

ALERT Rain and Stream Gauges for Enhanced Storm Response



Project Summary



- Original gauge system became obsolete
- City obtained \$100K total in grant funding from two Department of Water Resources Flood Emergency Response Grants
- Contracted with WEST Consultants and High Sierra Electronics to perform the work – work completed in 2022
- Equipment included seven rain gauges, four stream gauges, and one base station
- Data hosted on Contrail web interface available to the public

Gauge Locations



Rain and Stream Gauge

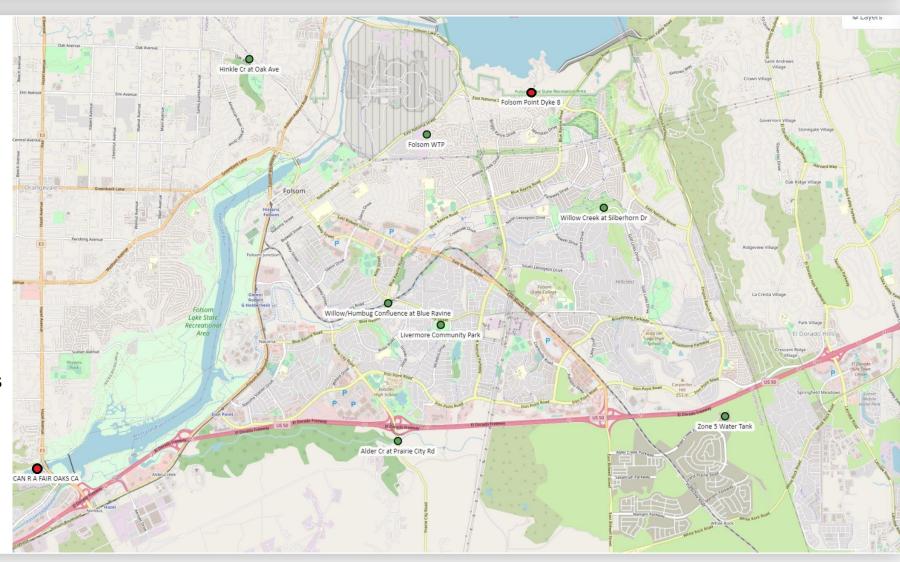
- Hinkle Creek at Oak Ave
- Willow Creek at Silberhorn Dr
- Willow / Humbug Confluence at Blue Ravine Rd
- Alder Creek at Prairie City Rd

Rain Gauge

- Water Treatment Plant
- Livermore Community Park
- Zone 5 Water Tank

Gauges Operated by Others

- Folsom Point Dyke 8 Rain Gauge (Bureau of Reclamation)
- American River at Hazel Ave Stream Gauge (State Parks)



Rain Gauge





Hinkle Creek at Oak Ave



• Livermore Community Park



Willow/Humbug Confluence

Stream Gauge





Alder Creek at Prairie City



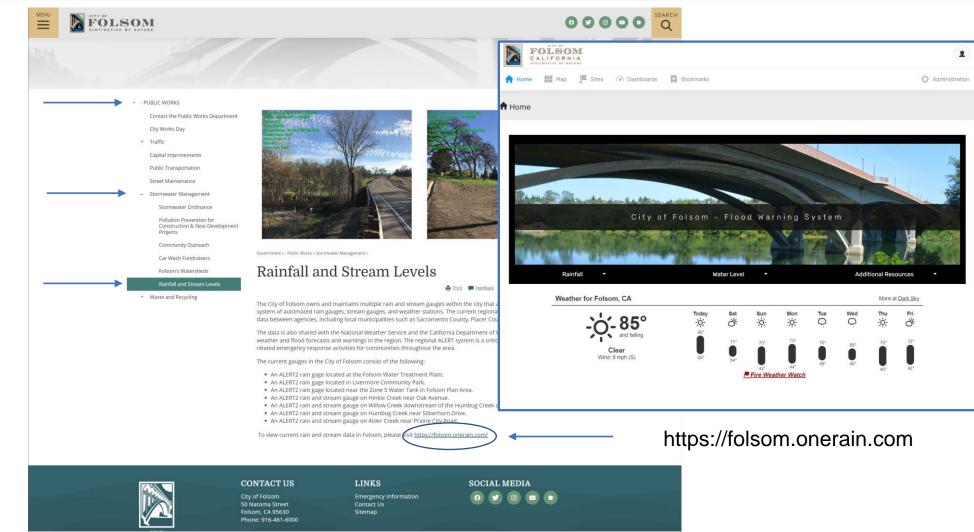
Hinkle Creek at Oak Avenue



Willow/Humbug Confluence

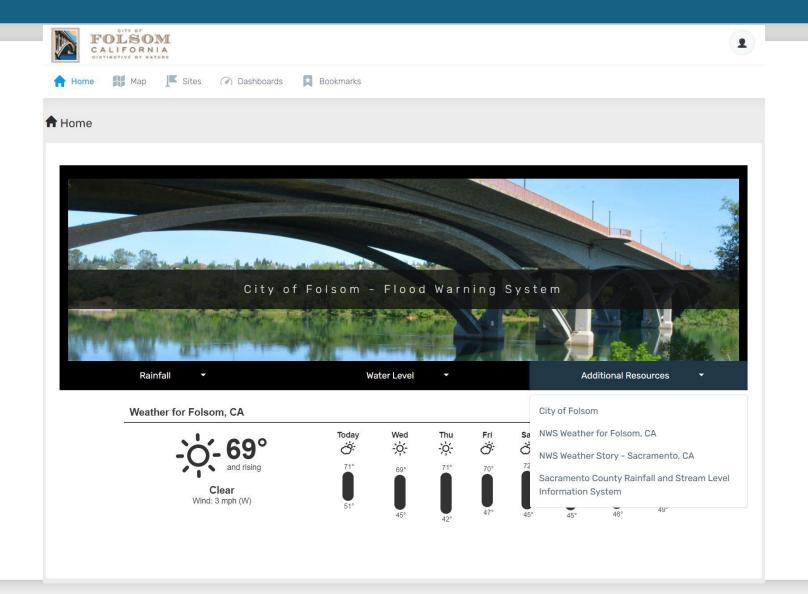
Website





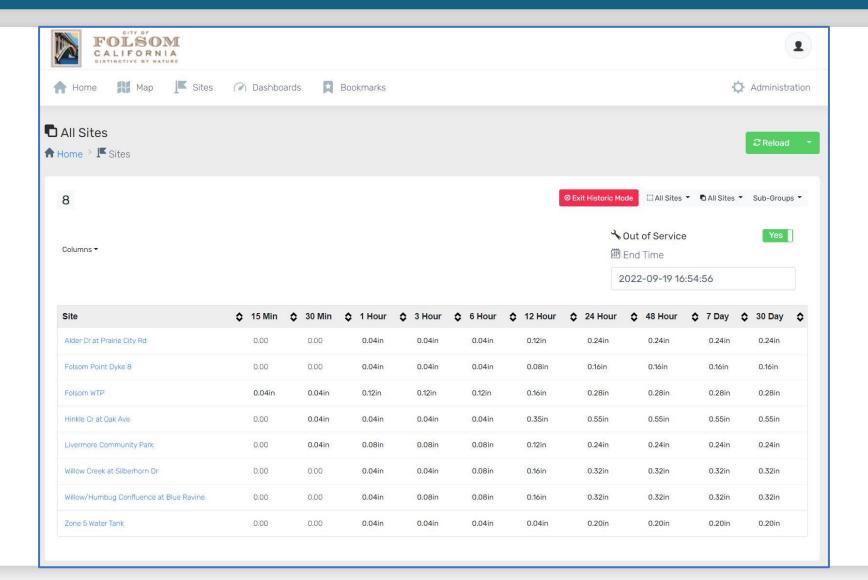
Website





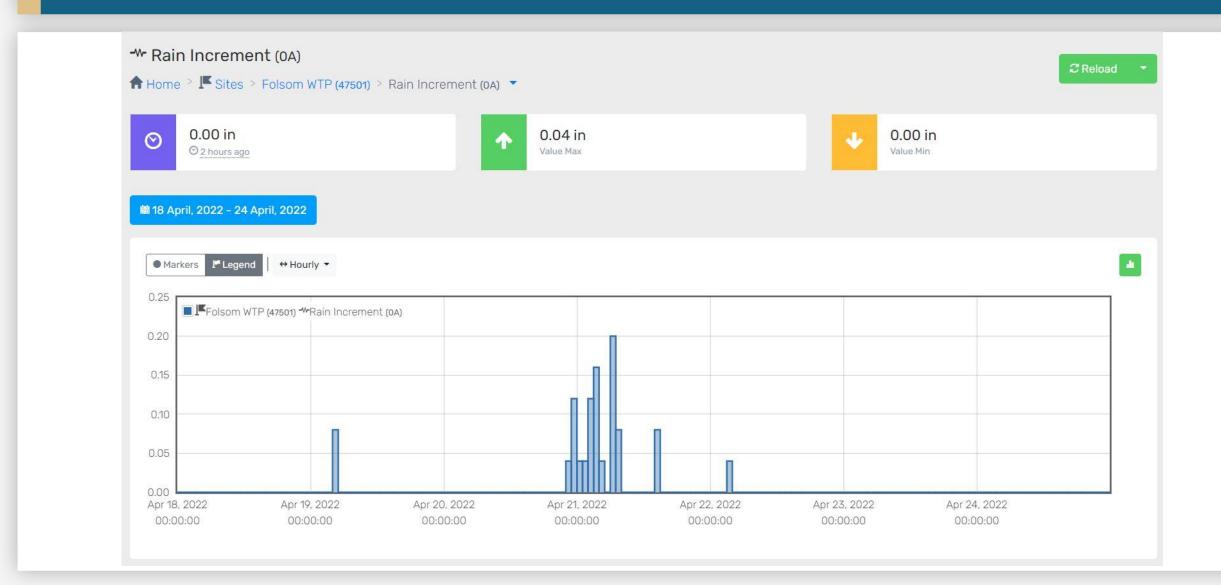
Data Collection – Rain Gauge





Data Collection – Rain Gauge





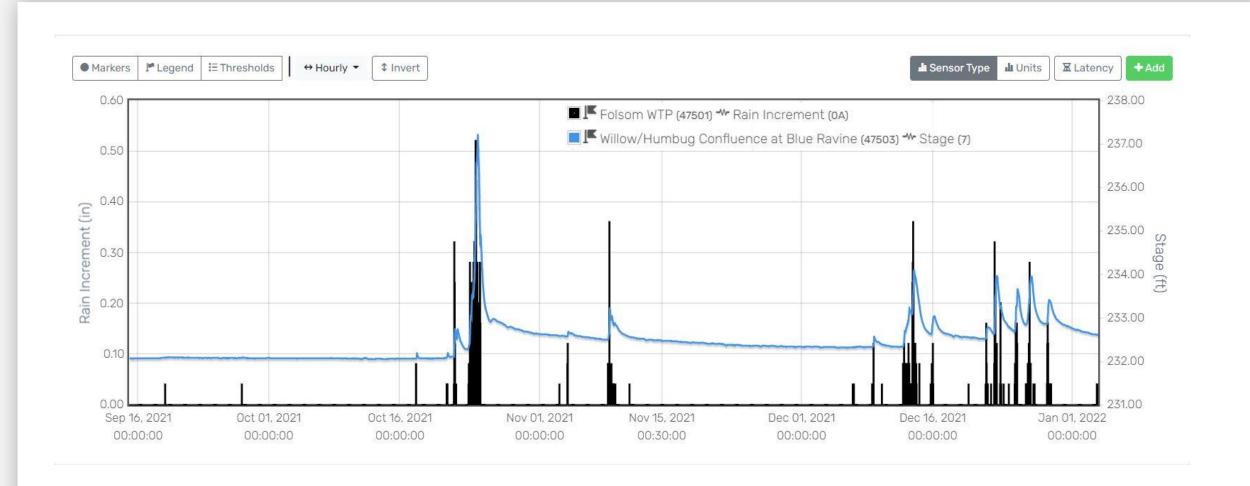
Data Collection – Stream Gauge





Analysis





Enhanced Storm Response

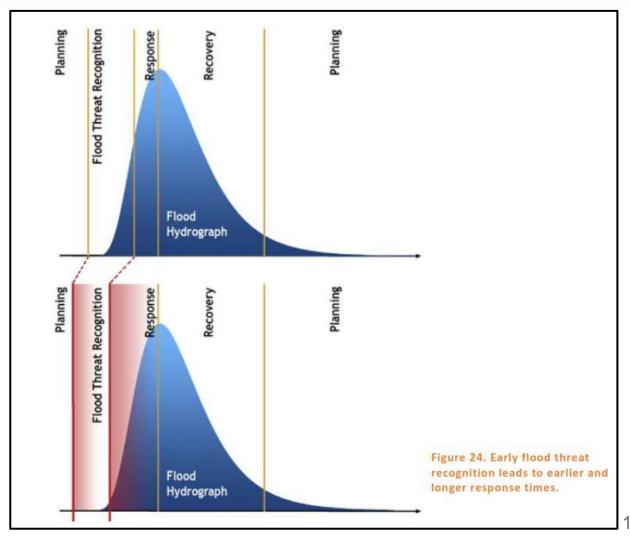


Pre-Storm Event

- Earlier recognition
- Automatic notifications to City staff
 - High water alerts
 - High intensity rainfall alerts

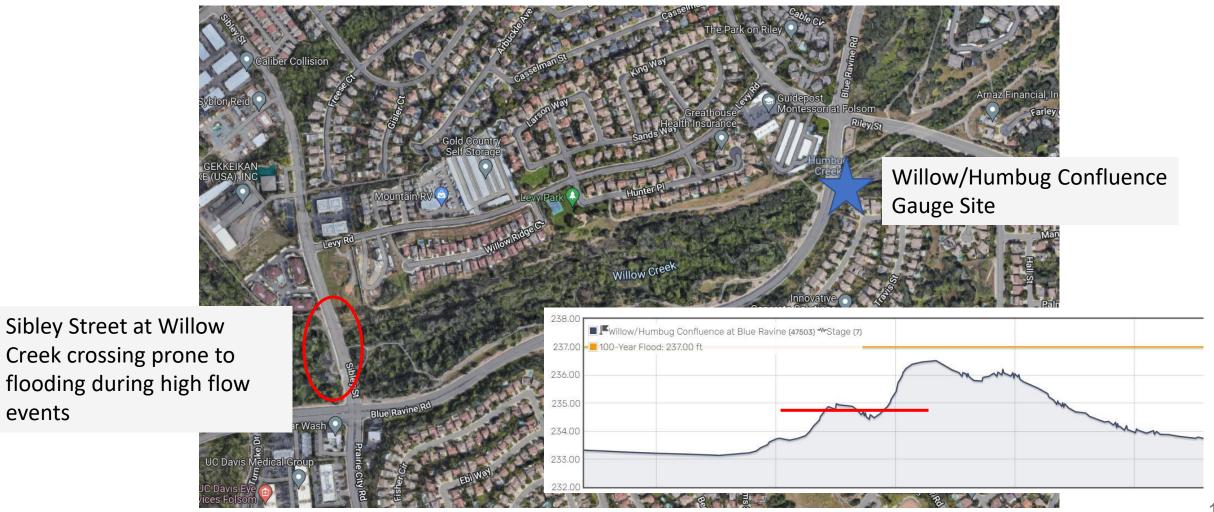
Post-Storm Event

- Correlate data to design storm events
- Establish additional thresholds



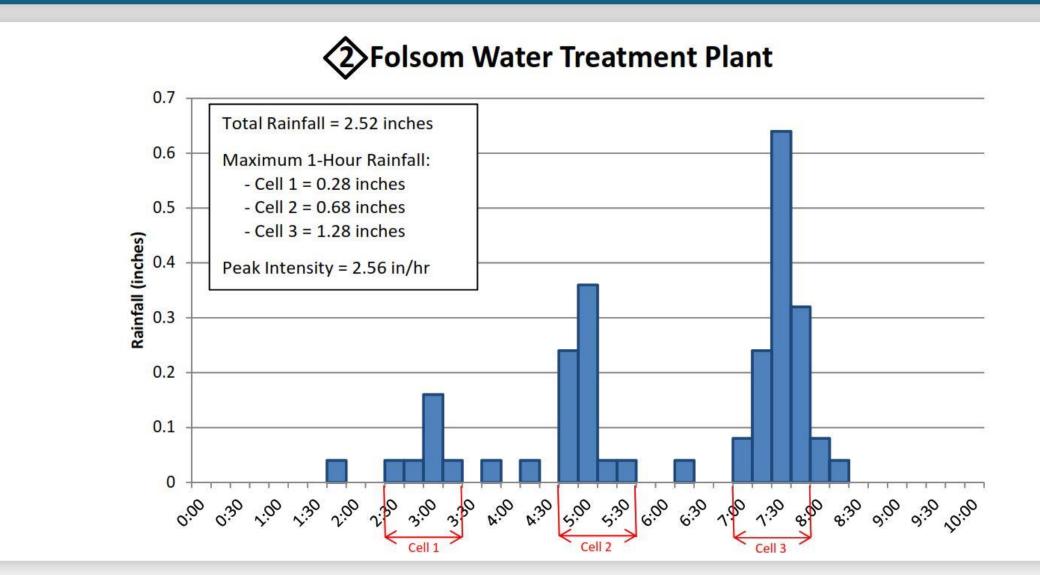
During Storm Example





After Storm Example





Questions?



