



September 27, 2023

Dear Signal Mountain Resident,

The Hamilton County Water and Wastewater Treatment Authority (WWTA) is investing \$40 million to address Signal Mountain's 50-year-old sanitary sewer problems and come into compliance with wastewater regulations. Multiple sanitary sewer overflows (SSOs) on Signal Mountain adversely affects the environment and contaminates our streams and river, resulting in numerous violations of the Clean Water Act. While Signal Mountain only represents only 8.2% of the WWTA system, in 2022, more than **71% of all overflows took place on Signal Mountain**. To solve these issues, your current gravity sewer system will be deactivated and converted to a low-pressure sewer system.

As part of this multi-year phased project, a low-pressure sewer line will be installed on your street and a grinder pump installed at your residence. The installations will occur over an extended period and additional notification will be provided when work will occur on your street. This transition will divert sewer from lines that often overflow into creeks and streams.

A signed easement will be necessary for the work to be completed on your property. The easement allows WWTA to provide long-term maintenance for the new grinder pump. This low-pressure sewer easement is similar to the existing gravity sewer easement and has the same restrictions and limitations. However, it will be located in a different area.

Grinder pumps are buried infrastructure that moves wastewater efficiently and quietly from your home to a low-pressure sewer system and safely transported to a treatment facility. Grinder pumps are often placed in mountain communities because the lines don't need to be buried as deeply as traditional sewer lines, and they work well across difficult and rocky terrain.

The low-pressure sewer conversion requires installing a grinder pump outside your home with a small control panel connected to your electric system. We will also install a new sewer service line from the pump to the low-pressure system. **There is no charge for the installation.** After installation, property landscape will be returned to its original condition with as little disruption to you as possible.

For comparison, the grinder pump system is significantly less visible than a typical HVAC system. There are green covers to help them blend in or you may purchase other covers.

Our teams will be going door-to-door to speak with you about this transition over the next several weeks. Wearing a Jacobs and/or a WWTA branded safety vest or shirt, our teams will provide more information on the transition to low-pressure sewer and additional details on the easement form. During our outreach, we will not ask to go inside your home or request payment.

You can use the QR code on the back of this letter to see an animation of the grinder pump and read all our frequently asked questions.

FAQs

Q: What is a grinder pump?

A: A grinder pump is a small, buried pump that efficiently and quietly moves wastewater away from your home to a main sewer line that carries the wastewater to the treatment plant. Grinder pumps are often selected in mountain communities because the lines don't need to be buried as deeply as traditional sewer lines, and they work well across difficult and rocky terrain.

Q: Will you install a new sewer line?

A: Yes. A low-pressure system at your home means we will install a mostly buried grinder pump outside your home and have a small panel connected to your electric system. We will also run a new sewer line from this pump to the street's main sewer line. We will work with you on the location to avoid the disruption of pre-existing plantings and landscaping. We are committed to installing this system with as little disruption to you as possible, and to returning landscaping to its original condition as much as possible.

Q: Is there a charge?

A: There is no installation cost to you, and no additional charge above what you are already paying for general maintenance of the WWTA sewer system. However, failure to follow the owner's manual, and repeatedly flushing items such as wet wipes, may result in a repair charge.

Q: What happens if the grinder pump stops working or needs maintenance?

A: While rare, it is possible that a grinder pump will have a problem or need to be replaced. The pump is equipped with an alarm to let you know that it needs to be checked. If the alarm goes off, stop running water and flushing toilets, then call (423) 209-7842.

Q: When will construction work begin in my area?

A: Construction is estimated to start the summer of 2024 and may continue past 2026. Notifications will be sent in advance of any work to be performed at your home.

Q: Why aren't all homes on Signal Mountain being transitioned to these pumps?

A: The homes that are being converted are limited to areas where the replacement or repair of the existing gravity system is either very difficult or in many cases impossible without significant disruption to the environment and property. The conversion decision is not being made lightly. From a utility maintenance standpoint, gravity is preferred. Unfortunately, the topography on the mountain caused the original gravity lines to be installed in locations that would not be allowed today. Having gravity sewer lines in close proximity to creeks results in significant opportunity for extraneous water to infiltrate the lines. The conversions remove this opportunity. Overflow locations, flow rates, and system capacity were considered when selecting which homes would be transitioned from a gravity-fed sewer system to a low-pressure system.

Q: How much will the low-pressure system increase my electric bill?

A: About \$10 a year. A typical family home uses approximately 250 gallons of water per day. The grinder will use between 9 and 20 kWh per month (60-240 kWh per year). The monthly energy usage charge according to EPB is 8.341¢ per kWh which would be $\$0.083 \times 120 \text{ KWh} = \9.96 per year cost of electricity to operate the grinder pump.

Q: Will my power be interrupted while installing the low-pressure system?

A: There may be an interruption of power with the installation of the grinder pump system. The power could be down for 4-5 hours during the installation. We will provide as much notice as possible to you before our work begins.

Q: Will I be able to hear the low-pressure pump system?

A: If you are standing outside your home, next to the pump when it is running, you may hear a very low hum. You will not be able to hear the pump in your home. The system is much quieter outside than a traditional HVAC system when running. There is also an alarm system, which will alert you to needed maintenance or operational issues with instructions on contacting WWTa to quickly address the problem.

Q: Will the low-pressure system create a smell in my yard?

A: When operating normally, there will be no noticeable odors coming from the unit. If there are odors, the unit may need flushing. Run clean water down your kitchen, laundry or bathroom sink for about 10 minutes. Residents will receive a guide for the new system, with operating instructions. There is also an alarm system, which will alert you to needed maintenance or operational issues with instructions on contacting WWTa to quickly address the problem.

Q: Will I be able to access my driveway and the road?

A: In some cases, we may need to block the driveway while putting in the new pipeline to the road. We will work with each homeowner to give plenty of notice, and alert you on the day of the construction so you have the opportunity to move your vehicle if needed.

Q: I live on a dead-end road, how will I access my driveway?

A: We will always work with traffic control to ensure you can access your driveway, and that emergency vehicles can access the area.

Q: What will it look like?

A: Here is a photo of a Lookout Mountain home with a grinder pump installed. Watch our full animation by using the QR code below.

