

Monitoring and Assessment Projects Overview

Clark County Public Works – Clean Water Division



Status and Trends Monitoring of Urban Streams in Clark and Cowlitz Counties in the Lower Columbian River Region (LCUS)

- The 2019 NPDES Permit states that Clark County will conduct regional urban streams status and trends monitoring in urban and urbanizing areas.
- Ecology will reimburse Clark County a total of \$469,678 through July 31, 2024 to complete all associated project tasks.
- This monitoring is funded by Phase I and II Municipal Stormwater Permittees in Clark and Cowlitz Counties.
- Clark County is required to contribute \$54,496 annually for the project from August 2020 through July 31, 2024.
- This agreement allows Clark County to recover those costs while acting as Ecology's contractor to complete the project.

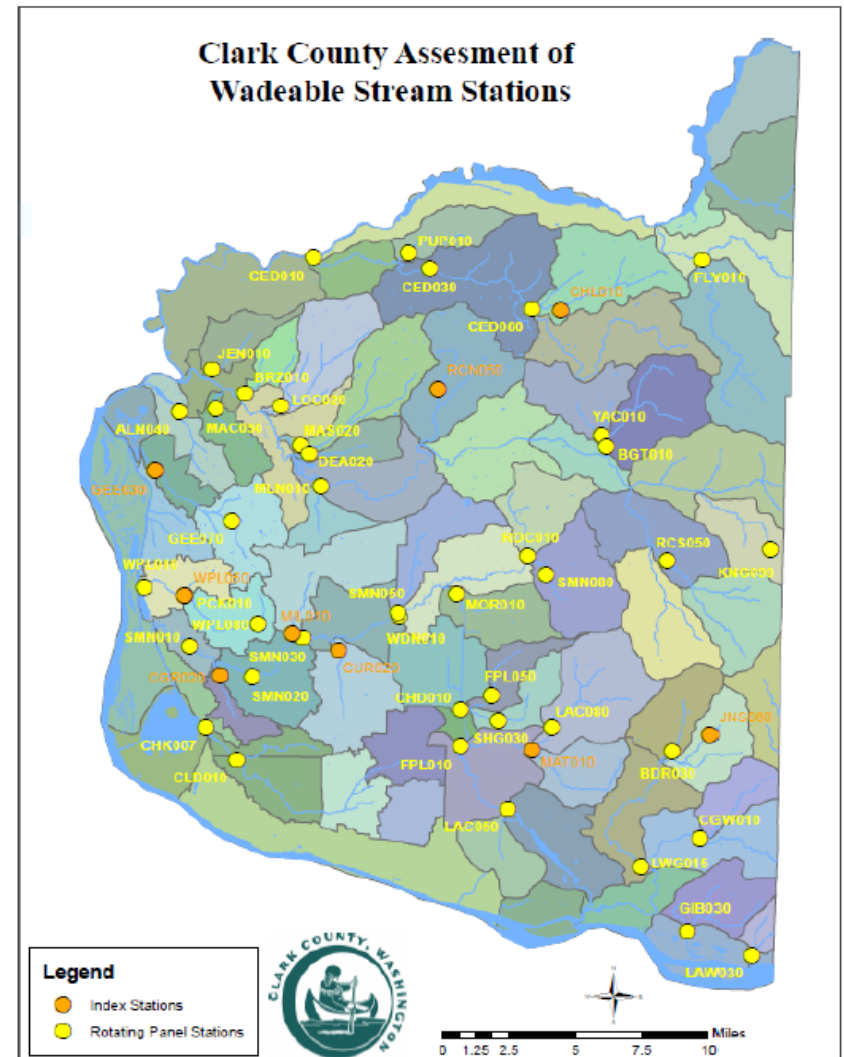


- 5 Trend monitoring stations
- 3 – 4 Status monitoring stations a year
- Continuous stage
- Continuous stream temperature
- Continuous conductivity
- Habitat monitoring
- Macroinvertebrates
- Water quality



Clark County Wadeable Streams

- 9 Index monitoring stations
- 9 – 11 Rotating Panel monitoring stations
- Monthly water quality parameters
- Macroinvertebrates
- OWQI scores calculated
- BIBI Scores
- Data analysis will be used for the upcoming stream health report that will be incorporated into Story Map

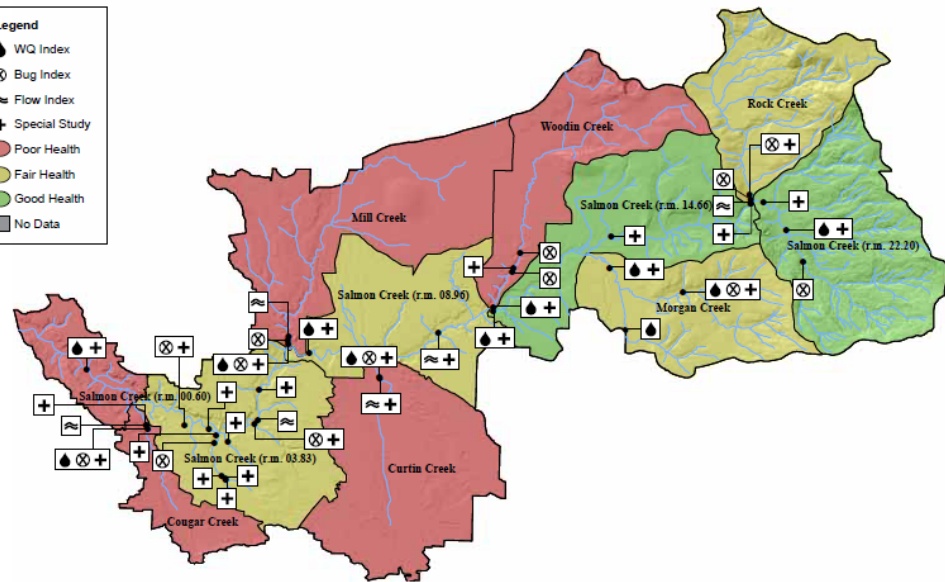
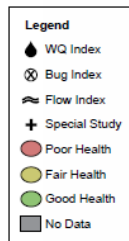


Clark County Wadeable Streams

- Update the 2010 Stream Health Report

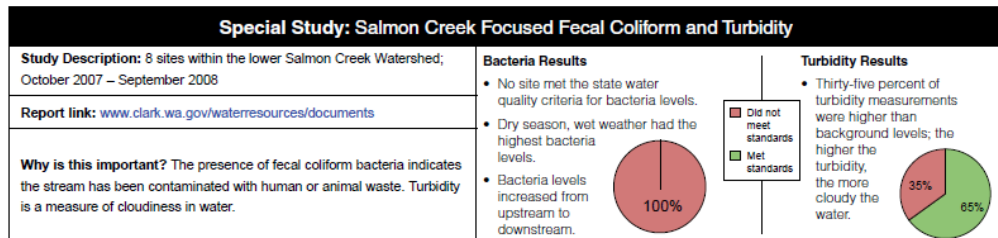
Salmon Creek Watershed: Stream Health

| Subwatershed | Water Quality | Biological Health | Flow | Subwatershed Rating |
|---------------------------|---------------|-------------------|------|---------------------|
| Mill Creek | ● | ● | ● | ● |
| Cougar Creek | ● | ● | ● | ● |
| Salmon Creek (r.m. 03.83) | -- | ● | ● | ● |
| Salmon Creek (r.m. 08.96) | ● | -- | ● | ● |
| Salmon Creek (r.m. 14.66) | ● | -- | ● | ● |
| Curtin Creek | ● | ● | ● | ● |
| Woodin Creek | ● | ● | -- | ● |
| Rock Creek | -- | ● | -- | ● |
| Morgan Creek | ● | ● | -- | ● |
| Salmon Creek (r.m. 22.20) | ● | ● | ● | ● |
| Salmon Creek (r.m. 00.60) | ● | -- | -- | ● |
| Indicator Rating | ● | ● | ● | |
| Overall Watershed Rating: | | | | Fair ● |



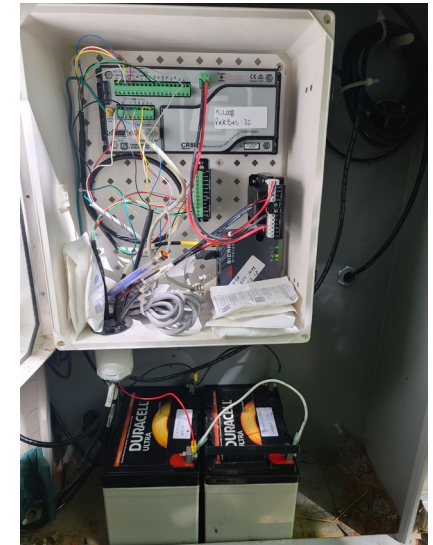
Score Summary:

- Ratings range from poor to good
- Poor water quality and biological health ratings are common in areas where development is most prevalent
- This watershed includes some of the most healthy, and least healthy, streams in Clark County
- Local jurisdictions are implementing a state Water Cleanup Plan for bacteria, turbidity, and temperature



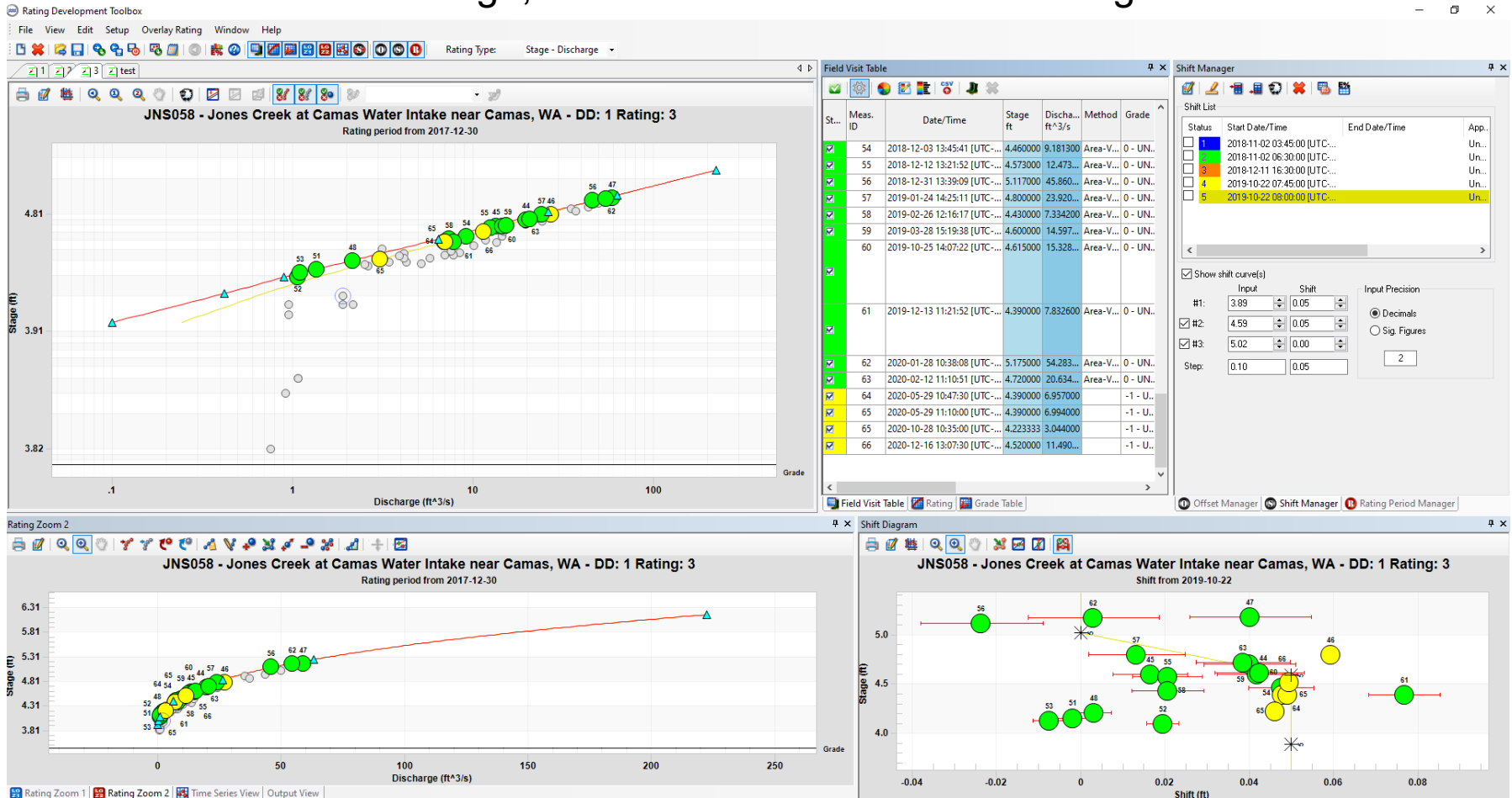
Hydrology

- Continuous stage
- Continuous stream temperature
- Streams include: Mill Creek, Cougar Creek, Jones Creek, Whipple Creek (upper and mid), Packard Creek
- 6 rain gauges throughout the county



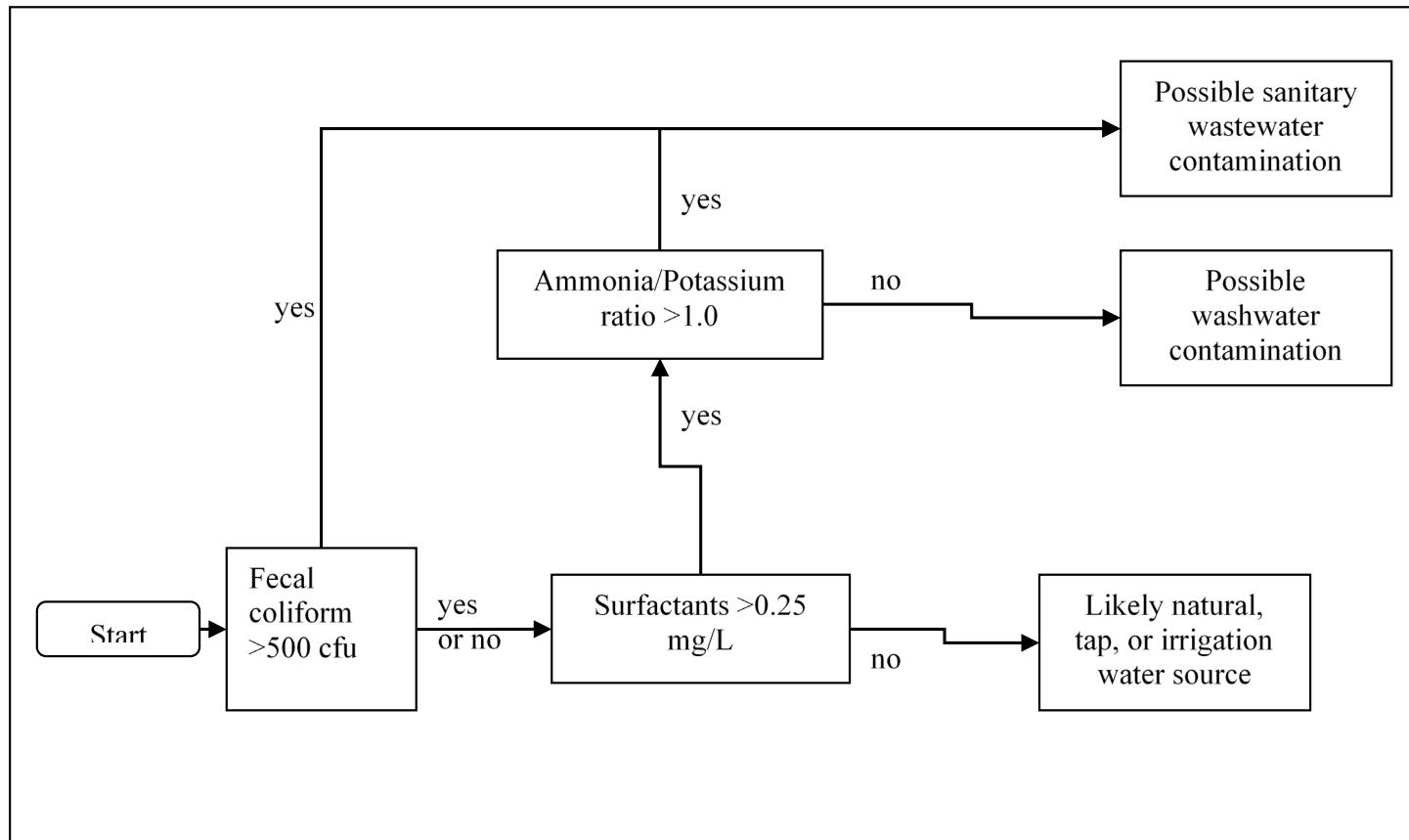
Hydrology

- From continuous stage, we calculate continuous discharge



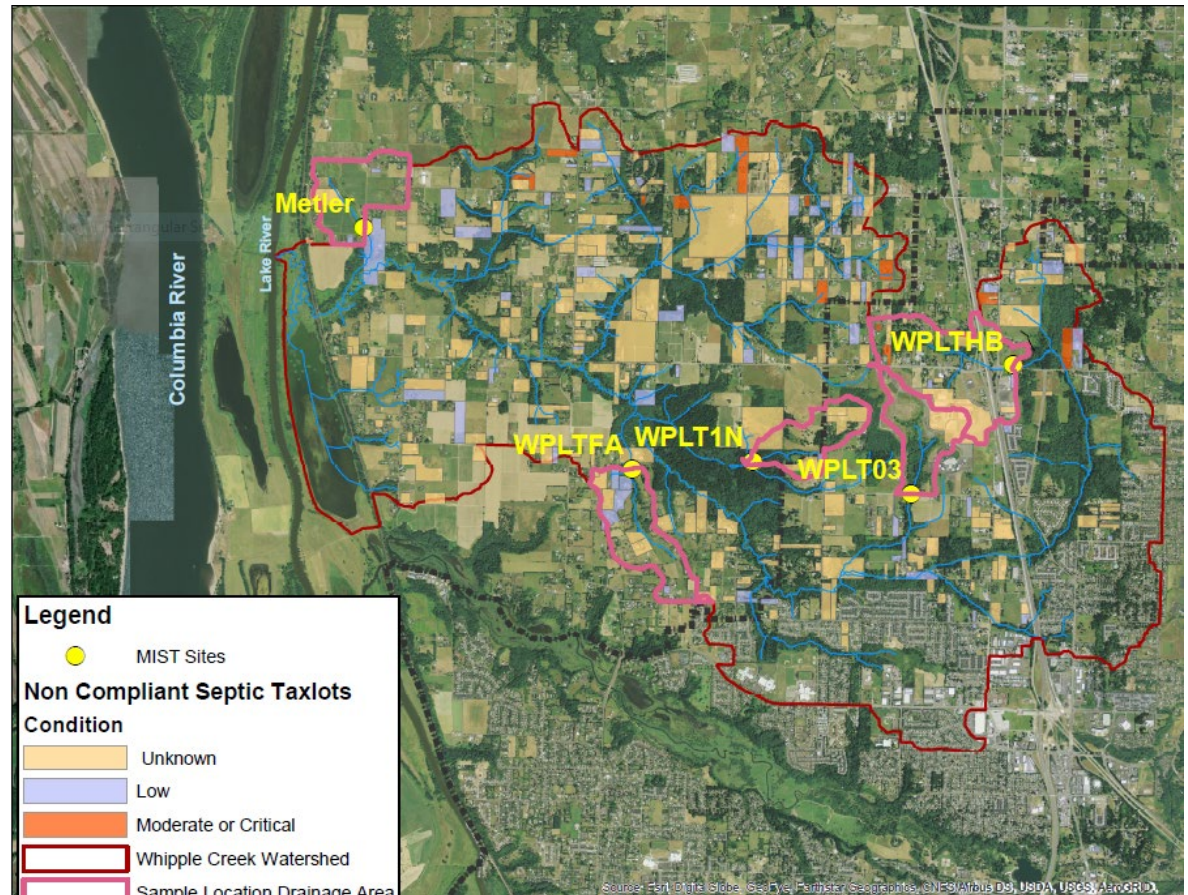
Illicit Discharge Detection and Elimination Screening (IDDE)

- Conducted in the dry season to find and remove non-stormwater discharges.
- IDDE also supports CWDs Source Control efforts.



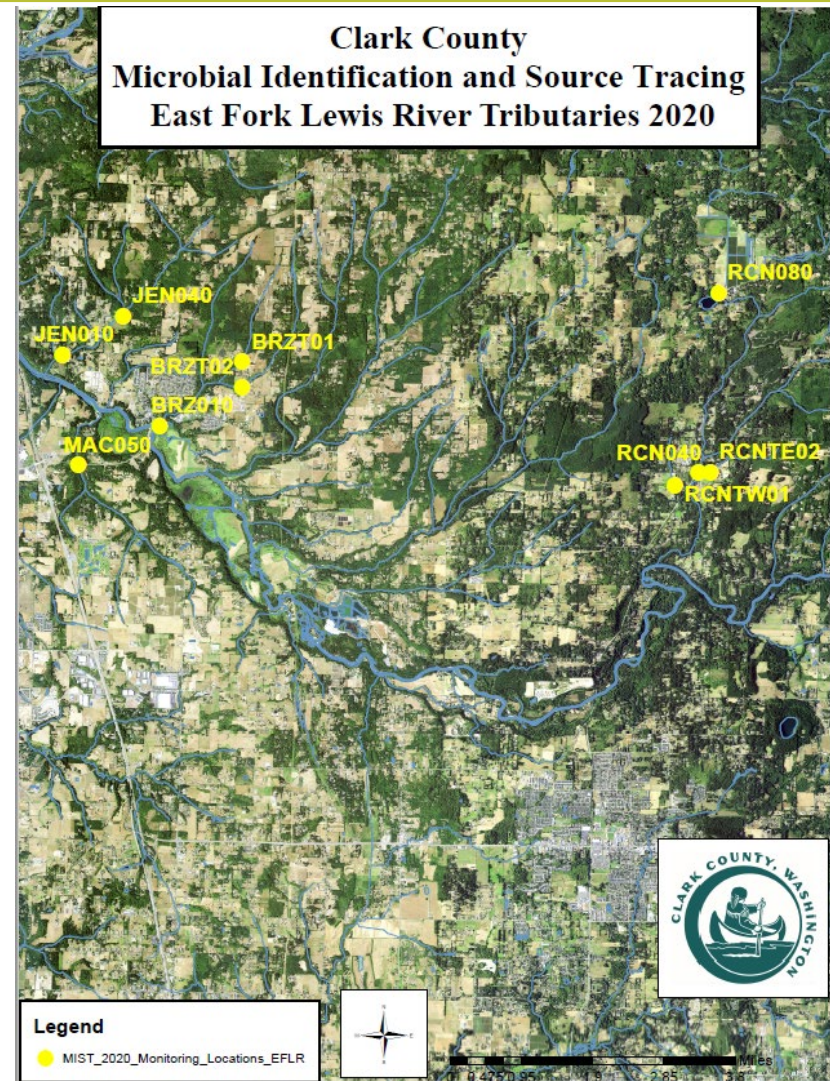
Microbial Source Tracking (MST) Whipple Creek

- Known FC issues
- Land use analysis
- Septic tank compliance analysis
- Human DNA was found at all monitoring sites
- Dog DNA was found at all monitoring sites
- Beaver DNA was only found at one site.
- All sample locations had higher than background Optical Brightener values
- Results Support Public Health



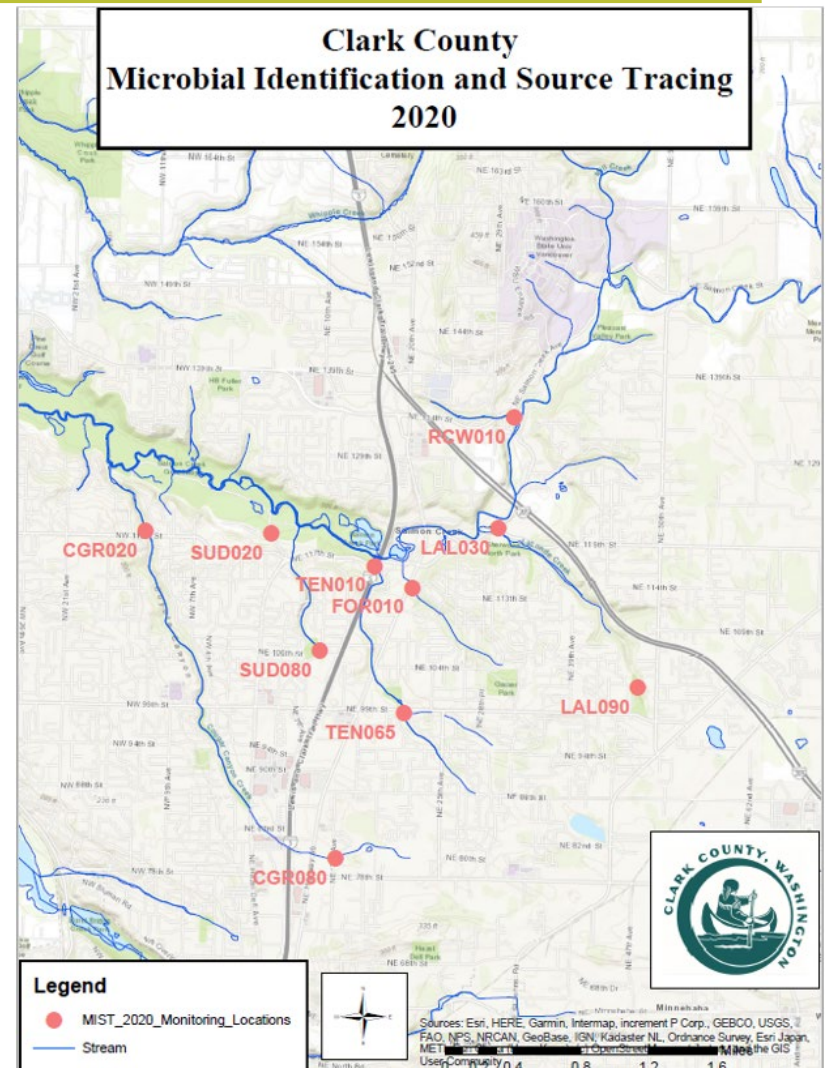
MST

- East Fork Lewis River tributaries
- All sample locations had Human DNA
- All sample locations had Dog DNA
- All sample locations had higher than background Optical Brightener values
- Results Support East Fork Lewis TMDL Alternative
- Future MST sampling will support the Poop Smart Clark Ecology funded grant



MST

- Monitoring plan was a follow up from the 2009 Salmon Creek Focused Assessment report by CWD
- Known FC issues
- All sample locations had Dog DNA
- All but one sample location had higher than background Optical Brightener values
- Results Support Salmon Creek TMDL and CWD Canines for Clean Water



Grants

- Schriber Reforestation Project
- Total cost is \$217,693
- Awarded \$163,270
- Restoration of 13.23 acres
- Revegetation of 3,500 feet along the south bank of the East Fork Lewis River
- 17,920 native trees and shrubs will be planted
- Project supports East Fork Lewis River TMDL Alternative



- Heritage Farm Wetland Restoration
- Total cost is \$1,425,468
- Awarded \$500,000
- Restoration of 6 acres of wetland
- Establish 2.7 acres of riparian buffer
- Project supports Salmon Creek Temperature TMDL



Partnerships

- LCUS (Ecology, Cowlitz County, Cities of Battleground, Washougal, Camas and Vancouver)
- East Fork Lewis River TMDL Alternative (Ecology)
- Salmon Creek Temperature TMDL (Ecology)
- Lacamas Creek Fecal Coliform study (Ecology)
- Poop Smart Clark (Clark Conservation District)
- Jones Creek hydrology monitoring (City of Camas)
- MST (City of LaCenter)
- MST (Clark County Public Health)
- Monitoring Resource Center (Clark County Public Health, Public)
- East Fork Lewis River Partnership
- Education and Outreach (CWD)
- Source Control (CWD)
- Data Requests (Public)

