"...meeting community needs...enhancing quality of life."

MEMO

TO: Utilities Committee

FROM: Paula Vandehey, Director of Public Works

DATE: March 16, 2022

SUBJECT: Year-End Summary of Watermain Breaks

As requested by Alderpersons Meltzer and Smith, below is a year-end summary of our monthly watermain break report:

Number of watermain breaks = 137
Estimated water loss = 316,994,697 gallons (about 10% of all water produced)
Cost to repair main breaks = $1,233,000 (using average of $9,000 per break)
Cost to produce lost water = $86,310 (using average cost of $630 per break)

The 137 watermain breaks in 2021 was the second highest number in the past 22 years as shown on the attached chart. The average number of breaks over that same time period is 95.5. Although 137 is definitely more than industry standard, we also understand that the city could never afford to have a goal of zero main breaks in any given year.

The attached 5-Year Main Break Map shows that the breaks are scattered throughout the core area of the community. Also shown on the map is the current 5-Year Watermain Replacement Program. The map highlights 3 distinct scenarios:

Scenario #1 – Road reconstruction and watermain relay programs align with high watermain break history. Lawe Street is a good example of this scenario.

Scenario #2 – Pavement condition is driving the 5-Year Plan even though roadway has low watermain break history. Linwood Avenue is a good example of this scenario.

Scenario #3 – Roadway has significant watermain break history but is currently not in the 5-Year Plan. Capitol Drive is a good example of this scenario.

As we have discussed in the past, we all agree that in an ideal situation we would be replacing an average of approximately six (6) miles of watermain annually as recommended in AECOM's 2019 Water System Master Plan Report. However, at this time, the General Fund portion of the infrastructure upgrades cannot support the corresponding street reconstruction associated with six miles of watermain replaced annually.

Attachments

YEAR	BREAKS
2000	120
2001	109
2002	91
2003	120
2004	100
2005	90
2006	58
2007	100
2008	90
2009	69
2010	62
2011	99
2012	83
2013	87
2014	141
2015	71
2016	92
2017	91
2018	86
2019	100
2020	105
2021	137
TOTAL =	2101
Average :	**95.5**