

Informational Item: Mound Update

Kyle Colvin, Assistant Manager, Engineering Services

Environment Committee: August 12, 2014



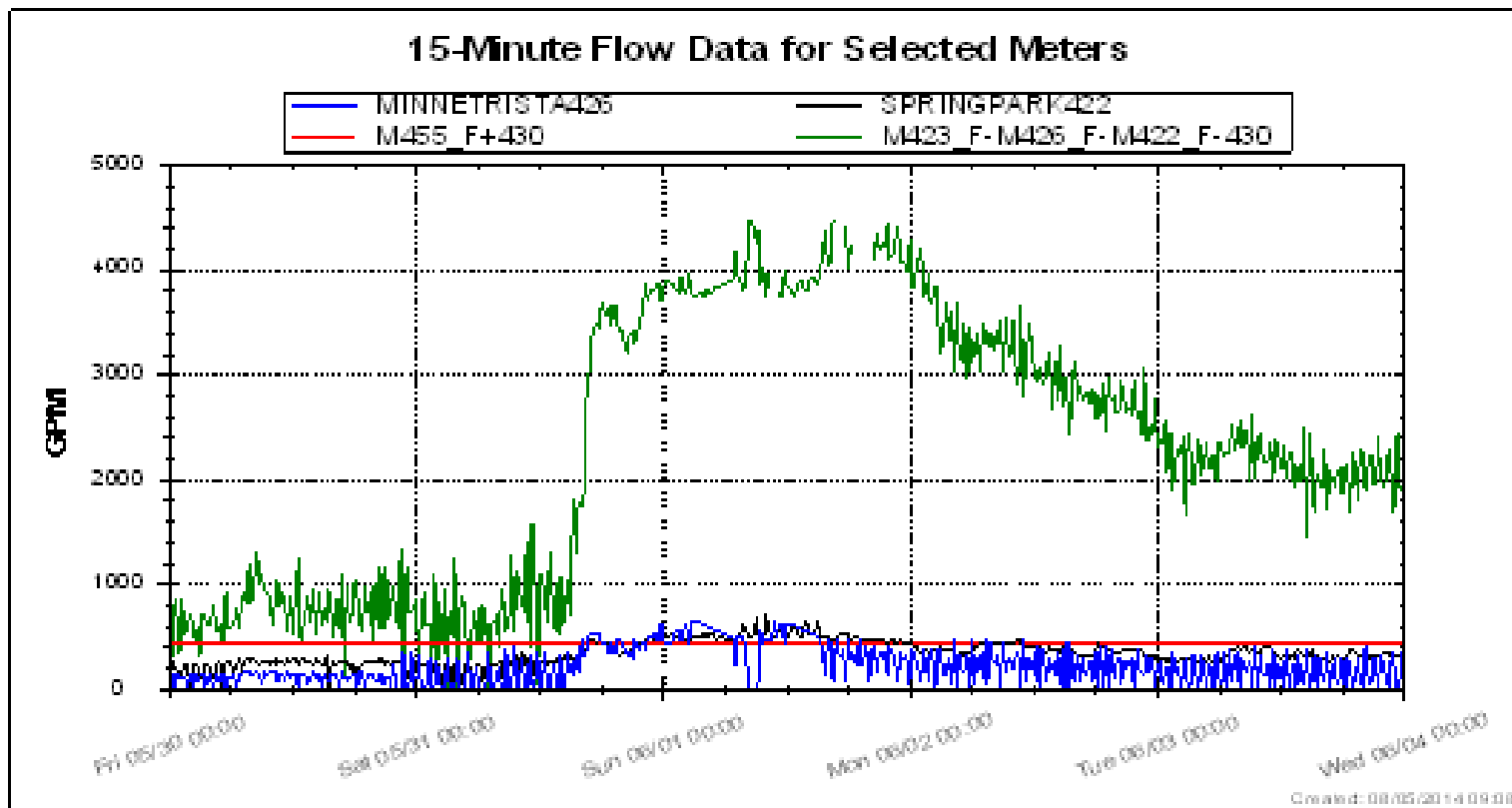
What Happened

- Two separate storm events in June resulted in localized basement backups and city diverting sanitary sewage into Lake Minnetonka during June 1 event
- Excessive clear water flowed into wastewater system
- Mound flow to wastewater system more than six times its daily average in both events
- Regional system
 - June 1 Event: No Spills – Operated above its design capacity
 - June 19 Event: Spill reported – Operated above its design capacity

System Response – June 1, 2014

- Total Precipitation – 3.53 inches
- Mound contributed 4,550 gallons of wastewater per minute; four communities combined contributed 5,400 gallons per minute
- Mound notified Pollution Control Agency (PCA) of their intent to discharge to lake to reduce number of basement backups
- 29 basement backup claims have been submitted to the city

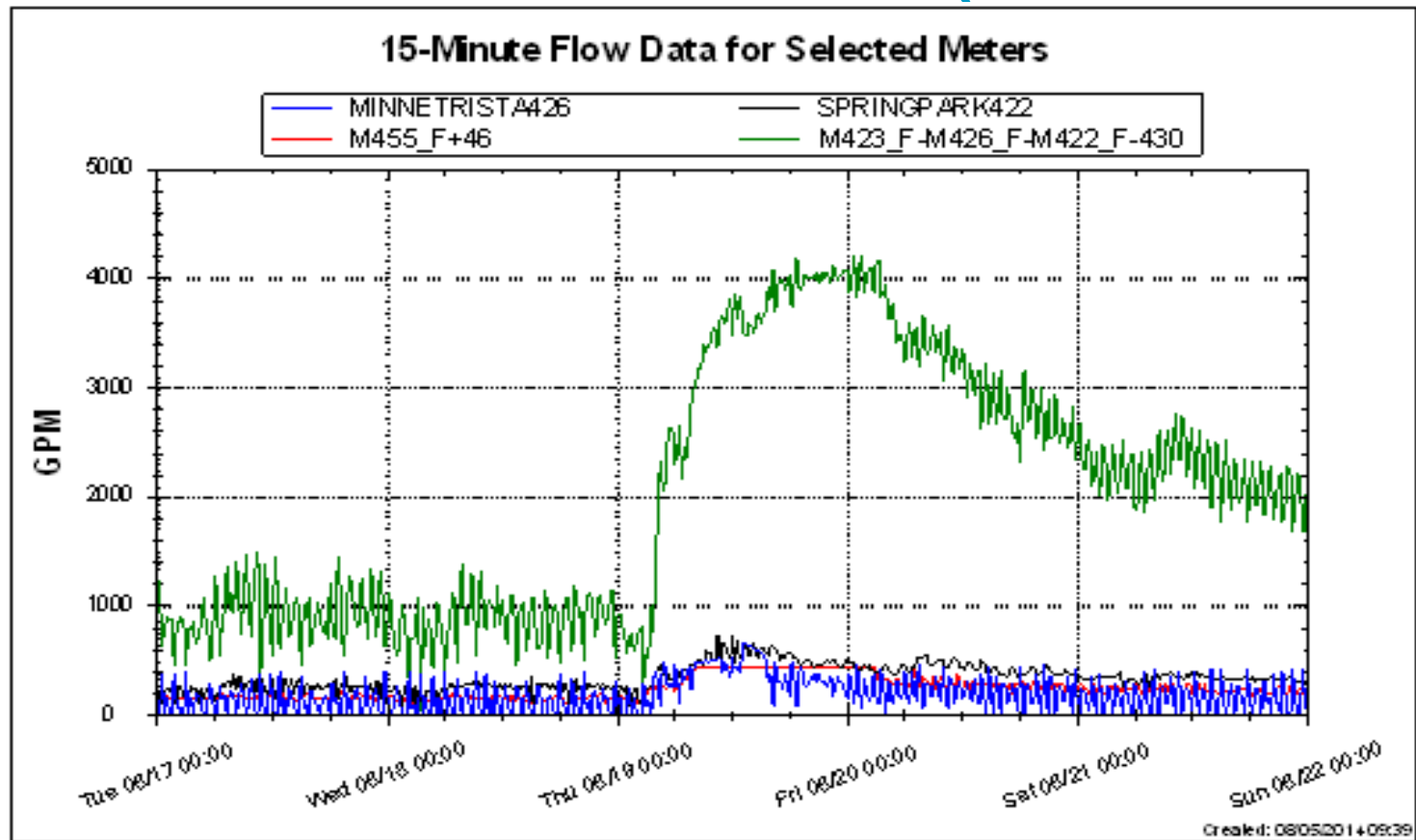
Comparison Flows of Mound, Spring Park, Shorewood and Minnetrista (June 1, 2014)



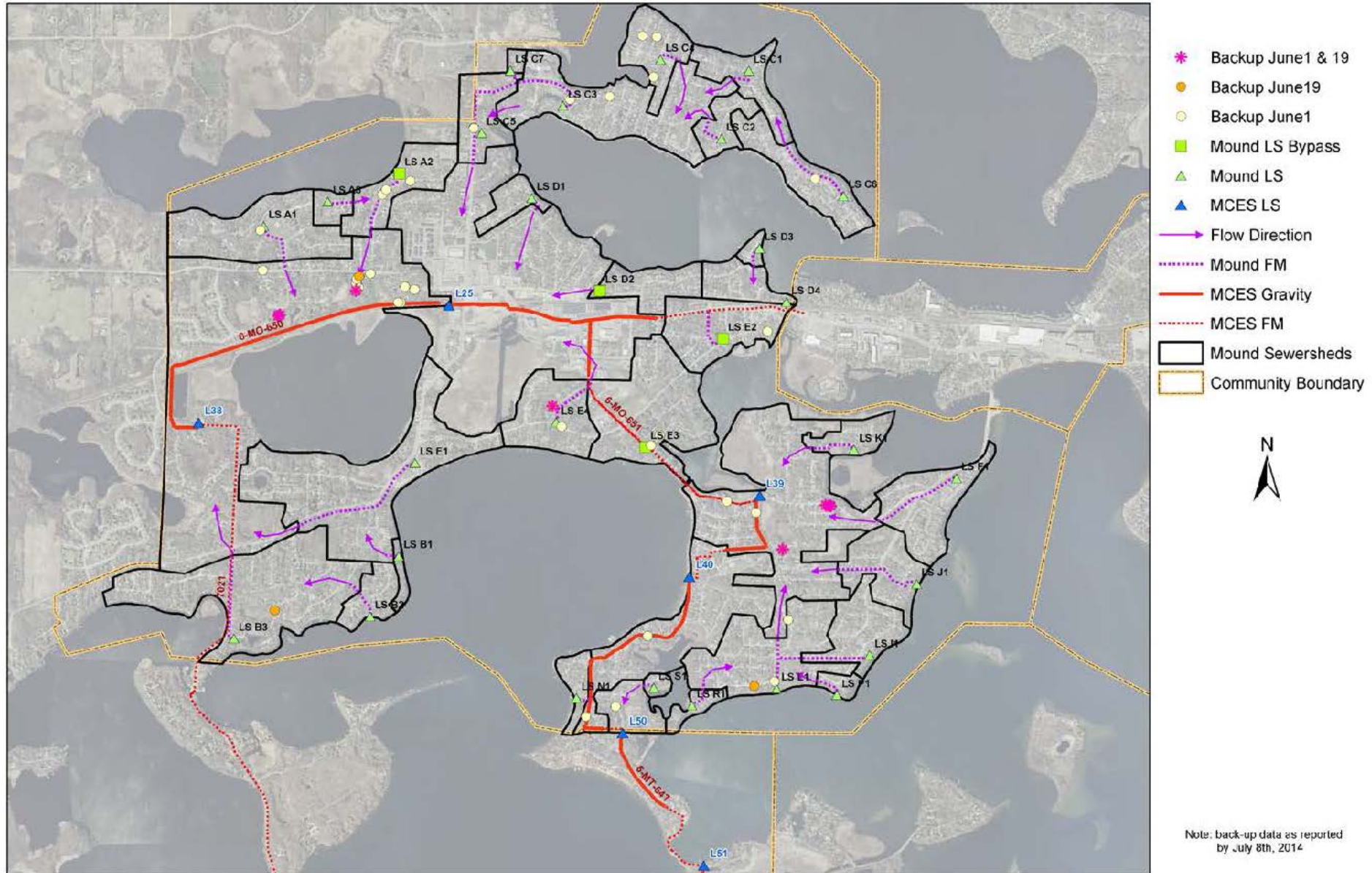
System Response – June 19, 2014

- Total Precipitation – 3.51 inches
- Mound contributed 4,050 gallons of wastewater per minute; four communities combined contributed 5,400 gallons per minute
- Mound used 7 vacuum trunks to pump from local liftstations and haul wastewater to other locations
- 13 basement backup claims have been submitted to the city
- Of the 13 basement backups, 11 also occurred during June 1 event

Comparison Flows of Mound, Spring Park, Shorewood and Minnetrista (June 19, 2014)



Reported Back-Ups By City



Mound Flow Summary

- Base flow reduction
 - Reduction of average daily flow since 2007
 - Reflects city infiltration mitigation efforts on public infrastructure
- June 2014 system flow responses
 - Dramatic increase in peak flow demonstrates need to address inflow sources
 - Private property inflow sources next step in local efforts
 - Council recognizes regional need to address private property inflow and infiltration (I&I) mitigation and will work with MetroCities to develop program and funding assistance proposal

Council Operational Responses

- Crew & vacuum truck sent to help at a Mound local lift station
- Crews sent to pump out of MCES Lift Station(s)
- 3 trucks hauling
- Crews checked MCES pipes for inflow sources
- One crew inspecting system (June 19) for any blockages
 - None found

Proposed Regional Investment

MCES Map

Mound Interceptor 6-MO-650 (802828)
 Remove & replace existing pipe from L25 to L38. Replace existing 24" with larger 36" pipe on same alignment with increased depth. L25 to be removed. Construction in 2015-2017.

Meter 426 installed.
 Completed 2013

Minnetrista

Mound

Spring Park

Orono

Mound Lagoon (802822) Demo/ sitework & sediment removal from existing pond. Completed 2014.
L38/WMF (802824/802826) Build new maintenance facility and L38 lift station. Demo existing WWTP building upon completion. Construction 2014-2016.

Forcemain 6-MO-651 Replacement of dual existing 8" CIP forcemains to gravity outlet. Construction 2015-2016.

CIPP project
 Completed 2013.

L39/40 Gravity sewer extension from L40 to L39 & reconstruct L39 in new location and abandon L40. Construction 2015-2016.

Forcemain 7021 Install parallel forcemain over entire length. In planning stage. Construction TBD.



This map is for geographical representation only, for a general location of MCES Interceptor Facilities. This map should not be used as a reference for excavation or engineering purposes.



July 2, 2014 City Council Workshop



<http://www.cityofmound.com/>

August 12, 2014

July 2 Workshop Discussion

- Information exchange
 - System configuration, event flow responses and system performance
 - Flow metering
 - Source of I&I, Local vs. Regional
 - Commitment from Metropolitan Council to inspect portion of interceptor system
 - Previous commitments for regional improvements
 - Regional system Improvement schedule

July 25 Follow-up Staff Workshop

- Collaborative work plan
 - Develop “Emergency Action Plan”
 - System integration
 - System hydraulic modeling
 - Continued public infrastructure I&I work
 - Private property investigation/mitigation efforts
- Next staff workshop scheduled for September 8, 2014

Questions

August 12, 2014