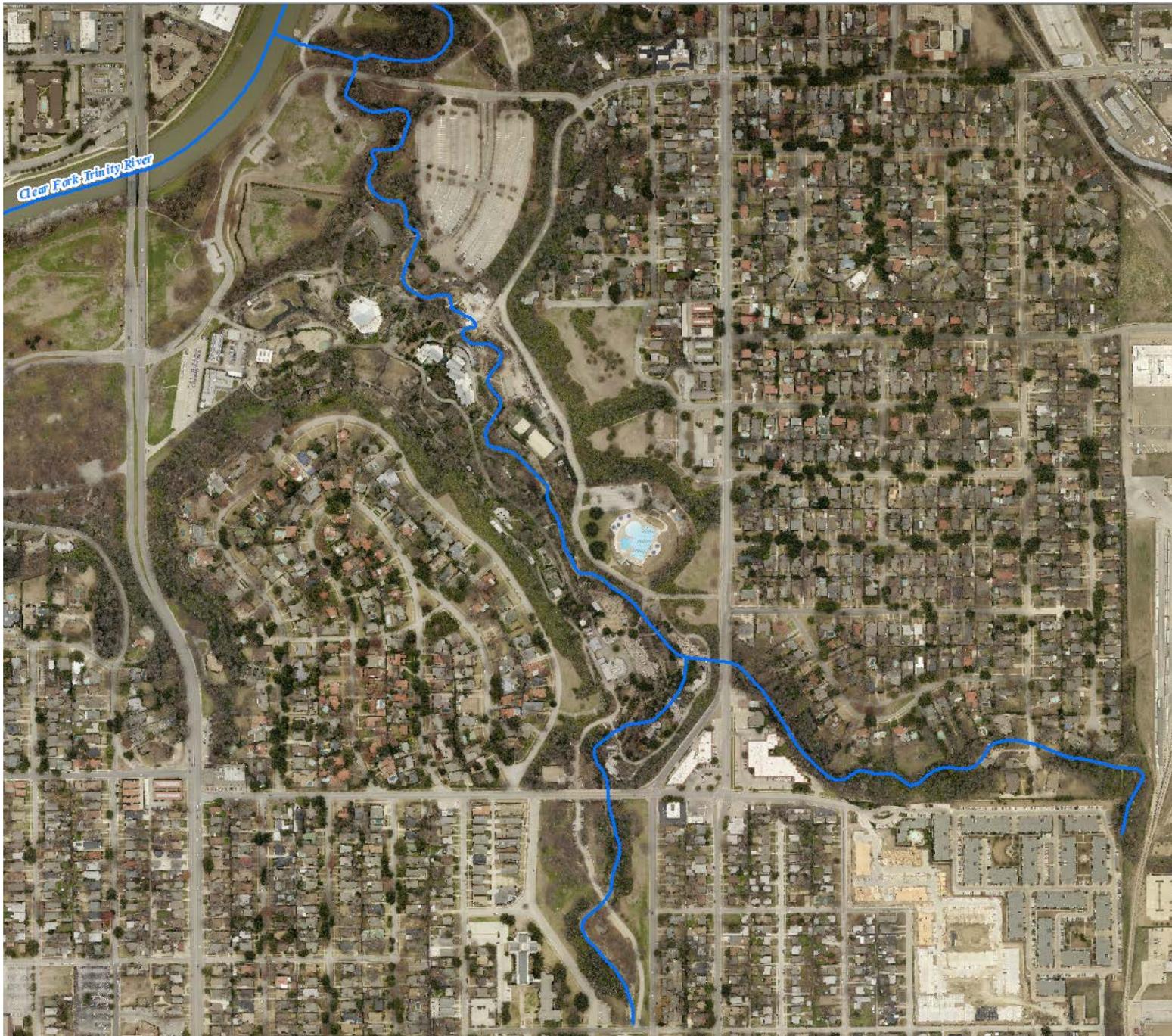
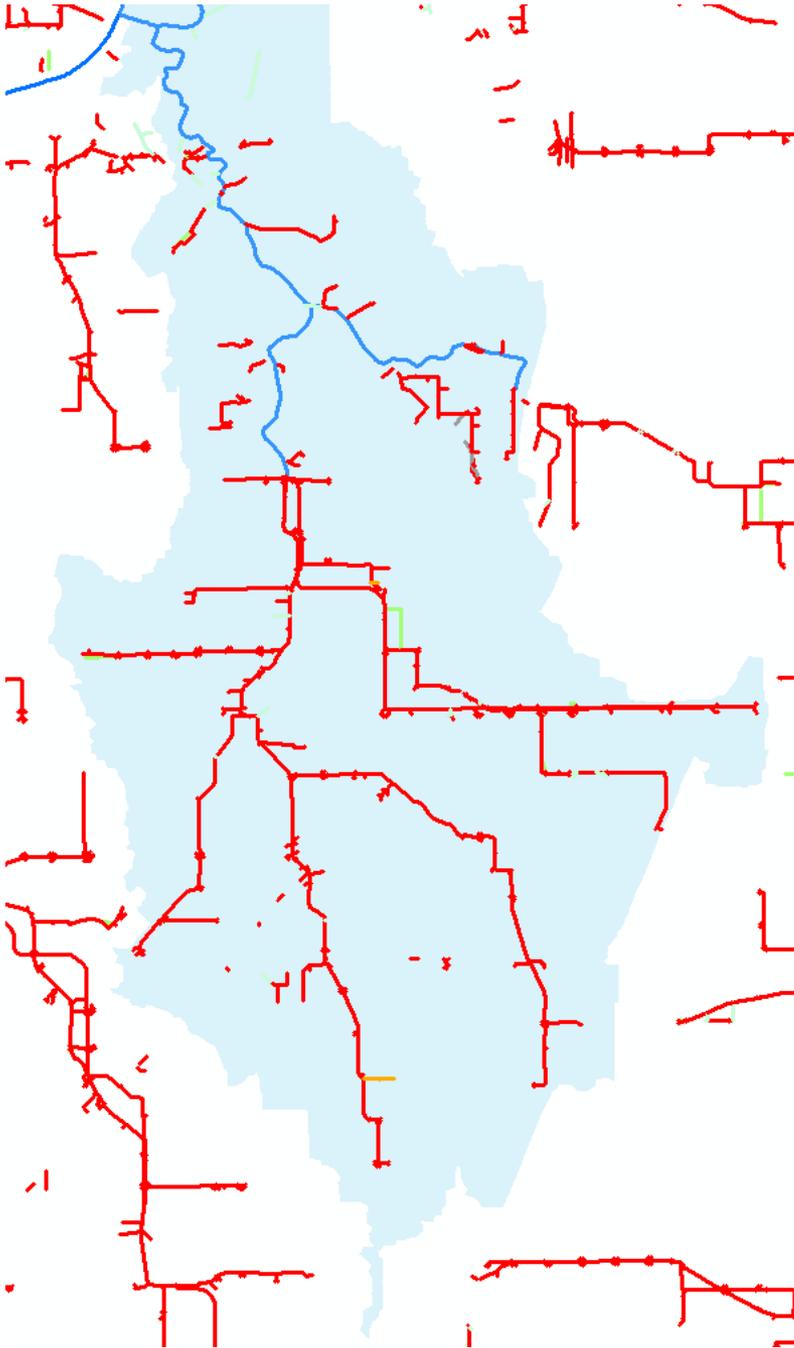




Zoo Creek
City of Fort Worth
2016





- Approximately 1,247 acres
 - 65 of those are Zoo
- 50 Outfalls
- 397 Inlets

Bacteria

- Clear Fork downstream of Zoo Creek is sampled monthly for bacteria
 - Occasional uptick in bacteria
- Outfalls typically have flow through the area
- Bacteria results are higher than we'd like to see (2,000MPN/100mL)

Problem

- Where is the bacteria coming from?
 - Aging Infrastructure—some sanitary sewer pipes are from the 1920s
 - Cross connections
 - Wildlife and pets
 - University or schools
 - Zoo

Problem

- Cost
 - CCTVing is expensive
 - Bacteria source tracking is (slightly) expensive
 - We would only be able to source a few outfalls
- Time
 - A luxury we don't have

Solution

- Test for optical brighteners
 - Optical brighteners are found in laundry detergent, used to make your whites whiter and your brights brighter
 - When optical brighteners are present they will fluoresce under UV light

Solution

- Fluorometers
 - Slightly expensive (\$1k) and our budget was stretched thin...
 - Not to mention we needed answers quickly
- Tampons!!!!
 - Super cheap and readily available
 - We had a UV light and chamber for bacteria analysis

Solution

- Tampons are made of unbleached cotton or rayon
- Optical brighteners will glom onto the material
- If optical brighteners are present, the tampon will glow

Install



Results



Results



Questions?

