



## Surface Water F Failures Overview

As of April 29, 2019

### Overview of Surface Water Infrastructure Rehabilitation and Replacement Program

- Mill Creek's infrastructure is aging, with some pipes already more than 40 years old. The City has entered an infrastructure rehabilitation and replacement phase, meaning that surface water pipes need to be inspected, evaluated and scheduled for rehabilitation or replacement as needed.
- In a proactive approach, the City Council raised the Surface Water Utility rate to \$150 for 2019. This is the first time the fees were raised since their establishment 20 years ago.
- In 2018, Perteet, Inc. was contracted to inspect, evaluate and schedule replacement for the aging surface water infrastructure. Their scope of work focused on pipes 18 inches or larger in diameter since their potential failure could have a negative effect on life, property or a combination of both.
- These larger pipes represent a total of 35,800 linear feet (approximately 14%) of the total surface water pipe infrastructure in the City of Mill Creek.
- The following prioritization criteria were used when identifying projects to include in the CIP.
  - Catastrophic: Pipe is ruptured and its potential failure could have a negative effect on life, property or a combination of both
  - Private property: Fault is located in an easement adjacent to private property posing a risk to residents and property
  - Critical area: Failure is located within one quarter miles of a wetland or steep slope posing environmental damage and slope erosion risks
  - Critical Infrastructure: Failure would obstruct access to critical infrastructure (e.g., Fire Station, Police Station, Schools) and potentially impact core City functions
  - Arterial or Collector: Failure on roadways with high traffic could impact a large number of commuters
  - Pipe Size: Prioritize larger pipes
  - Date of discovery: prioritize faults discovered in past years (chronological order)
- Based on the criteria, pipe faults were identified and graded for severity on an A through F scale. F grade faults ("F failures") are the most severe, recommended for repair within one year.
- Delaying work on F grade faults could have a negative effect on life and/or property, pose a risk of environmental damage, or would obstruct access to critical infrastructure.
- An example of what could happen with delaying work is the sinkhole that developed in Mill Creek's Sweetwater Ranch neighborhood in 2018, which was handled as an emergency project and cost more than \$900,000 to repair and restore – more than is budgeted for the 2019 surface water rehabilitation and replacement program.

## F Failure Project in Summer 2019

- The largest Surface Water Public Works project the City is undertaking in summer 2019 is repair or replacement of larger surface water pipes that are considered F failures.
- Approximately 20 F failures around the City will be repaired. Though the exact schedule won't be determined until an agreement with a contractor is reached, it is the City's hope that the work will begin in July.
- These repairs are critical to prevent sinkholes from developing.
- Of the pipes to be repaired, a handful will be handled by other utility providers that inadvertently impacted the stormwater pipes. Since they impacted the infrastructure, they are responsible for the repairs and the schedule.
- Most F failures are generally surgical and localized in nature, meaning that only a section of pipe will need to be addressed at each site.
- Surface water infrastructure repairs will be ongoing over the next several years. The City will keep the public notified as it works in specific neighborhoods.

## 2019 F Failure Repair Locations

- The repairs on F failure sites are slated to be completed in 2019, starting with the City's southwest locations and moving to the northeast.
- There are five repairs that will occur along Mill Creek Blvd. Four are located west of SR 527, and one is located immediately east of SR 527.
  - 16018 Mill Creek Blvd (sidewalk or street in front of property)
  - 15928 Mill Creek Blvd (sidewalk or street in front of property)
  - 15808 Mill Creek Blvd (sidewalk or street in front of property)
  - 15704 Mill Creek Blvd (sidewalk or street in front of property)
  - 1201 Mill Creek Blvd (sidewalk or street in front of property)
- One will take place on Mill Creek Road east of Laurels at Mill Creek.
- Four will take place in the SpringTree neighborhood:
  - Between 15933 and 15924 160<sup>th</sup> Pl. SE (across the road)
  - Between 15808 and 15814 21<sup>st</sup> Avenue SE (between the residences and extending into the street)
  - Between 2114 and 2122 160<sup>th</sup> Pl. SE (between the residences and extending into the street)
  - Between 15630 and 15620 23<sup>rd</sup> Avenue SE, and potentially impacting 15702 23<sup>rd</sup> Avenue SE (the street, sidewalk and yards in front of the residences)
- Two locations in the Mill Creek Estates neighborhood, located between 2517 161<sup>st</sup> St. SE on the west and 2614 161<sup>st</sup> St. SE on the east. Pipes are on both sides of the street.

- Two locations in the Evergreen neighborhood, with impacts to the Laurel neighborhood:
  - Between 1629 and 1704 148<sup>th</sup> St. SE (street and yard in front of residences, and potentially impacting the intersection with 17<sup>th</sup> Court SE)
  - Along 16<sup>th</sup> Avenue SE between 14623 16<sup>th</sup> Ave. SE on the north to 14703 16<sup>th</sup> Ave. SE on the south (in the street and extending into yards at 14623 16<sup>th</sup> Ave. SE, as well as 14528 16<sup>th</sup> Ct. SE and 14531 16<sup>th</sup> Ct. SE in Laurel). This project will be handled by another utility.
- One location in the Holly neighborhood between 14500 and 14512 14<sup>th</sup> Ave. SE (on the street in front of the residences and extending into the yard between the residences).
- One location in the Fairway neighborhood between 14817 and 14825 26<sup>th</sup> Ave. SE (work predominantly between the residences, with some impacts extending into the street).
- Three locations in the Vine Maple neighborhood:
  - On 19<sup>th</sup> Drive SE, between 14102 and 14018 19<sup>th</sup> Dr. SE (primarily in the street, but with some impacts to yards along the street). This project will be handled by another utility.
  - On 142<sup>nd</sup> Street SE between 1832 and 1916 142<sup>nd</sup> St. SE (primarily in the street, but with some impacts to yards along the street). This project will be handled by another utility.
  - Between 2402 and 2440 141<sup>st</sup> Pl. SE (street and yard in front of residences on the south side of the street).
- One location in the Heatherwood West neighborhood along 139<sup>th</sup> Street SE on the north side of the street between the residences at 13833 and 13905 26<sup>th</sup> Ave. SE and into the intersection at 26<sup>th</sup> Avenue SE. This may impact the yard at 13833 26<sup>th</sup> Ave. SE. This project will be handled by another utility.

## Impacts

- While the locations of certain projects may be just in front of one or two residences, the traffic along the street will be impacted due to construction equipment and crews.
- No full-road closures are anticipated, although a lane may be blocked allowing traffic in one direction at a time.
- Cars should be moved off the street adjacent to project sites. The crews will not block driveways.
- Construction is slated to take place from 7 a.m. to 4 p.m., though hours within that window of time may vary at each specific location.
- Street and sidewalks impacted by the construction will be restored.
- If landscaping is impacted, the City will work directly with homeowners to document existing landscaping and restore it to the state it was prior to construction.
- Those project areas handled by other utilities are outside of Mill Creek's control for scheduling. The work will occur this summer, but the schedule is handled by another party.

## Financing

- The 2019 Storm Water program work is estimated to cost \$937,500. This cost includes design and construction.
- The City of Mill Creek's Surface Water Utility is a self-supporting, meaning that all goods and services provided to the public are covered by the user fees billed to all properties in the City based upon equivalent residential units.
- This project demonstrates our residents' tax dollars at work.
- The new Surface Water Utility rate will cover basic operations costs and capital projects. Therefore, this new funding helps ensure that Mill Creek's infrastructure is maintained and preserves the value of Mill Creek residences.
- In addition to an increased Surface Water Utility rate, the City will issue bonds to fund the six-year surface water program.
- Some of the F failures are the result of other utilities impacting the City's pipes. Those repairs will be conducted and paid for by those utilities.