Utilities Department
July 2021

Neighborhood Water Main Rehab

Causes of Water Leaks and Breaks

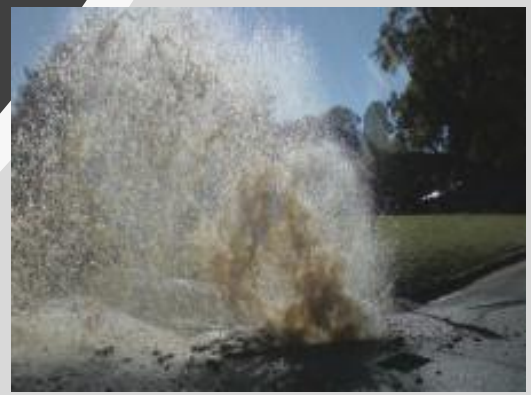
Natural Leaks/Breaks

- Ground Contraction
- Expansion due to temperature change
- Life Cycle of Pipe Materials

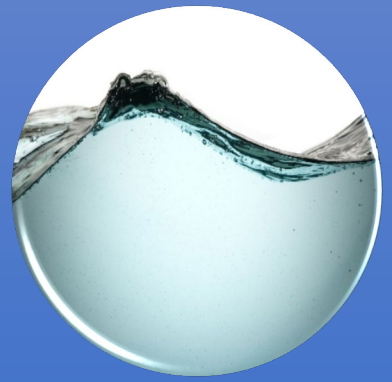
Artificial Leaks/Breaks

- Dig ups by contractors, homeowners, and other utility companies.

Much of the City's neighborhood underground infrastructure was constructed more than 45 years ago; with an average lifespan of 50 years.



Neighborhood Rehab Goals



Improve Water Service

- Reduce Water Service Interruptions
- Improve Operations and Maintenance Abilities

Fire Protection

- Improve Water Volume by Upsizing of Water Mains
- Increase Number of Fire Hydrants to Meet Standards
- Potential Increase of ISO Rating

Compliance with Updated Lead/Copper Rule

- Inventory of Water Service Pipe Types
- Reduction of Lead, Galvanized, and Copper Services

203 - City Wide Mains

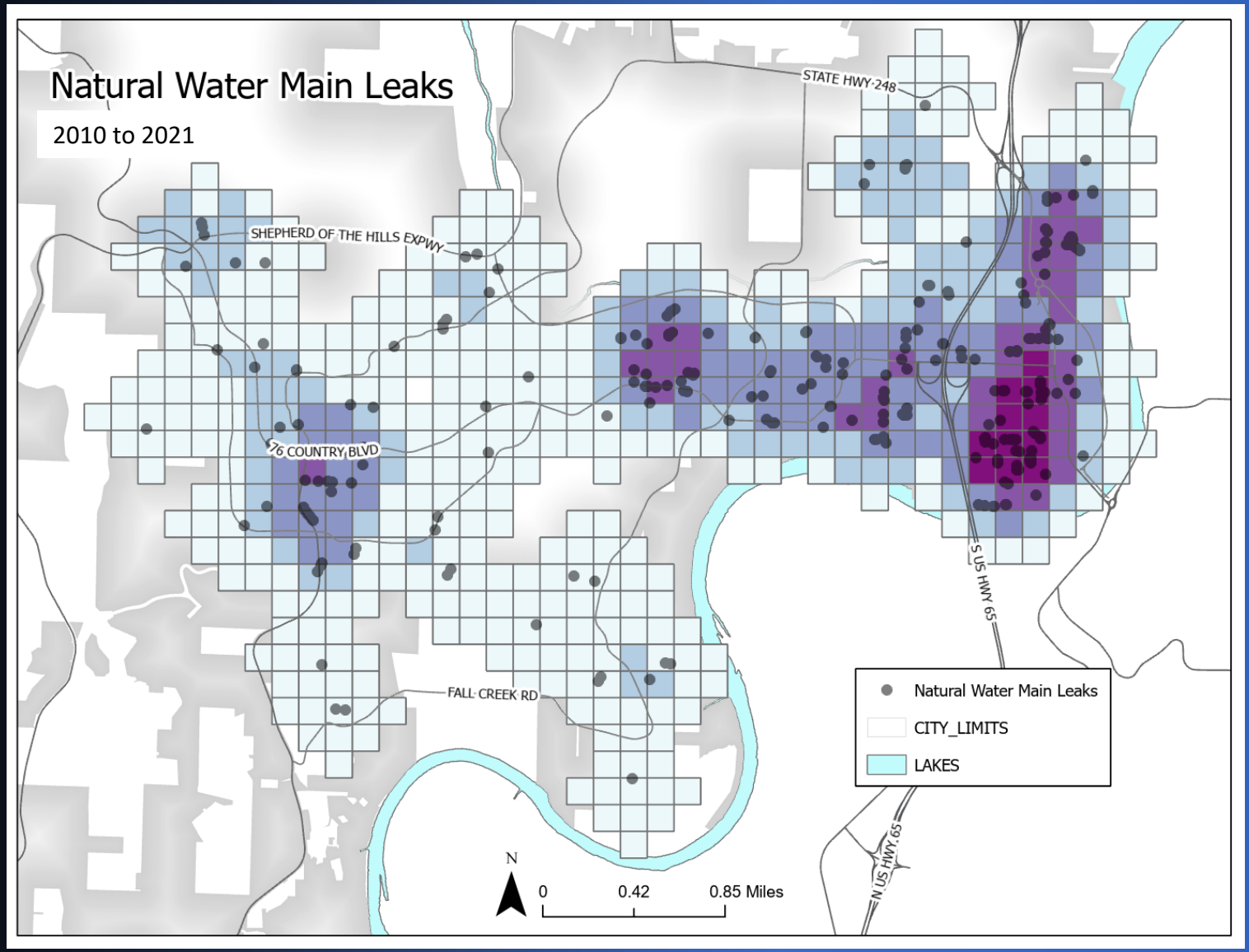
165 - Neighborhood Mains (81%)

307 - City Wide Service Leaks

216 - Neighborhood Service Leaks (70%)

Branson Water Main Leaks & Breaks

2010 through April 2021



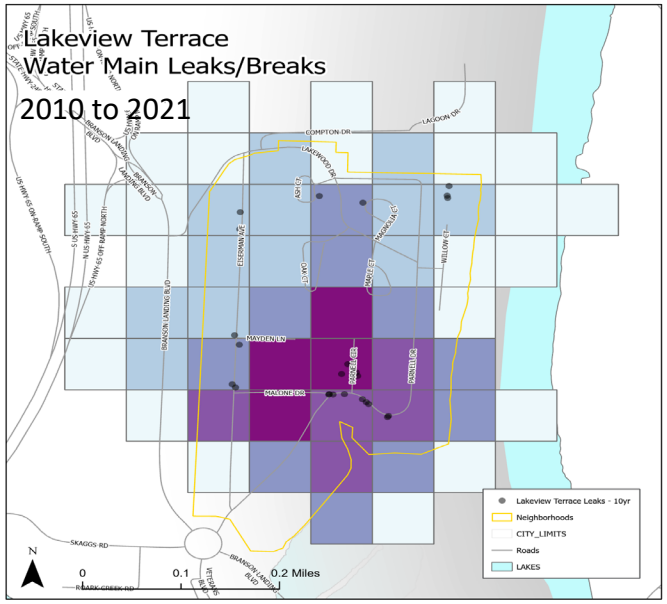
#1 - Lakeview Terrace

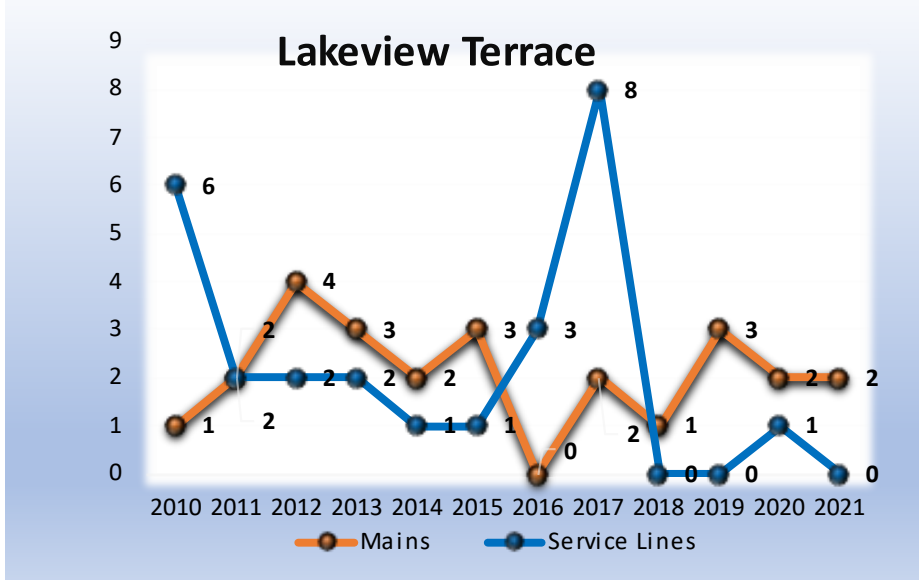
25 Water Main Leaks/Breaks
Main Sizes: 2-Inch, 4-inch, 6-inch
Material: Thin-walled PVC & Transite Pipe

30 Service Line Leaks

Current Length of Water Main:
2.45 Miles
Proposed Water Main Rehab Length:
2.26 Miles

Projected Cost:
Water Main: $3.6 Million





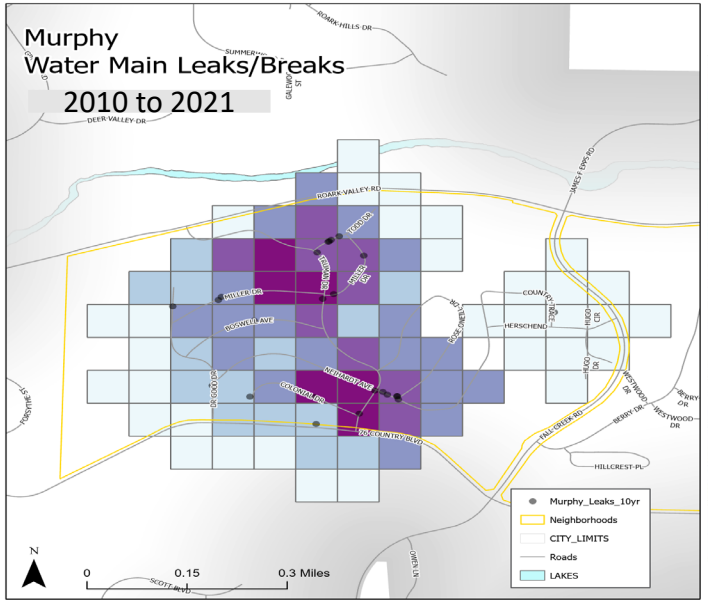
#2 – Murphy Addition

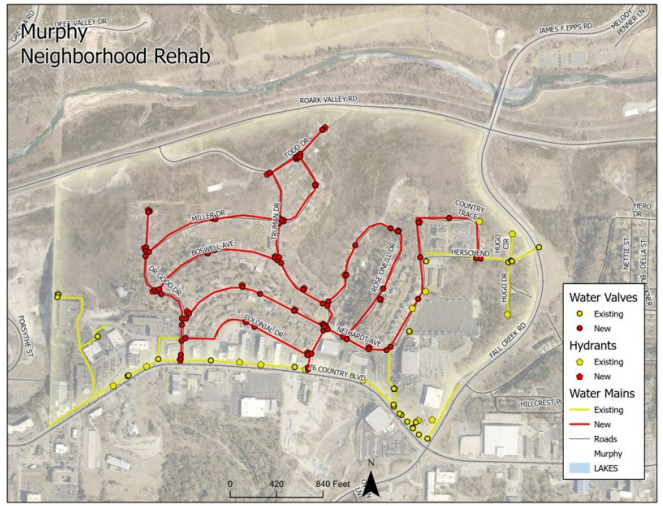
25 Water Main Leaks/Breaks
Main Sizes: 4-inch
Material: Thin-walled PVC & Transite Pipe

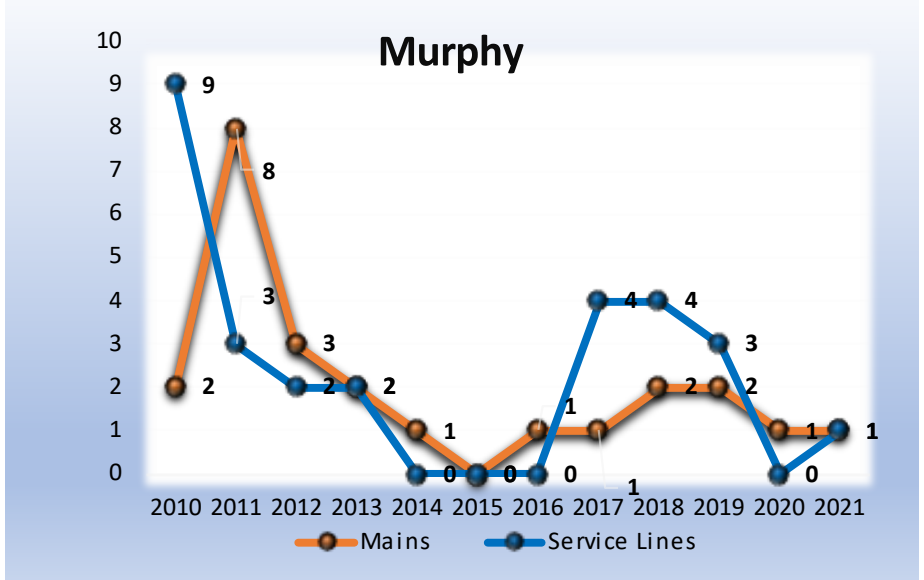
32 Service Line Leaks

Current Length of Water Main:
4.50 Miles
Proposed Water Main Rehab Length:
2.93 Miles

Projected Cost:
Water Main: $4.7 Million







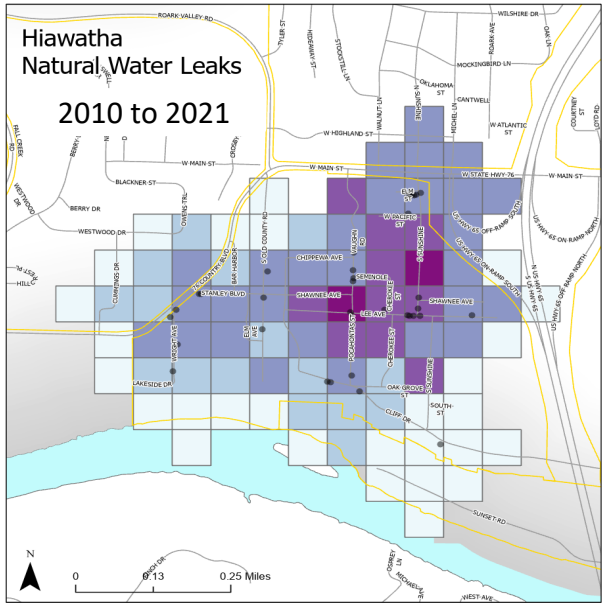
#3 – Hiawatha Heights

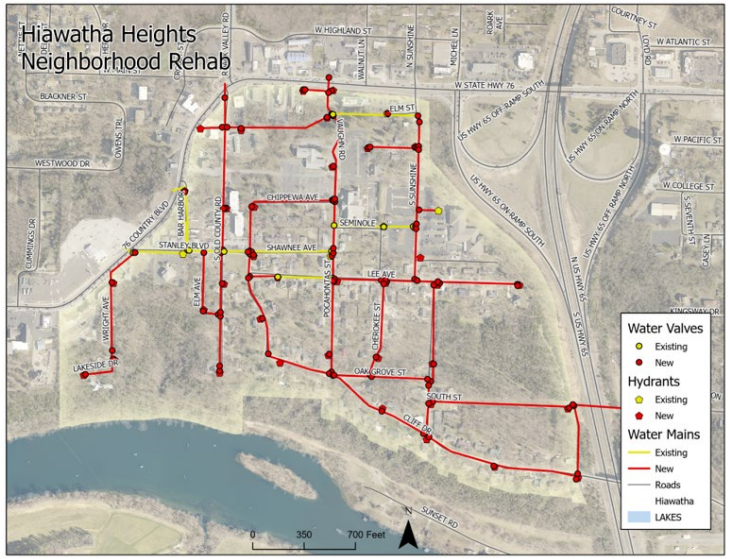
21 Water Main Leaks/Breaks
Main Sizes: 4-inch
Material: Thin-walled PVC & Transite Pipe

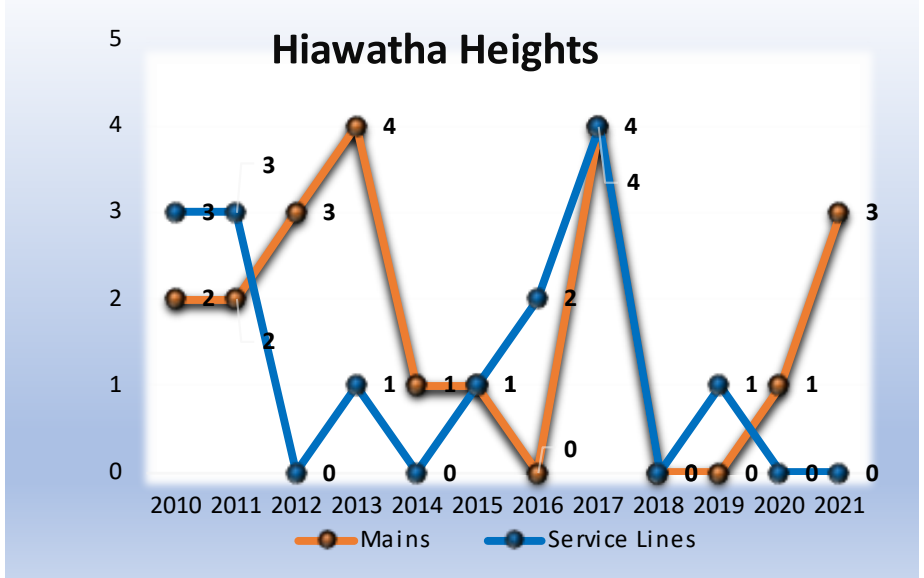
15 Service Line Leaks

Current Length of Water Main:
4.10 Miles
Proposed Water Main Rehab Length:
3.54 Miles

Projected Cost:
Water Main: $5.6 Million







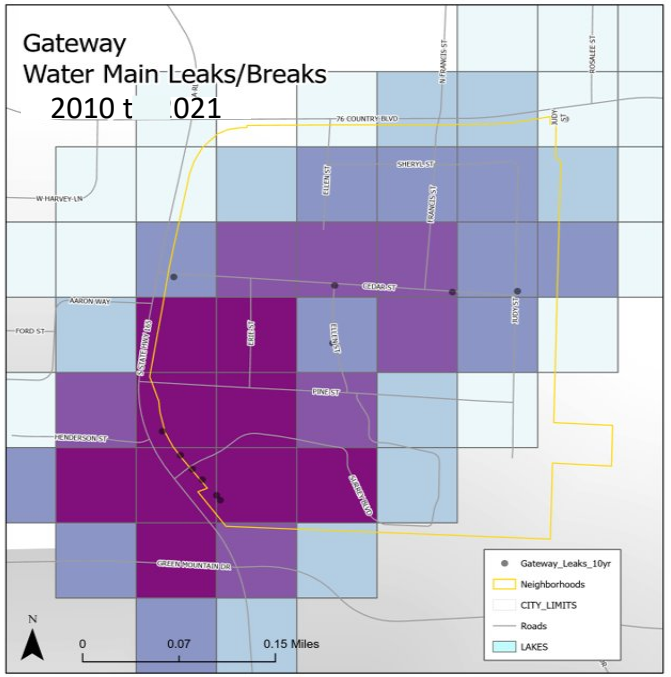
#4 - Gateway

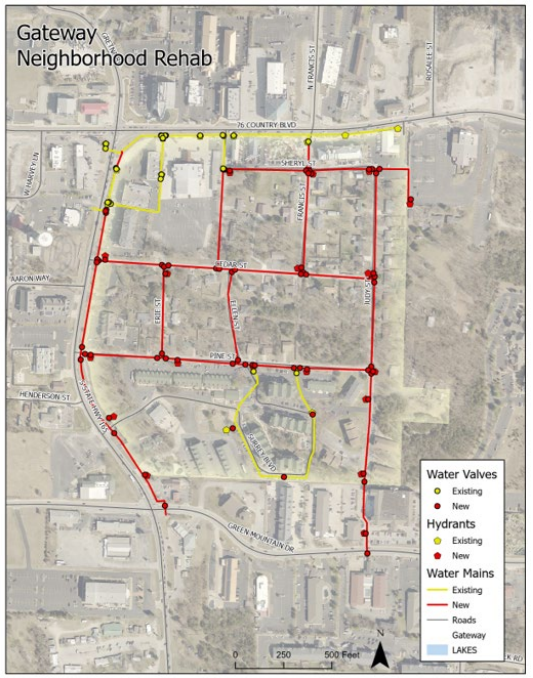
12 Water Main Leaks/Breaks
Main Sizes: 4-inch, 6-inch
Material: Thin-walled PVC & Transite Pipe

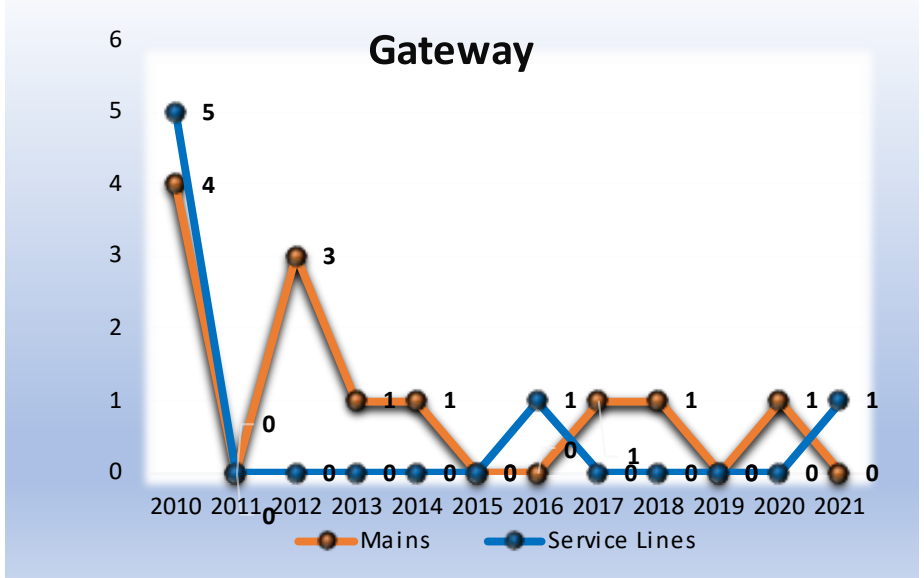
7 Service Line Leaks

Current Length of Water Main:
2.75 Miles
Proposed Water Main Rehab Length:
1.92 Miles

Projected Cost:
Water Main: $3.1 Million







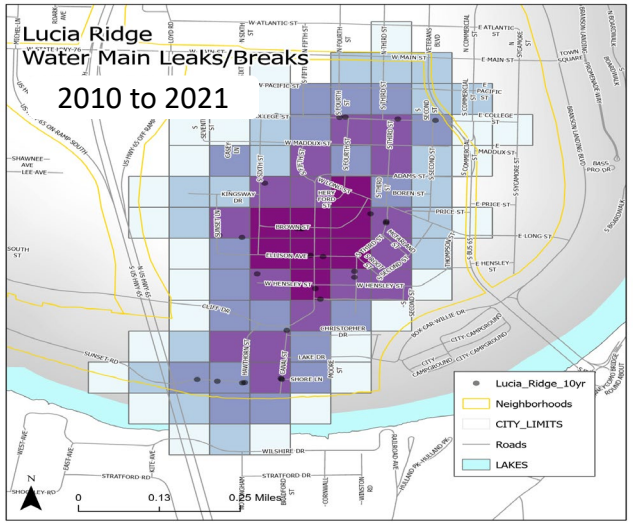
#5 – Lucia Ridge

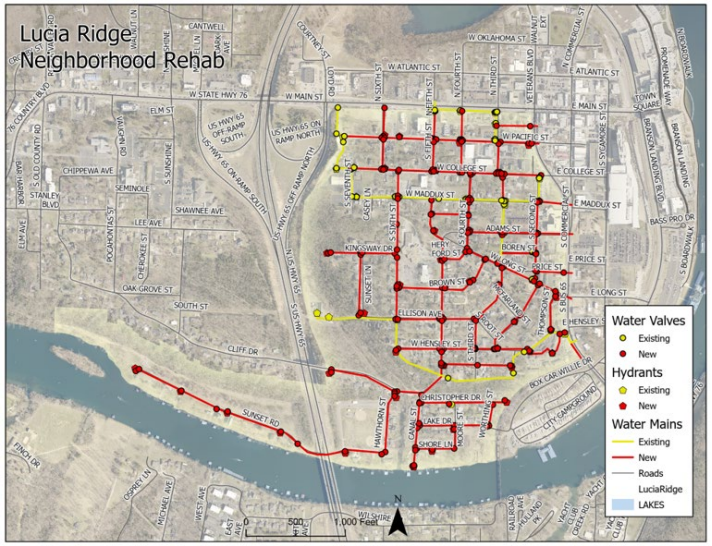
34 Water Main Leaks/Breaks
Main Sizes: ¾”-inch, 1-inch, 2-Inch, 4-inch, 6-inch
Material: Thin-walled PVC & Transite Pipe

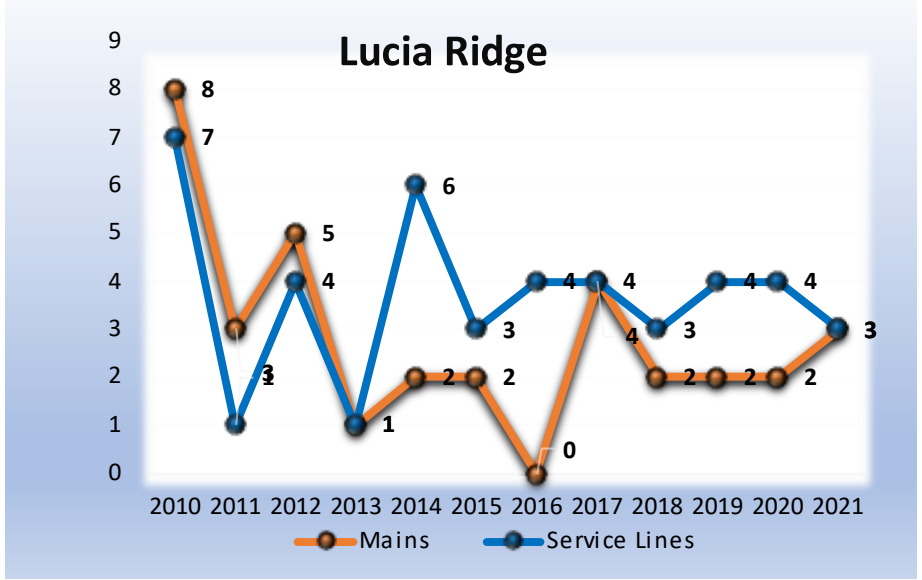
55 Service Line Leaks

Current Length of Water Main:
8.03 Miles
Proposed Water Main Rehab Length:
6.00 Miles

Projected Cost:
Water Main: $9.5 Million







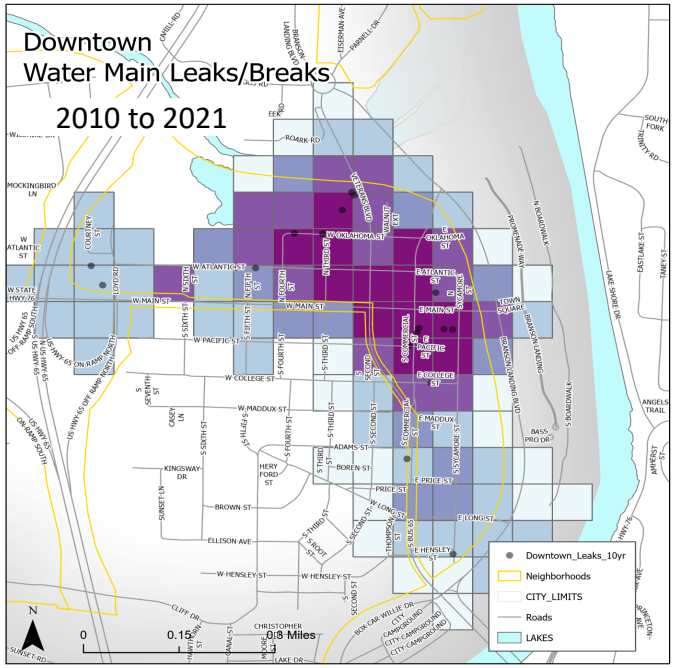
#6 - Downtown

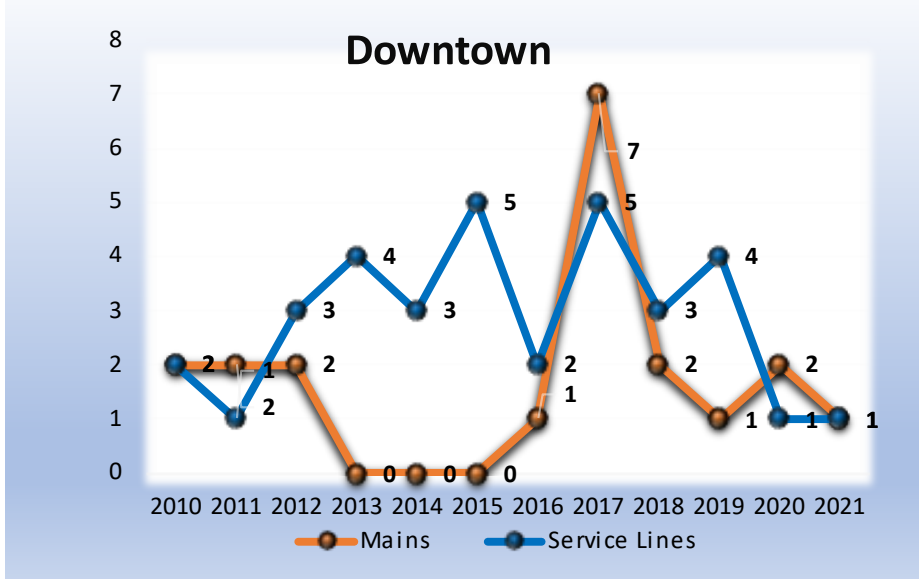
20 Water Main Leaks/Breaks
Main Sizes: ¾”-inch, 1-inch, 2-Inch, 4-inch, 6-inch
Material: Thin-walled PVC & Transite Pipe

43 Service Line Leaks

Current Length of Water Main:
4.80 Miles
Proposed Water Main Rehab Length:
2.00 Miles

Projected Cost:
Water Main: $3.2 Million





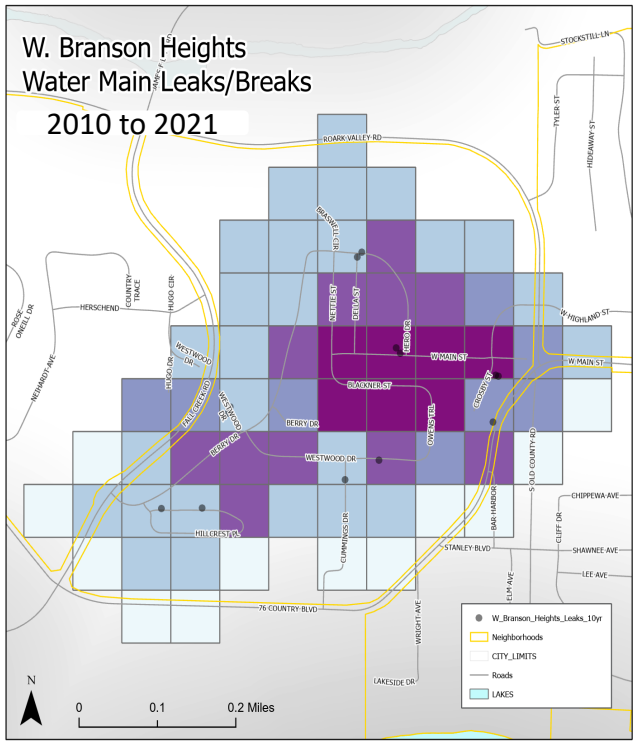
#7 – W. Branson Heights

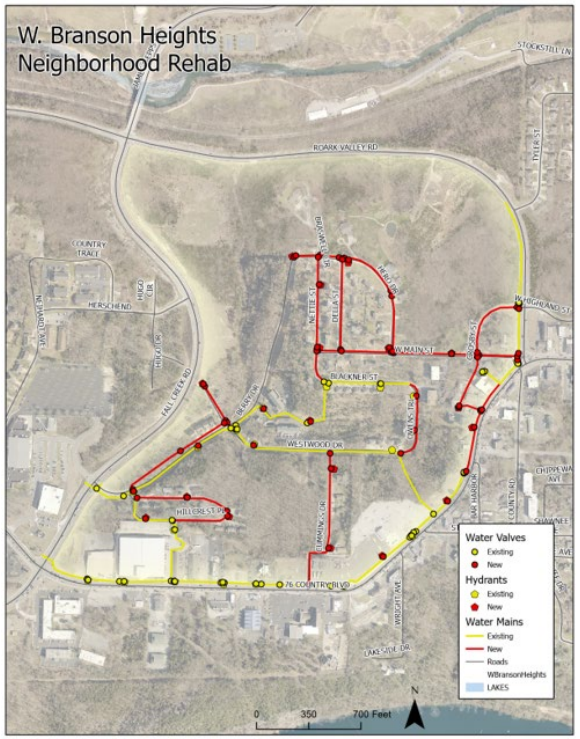
13 Water Main Leaks/Breaks
Main Sizes: 4-inch, 6-inch
Material: Thin-walled PVC & Transite Pipe

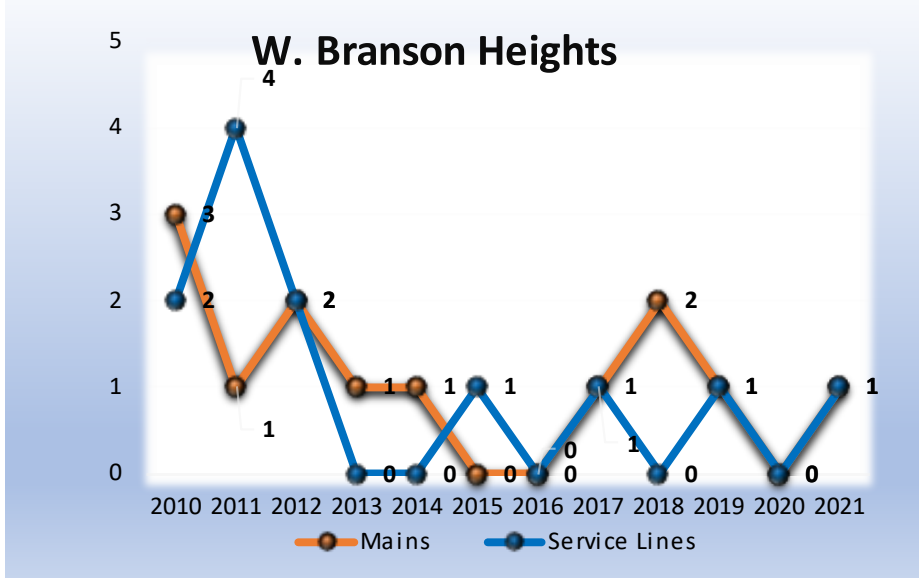
12 Service Line Leaks

Current Length of Water Main:
3.61 Miles
Proposed Water Main Rehab Length:
1.90 Miles

Projected Cost:
Water Main: $3.0 Million







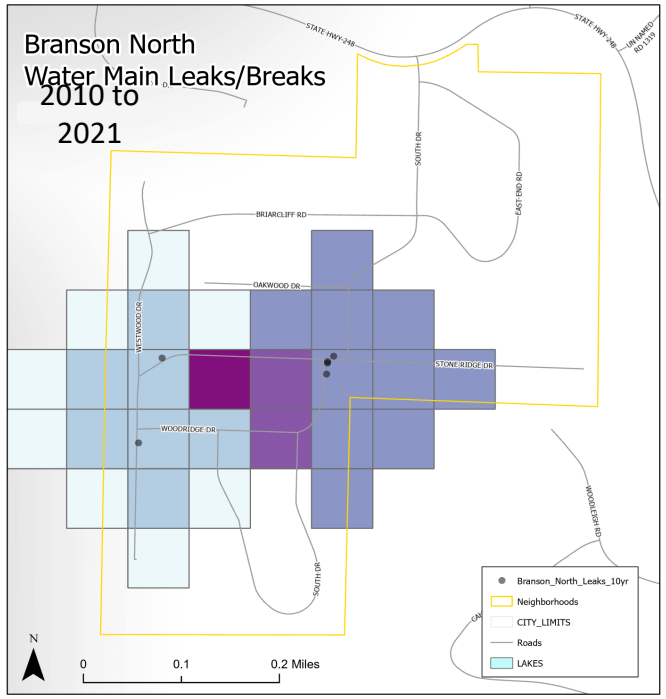
#8 – Branson North

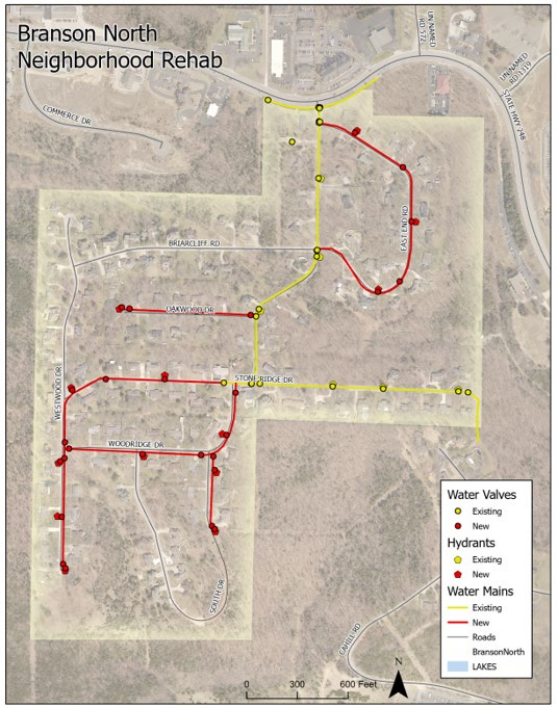
6 Water Main Leaks/Breaks
Main Sizes: 4-inch, 12-inch
Material: Thin-walled PVC & Transite Pipe

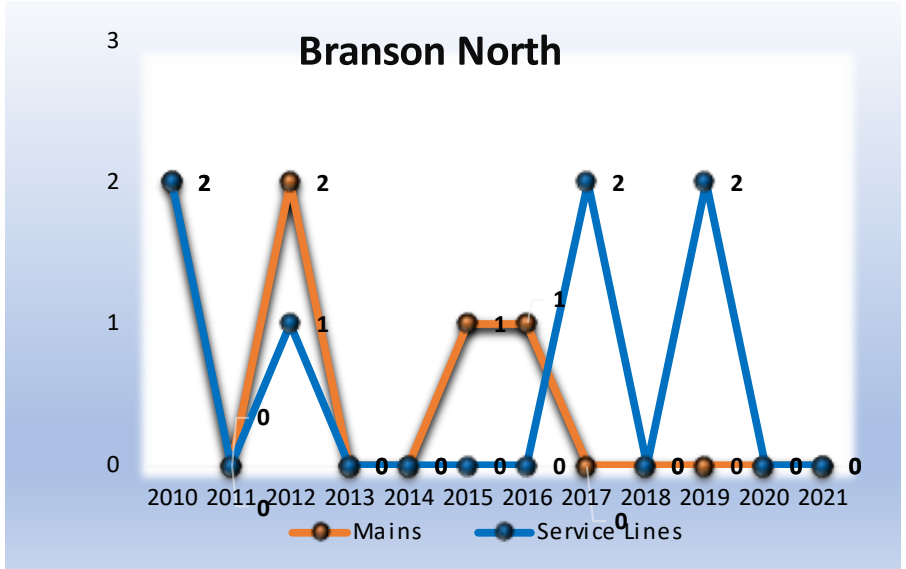
10 Service Line Leaks

Current Length of Water Main:
2.39 Miles
Proposed Water Main Rehab Length:
1.23 Miles

Projected Cost:
Water Main: $2.0 Million







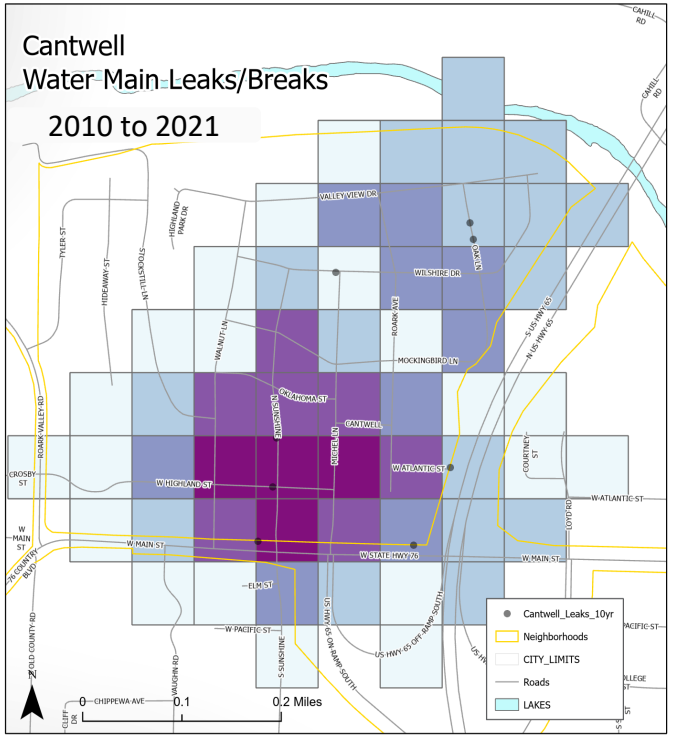
#9 – Cantwell

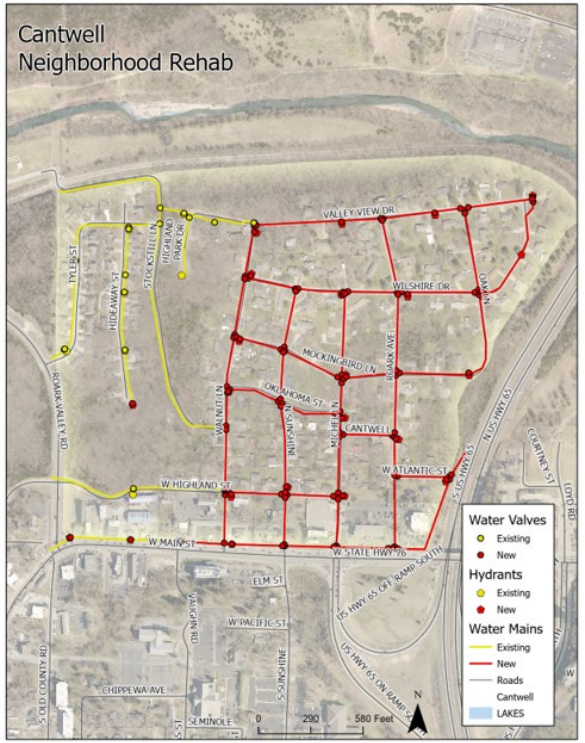
10 Water Main Leaks/Breaks
Main Sizes: 4-inch, 6-inch, 8-inch
Material: Thin-walled PVC & Transite Pipe

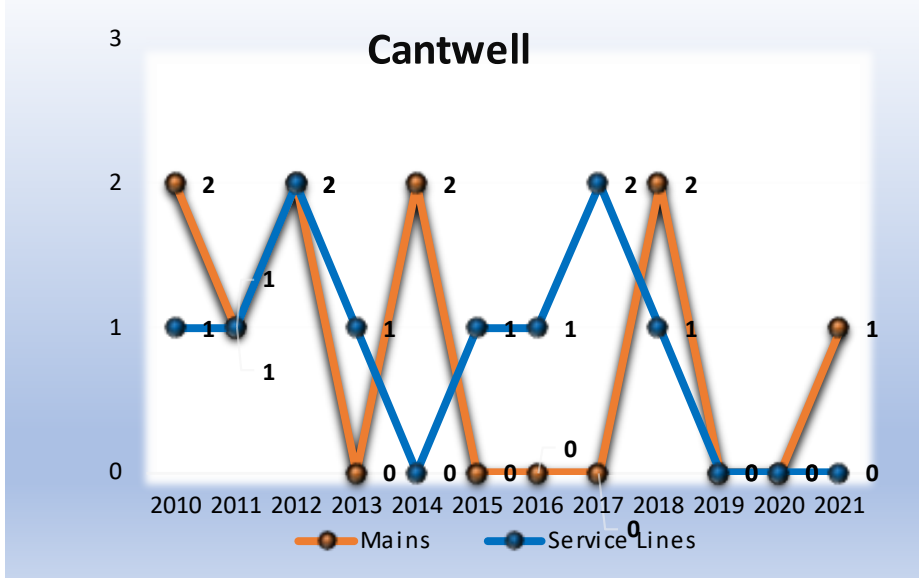
12 Service Line Leaks

Current Length of Water Main:
4.23 Miles
Proposed Water Main Rehab Length:
3.06 Miles

Projected Cost:
Water Main: $4.9 Million







Summary

Total Projected Cost of Waterlines for all 9 Neighborhoods:	**$39.6 Million***
Total Miles of Waterlines for all 9 Neighborhoods:	**24.84 Miles**
Total Projected Project Duration:	**18-20 Years**

With much of the City's neighborhood underground infrastructure reaching its average lifespan, the likelihood of watermain leaks will continue to increase.

Investing in watermain replacement will pay off in the long run. You will see a downward trend in the number of main breaks per year, which will save in water production cost, parts, and payroll. New mains are designed to last over 100 years; updated materials and improved installation procedures will provide a more reliable service, with continued high quality of water, and plenty of water pressure. The new design will also allow the addition of additional valves to the system resulting in the ability to isolate main breaks into smaller affected areas. Additions of fire hydrants will help in the area fire protection.

*Total projected costs do not include the repair, replacement, or upgrades to city streets, curb and gutter, sidewalk or storm sewers impacted by the installation of water lines.