

East Fork Lewis River  
**Partnership**  
for clean water





**Thank You!**  
**City of La Center**

# Introductions

- Name & Organization



Is this your first East Fork Lewis River Partnership meeting?



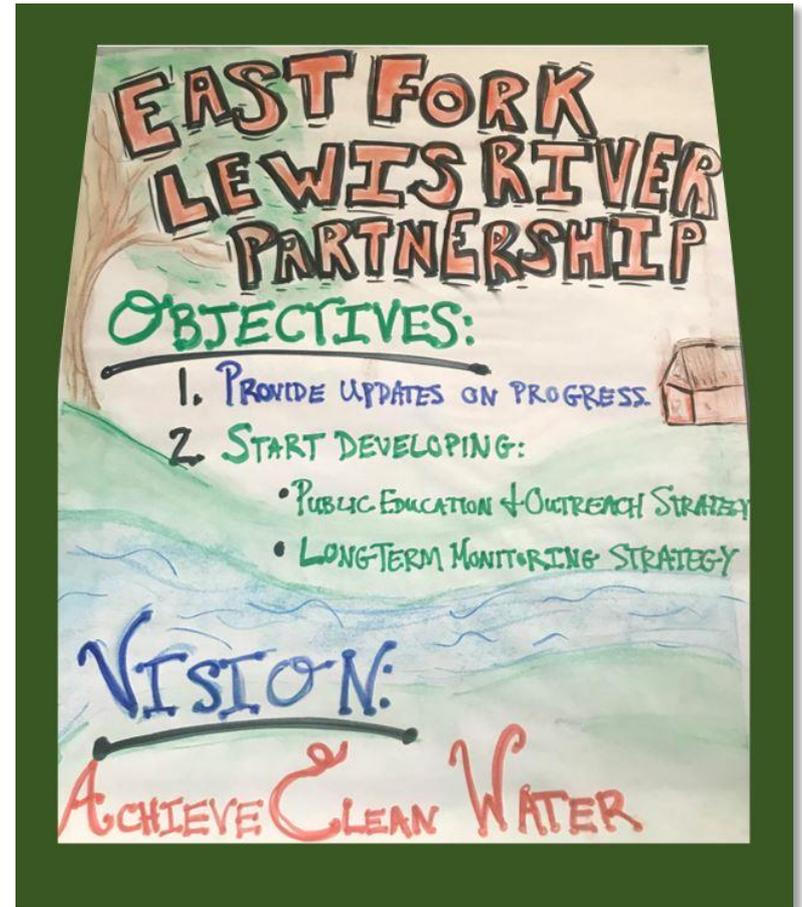
# Objectives

- **To receive updates on projects and programs in the East Fork Lewis River.**
- **To start discussing public education and outreach, and long-term monitoring strategies.**



# Agenda

1. Progress – 2018 in Review
2. Recovery Plan  
Programmatic Review
3. Temperature Updates
4. Bacteria Updates
5. Combined Water Quality  
Funding Update
6. Facilitated Discussion
7. Report Out & Next Steps



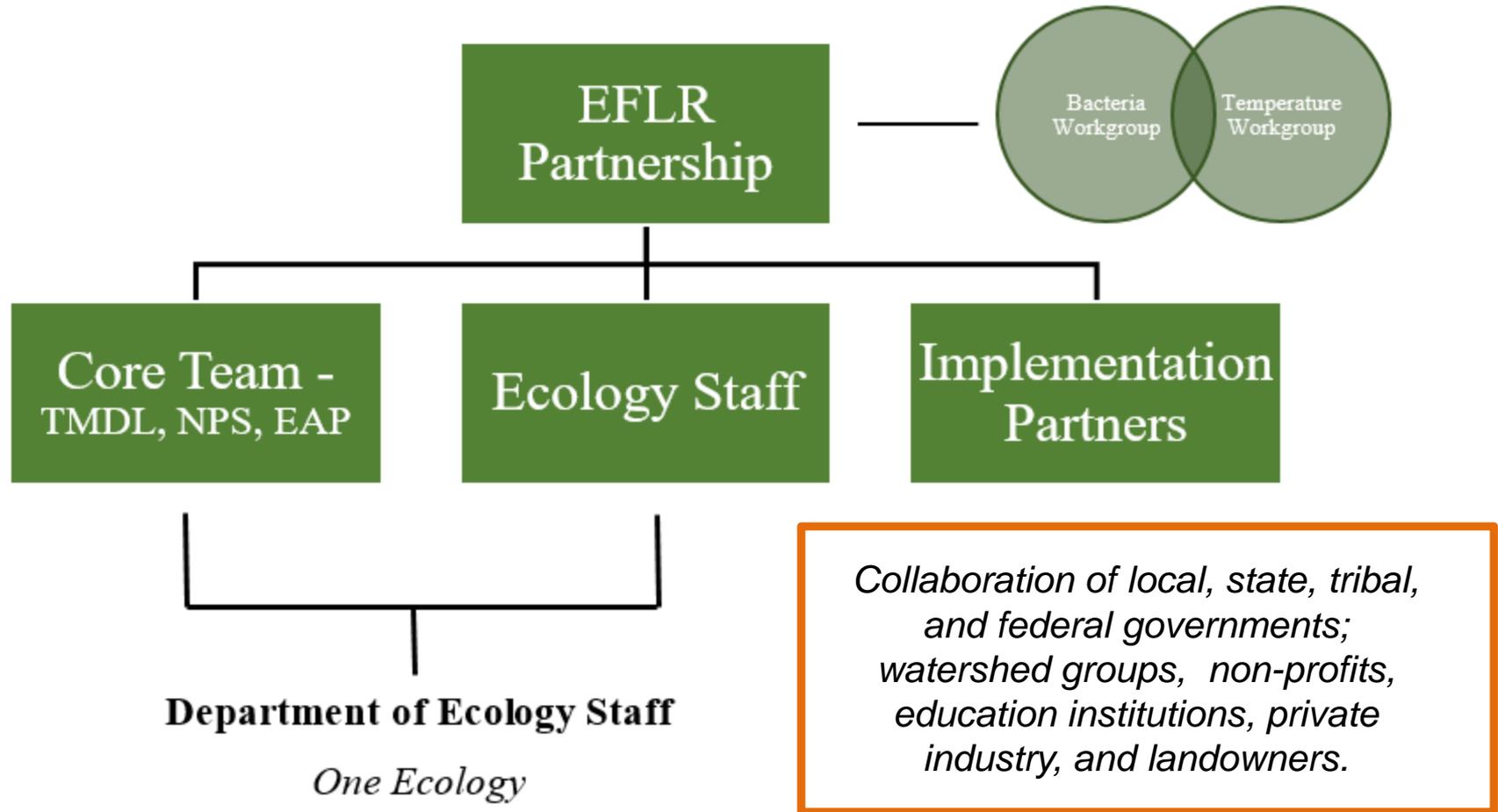


# Progress in 2018

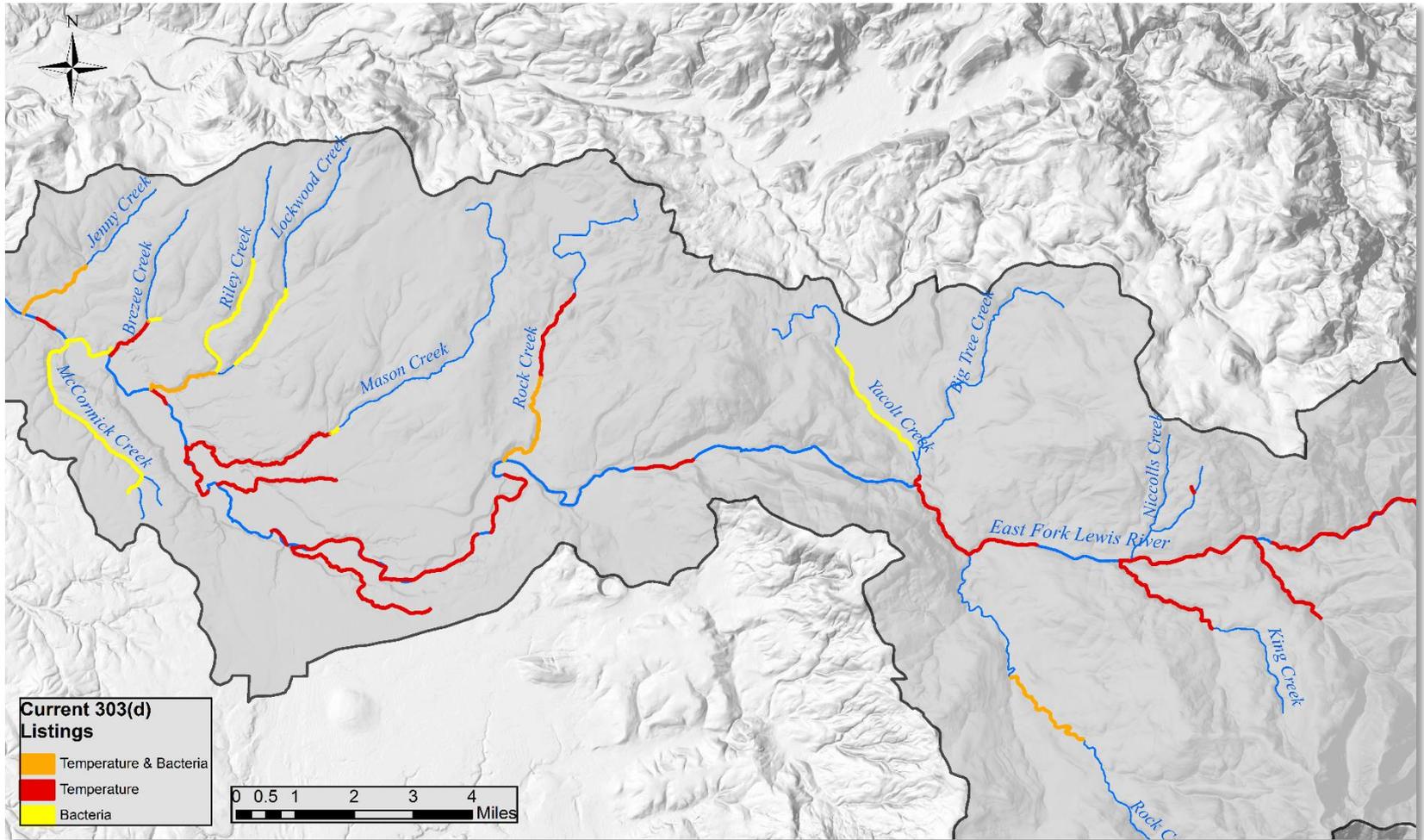
## Water Cleanup Plan Update



# East Fork Lewis River Partnership



# Impairments



# Characterizing the Watershed

- **History**
  - 2005-2006 Initial Monitoring
  - 2017 Monitoring (FC Only)
  - 2018 Source Assessment
    - Analyzed Water Quality Data
    - Created Watershed Inventory
    - Identified Critical Areas
    - Implementation Recommendations



**East Fork Lewis River Watershed  
Bacteria and Temperature**

**Source Assessment Report**



May 2018

Publication No. 18-03-019



# Kickoff Meeting Recap

**47** Partners from  
**28** organizations  
came to the first  
meeting!



# Goals

- 1. Develop plan to address bacteria and temperature impairments.**
- 2. Meet water quality standards (WQS) and support all beneficial uses in watershed.**
- 3. Strengthen watersheds eligibility for funding.**
- 4. Strengthen partnerships.**
- 5. Support existing projects and plans.**
- 6. Provide technical assistance and resources to partners.**



# **East Fork Lewis River TMDL Alternative**

## **9 Element Watershed Plan**



- 1. Identify Critical Areas**
- 2. Identify Solutions**
- 3. Design an Implementation Program**
- 4. Estimate Resources Needed**
- 5. Develop a Timeline**
- 6. Implement Watershed Plan**
- 7. Adaptive Management - Measure Progress and Make Adjustments**
- 8. Public Education and Outreach**
- 9. Long-term Monitoring**



# Progress

- **Bacteria Workgroup**
- **Temperature Workgroup**
- **Private Landowner Technical Assistance Meeting**
- **Multiple one-on-one meetings**



# Kickoff Meeting Recap

- **Source Assessment Report**
- **Partner Presentations**
  - Clark County Legacy Lands Program & Columbia Land Trust
  - Clark County Public Works
  - Lower Columbia Estuary Partnership
  - Washington State University Extension
  - Clark Conservation District
  - Department of Ecology Grant Program
- **Facilitated Discussion: Getting to Clean Water**



# Kickoff Meeting Recap

## What did we learn?

- **Challenges**

- Funding availability.
- Funding for projects on private properties.
- Contacting private landowners.
- Landowner engagement and willingness.
- Urban Development.

- **Needs**

- More collaboration and partnership between agencies, non-profits, and private landowners.
- Outreach and community building.
- Education for developers and homeowners, private landowners.
- Develop common strategy for EFLR.
- Connect environment to economy.



# Temperature Workgroup

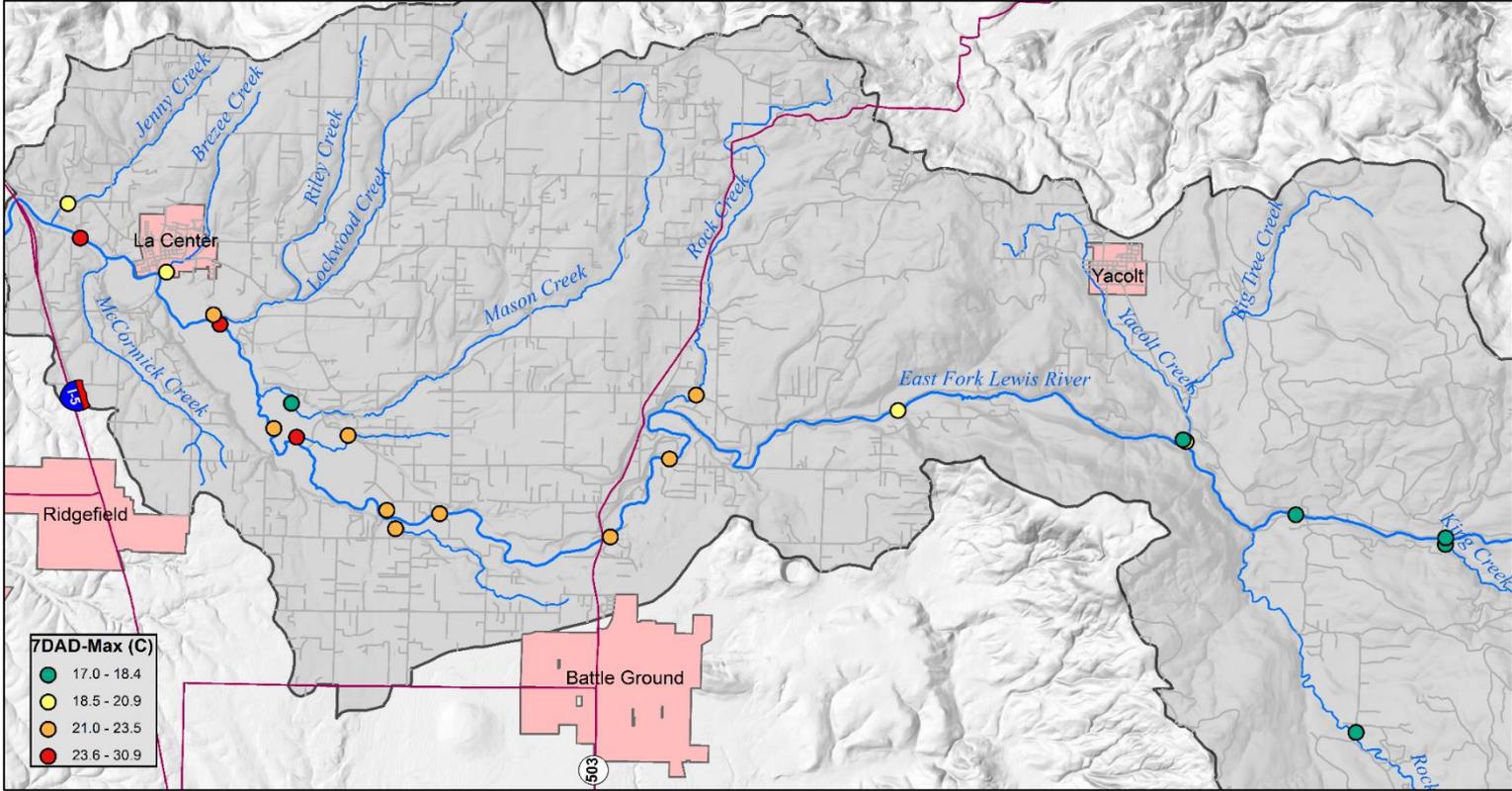
- **Objective**
  - Learn about temperature work underway and start identifying critical areas, priority actions, and opportunities
- **Agenda**
  - Source Assessment Priorities
  - Presentations - FOEF & LCFRB
  - Facilitated Discussion



All Sites  
**EXCEEDED**  
**(Did not meet)**  
Temperature WQS  
**>16° C**



# Summary: Temperature Results



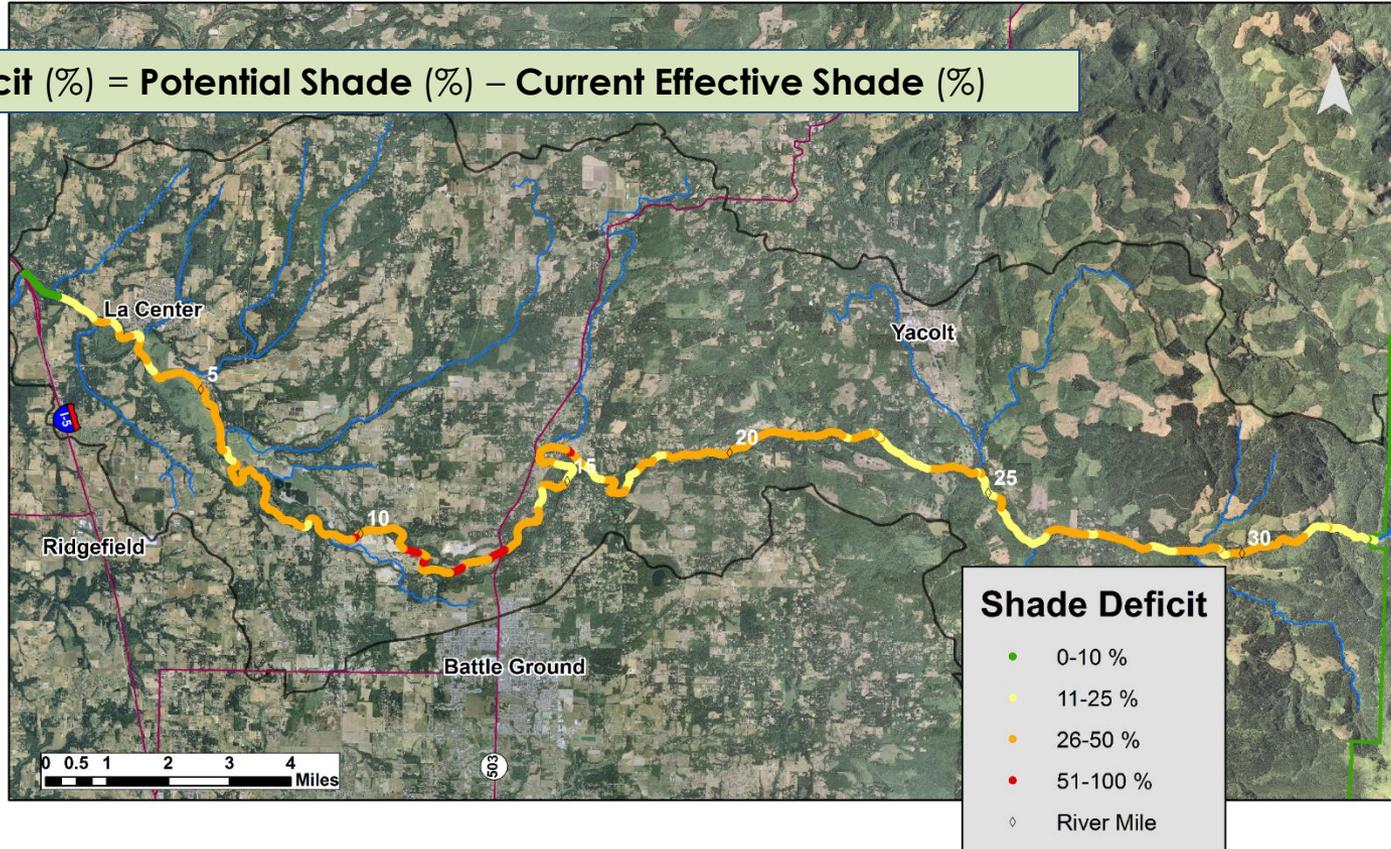
7-DADMax is the 7-day average of the daily maximum temperatures

**Temperatures Increase Downstream**



# Summary: Shade Analysis Results

$$\text{Shade Deficit (\%)} = \text{Potential Shade (\%)} - \text{Current Effective Shade (\%)}$$



Detailed methodology in QAPP (Raunig and McCarthy, 2017) and Report (McCarthy, 2018)

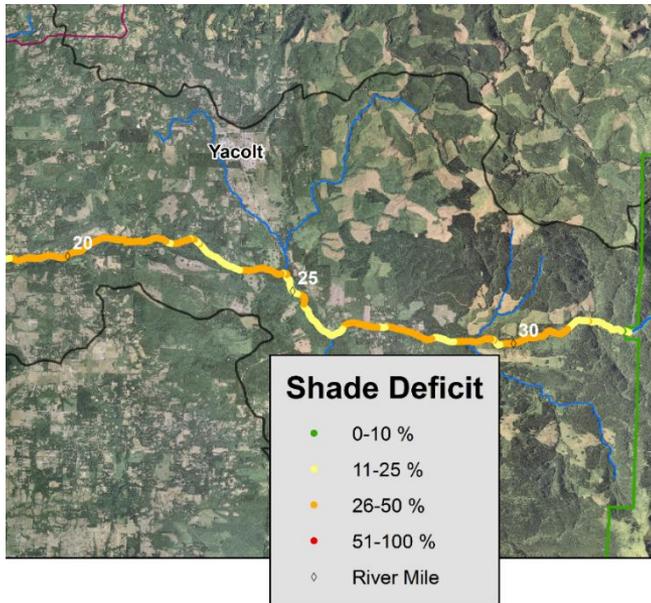
**Lower**  
**Mouth to RM 5.7**  
**Deficit = 27%**

**Middle**  
**RM 5.7 – 20.3**  
**Deficit = 35%**

**Upper**  
**RM 20.3 – 32.3**  
**Deficit = 26%**

# Priorities – Upper Watershed

**Average Shade Deficit = 26%**



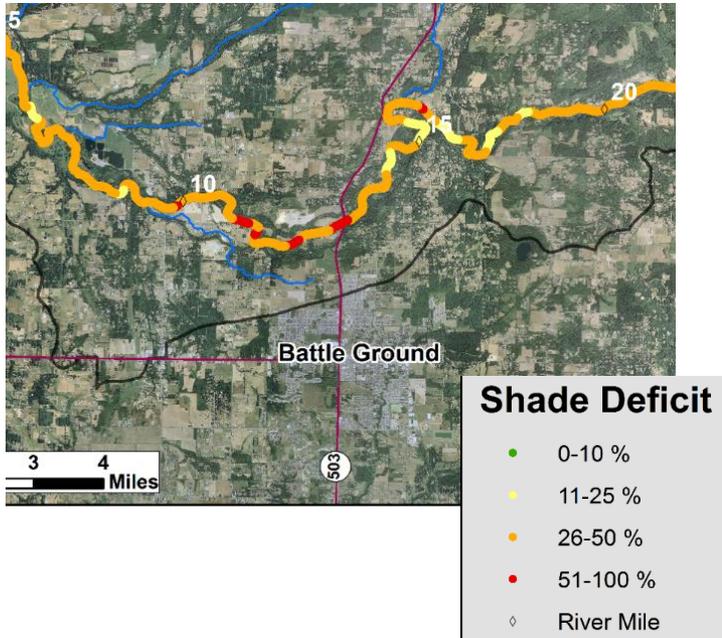
## Tier 2

- **RM 21-22 (34% Deficit)**
- **RM 27-28 (34% Deficit)**



# Priorities – Middle Watershed

**Average Shade Deficit = 35%**



- **Tier 1**

- **RM 11-12 (45%)**
- **RM12-13 (49%)**

- **Tier 2**

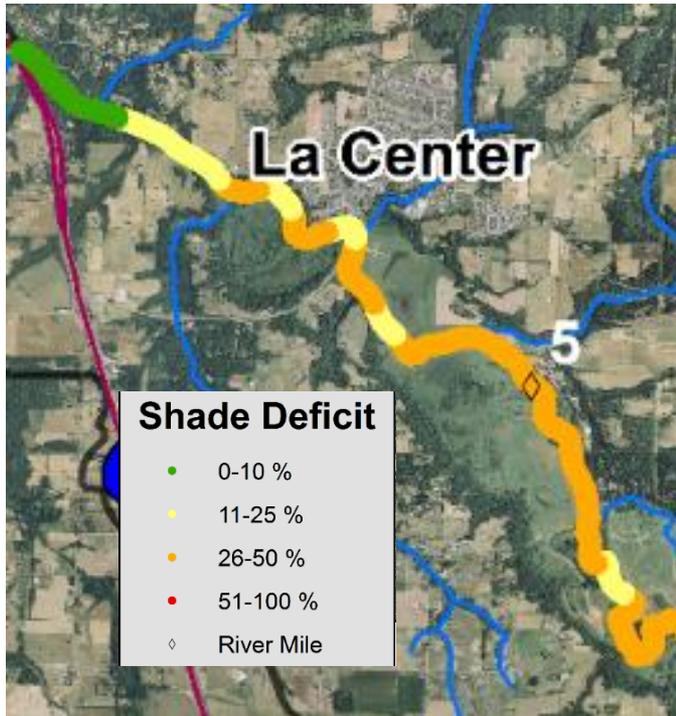
- **RM 6-14 (>30%)**

**Warmest Temperatures = 26 °C at Dean Creek**



# Priorities – Lower Watershed

**Average Shade Deficit = 27%**



- **Tier 2**

- **RM 4-6 (>30%)**



# Temperature Workgroup

## What did we learn?

- **2,000+ Acres under public ownership in watershed.**
- **Temperature Needs....**
  - Private landowner education and outreach.
  - Backyard habitat program.
  - Organizations and businesses for tree planting projects.
  - Focus on planting right tree in right place.
  - Shade analysis in tributaries.
  - How..... influence temperature.
    - Groundwater, water withdrawal, low summer flows, and reduced snowpack.
    - Width to depth ratio.
    - East to west flow.
    - Beaver dams.
    - Stormwater BMPs.
    - Manmade dams/ponds.

# Bacteria Workgroup

- **Objectives**

- Learn about bacteria work underway and start identifying critical areas, priority actions, and opportunities

- **Agenda**

- Source Assessment Priorities
- Presentations – ECY NPS & CCPH
- Facilitated Discussion



# Bacteria Workgroup

- **Source Assessment Priorities = Lower & Middle Watershed**

- **Tier 1**

- Brezee Creek
- McCormick Creek

- **Tier 2**

- Jenny Creek
- Riley Creek
- Lockwood Creek
- Rock Creek North

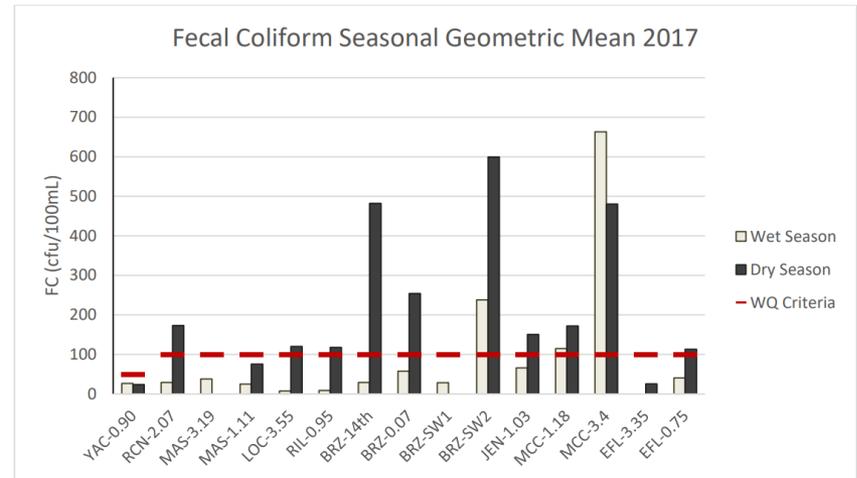


Figure 29. FC results for geometric mean, 2017.



# Bacteria Workgroup

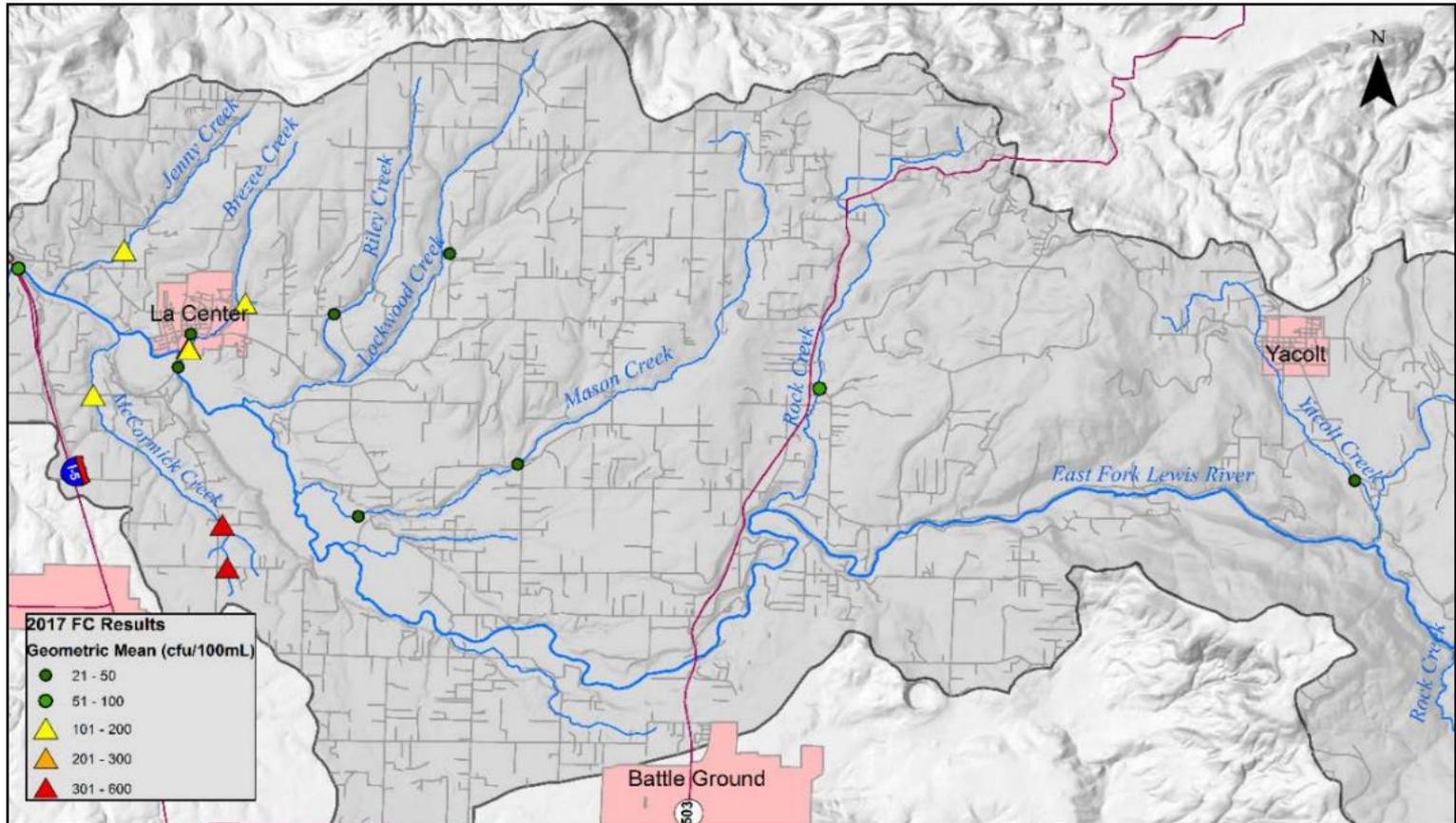


Figure 30. FC results for geometric mean (annual), 2017.



# Bacteria Workgroup

## What did we learn?

- **34,500 septic systems in Clark County**
  - 30% (~10,350) out of compliance with OSS Inspection
- **Bacteria Needs....**
  - Education and Outreach for private landowners.
  - Pollution Identification & Correction Program.
  - Source Tracking resources.
  - OSS Inspection Enforcement / Compliance Program.
  - Support for Conservation District.
  - IDDE Programming / Stormwater BMPs.
  - Partnerships and Collaboration.



# Private Landowner Technical Assistance Meeting

- **Objective**

- Discuss private landowner technical assistance

- **Desired Outcomes**

- Understand capacity
- Current challenges and need
- Discuss partnership and collaboration opportunities



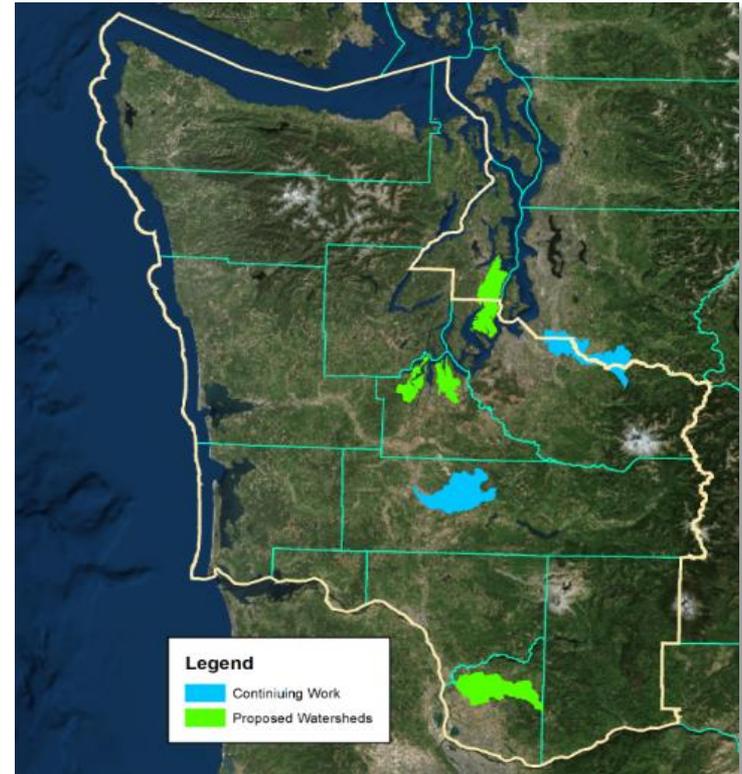
# What did we learn?

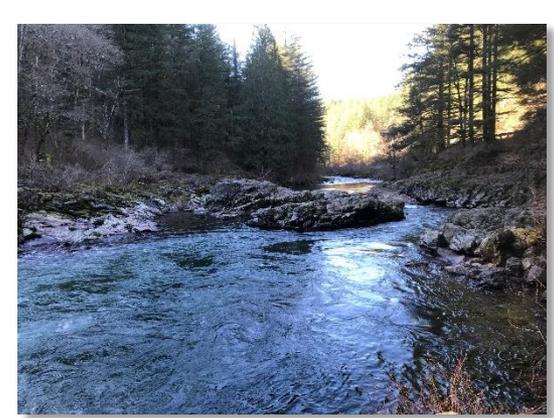
- **Clarified Roles, Focus Areas, and Capabilities.**
  - WSCC, USDA NRCS, Clark CD, WSU Extension, County Code Enforcement, ECY NPS, Watershed Alliance etc.
- **Limited Capacity & Funding.**
  - Some funding for projects, less money for staff.



# What else have we been up to?

- **ECY Nonpoint Source**
  - Approval to work in East Fork!
  - Public Education & Outreach
  - Proactive Investigation
- **Planning & Partnering**
  - Clark County Public Works
  - Clark County Public Health
  - Clark Conservation District
  - City of La Center





# Facilitated Discussion

## Building the TMDL Alternative



# Public Education & Outreach

- *Private landowner outreach is a huge need...*
- **Updates on...**
  - Outreach events, workshops, public education efforts coming up in 2019?



# Public Education & Outreach

- *Private landowner outreach is a huge need...*
  - Opportunities to partner?
  - Resources needed to expand reach?
  - Other Considerations
    - Additional target audiences?
    - Key messages?
    - New dissemination methods?  
*Print, TV, Radio, Billboards, Videos, Social Media*



# Monitoring

## Who, what, where, when, and why?

- **Who?**
  - Who is currently collecting data in the watershed?
- **What?**
  - What information is being collected?
  - What type of information should be collected?
  - What resources are needed?
- **Where?**
  - Where is monitoring happening?
  - Where is it needed?



# Monitoring

## Who, what, where, when, and why?

- **When?**
  - When is monitoring happening?
  - When should it be happening?
- **Why?**
  - What questions are we trying to answer?
  - Code Enforcement? Compliance? Grant Requirements?
- **How?**
  - Investigative vs. Effectiveness?
  - Short-term grab samples vs. long-term stations?

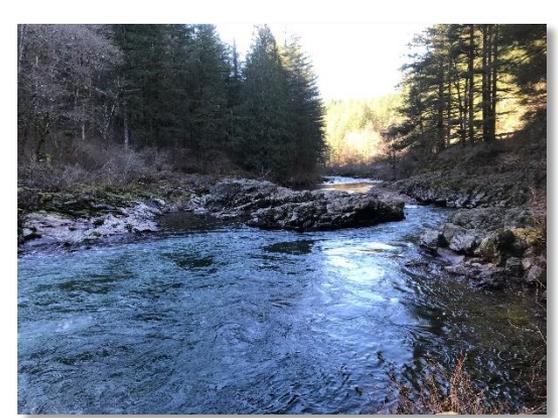


# Monitoring

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  - Short-term grab samples vs. long-term stations?





# Report Out & Next Steps



# Facilitated Discussion

- **Public Education and Outreach**
- **Monitoring**



# Next Steps

- **Writing DRAFT Water Cleanup Plan / TMDL Alternative**
- **NPS Investigation and Outreach**
- **Other**
  - Share your project ideas with Ecology Staff!
  - Are you applying for ECY funding in 2019?
  - Are there future discussion topics or meetings needed?
  - Is there interest in a spring picnic?



# Water Quality Funding



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

**Funding Guidelines  
State Fiscal Year 2020  
Water Quality Financial Assistance**

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*Centennial Clean Water Program*

*Clean Water Act Section 319 Program*

*Stormwater Financial Assistance Program*

*Washington State Water Pollution Control  
Revolving Fund Program*

## **Due: October 2019**

- Wastewater facility
- Onsite sewage system
- Stormwater facility
- Nonpoint source activity

## **Workshops ~ August 2019**



# Ongoing Opportunities

- **Mason Creek Acquisition & Restoration**
  - *Clark County & LCEP*
- **McCormick Creek Riparian Restoration**
  - *Clark County PUD*
- **Recovery Plan Programmatic Review**
  - *LCFRB*
- **Ridgefield Pits Technical Advisory Committee**
  - *LCEP*

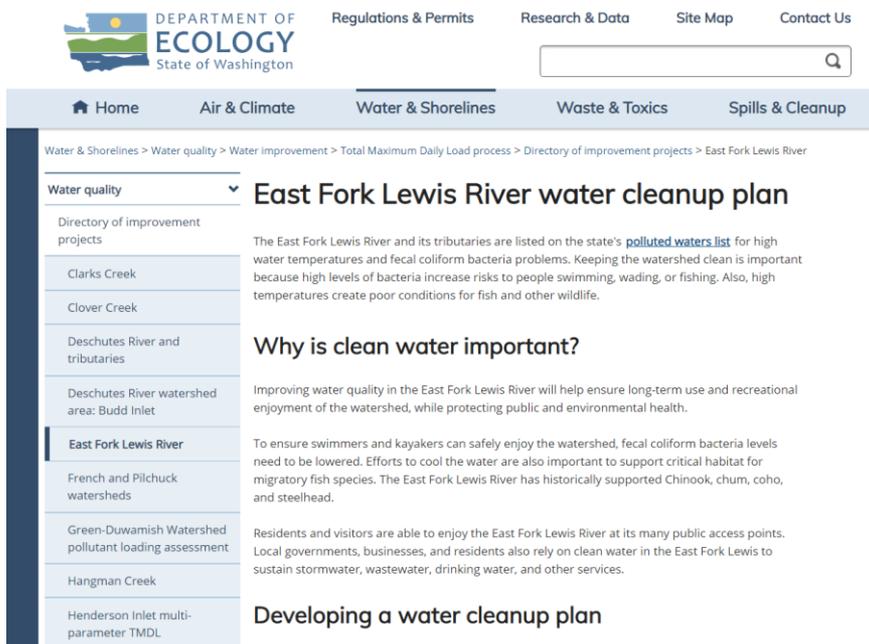


# **Other Potential Opportunities?**

- **Cold Water Refugia Analyses**
- **Beaver Dam Suitability Analyses**
- **Coordinated Private Landowner Engagement**
- **Pollution Identification and Correction Program**
- **Partnerships for Education and Outreach Workshop series?**
- **Effectiveness Monitoring Resources**

# East Fork Lewis River Website

*Stay up to date!*



DEPARTMENT OF ECOLOGY  
State of Washington

Regulations & Permits   Research & Data   Site Map   Contact Us

Home   Air & Climate   Water & Shorelines   Waste & Toxics   Spills & Cleanup

Water & Shorelines > Water quality > Water improvement > Total Maximum Daily Load process > Directory of improvement projects > East Fork Lewis River

**Water quality**   **East Fork Lewis River water cleanup plan**

Directory of improvement projects

- Clarks Creek
- Clover Creek
- Deschutes River and tributaries
- Deschutes River watershed area: Budd Inlet
- East Fork Lewis River**
- French and Pilchuck watersheds
- Green-Duwamish Watershed pollutant loading assessment
- Hangman Creek
- Henderson Inlet multi-parameter TMDL

The East Fork Lewis River and its tributaries are listed on the state's [polluted waters list](#) for high water temperatures and fecal coliform bacteria problems. Keeping the watershed clean is important because high levels of bacteria increase risks to people swimming, wading, or fishing. Also, high temperatures create poor conditions for fish and other wildlife.

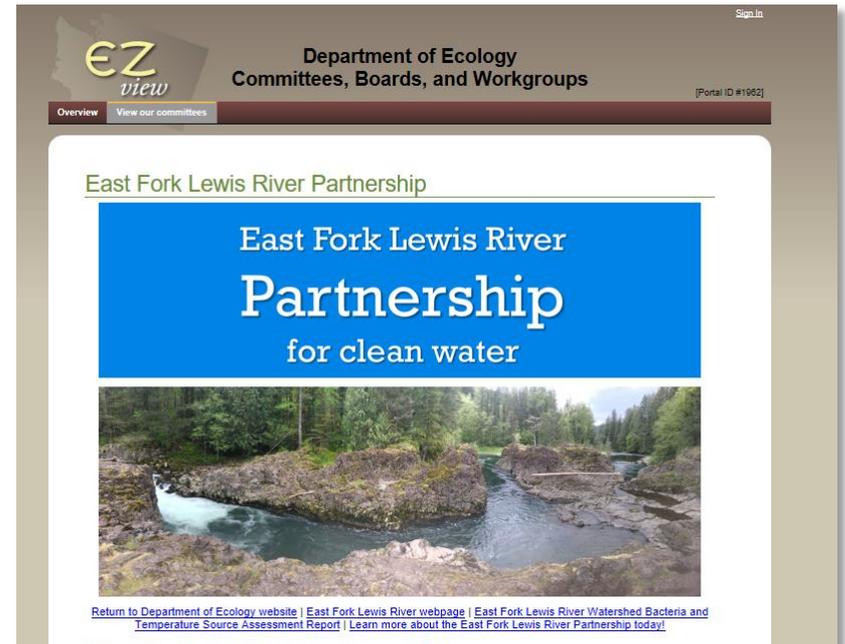
### Why is clean water important?

Improving water quality in the East Fork Lewis River will help ensure long-term use and recreational enjoyment of the watershed, while protecting public and environmental health.

To ensure swimmers and kayakers can safely enjoy the watershed, fecal coliform bacteria levels need to be lowered. Efforts to cool the water are also important to support critical habitat for migratory fish species. The East Fork Lewis River has historically supported Chinook, chum, coho, and steelhead.

Residents and visitors are able to enjoy the East Fork Lewis River at its many public access points. Local governments, businesses, and residents also rely on clean water in the East Fork Lewis to sustain stormwater, wastewater, drinking water, and other services.

### Developing a water cleanup plan



Department of Ecology  
Committees, Boards, and Workgroups

Overview   View our committees

## East Fork Lewis River Partnership

# East Fork Lewis River Partnership

## for clean water



[Return to Department of Ecology website](#) | [East Fork Lewis River webpage](#) | [East Fork Lewis River Watershed Bacteria and Temperature Source Assessment Report](#) | [Learn more about the East Fork Lewis River Partnership today!](#)

**Meeting Summary and Materials will be posted online**





# Thank You!

Devan Rostorfer, TMDL Lead

Jennifer Riedmayer, Nonpoint Source Specialist

Shawn Ultican, Nonpoint Source Specialist



# Partnership seeks to improve East Fork water quality

Bacteria, temperature chief issues with Columbia River tributary

Rick Bannan / rick@thereflector.com Feb 11, 2019



**Retired U.S. Forest Service Hydrologist** Dick Dyrland looks out onto the East Fork Lewis River in August 2018. Dyrland has been outspoken about concerns over the deterioration of the river, which recently has been the focus of a partnership formed specifically to improve conditions in the lower watershed with regard to bacteria and temperature issues.

photo by Rick Bannan

Local, state and federal agencies alongside nonprofits and a few private entities are coming together in an effort to improve the water quality of the East Fork Lewis River watershed.