

MALINE CREEK CSO BP 051 & 052 LOCAL STORAGE FACILITY



**project
clear**

MSD Project Clear is the Metropolitan St. Louis Sewer District's (MSD) initiative to im-

prove water quality and alleviate many wastewater concerns throughout St. Louis City and County. MSD Project Clear is a long-term effort by MSD, undertaken as part of [an agreement](#) with the U.S. Environmental Protection Agency and the Missouri Coalition for the Environment. MSD Project Clear will invest billions of dollars over a generation in planning, designing, and building community rainscaping, system improvements, and an ambitious program of maintenance and repair. At times of heavy wet weather, the sewer system of St. Louis City and much of St. Louis County can be overwhelmed, causing overflows into area rivers and streams. Like many cities throughout the United States, this program is designed to reduce the occurrence of sewer overflows that result from older wastewater collection and treatment systems during heavy storms. MSD Project Clear has divided this multi-year, multi-billion dollar investment into numerous projects that will be designed and constructed over the next several decades. The Maline Creek Local Storage Facility project, for example, will address an aging system in the North St. Louis City area of the Region.

COMBINED SEWER OVERFLOWS (CSO) – WHAT ARE THEY?

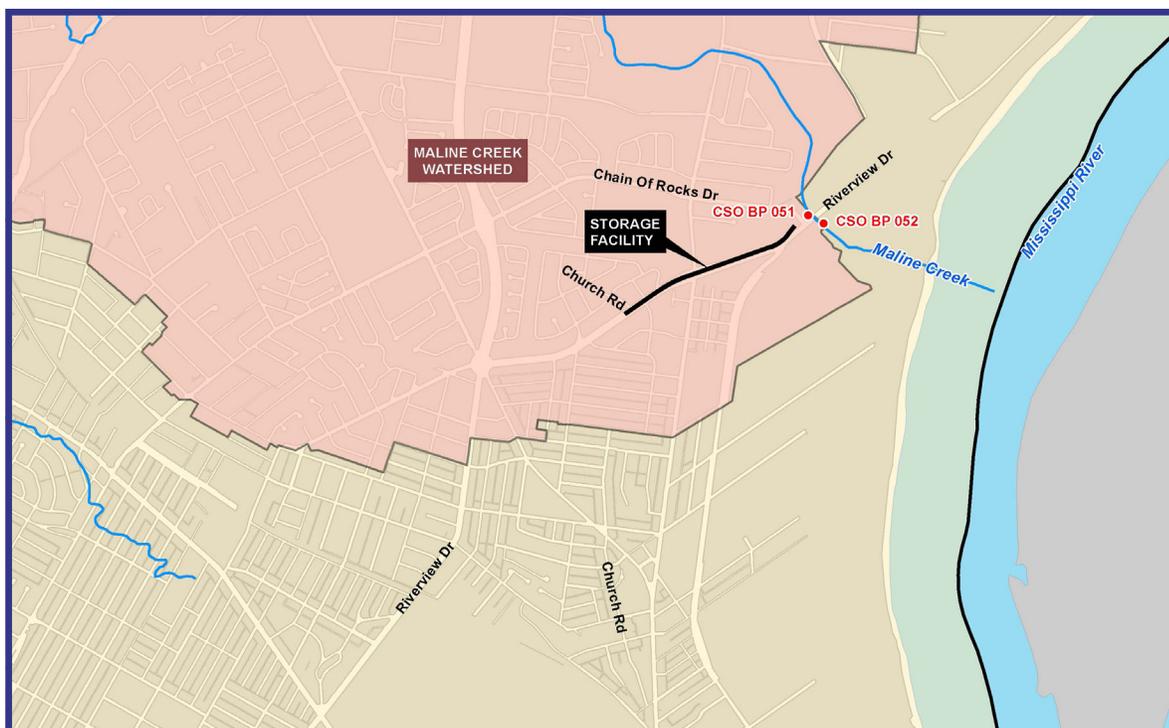
Combined sewers were constructed through the mid-1900s to carry a set amount of rainwater and wastewater in the same pipe. During dry weather, these systems can handle the wastewater collected and carry it through pipes to treatment plants where contaminants are removed. However, during heavy rain or significant snowmelt the wastewater may exceed the capacity of the sewer system or the treatment plant, creating a need to discharge the excess sewage into an adjacent stream or other water-

way. These are referred to as combined sewer overflows (CSO) and the pipes that carry the discharges are called “outfalls”. Systems are now designed to dramatically reduce the amount of overflow into our waterways by holding wastewater and stormwater in storage facilities until capacity is available at the treatment plant.

The Maline Creek Storage Facility Project

Maline Creek is a small tributary to the Mississippi River that lies on the northern edge of the City of St. Louis. The Maline Creek facility will be the second MSD Project Clear storage project to be constructed. The underground storage facility will reduce the volume of discharge into Maline Creek and, ultimately, the Mississippi River.

The Maline Creek storage facility will run from Chain of Rocks Drive to Church Road. In this project, there are two locations, just upstream of the confluence of the Mississippi River, where combined sewers may discharge into Maline Creek during significant wet weather. They are located near the intersection of Riverview Drive and Maline Creek. The Maline Creek project will divert the excess water and sewage to the storage facility during times of significant wet weather, and then a pump station will transfer the stored flow back to the system when the wet weather subsides. The flow will be treated at the Bissell Point Wastewater Treatment Plant.



MALINE CREEK STORAGE FACILITY CONSTRUCTION ACTIVITIES

The Metropolitan St. Louis Sewer District (MSD) has awarded the \$82.8 million construction contract for the Maline Creek Storage Facility. Construction will take place over the next four years and some of the construction activities will have direct impacts for those living, working, and visiting the community.

BUILDING THE UNDERGROUND FACILITY

The underground storage facility itself will be 175 feet below the ground surface or a little longer than half a football field. To reach that depth the construction team will need to “blast” a 40-foot diameter circular shaft. The underground storage facility will be a 2,700 foot long, 28-foot in diameter tunnel located below Riverview Blvd. between Chain of Rocks Road and Church Street.

The construction shaft (which will later serve as the location for the pump station to drain the storage facility) is located near the middle of the facility’s alignment near N. Broadway and Riverview Blvd. on property that has been purchased for this project. Excavation of the soil will use common excavation equipment, such as a crane and backhoes. When the rock surface is reached, the remaining portion of the shaft will be excavated by drilling and blasting.



Construction Shaft

BLASTING – WHAT TO EXPECT

Blasting is expected to take place beginning in October 2016 and last for approximately one year for both the construction shaft and the storage facility excavation. Here is what the community can expect:

- Blasting at the shaft will begin in October 2016 and continue through December
- Once the planned depth of 175 feet has been reached, blasting for the storage facility will begin and continue through late spring of 2018
- Blasting will occur once per day for the shaft excavation and possibly twice a day for excavating the storage facility
- Prior to the first blast, nearby property owners will be provided written notification of this activity. Each blast takes approximately eight seconds
- Five minutes and one minute before each blast, a blasting signal will be sounded to alert the community that a blast is about to happen. This will happen on a daily basis

until workers reach the intended storage facility depth with the shaft

- The noise from the blasting may be noticeable up to about a half-mile while the shaft is being excavated
- Similarly, minor vibration will be felt from the shaft blasting
- Removal of the rock will take 5 to 10 truckloads per hour during blasting operations
- No blasting will occur in the evening hours or on Sunday
- The remainder of construction will include lining the storage facility with concrete, constructing the flow intake structures and completing the pump station

DIRECTING RESIDENTIAL AND COMMERCIAL WASTEWATER AND STORMWATER FLOW INTO THE FACILITY

As described earlier, there are two locations where CSOs discharge into Maline Creek during heavy rains. This project will reduce the amount of CSO discharge into Maline Creek by directing the flow through “intake structures” to the storage facility. Two of these intake structures – one at Chain of Rocks Rd., and one at Church Street - and their related construction activities will have minor traffic and noise impacts to the community. The third structure will be built next to the existing CSO 052 intake structure on the east bank of Maline Creek. Given its location there will be no direct impact to the community.

Shaft drilling work for all of the intake structures will take place through the end of 2016. Construction of the Chain of Rocks intake will last through Fall 2017 and the construction of the Church Street structure will last through Spring 2018. Construction of the pump station will continue through Fall 2020.

TRAFFIC IMPACTS – CHURCH STREET INTAKE CONSTRUCTION

There will be two conditions where traffic will be impacted for a period during construction.

- Vehicular and pedestrian traffic on Riverview Blvd. will be stopped beginning approximately one minute before each blast and lasting until the Blaster-In-Charge has determined that the blast area is safe
- Construction of the Church Street structure requires a specific traffic control plan. In general, Riverview Blvd. will be reduced to one lane, bike lanes will be closed, parking in some locations will be eliminated, and traffic detours will be used. Some detours will also occur near the Chain of Rocks structure construction. All of these traffic adjustments will be signed for the traveling public

WHO TO CONTACT

Questions or concerns about construction should be directed to John Deeken at (314) 282-8502 during normal business hours. If there is an emergency please call 911!