering. As a result, Honey Creek had no place to relieve itself, and overtopped its channel, or where contained in a box, flowed up and out through the catch basins. This was especially apparent in the McCarty Park area where the water was over the channel by at least 150 feet in either direction.

Further complicating the situation with Honey Creek in McCarty Park was the fact that the grate that covers the box on 82 and Arthur, became packed with debris from down stream that had ended up in the open channel. Water over-topped Arthur Avenue and flowed above ground to Hayes. This contributed to the saturation of the ground, and in turn, created additional problems with residential property drain tiles trying to relieve the large amounts of water that was entering.

The surcharging of the Honey Creek out of the box in the area of 82-83 and Greenfield as well as the Lapham/Orchard area caused similar problems. Water in the street exceeded three feet in this area.

The Rainfall intensity subsided considerably after 8:00 and rain fell intermittently between 10:00 p.m. and 3:30 a.m. By that point in time, most streams had returned to their banks and streets could be opened. DPW crews left the Department at 4:00 a.m.

#### Sunday 6-8-08

The sun was out early in the morning on Sunday. Rivers remained within their banks and the City's system, while in many cases, running full was, nonetheless running. Approximately 10:15 a.m., the rain started falling at an extremely heavy rate. Again, personnel from Street and Sewer reported to work to field calls and address potential flooding situations. At this time, numerous streets needed to be closed due to over-topping. Cleveland Ave. was closed at S.116 Street due to the Hale Creek over-flowing.

The rain ended shortly after noon however the area north of McCarty Park continued to experience problems. Basements were having a difficult time relieving themselves of the water from the previous night. Again, we would suspect that most of this difficulty was

attributed to the saturated ground and the water going from the drain tiles into the charged sanitary sewer lines.

Residents were naturally concerned with the condition of the grates on Honey Creek at S. 82 & Arthur. DPW made a number of calls to MMSD, who is responsible for Honey Creek and the cleaning of these grates, and finally was successful in getting MMSD to dispatch one of their contractor crew's to the site. At approximately 1:00 p.m. I met Dave Fowler of MMSD on site and shortly thereafter, a hydro crane arrived and the cleaning was initiated. The Department provided two tandem dump trucks to haul the debris removed from the grates.

DPW personnel continued addressing various storm related issues until approximately 5:00 p.m. at which time they went home.

At approximately 8:15 p.m., the next round of rain began to fall. DPW personnel were again called back in to respond to weather related events. Numerous streets were closed during this rain event and the only other major problem that the department continued to deal with was the difficulty that certain homes north of McCarty Park were having getting rid of water in their basements. In an effort to assist the rate of drainage from the Sanitary Sewer line on S. 82 Street, the Department operated its sewer jet well into the night which appeared to help relieve this line. All personnel left at 4:00 a.m.

#### Week of June 9

Two to three additional crews are currently working every day to pick up flood debris throughout the city. In addition, on Monday, two Forestry crews also were used to collect tree damage although this damage was fairly limited because the storms did not have high winds associated with them. Two crews were used to restore road shoulders along S. 124 St. as well as washouts along various streams. Outfalls were also cleaned at locations throughout the system. Four residential properties also requested that their basements be sanitized. This work was done on June 11.