



[Wastewater Treatment](#)

[Water Treatment](#)

[Water Storage](#)

[Lake Livingston](#)

[Recreation Facilities](#)

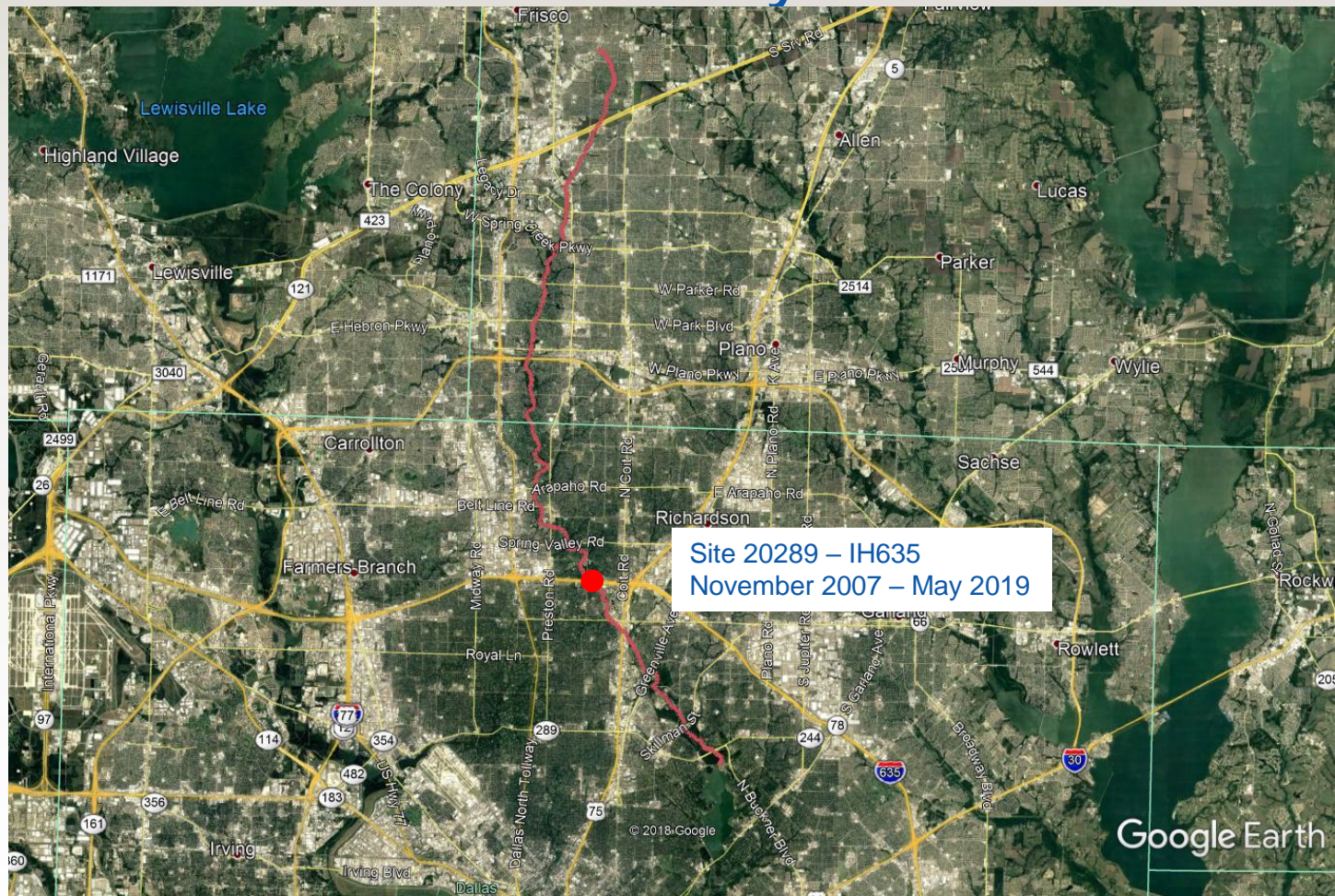
White Rock Creek E. coli Study



Trinity River Authority of Texas

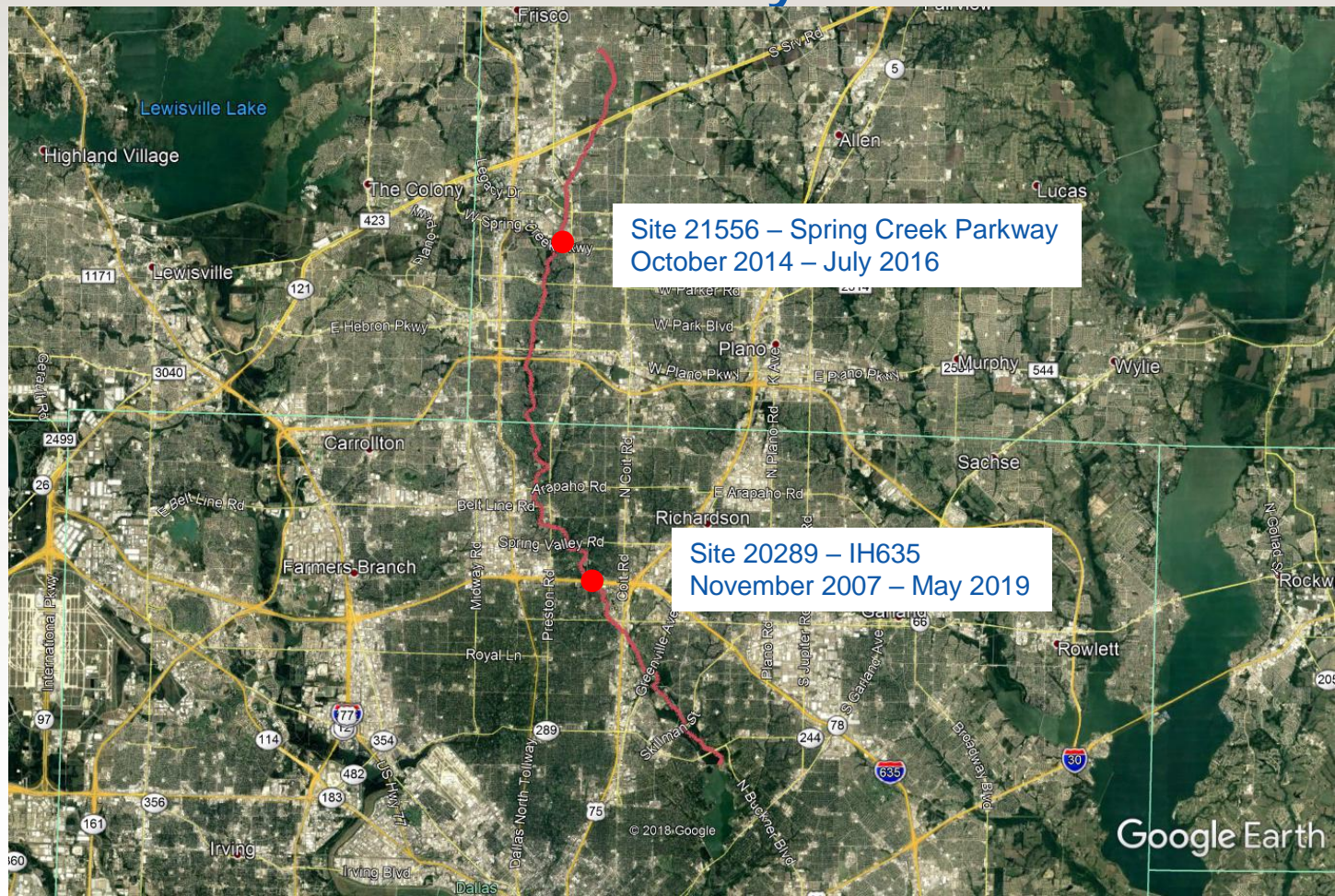


White Rock Creek *E. coli* Monitoring History



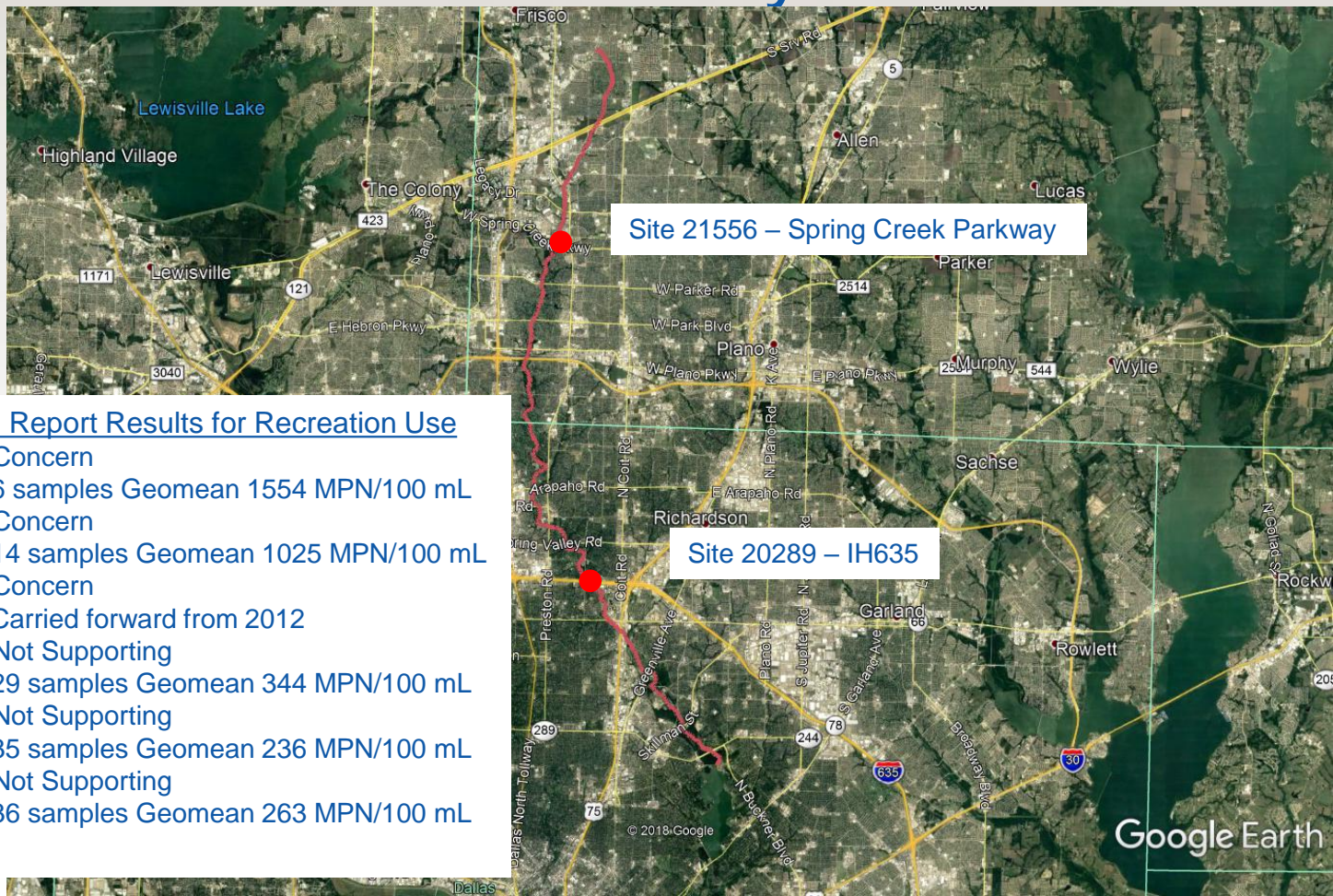


White Rock Creek *E. coli* Monitoring History





White Rock Creek *E. coli* Monitoring History

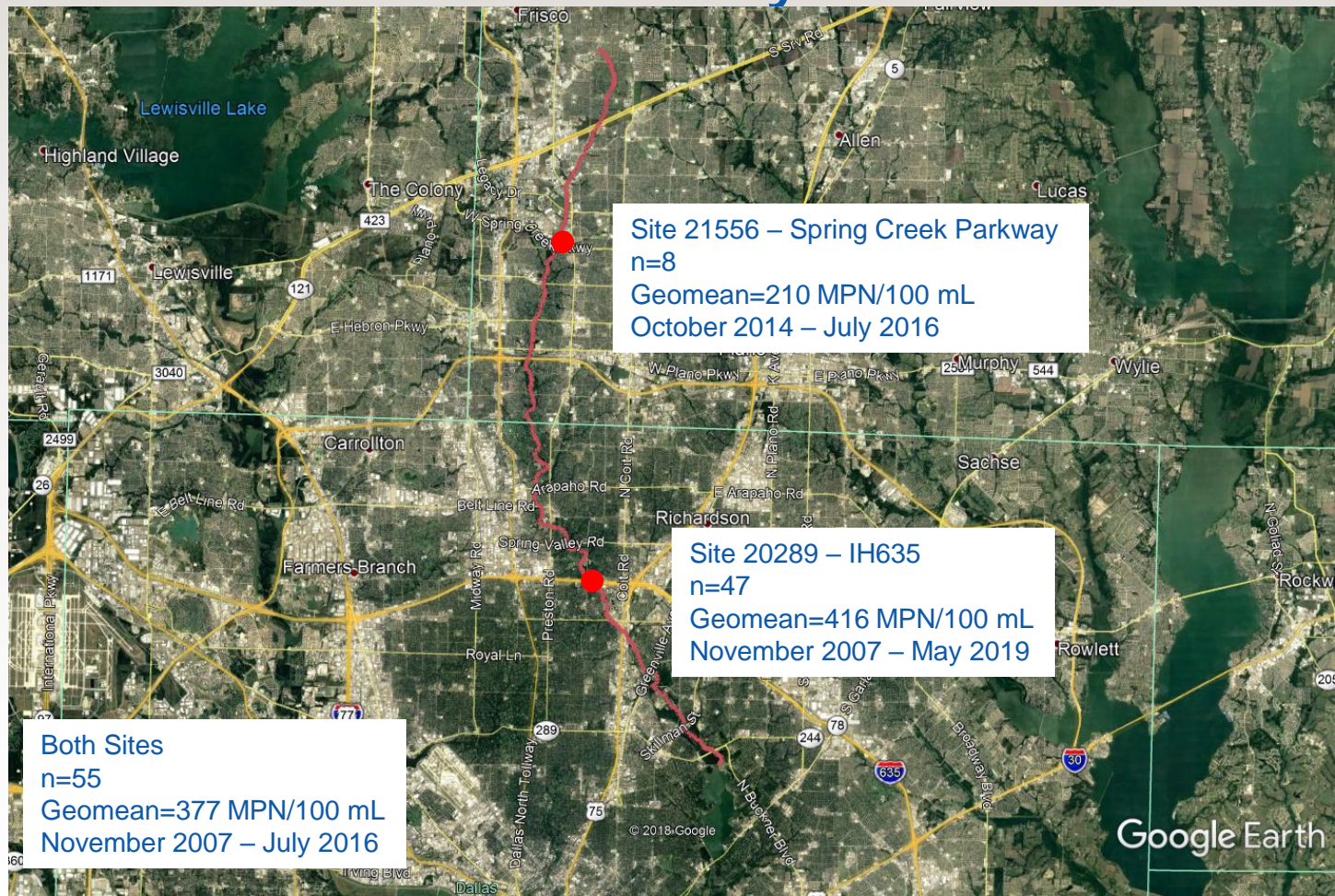


Integrated Report Results for Recreation Use

- 2010 – Concern
 - 6 samples Geomean 1554 MPN/100 mL
- 2012 – Concern
 - 14 samples Geomean 1025 MPN/100 mL
- 2014 – Concern
 - Carried forward from 2012
- 2016 – Not Supporting
 - 29 samples Geomean 344 MPN/100 mL
- 2018 – Not Supporting
 - 35 samples Geomean 236 MPN/100 mL
- 2020 – Not Supporting
 - 36 samples Geomean 263 MPN/100 mL

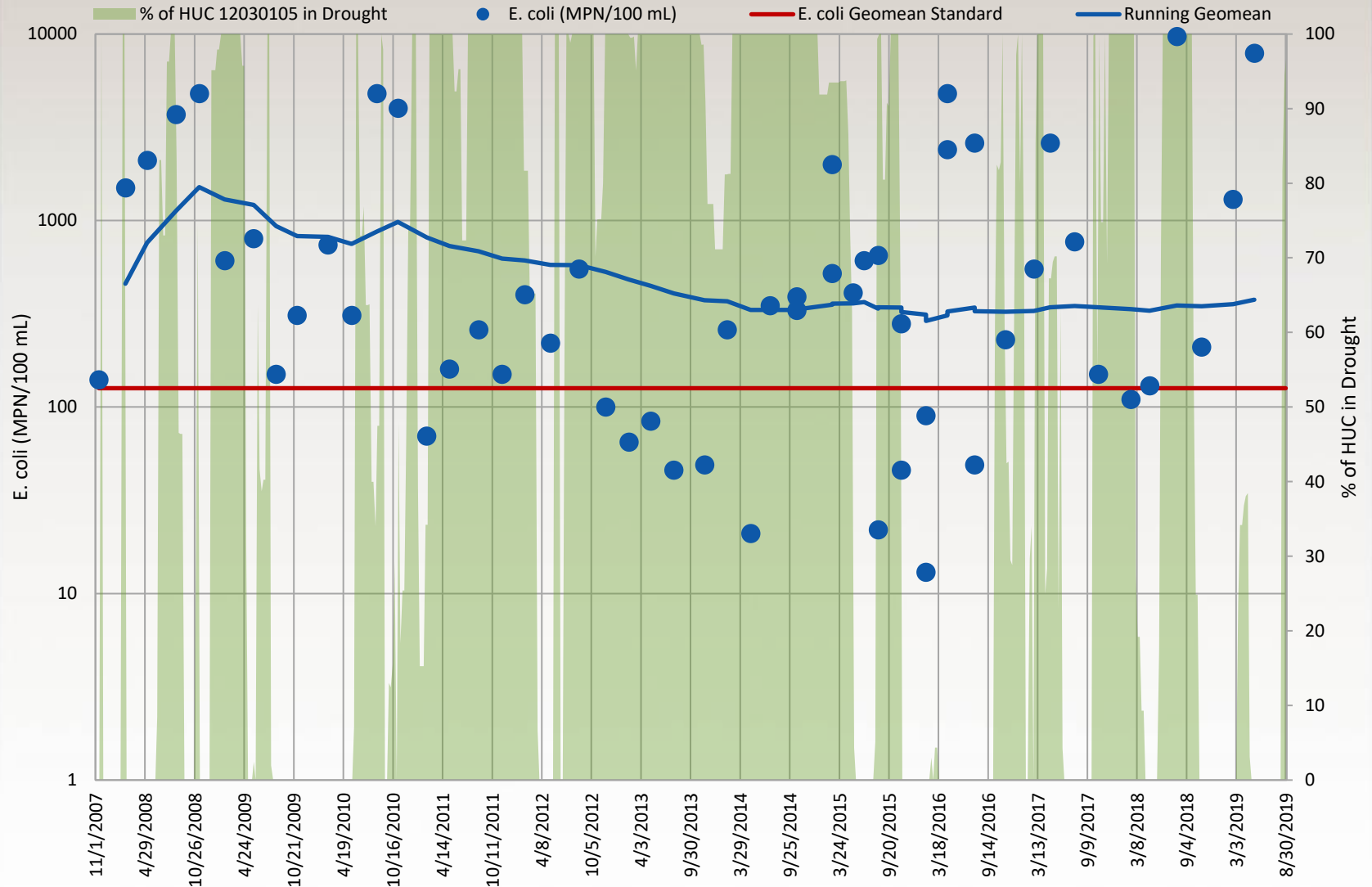


White Rock Creek *E. coli* Monitoring History





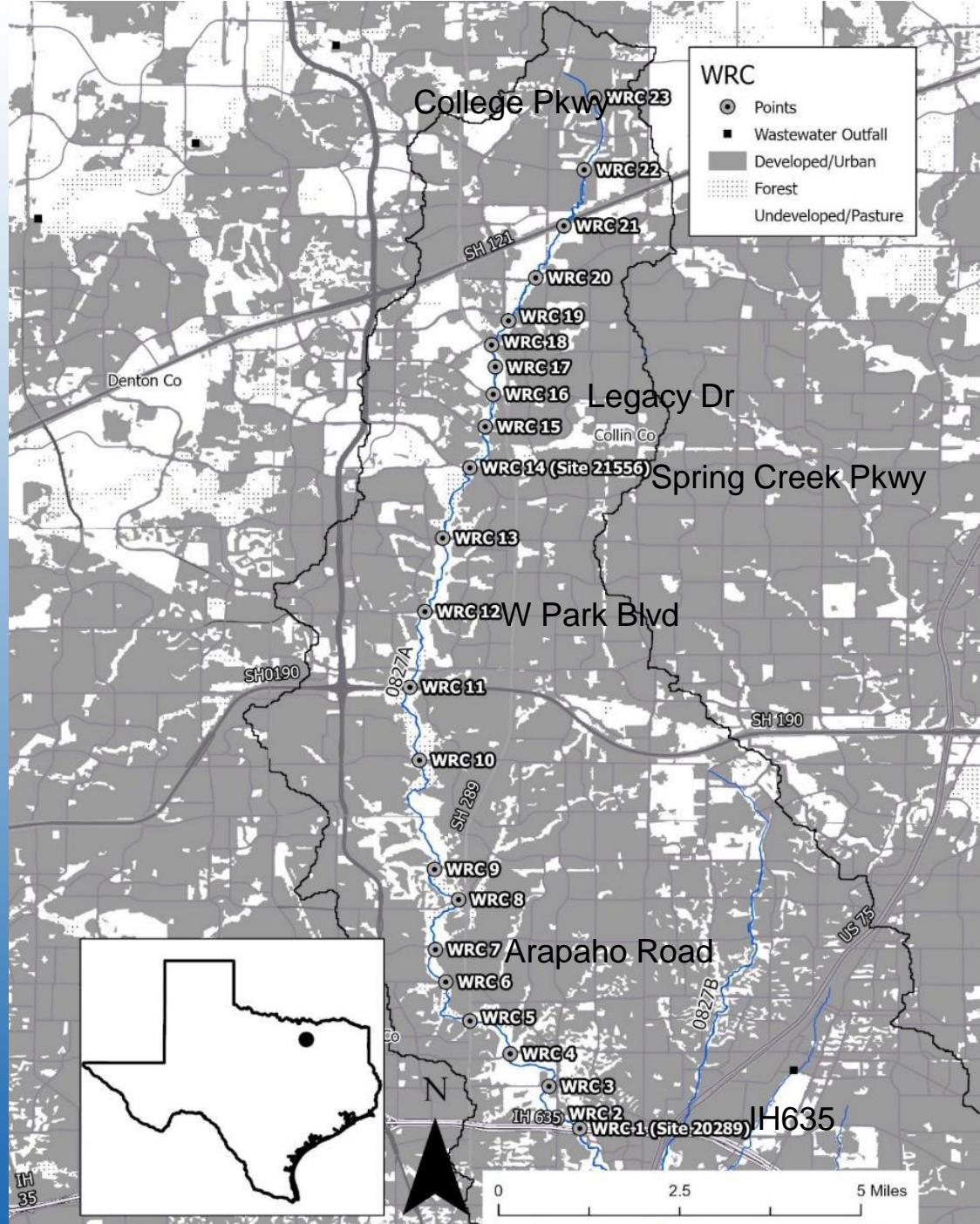
White Rock Creek E. coli and % of HUC in Drought



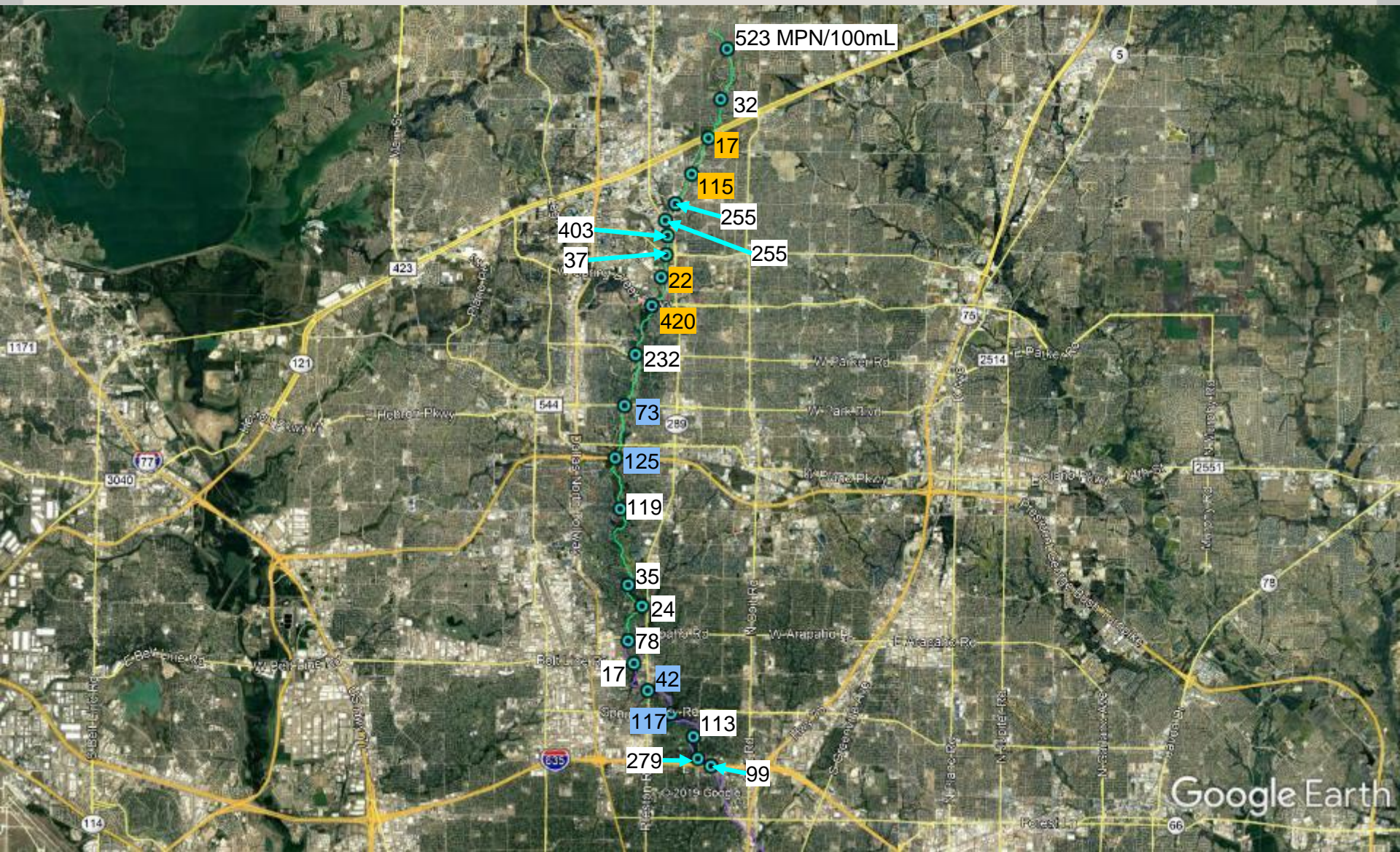


Study Development

- Consistently High Values
- No obvious tie to point or non-point sources
- 4 part study
 - Dry weather coarse scale sampling at 23 bridges
 - Dry weather fine scale sampling at selected reaches
 - Wet weather coarse scale sampling at 23 bridges
 - Wet weather fine scale sampling at selected reaches
- Goal – Turn over data to the appropriate entity for enforcement if necessary



White Rock Creek *E. coli* Source Identification Dry Weather Coarse Scale



23 – College Pkwy

523 MPN/100 mL



22 – Lebanon Rd

32 MPN/100 mL



21 – SH 121

17 MPN/100 mL



20 – McDermott Rd

115 MPN/100 mL



19 – Ohio Dr

255 MPN/100 mL



18 – Preston Rd

255 MPN/100 mL



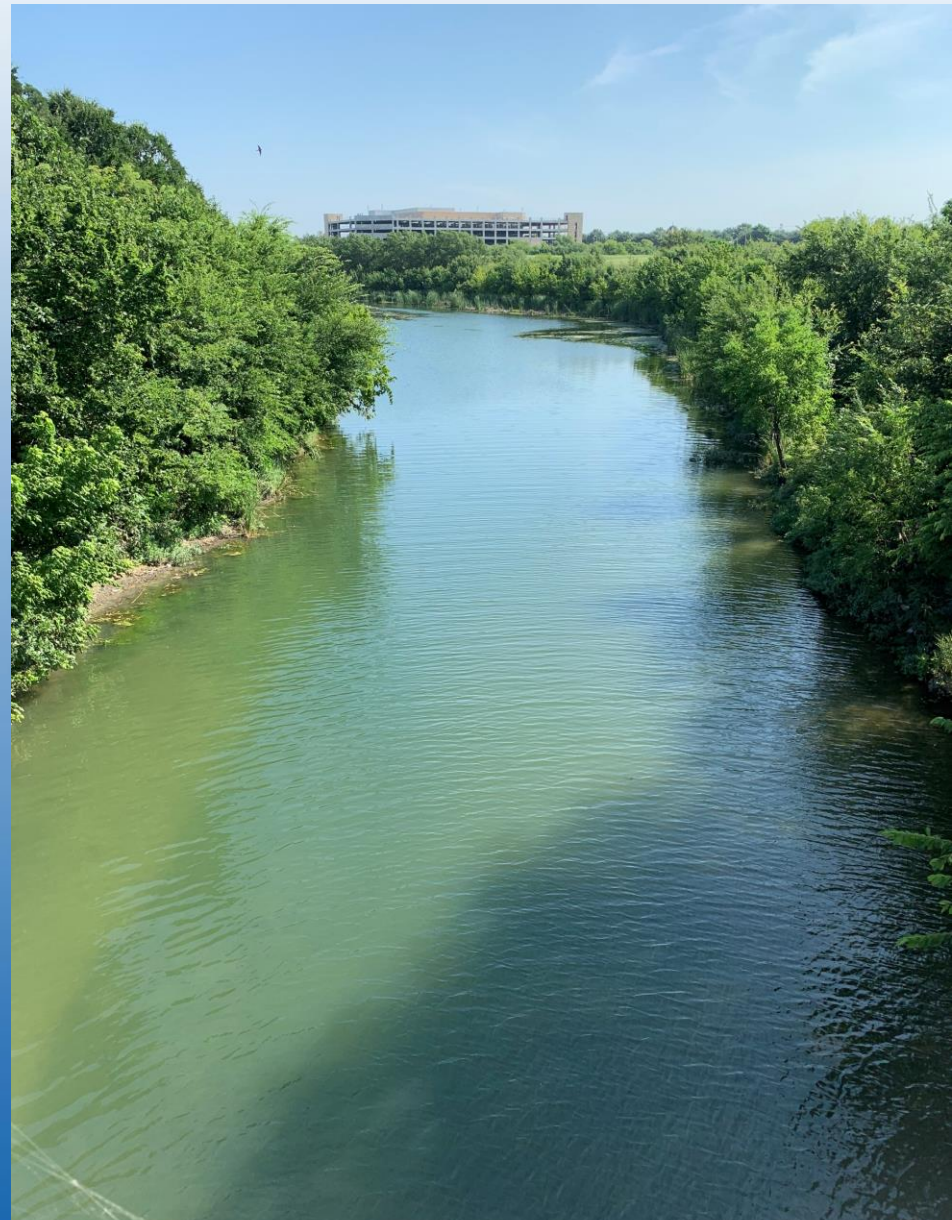
17 – Quincy Ln

403 MPN/100 mL



16 – Legacy Dr

37 MPN/100 mL



15 – Tennyson Pkwy

22 MPN/100 mL



14 – W Spring Creek

420 MPN/100 mL



13 – W Parker Rd

232 MPN/100 mL



12 – W Park Blvd

73 MPN/100 mL



11 – PGB Turnpike

125 MPN/100 mL



10 – Frankford Rd

119 MPN/100 mL



9 – Westgrove Dr

35 MPN/100 mL



8 – Keller Springs Rd

24 MPN/100 mL



7 – Arapaho Rd

78 MPN/100 mL



6 – Beltline Rd

17 MPN/100 mL



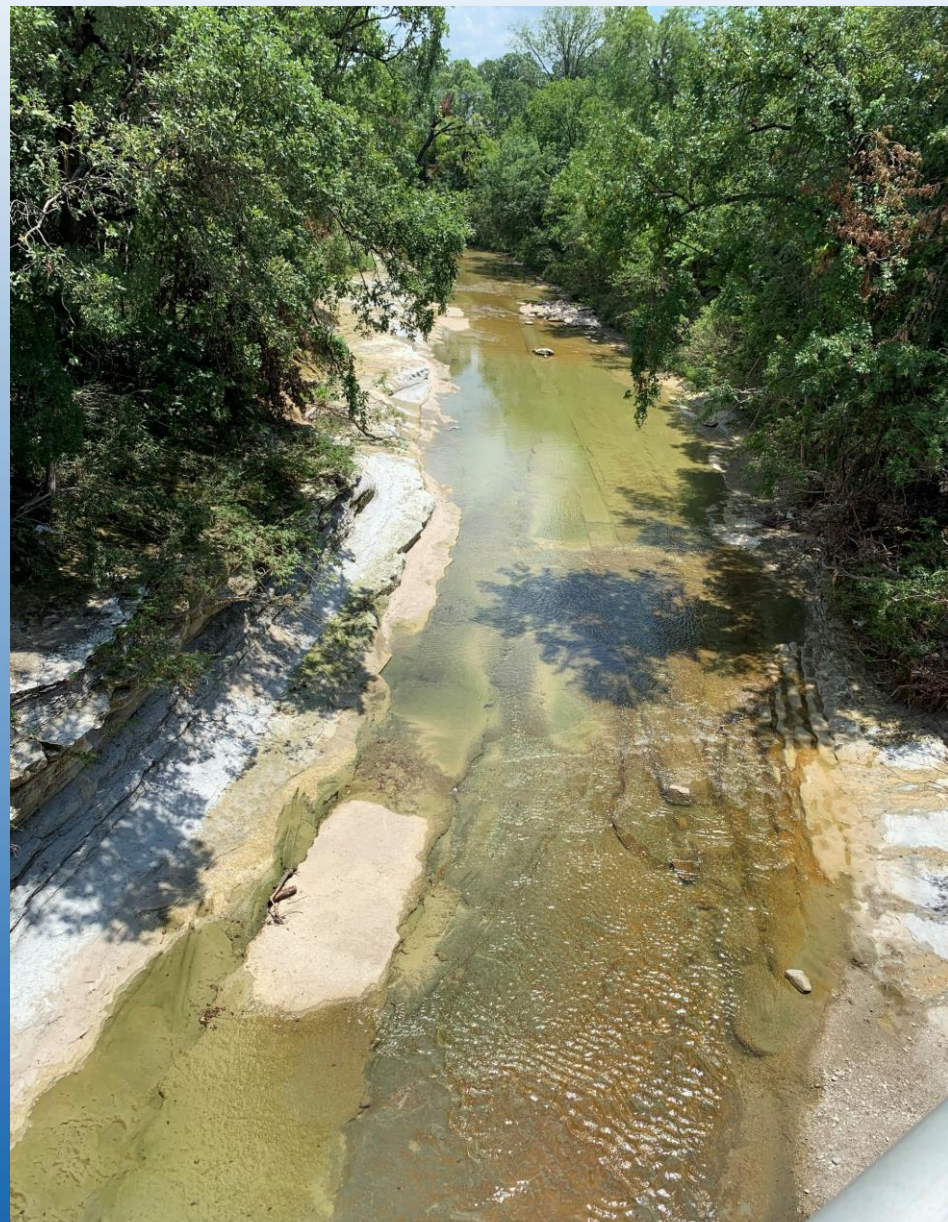
5 – Preston Rd

42 MPN/100 mL



4 – Spring Valley Rd

117 MPN/100 mL



3 – Alpha Rd

113 MPN/100 mL



2 – Hillcrest Rd

279 MPN/100 mL



1 – IH 635
99 MPN/100 mL



White Rock Creek *E. coli* Source Identification

Dry Weather Fine Scale – 121 to McDermott



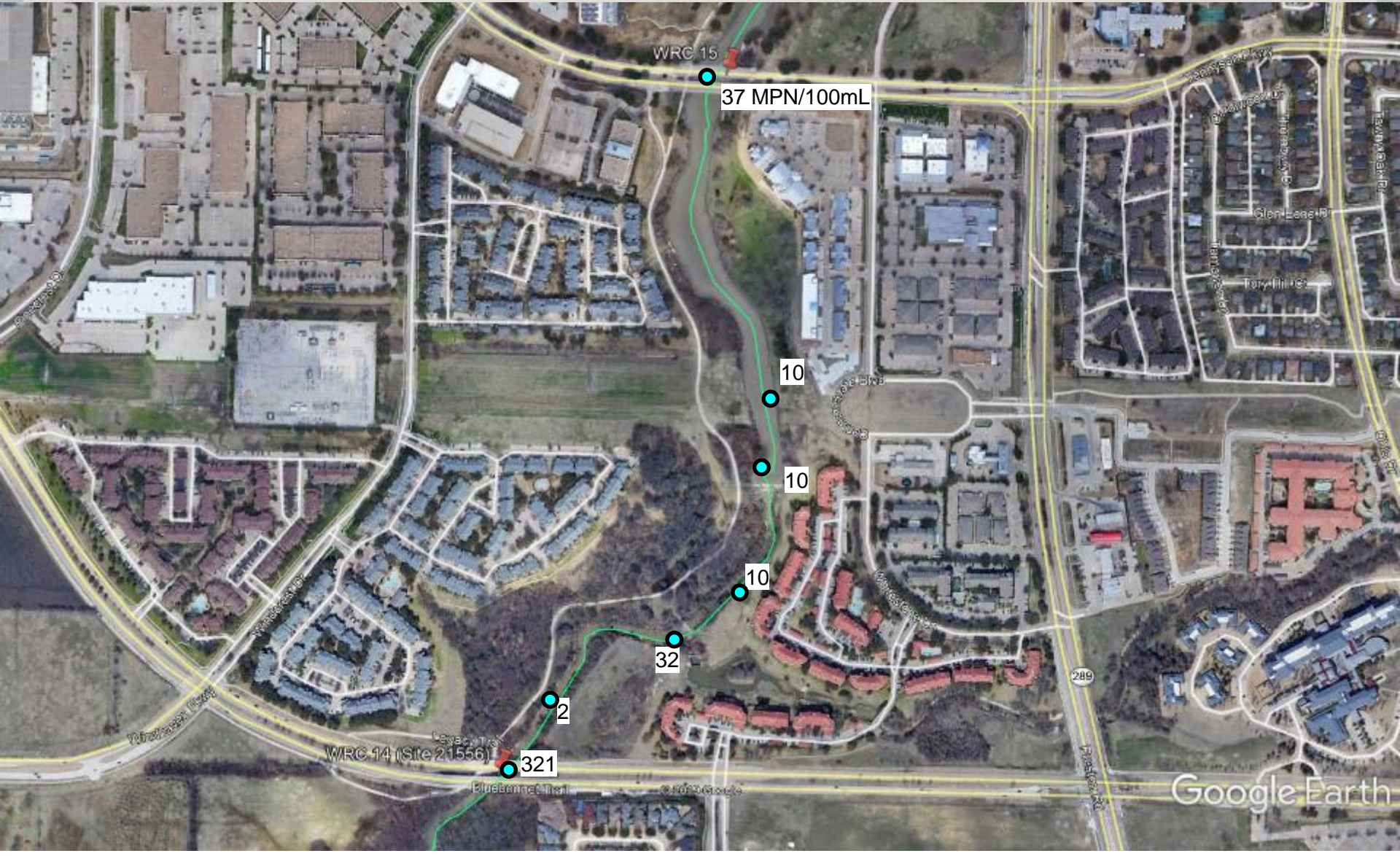


August 1, 2019

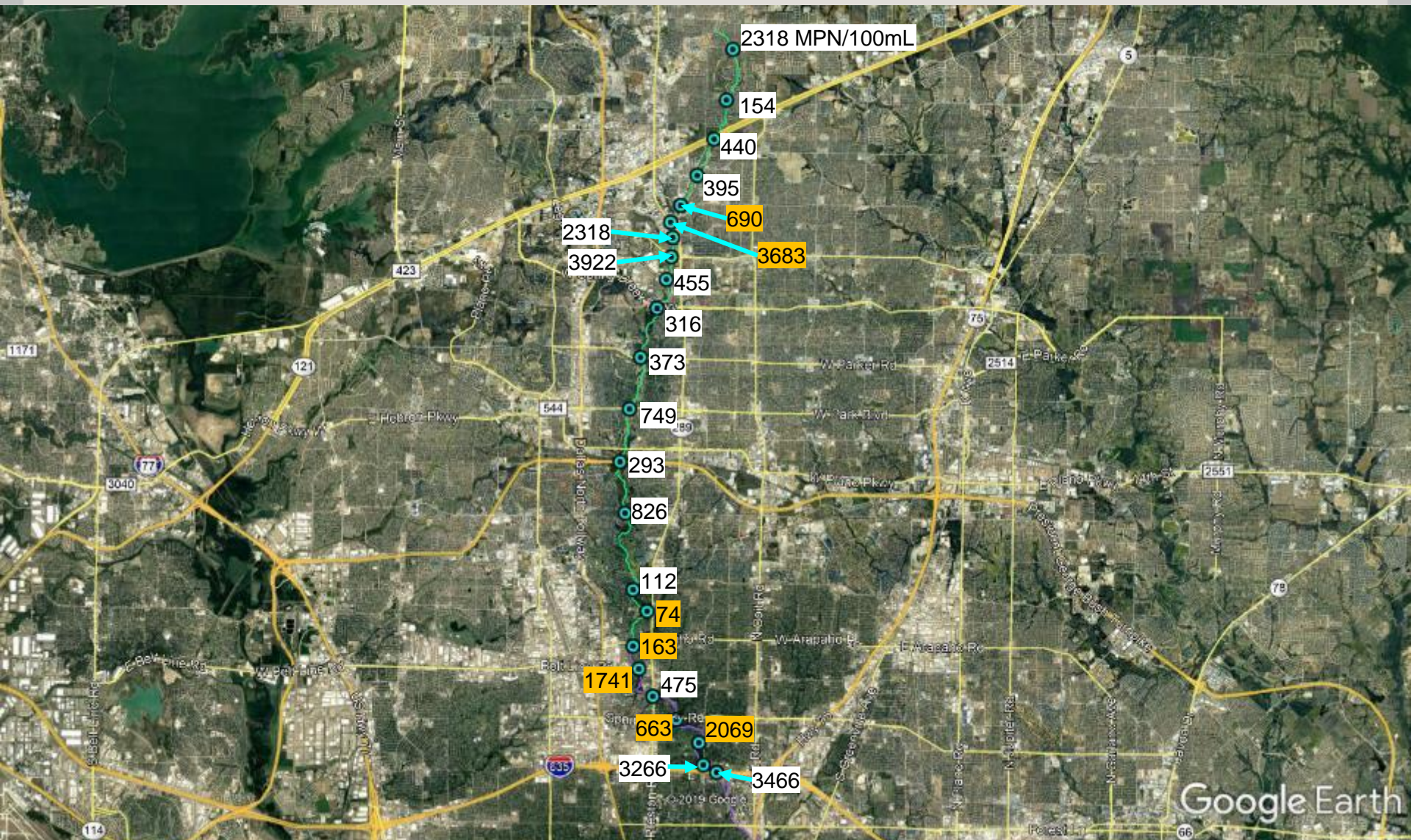


October 17, 2019

White Rock Creek *E. coli* Source Identification Dry Weather Fine Scale – Tennyson to Spring Creek

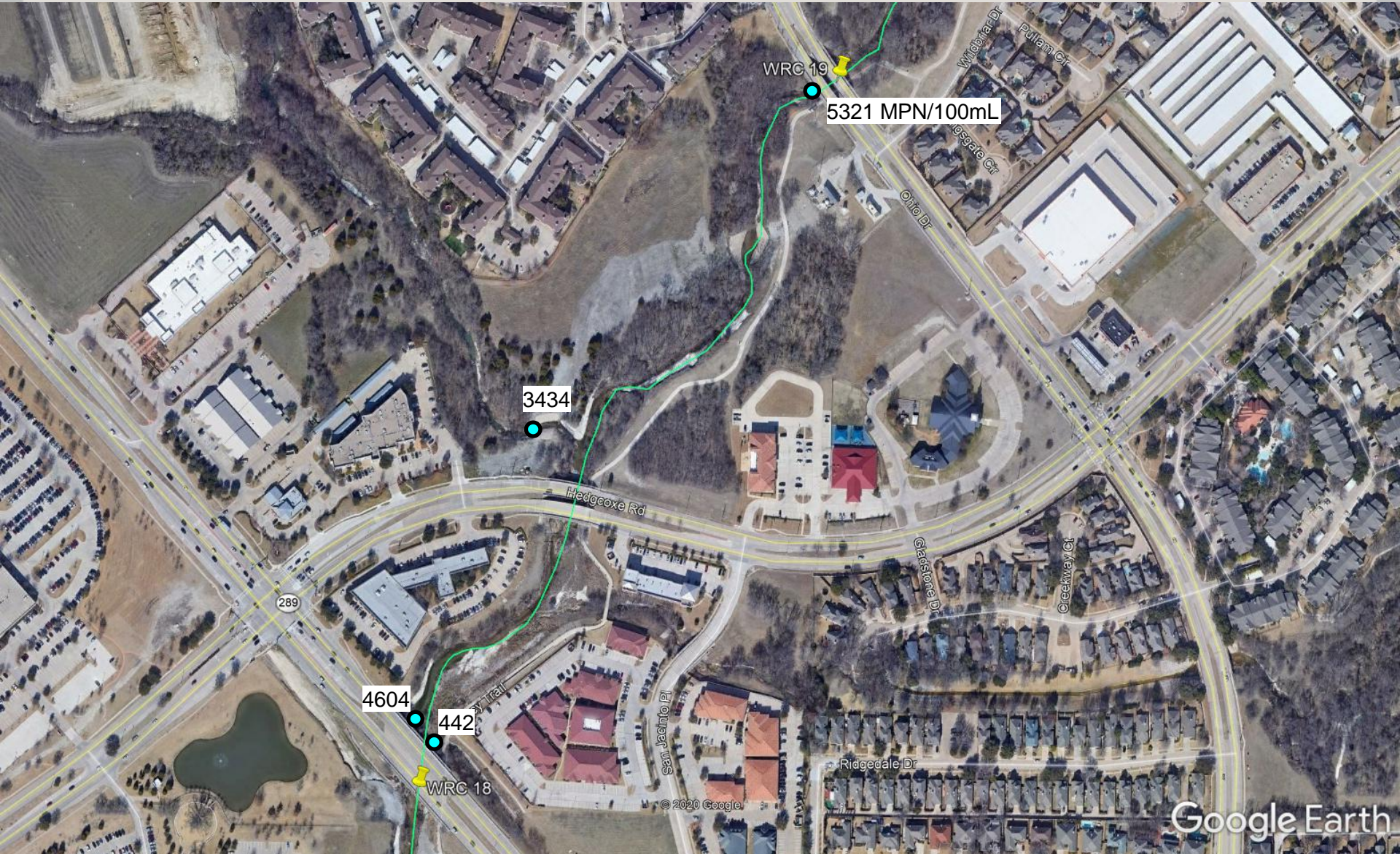


White Rock Creek *E. coli* Source Identification Wet Weather Coarse Scale



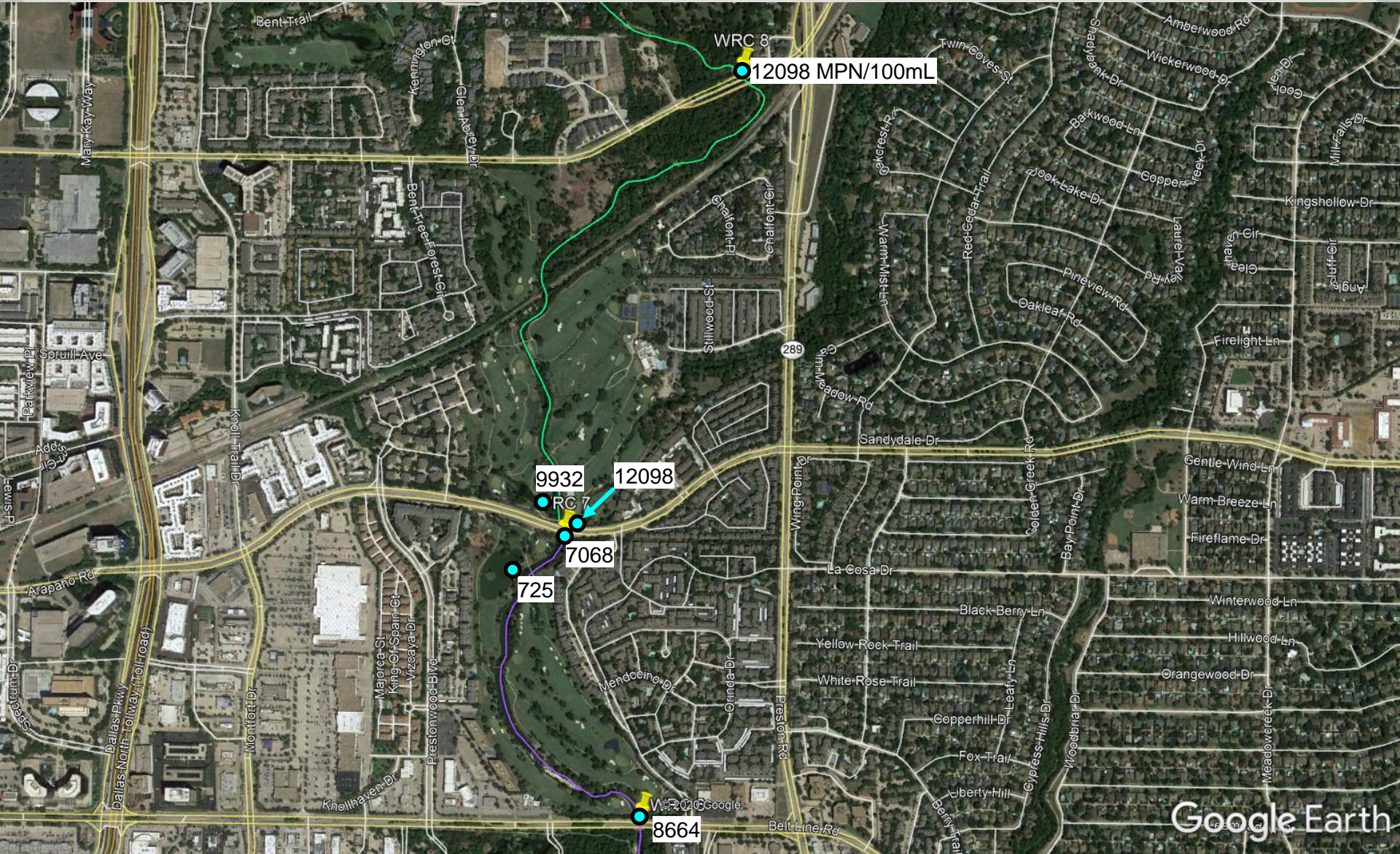
White Rock Creek *E. coli* Source Identification

Wet Weather Fine Scale – Ohio to Preston



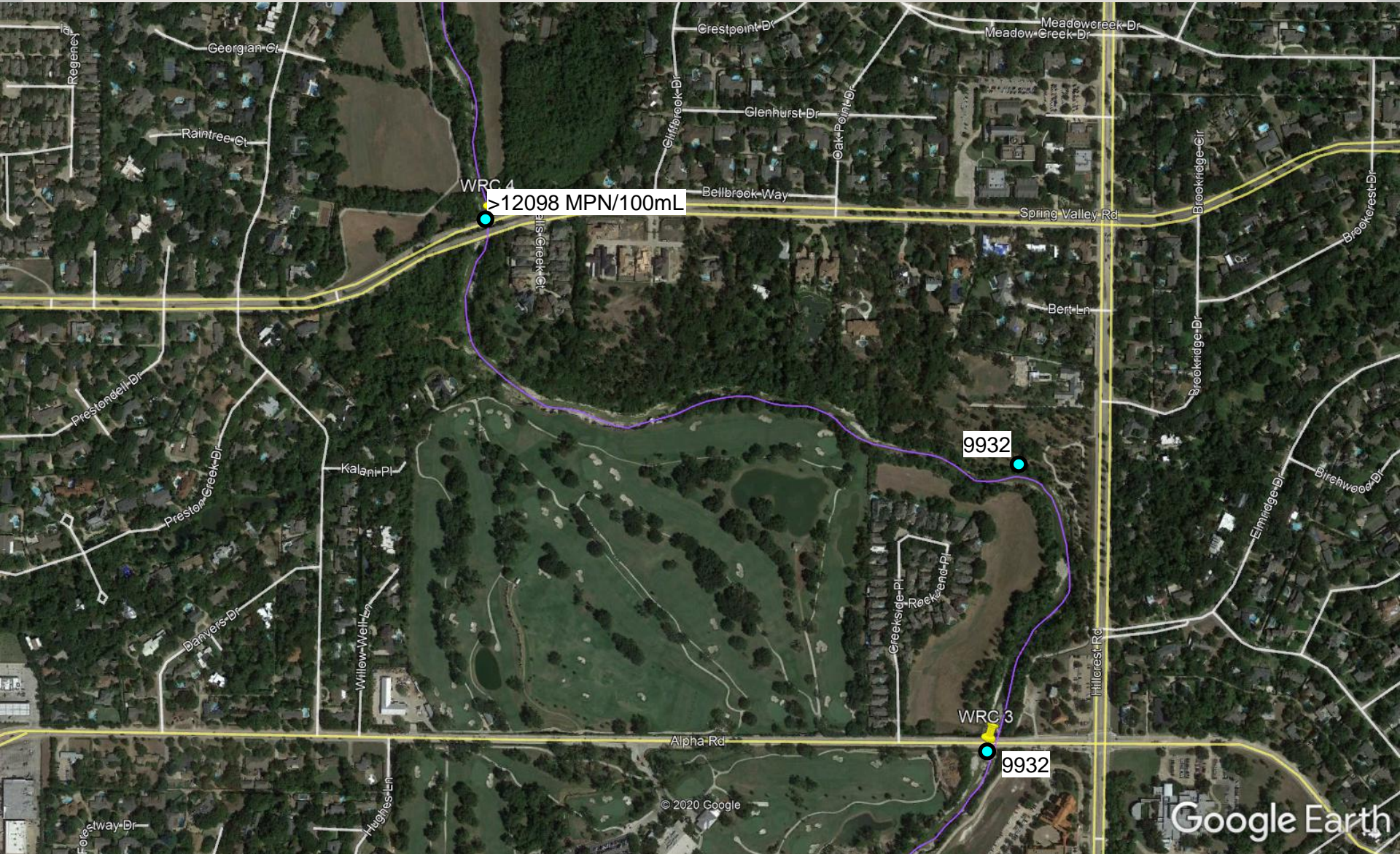
White Rock Creek *E. coli* Source Identification

Wet Weather Fine Scale – Keller Springs to Arapaho to Beltline



White Rock Creek *E. coli* Source Identification

Wet Weather Fine Scale – Spring Valley to Alpha

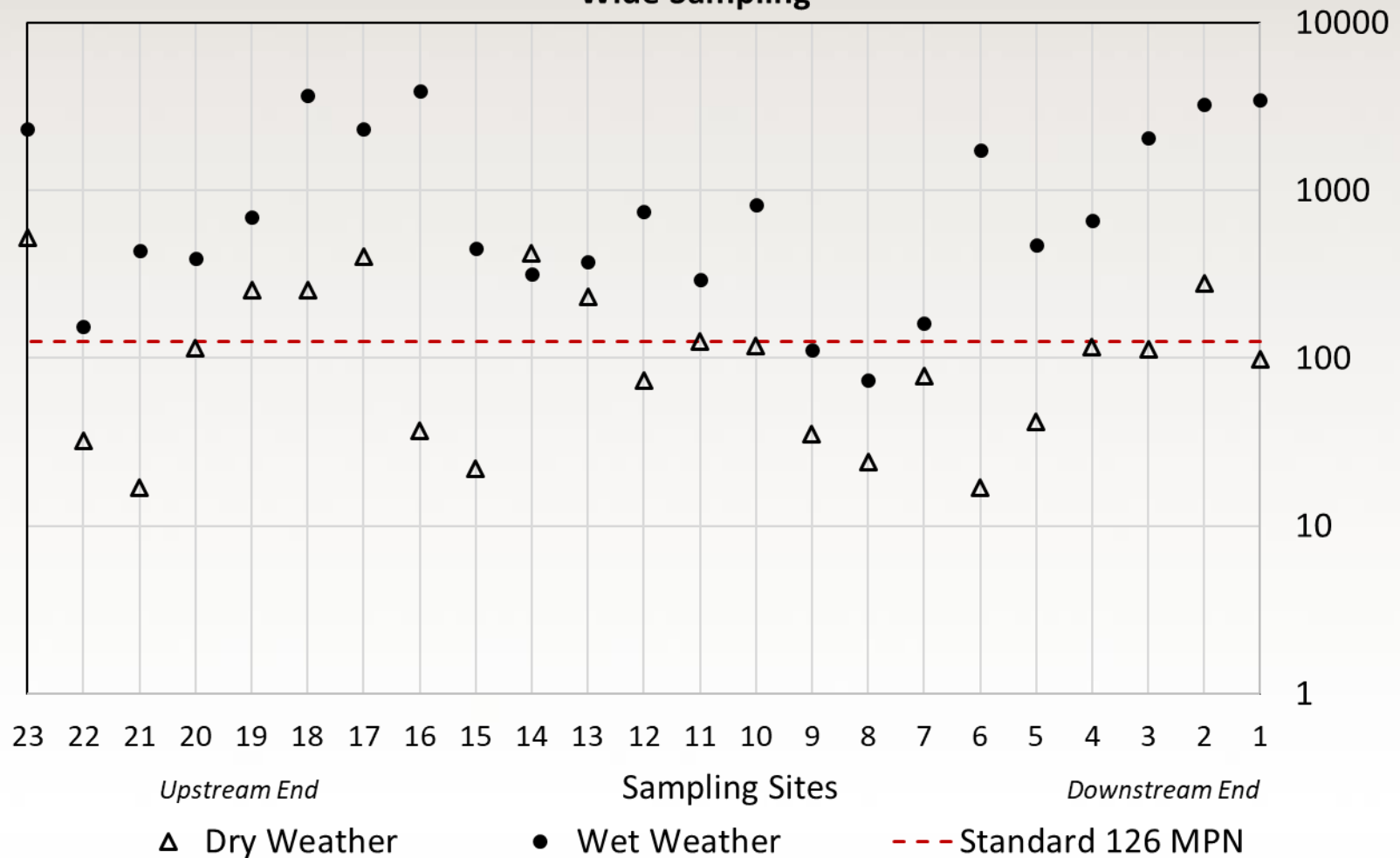


Wet Weather Photos



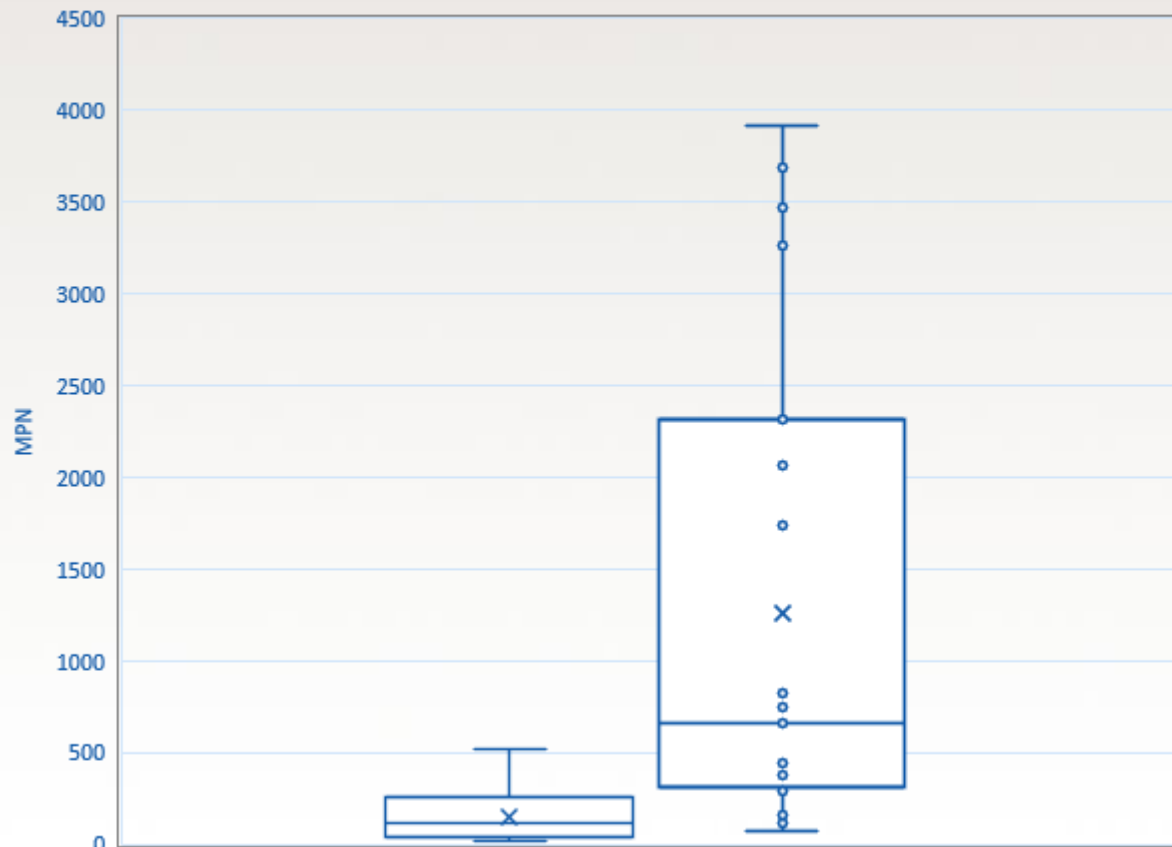
Dry and Wet Weather Sample Comparison

E. coli (MPN/100 mL) Results from Dry and Wet Weather Study Area
Wide Sampling



Dry and Wet Weather Sample Comparison

White Rock Creek *E. coli* Results
Dry Weather vs Wet Weather
(All Sites Combined)





Conclusions

- Likely both point and non-point sources
- Broken/leaking infrastructure can't be ruled out
 - This was not observed during sampling
- Findings from 121 to McDermott were transmitted to the City of Plano
- Wildlife on golf courses are likely significant contributors during wet weather
 - BST required to confirm
- Not all studies have the desired outcome