

# 15 Mile Sewer Interceptor Overview

*(All data current as of March 21)*

On Dec. 24, 2016, the Macomb Interceptor Drain Drainage District sewer interceptor collapsed along 15 Mile Road, at Eberlein Drive in Fraser, Mich. Since then, only minimal sewage has been able to pass through the line. The collapse affects the sewerage service to more than 500,000 residents of Macomb County.



## **What is the history of this interceptor?**

**1973:** This 11-foot diameter sewer pipe, the bottom of which is approximately 60 feet below 15 Mile Road, was built in 1973 to carry the sewage collected from 11 Macomb County communities to a sewer treatment plant in Detroit.

**1978:** In 1978, about 1,000 feet to the west of the current collapse, the pipe experienced a similar collapse, in Clinton Township. The debt to pay for the repairs to the pipe in 1978 – about \$25 million -- has been paid off.

**2004:** In 2004, about 1,000 feet west of the 1978 collapse, between Moravian and Hayes in Sterling Heights, a similar collapse occurred. That collapse never resulted in a complete blockage of the interceptor. The repair for that project was over \$53 million, resulting in an increase in the average homeowner's sewer rate of about \$12 per year until the debt is retired, which is expected in about 2030. The 2004 collapse happened on Aug. 22, 2004. Final work was completed on the repairs, road re-surfacing, etc., in June 2005.

**2010:** The Macomb County Office of Public Works took ownership of the MIDD system from the Detroit Water & Sewerage Department. Public Works did not pay a fee to take ownership, but did assume approximately \$90 million in outstanding debt on the system. Public Works started paying on that debt on a 25-year repayment in 2010.

**2016/2017:** On Dec. 24, 2016, a sinkhole roughly 50 feet wide, 260 feet long and 3 feet deep occurred along 15 Mile Road, at Eberlein Drive, in Fraser. (Clinton Township is on the opposite side of 15 Mile Road.

**How much sewage has been dumped into the Clinton River?**

On Dec. 26, 2016, nearly 13 million gallons of raw sewage was dumped into the Clinton River to prevent sewage back-up into Macomb County basements. Since then, no sewage discharges have occurred as a result of this sewer collapse.

**What will it cost to repair the damaged pipe?**

The cost to repair the sink hole (Phase 1) is estimated to be \$70 million. Further, a plan has been developed to “strengthen” an additional stretch of the collapsed pipe. This proposed Phase II work could cost up to an additional \$70-\$75 million. Therefore the permanent fix is estimated to be up to \$150 million, assuming Phase II is adopted.

On March 13, the MIDD board approved a \$1.5 million contract (to be paid for primarily via a Storm Water, Asset Management & Waste Water, or SAW, grant) with Red Zone Robotics to conduct a complete review of the 17-plus miles of MIDD interceptor pipes. When this review – which will examine both the inside and the outside of the pipes using camera, sonars and other means – is completed, a decision will be made by the MIDD board on what additional work to the MIDD should be done while the system is undergoing repair construction work in 2017.

**What is included in the \$70 million cost estimate?**

The estimate is all inclusive. It includes the creation of a by-pass pipe around the collapsed interceptor. This pipe – roughly 6,000 feet long – takes the sewage in the interceptor that is 60 feet below the surface, lifts it to the surface and travels west on 15 Mile Road until it gets beyond the collapsed interceptor and then drops it back down into the interceptor below ground. The cost includes the purchase and demolition of three homes damaged by the sinkhole, reimbursements to residents who were evacuated for about two weeks after the sinkhole first developed and repair of about a quarter mile stretch of 15 Mile Road, a busy 5-lane road. .

**Who will be doing this work? How were they selected?**

Ric-Man Construction was brought in on Dec. 24, 2016, to respond to the emergency. Ric-Man oversaw the construction of the by-pass system. This work was assigned to Ric-Man using the emergency authority of the Public Works Commissioner. As this work was ongoing, the Public Works Office requested bids on digging the shaft and replacing the damaged interceptor pipe. On March 13, 2017, the MIDD board awarded this contract, worth approximately \$32.7 million, to Dan’s Excavating. Public Works Commissioner Miller’s policy to use the bidding process, with bids awarded in public meetings, to ensure a level playing field for all major contract work.

**How will this work be paid for?**

Public Works is seeking both Federal and State funding and assistance. To date, this effort has resulted in a \$2 million grant from the Michigan Dept. of Environmental Quality. Through the Emergency Management program, the state awarded \$100,000 each to the county, Fraser and Clinton Township to help pay for the initial response to the emergency. Additional funding from state and/or federal sources are still being sought.

Public Works has also been authorized by the MIDD Board to issue up \$150 million worth of bonds to cover the cost of the work. The total of the bonds will be decreased by the amount of any state or federal funds received. The bonds will be re-payable over 25 years and could result in an up to 8%-9% increase in sewer costs for the residents and businesses of the 11 MIDD communities. Each of the 11 communities set their own retail sewer rates. On average, re-paying the bonds, assuming the full \$150 million is borrowed, would equate to an up to \$60 increase per year in sewer bills per home to be paid over the next 25 years. Some of this cost would be passed on starting July 1, 2017, but the full cost likely would not be implemented until sewer bills issued in 2018.

**I have heard that Public Works will be issuing \$240 million in bonds. Why is that?**

Public Works administrators, working with local bonding experts, have determined that it is advantageous to refinance (known as re-funding in the bonding industry) the existing roughly \$90 million in debt owed on the MIDD system when the bonds are sold to pay for the current needed repairs. By refinancing these bonds, which will be paid off in 2035, the MIDD ratepayers could save up to \$2 million in interest costs. It makes sense to refinance these bonds when the bonds to make the repairs are sold, as there will not be significant additional costs and fees associated with a separate sale.

**Are my taxes going up to pay for this?**

No. For the most part, all of this work is being paid for by the rates paid by sewer customers in the MIDD district. Some tax dollars may be used to re-pave 15 Mile Road and related roadwork. Also, any government grants received likely originated as tax dollars. Any work done by police, fire or similar response agencies in the immediate aftermath of the collapse was funded by taxes. All repair work is being paid for by MIDD sewer rates, minus any state or federal grants received.

**Does this impact what I pay for water service?**

No. Sewer rates and water rates are completely independent, though you typically see them on the same bill.

**Who owns this pipe?**

The pipe was built by the Detroit Water & Sewerage Department in 1973. DWSD owned the pipe until 2010, at which time the Macomb County Office of Public Works took over the

pipe on behalf of the Macomb Interceptor Drain Drainage District (MIDD) and assumed some \$90 million in existing debt.

**When was the pipe last inspected?**

It is believed the last inspection took place at the time the MIDD accepted ownership of the pipe in 2010.

**What is the MIDD?**

The Macomb Interceptor Drain Drainage District (MIDD). The MIDD is made up of Fraser, Sterling Heights, Utica and New Haven and Chesterfield, Shelby, Clinton, Harrison, Lenox, Washington, and Macomb townships, plus Selfridge Air National Guard Base. According to 2015 Census Bureau numbers the communities in the MIDD district have a combined total **population of 527,772**. (Utica and New Haven are 2013 estimates). The communities have a combined total of **more than 43,000 businesses** (of all types) according to 2012 Census Bureau data.

**What is the OMIDD?**

The Oakland-Macomb Interceptor Drain Drainage District is a neighboring sewer line. It is completely independent of the MIDD, though eventually they both feed into the same system to transport sewage to the treatment facility in Detroit.

**Are people on septic systems impacted by this?**

The MIDD only bills people who are hooked up to the sanitary sewer system. Septic systems are independent of the MIDD system. Those on septic systems will not be billed for MIDD repairs.

**Who governs the MIDD? Who will be making decisions on the bills?**

The MIDD board is currently the Public Works Commissioner, the chairman of the Macomb County Board of Commissioners and the chairman of the Board of Commissioners' Finance Committee. On April 1, 2017, a new law will go into effect that will change the make-up of the MIDD board to the Public Works Commissioner, a designee of the Macomb County Executive and the county commissioner whose district encompasses the largest portion of the MIDD. After April 1, therefore, those members will be Commissioner Candice Miller; Bryan Santo (designated by Macomb County Executive Mark Hackel); and Macomb County Commissioner Rob Mijac. Santo is the director of the Macomb County Dept. of Roads. Prior to April 1, the board was Miller and Macomb County Commissioner Bob Smith (board chairman) and Veronica Klinefelt (finance committee chair).

**What about the damaged homes?**

On Dec. 24 (Christmas Eve) 2016, the collapse and resulting sinkhole was first reported shortly after noon. Two homes on Eberlein Drive were condemned. One home on 15 Mile Road was condemned. An additional 20 homes on Eberlein were evacuated, due to the fact that the only road into and out of the subdivision was the intersection of Eberlein and 15 Mile Road – the exact location of the sinkhole. After a temporary road was built to the west, the residents of 20 homes on Eberlein were able to return home. They were evacuated from 24 Dec 2016 to 8/9 Jan 2017 (15 days). 23 homes impacted in total.

The homes are expected to be demolished the last week in March 2017.

### **Who will pay for those homes?**

Authorized by the MIDD board, the Office of Public Works had an independent appraisal completed on all three condemned homes. Offers were then made on those homes following the Eminent Domain rules of the state.

### **What are the by-pass pumps?**

The by-pass of the collapsed sewer line is essentially happening in three phases:

**Emergency by-pass pumps and pipes.** These were put in place on Dec. 26. These pumps would pump sewage into local drains and the Clinton River should it become necessary, in the event of a major rainfall, in order to prevent sewage from backing up into Macomb County basements.

**The temporary by-pass pumps and pipes.** This pipe, 36 inches in diameter, was used in conjunction with the limited flow capacity in the collapsed sewer line to allow the system to handle sewage flow until the long-term by-pass was constructed.

**The long-term by-pass pipes.** This combination of 54-inch pipes and 48-inch pipes are now being installed and are anticipated to be completed by early March. These pipes will allow for a complete stoppage of flow in the collapsed sewer main so that line can be completely pumped out and repaired. It is anticipated that complete repair of the line could take much of 2017 to complete.

### **What is the status of the State of Emergency?**

Fraser, Clinton Township, Macomb County and the State of Michigan have all formally declared the sewer collapse an emergency situation. The Macomb County Emergency Management Dept. is coordinating the emergency response in conjunction with the Office of Public Works. This emergency declaration allows the Office of Public Works to apply for various state grants and low-interest loans. These applications are now being made.

### **Where can I get more information?**

<http://publicworks.macombgov.org/PublicWorks-MacombInterceptor>

## **Timeline**

Dec. 24, 2016: Sinkhole developed. 23 homes evacuated.

Dec. 26-27: Approximately 12.6 million gallons of sewage dumped into Clinton River.

Jan. 1, 2017: Commissioner Miller's first day in office. Miller and Executive Hackel tour sinkhole site and receive briefing.

Jan. 2: First by-pass pump installed.

Jan. 5: County declares state of emergency.

Jan. 6: State declares state of emergency.

Jan. 8: Governor visits sinkhole site

Jan. 8: 20 of the 23 homes are re-inhabited with the creation of a temporary road.

Jan. 10: Environmental testing due to concerns about odor in homes. Tests are negative for toxins in the air.

Jan. 15: Congressional delegation visits site

Jan. 16: Further collapse in the interceptor. Renews calls for water conservation.

Feb. 5: Amid much media attention, no additional influx of sewage is recorded and now external discharges of sewage are required during the 2017 Super Bowl.

Feb. 13: First meeting of the MIDD board in as much as 7 years.

Feb. 22: Macomb Community College and Office of Public Works reach agreement to allow PW to use a piece of college property near sinkhole as a construction staging area for \$1 per month.

Feb. 28: 15 Mile Road in area of sinkhole is closed for duration of repairs.

March 2: More than 800 tons of steel to be used to dig the shaft to repair the collapsed interceptor begins to arrive on site.

March 6: Bids for the sinkhole repair turned in.

March 8: Two Michigan State Police robots are used to make final inspection of the three condemned homes along the sinkhole site.

March 10: Financial offers are made to the owners of the three condemned homes.

March 13: Contract awarded for sinkhole repair & for MIDD system-wide pipe inspection.