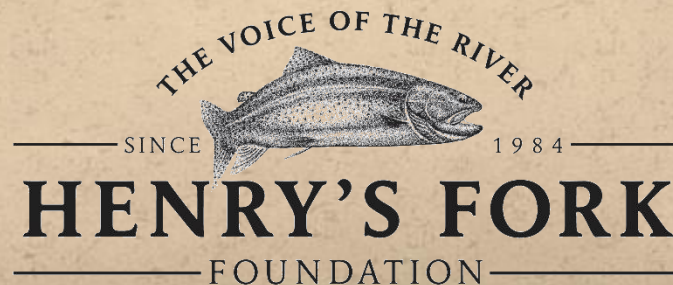


WIRE Project Update: Ashton Wastewater Treatment Plant assessment

Henry's Fork Watershed Council
October 13, 2015

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Henry's Fork Foundation



Goals of Assessment

Provide data and analysis of sufficient quantity and quality to assess receiving body:

1. Hydrology (intermittent vs. perennial)
2. Presence/absence of fish (if, when, where, species)
3. Evidence of aquatic life (if, when, where, type?)



Ashton WWTP Project Area



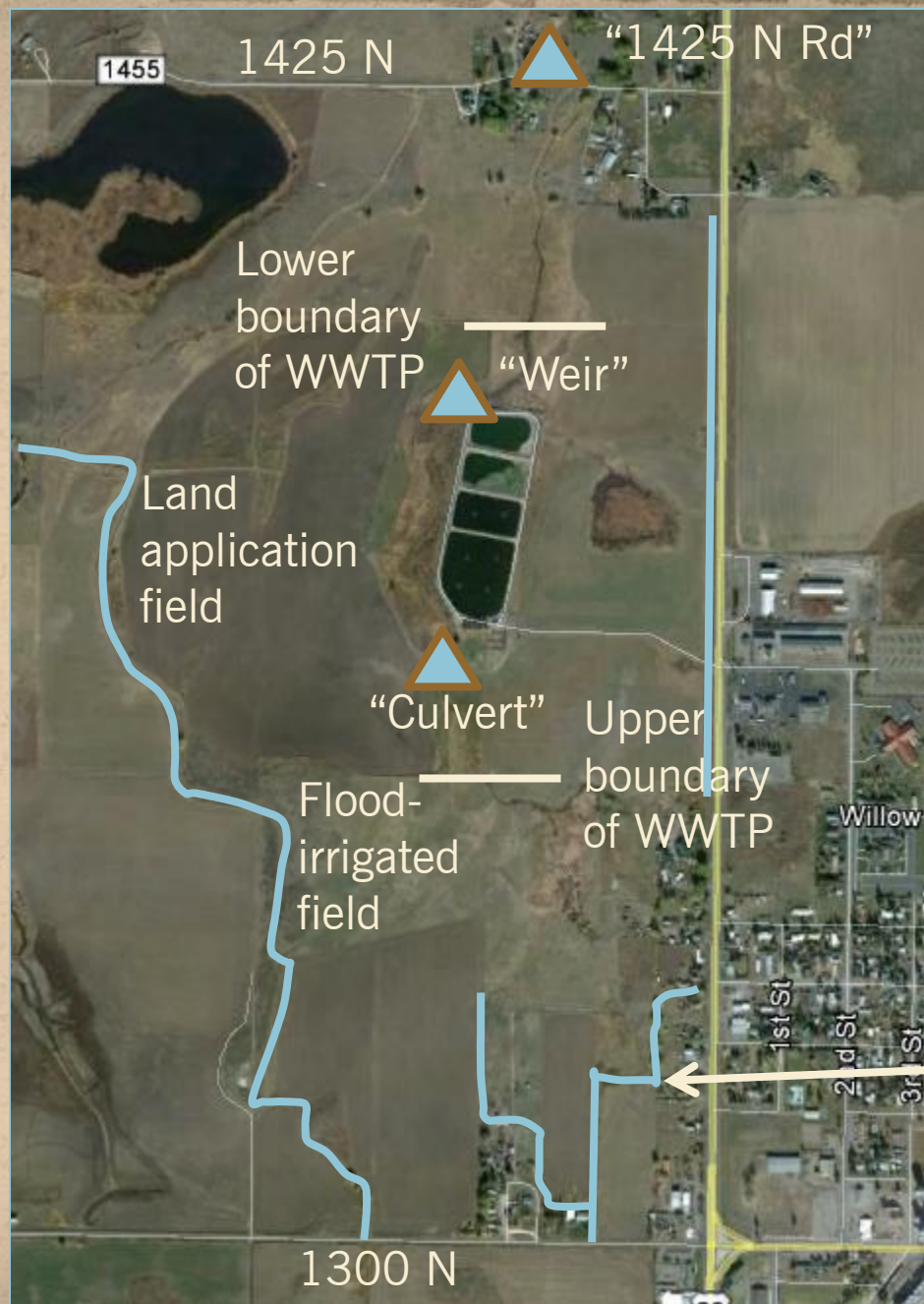
Discharge point



EPA photo, Sept. 2013
Plant not discharging

Gage
locations

Laterals of
Farmers Own
Canal

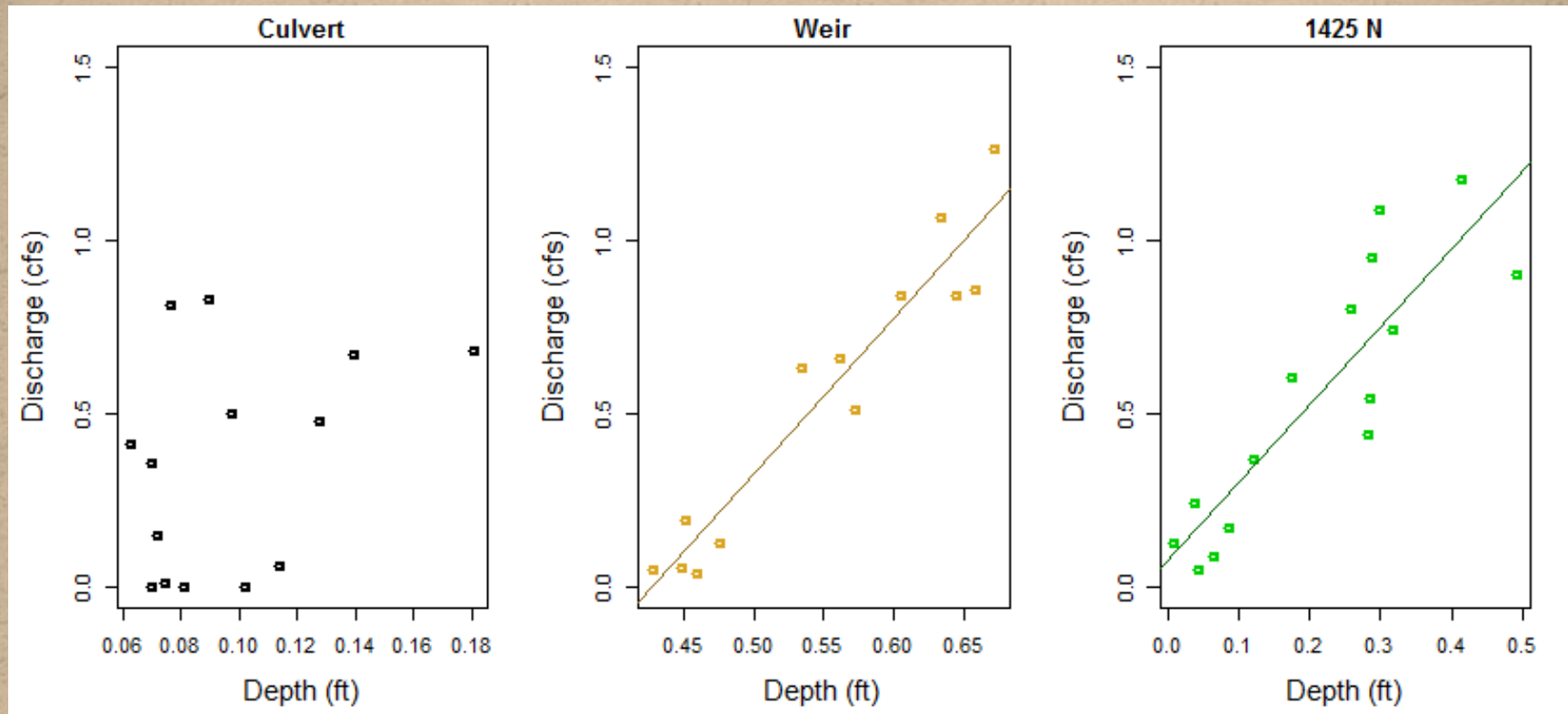


City storm
water enters
here via pipe

Activities to date

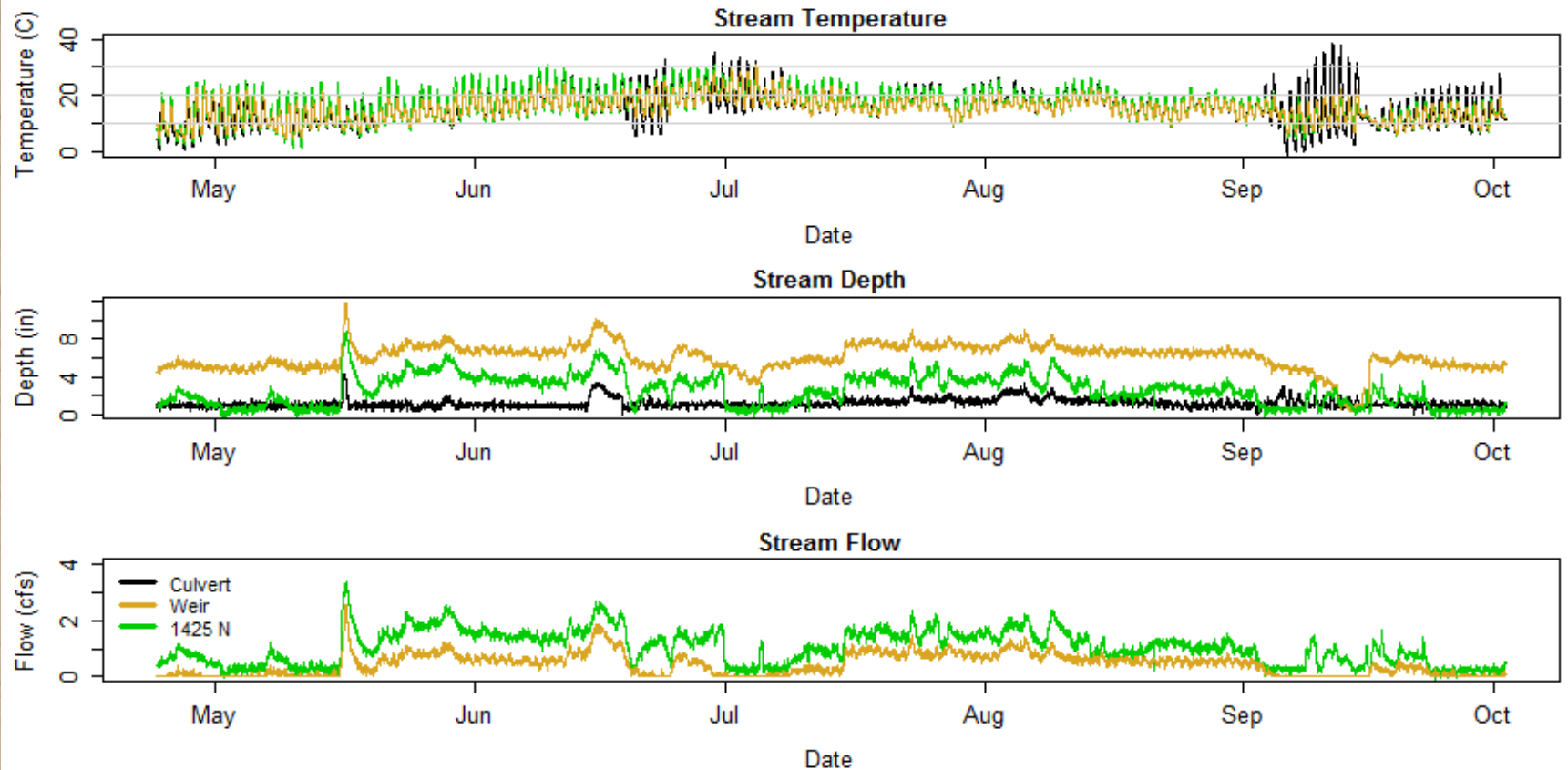
1. April 16: Walked swale (Advisory Committee, city's consulting engineer, city public works personnel)
2. April 23: Installed three water pressure and temperature recorders at culvert, weir and County Rd. 1425 N
3. May 1 – October 2: Measured flow every 1-2 weeks
4. Analyzed stage-discharge and temperature data
5. Surveyed vegetation, collected invertebrates, sampled substrate, and collected fish
6. Facility visited by Senator Crapo's staff (May 13) and state legislators (September 15)

Stage-discharge relationships



High water table early in the spring resulted in high water depth at zero discharge at culvert location, making it impossible to develop a stage-discharge relationship there.

Temperature, depth, and flow



- Water temperatures exceeded 20°C for much of summer.
- Water temperature very close to air temperature at culvert, because water was generally less than 2 inches deep.
- Flow influenced by stormwater runoff and upstream irrigation.

Seasonal changes at culvert: April - Oct



Seasonal changes at weir: Jan - Oct



Seasonal changes at County Rd: Mar - Sept



Substrate Samples



Upstream of culvert



Downstream of culvert



At weir



Downstream of weir

All gravel is from roads and lagoon dikes.

Other observations

1. Electrofishing was not feasible, but fish were observed on September 4 in a remnant pool, after irrigation had been cut. They were small Utah Chub, a warmwater species.
2. Vegetation was typical of wetlands, not riparian areas.
3. Except where gravel from road and dikes had rolled into channel, substrate was silt-sized particles derived from local top soil and organic matter.
4. Invertebrates were generally absent from substrate except near dike and roads, where some gravel was present.
5. Geology indicates that swale has carried water only in recent geologic time, since development of irrigation. There is no well defined channel connection between the swale and Spring Creek.