

Water Quality in Clark County



[Transcript of Presentation](#) is available online.

[Presentation Audio Recording](#)

Ecology Team



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Southwest Regional Office



VFO Staff Working for SW Washington



Rian Sallee
VFO Manager



Dana Mocca
VFO Secretary

Vancouver Field Office Team



Spill Prevention



Ken Esplin
Facility Prevention
Engineer



Vacant
Vessel and Oil Transfer
Inspector

Toxics Cleanup



Craig Rankine
Cleanup Site Manager
Hydrogeologist



Dave Mora
Municipal Stormwater
Grants Manager



Jessica McConnell
Sand & Gravel / Winery
Permit Manager



Noosheen Pouya
Municipal Stormwater
Permit Planner

Water Quality

Spill Response



Curt Piesch
Response Team



Ben Cornell
Response Team

Shorelands & Environmental Assistance



Miranda Adams
Shorelands & Wetlands Specialist



Devan Rostorfer
TMDL Coordinator



Jason Lenz
Forest & Fish



Greg Bengé
Senior Construction
Stormwater Inspector

Partners

- Clark County Public Health
- Clark County Clean Water Division
- Clark Conservation District
- Watershed Alliance of Southwest Washington
- Washington State University Extension



Councilor Introductions



CLARK COUNTY COUNCIL



Eileen Quiring O'Brien
Council Chair
Contact



Temple Lentz
Councilor District 1
Contact



Julie Olson
Councilor District 2
Contact



Karen Dill Bowerman
Councilor District 3
Contact



Gary Medvigy
Councilor District 4
Contact

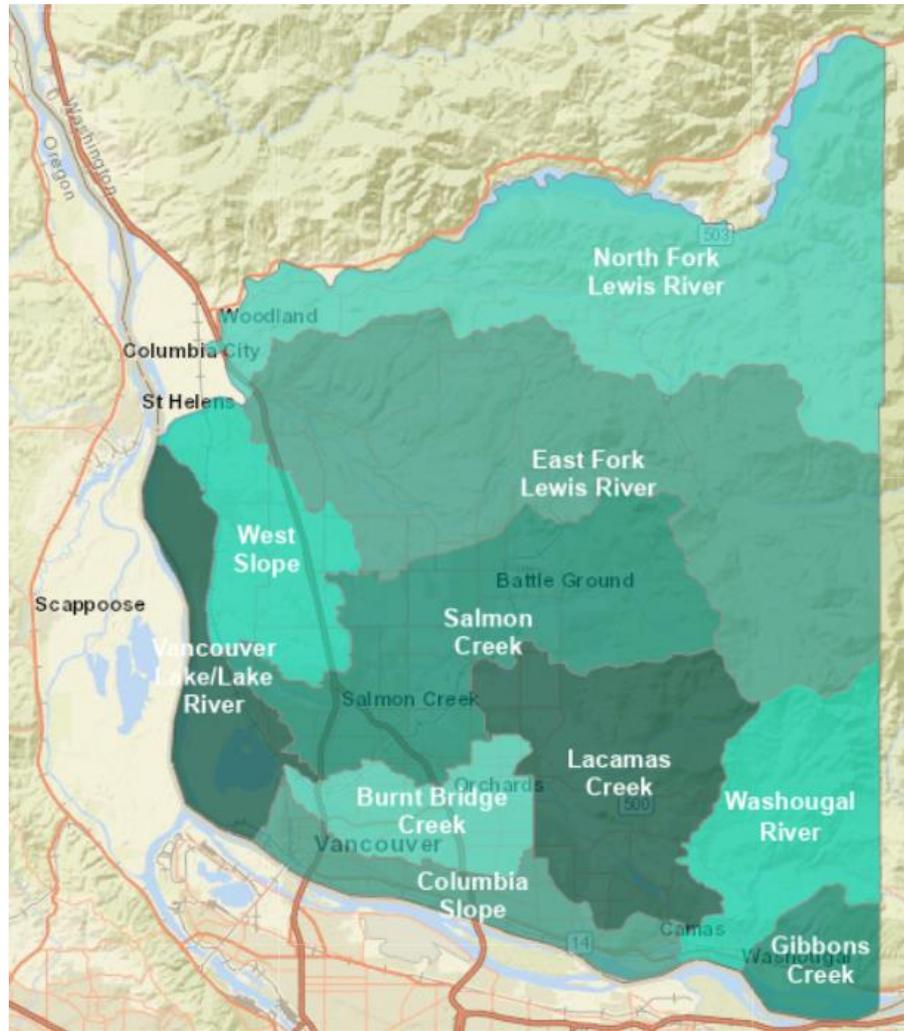
Presentation Overview

- **Watersheds in Clark County**
 - Agriculture
 - Septic systems
- **Ecology's Water Cleanup Plans**
 - East Fork Lewis River
 - Lacamas Creek
- **Poop Smart Clark**
 - Pollution Identification and Correction

Overview of Clark County Watersheds



Clark County watersheds



USDA Census of Agriculture, 2017

2017 CENSUS OF AGRICULTURE *County Profile*




**Clark County
Washington**

Total and Per Farm Overview, 2017 and change since 2012

	2017	% change since 2012
Number of farms	1,978	+3
Land in farms (acres)	90,737	+21
Average size of farm (acres)	46	+18

(Z) Percent of state agriculture sales

Share of Sales by Type (%)

Crops	42
Livestock, poultry, and products	58

USDA Census of Agriculture, 2017

Market Value of Agricultural Products Sold

	Sales (\$1,000)	Rank in State ^b	Counties Producing Item	Rank in U.S. ^b	Counties Producing Item
Total	47,702	23	39	1,796	3,077
Livestock, poultry, and products	27,829	17	39	1,392	3,073
Poultry and eggs	6,615	10	39	602	3,007
Cattle and calves	(D)	20	39	(D)	3,055
Milk from cows	13,887	12	29	383	1,892
Hogs and pigs	94	10	39	931	2,856
Sheep, goats, wool, mohair, milk	435	9	39	390	2,984
Horses, ponies, mules, burros, donkeys	512	8	39	416	2,970
Aquaculture	(D)	30	33	(D)	1,251
Other animals and animal products	(D)	(D)	39	(D)	2,878

\$47.7M - Market Value for Agriculture

in Clark County, 2017

\$27.8M - Market Value of Livestock

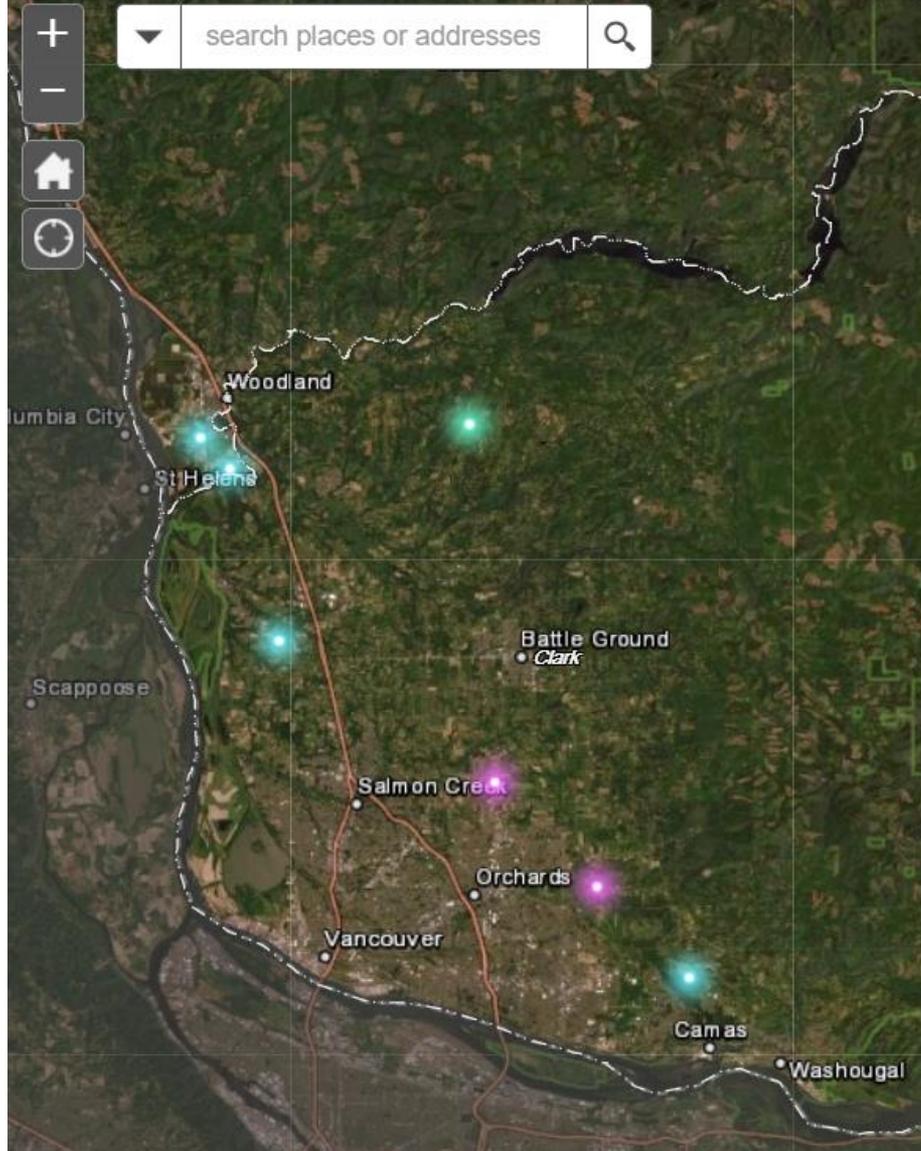
in Clark County, 2017

Livestock Inventory (Dec 31, 2017)

Broilers and other meat-type chickens	313,524
Cattle and calves	15,065
Goats	1,939
Hogs and pigs	412
Horses and ponies	2,687
Layers	11,470
Pullets	2,032
Sheep and lambs	2,016
Turkeys	314

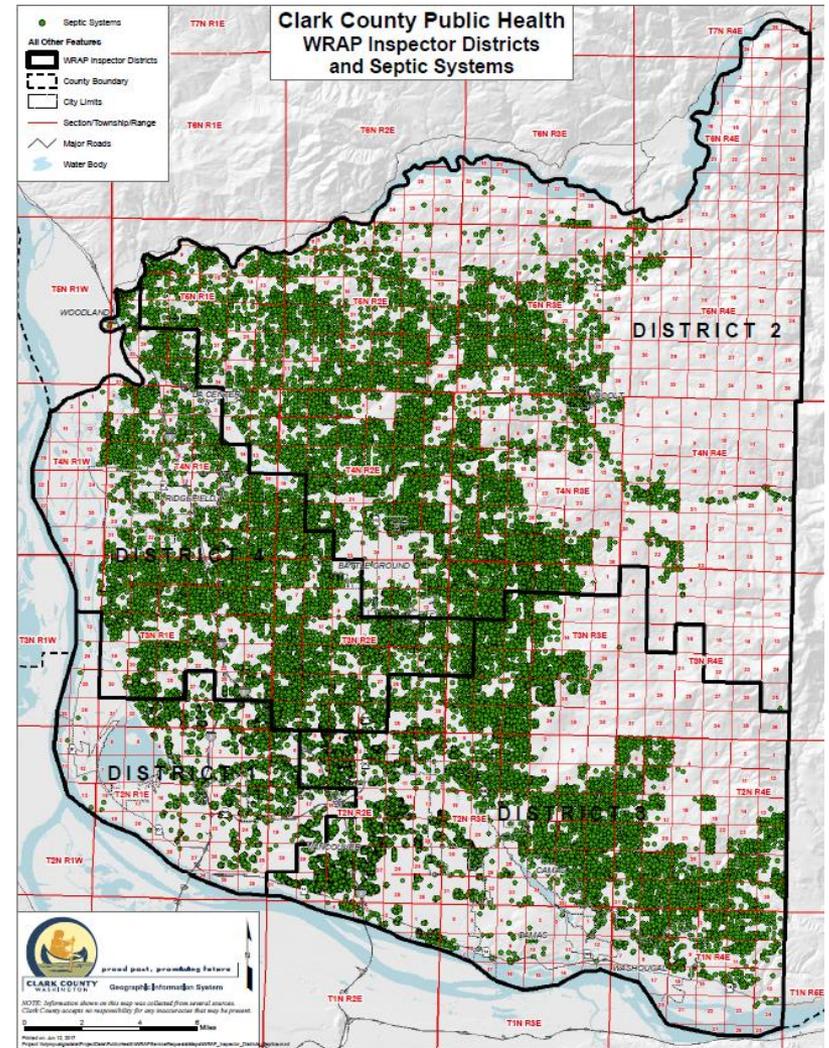


Washington Dairy Farms - 2018

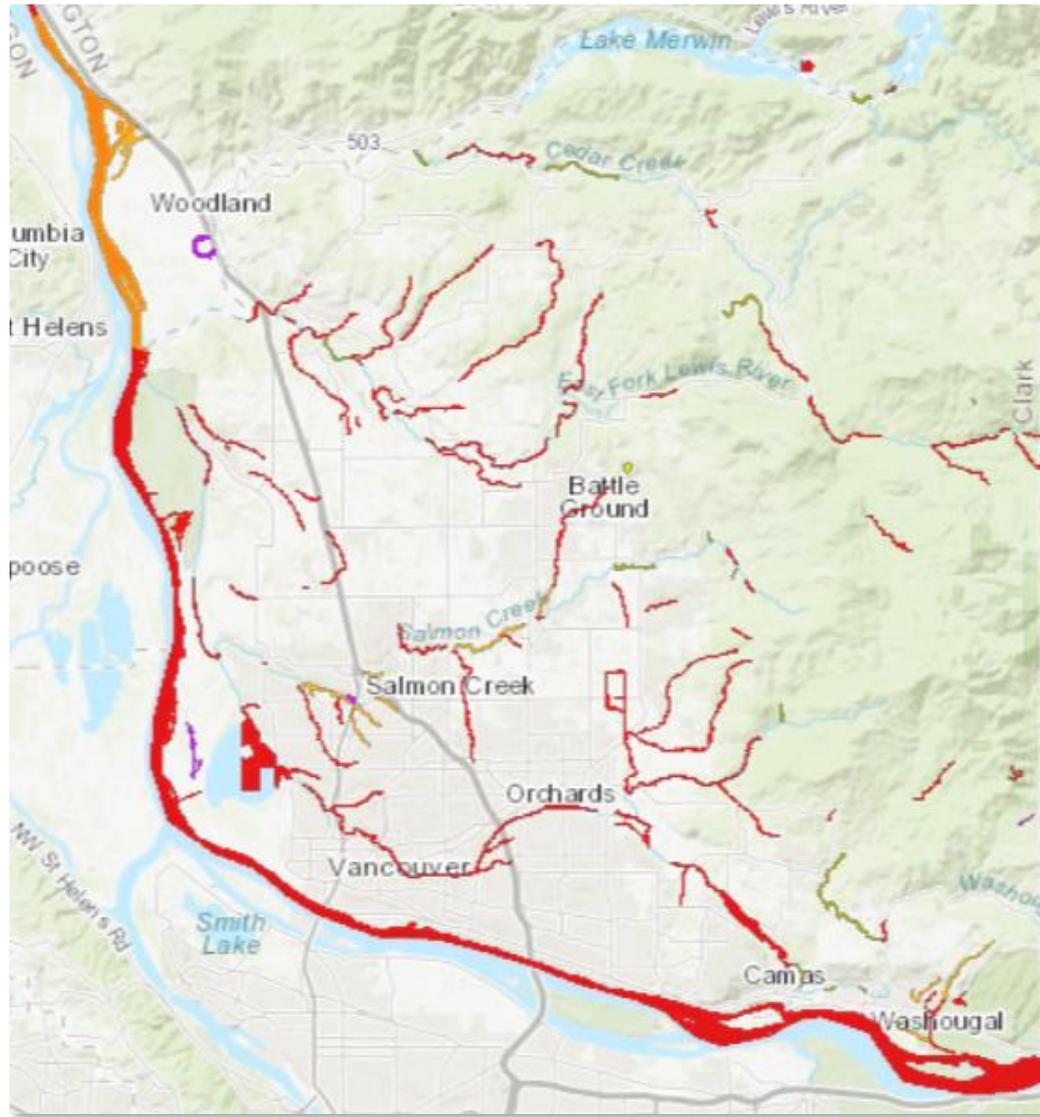


Septic Systems

- 34,500 Septic Systems in County
- 30% or 10,350 noncompliant systems.
- **Inspection** = Every 3 years
- **Maintenance** = Every 5 years

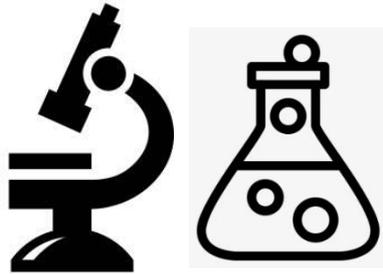


Clark County Polluted Waters



Ecology's Water Cleanup Process

Question: *How much pollution needs to be reduced to meet water quality standards?*



Step 1: Water quality monitoring and data collection



Step 2: Source Assessment



Step 3: Water Cleanup Planning

Step 4: Implementation – Stormwater, septic systems, agriculture, restoration.



Current Projects

- **East Fork Lewis River, 2017-2020**

Currently on Step 4 - Implementation

- **Burnt Bridge Creek, 2019-2022**

Currently on Step 3 – Water Cleanup Planning

- **Lacamas Creek, 2021-2024**

Currently on Steps 1 and 2 – Data Collection and Source Assessment

Achieve Clean Water

Meet Water Quality Standards

Support Beneficial Uses

For People, Fish, & Wildlife

Residents & Visitors of Clark County

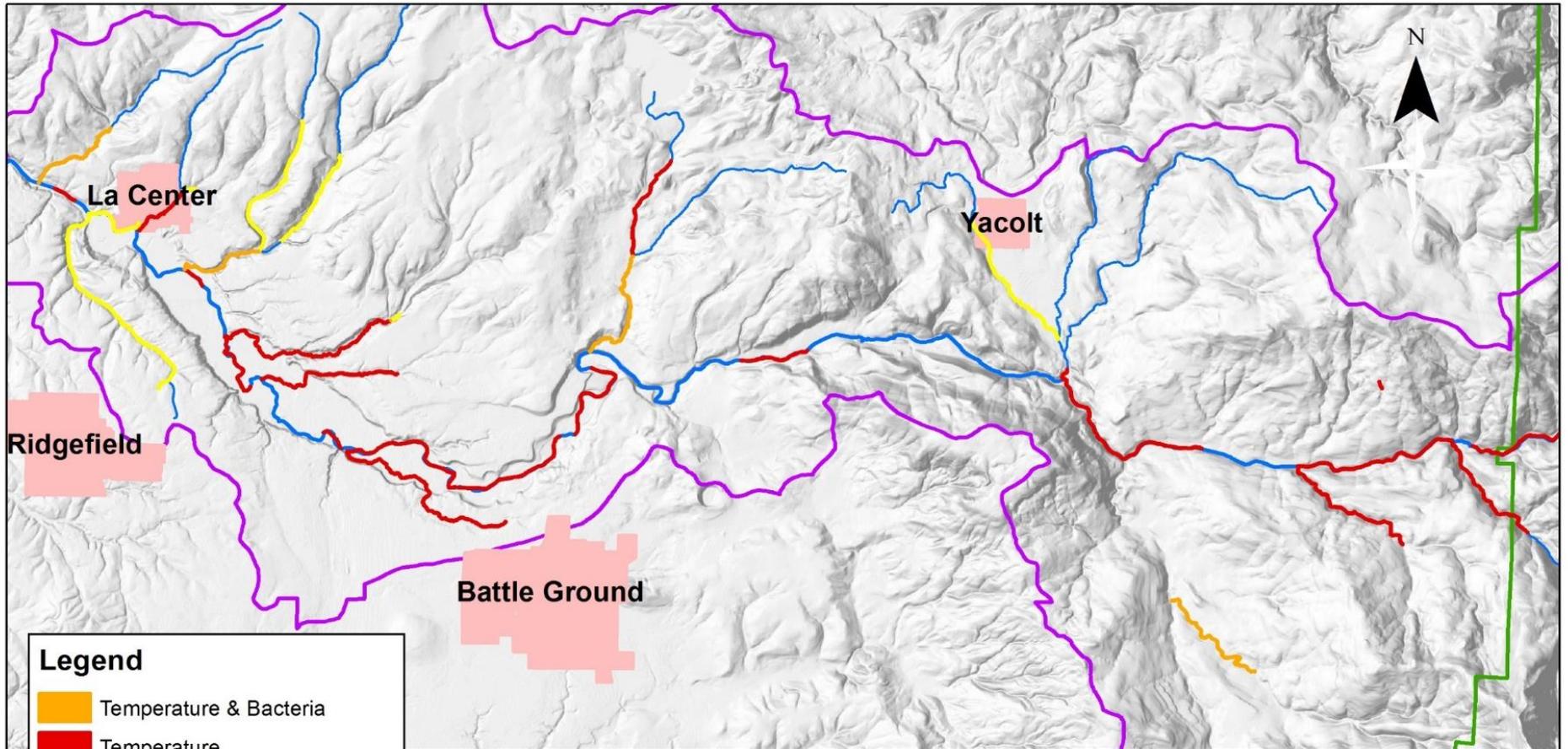


Water Cleanup Plans in Clark County





East Fork Lewis River
Partnership
for clean water



Legend

- Temperature & Bacteria
- Temperature
- Bacteria

Boundaries

- Watershed Boundary
- Gifford Pinchot National Forest

Washington State's Polluted Waters List (303d)

East Fork Lewis River Partnership

*Collaboration of local, state, tribal, and federal governments;
watershed groups and private landowners.*

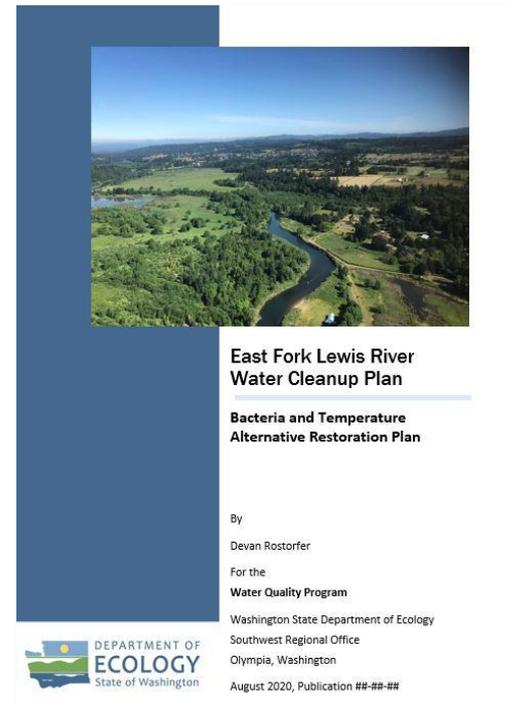
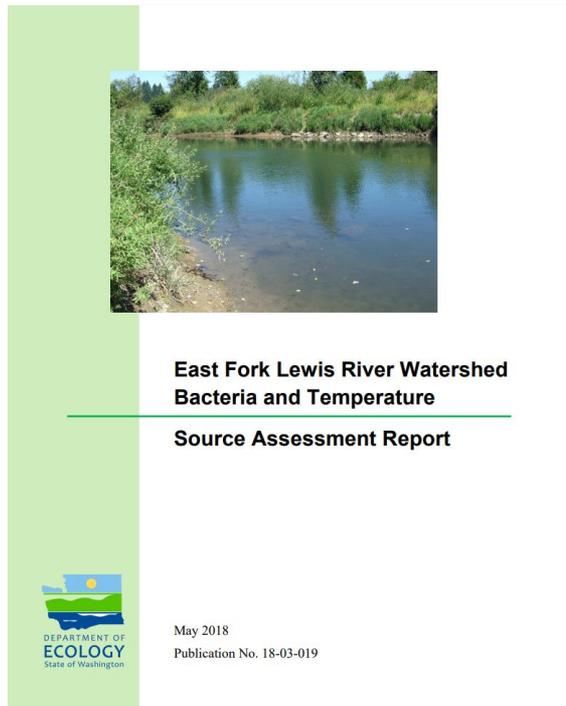


Priority Project & Program Areas

- 1. Septic Systems**
Design, Inspection, Maintenance, Repair
Pollution Investigations & Correction
- 2. Small Acreage Agriculture**
Conservation Planning, Technical Assistance
Soil Implementation
- 3. Riparian Restoration**
Public & Private Land
- 4. Stormwater Management**
Source Training, Best Management Practices & Stormwater
Management Planning

East Fork Lewis River Partnership

- *East Fork Lewis River Source Assessment, 2018*
- *East Fork Lewis River Water Cleanup Plan, 2020*



Implementation Priorities

Septic Systems

*Outreach, Inspection, Maintenance, Repair
Pollution Identification & Correction*



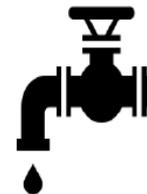
Small Acreage Agriculture

*Conservation Planning, Technical Assistance
BMP Implementation*



Stormwater Management

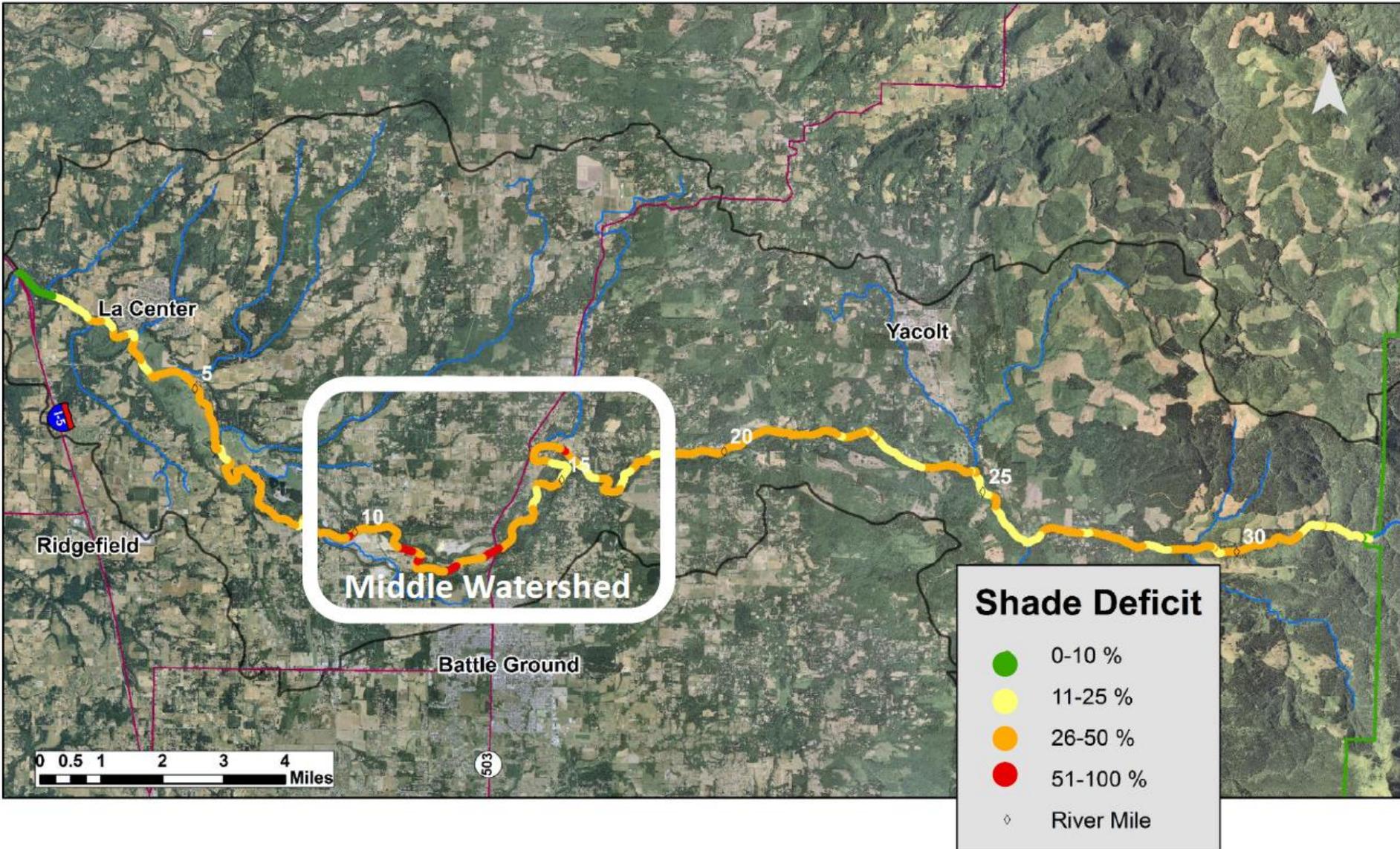
*Source Tracing, Illicit Discharge Detection & Elimination
Stormwater Management Planning*



Riparian Restoration

Public & Private Lands





Highest Shade Deficits = Middle Watershed



**40%
Shade
Deficit**

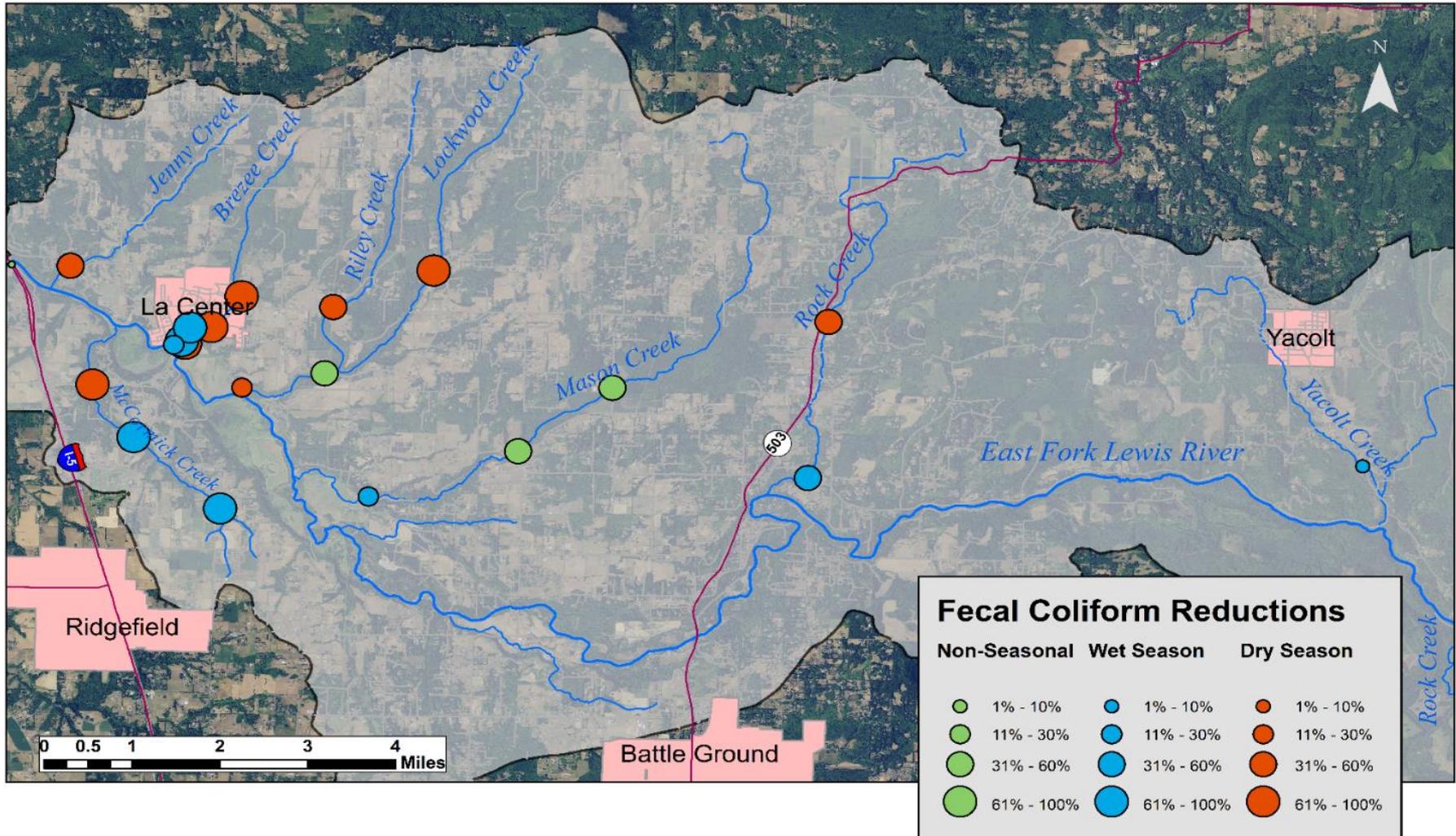
An aerial photograph of a river valley. The river flows through the center, surrounded by lush green fields and dense forests. In the background, there are rolling hills and some buildings. The overall scene is a mix of natural and developed land.

Legacy Lands Restoration

2,000+ acres of Clark County Legacy Lands.

9,000+ acres planned for acquisition.

Bacteria Reduction

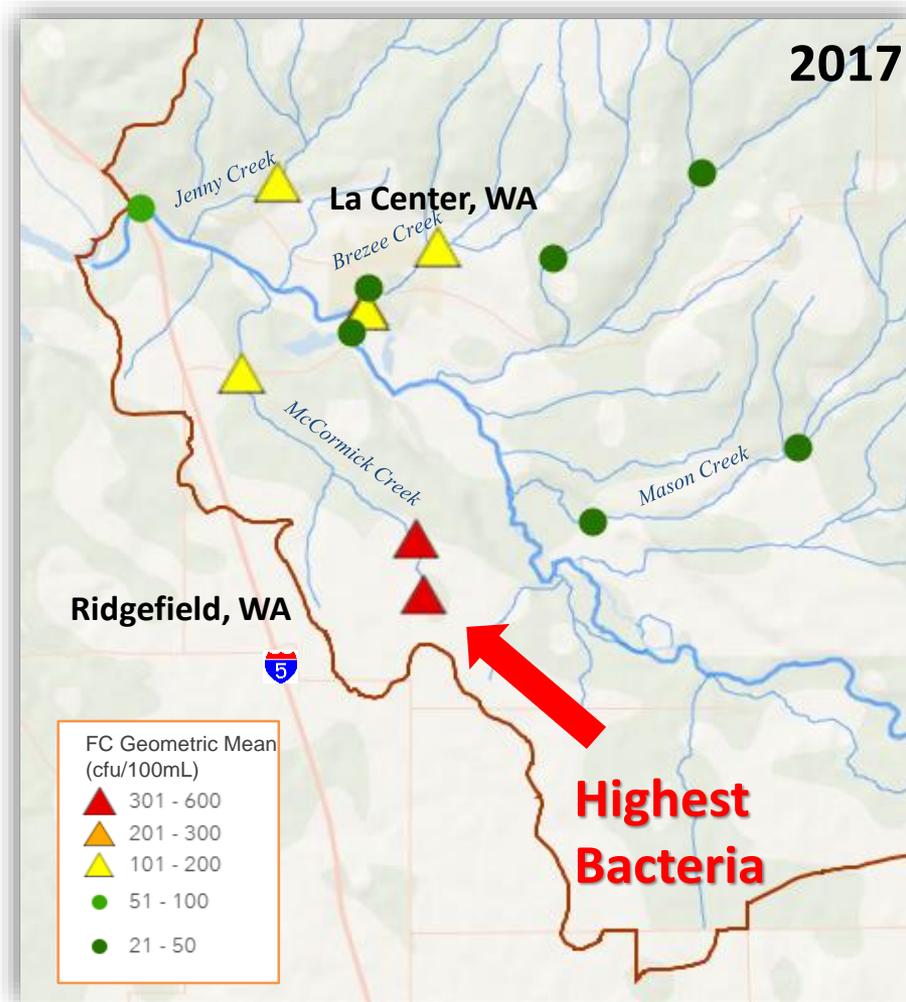




East Fork Lewis River Watershed
Bacteria and Temperature
Source Assessment Report



May 2018
Publication No. 18-03-019







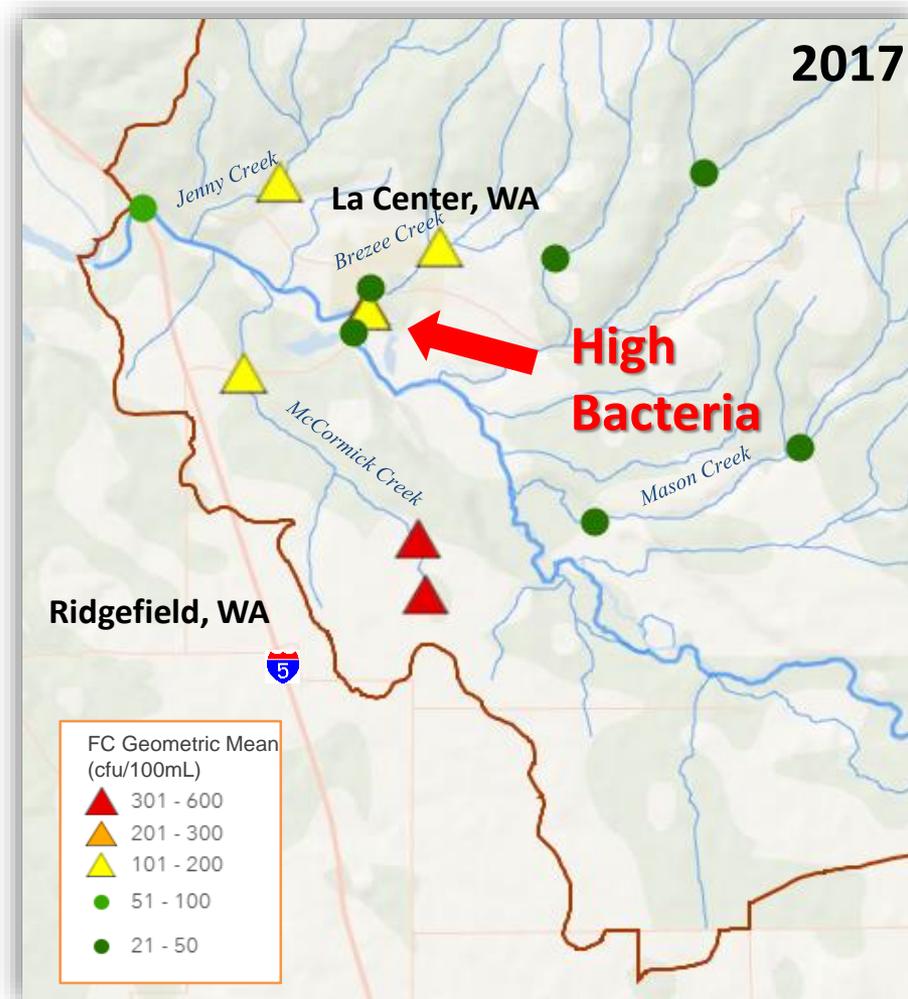
Manure Lagoon



East Fork Lewis River Watershed
Bacteria and Temperature
Source Assessment Report



May 2018
Publication No. 18-03-019





Breeze Creek

- **Stormwater investigation**
- **Illicit Discharge Detection and Elimination.**
- **Cross Connections Identified & Corrected.**
- **Stormwater Management Planning.**
- **New Codes, Ordinances Standards, and Procedures.**



Poop Smart Clark

Pollution Identification and Correction



PUBLIC WORKS



PUBLIC HEALTH

Poop Smart Clark

Pollution Identification
and
Correction



DEPARTMENT OF
ECOLOGY
State of Washington



WATERSHED
ALLIANCE
of Southwest Washington



NRCS

**Water Quality
Monitoring**

**Septic System
Replacement and
Sewer Connection**

**Education and
Outreach**

**Septic System
Maintenance**

Site Visits

Poop Smart Clark
Pollution Identification
and
Correction

**Septic System
Inspections**

**Technical
Assistance**

**Canines for
Clean Water**

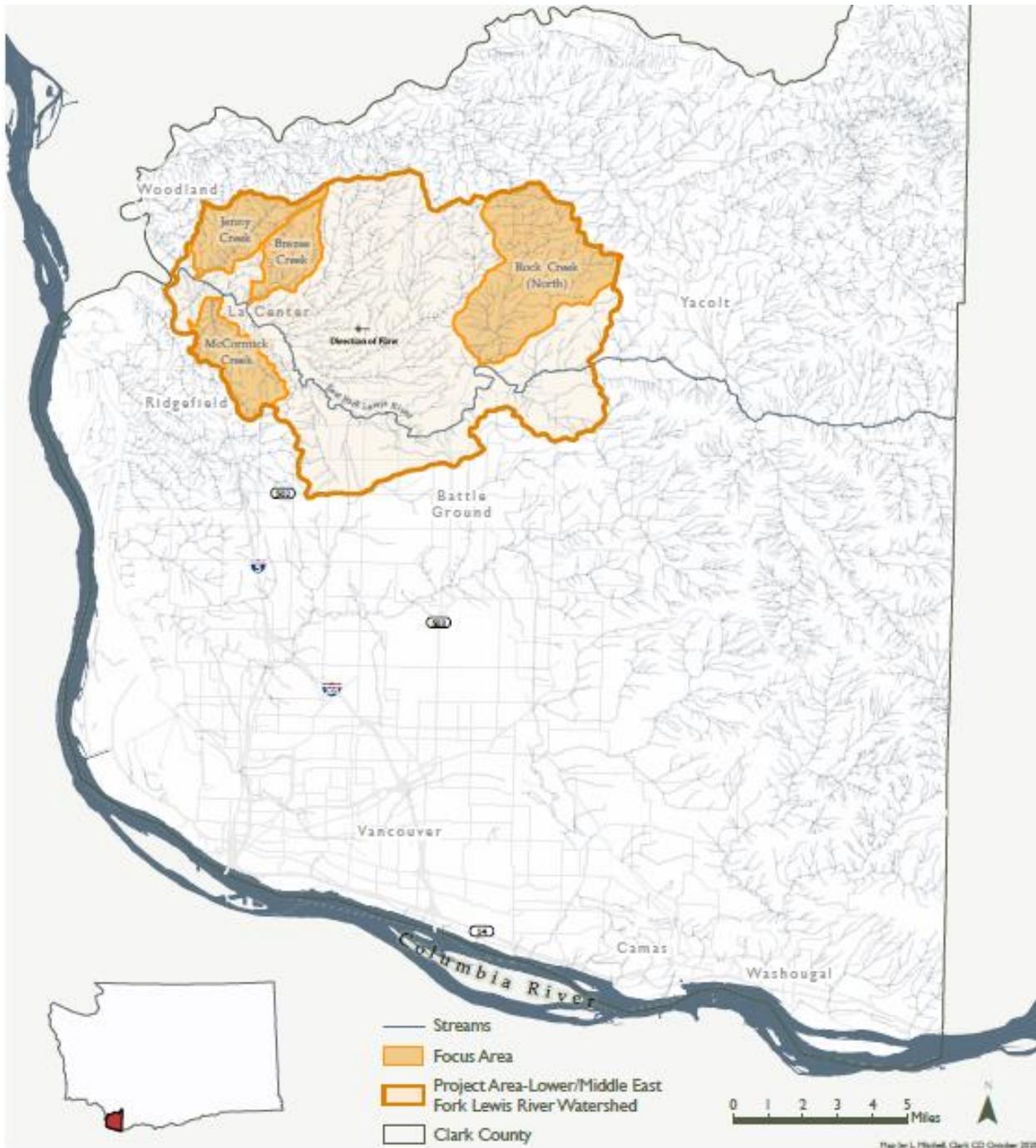
**Conservation
Planning**

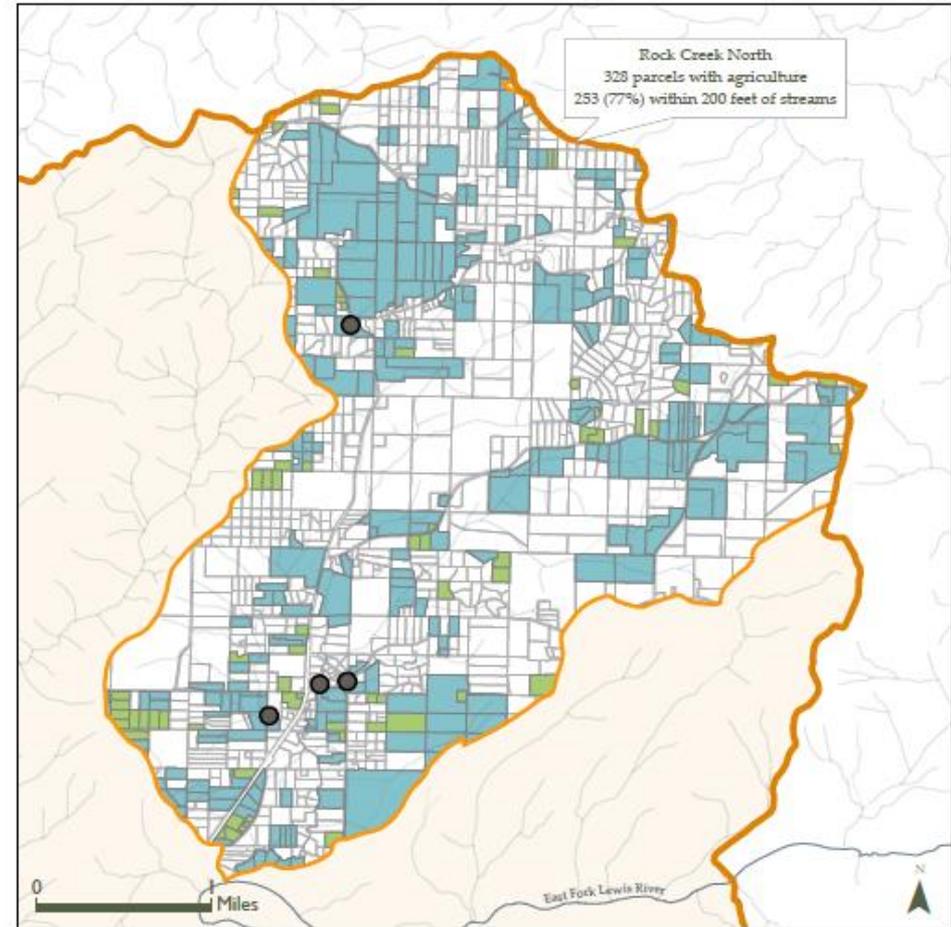
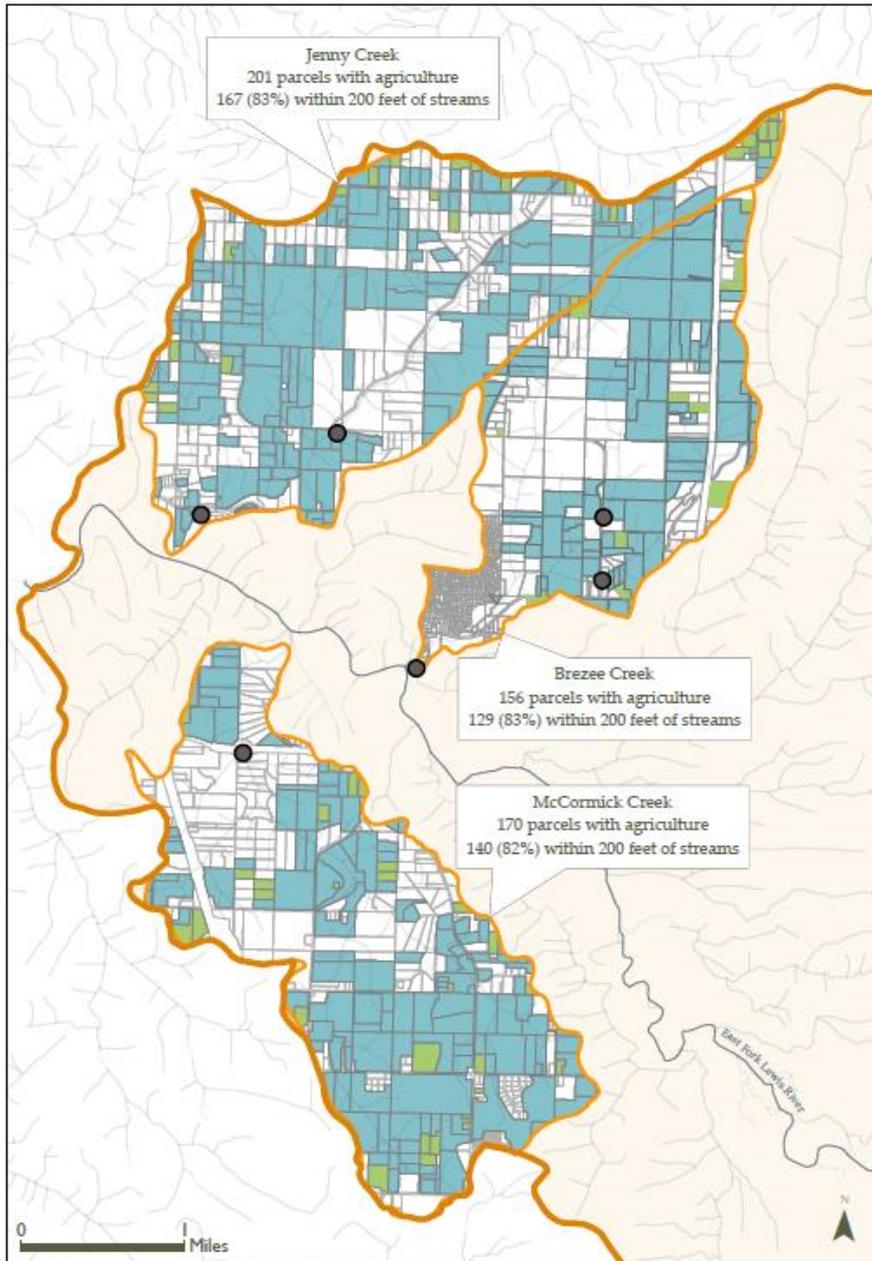
**Agricultural Best
Management
Practices**

Letters of Support

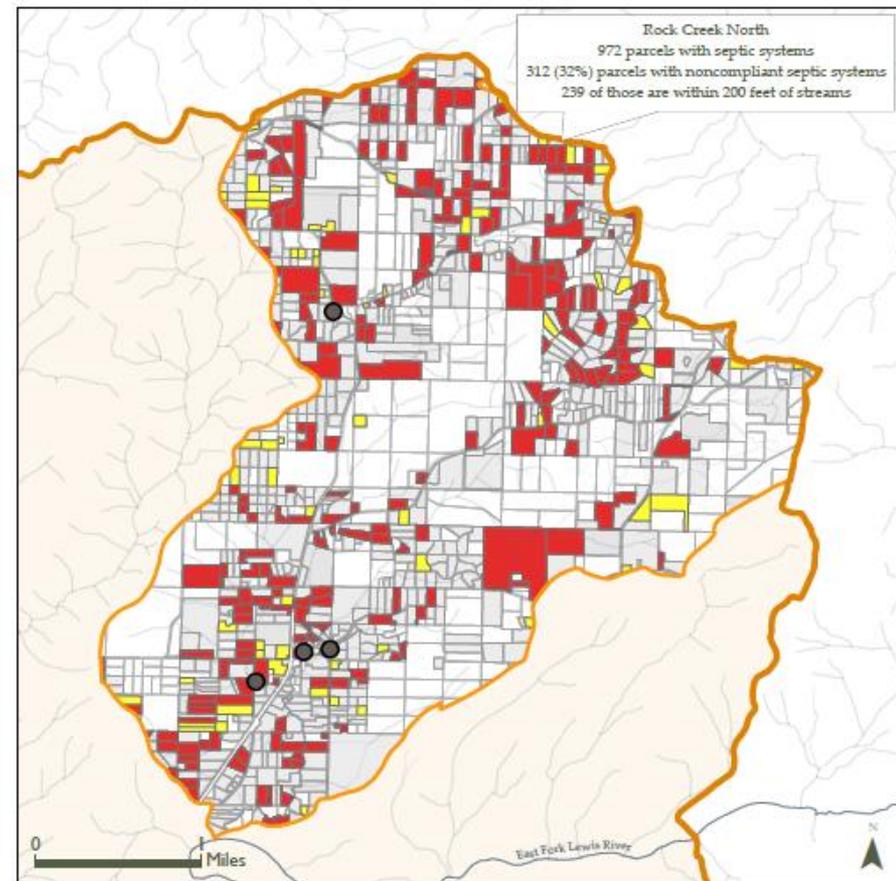
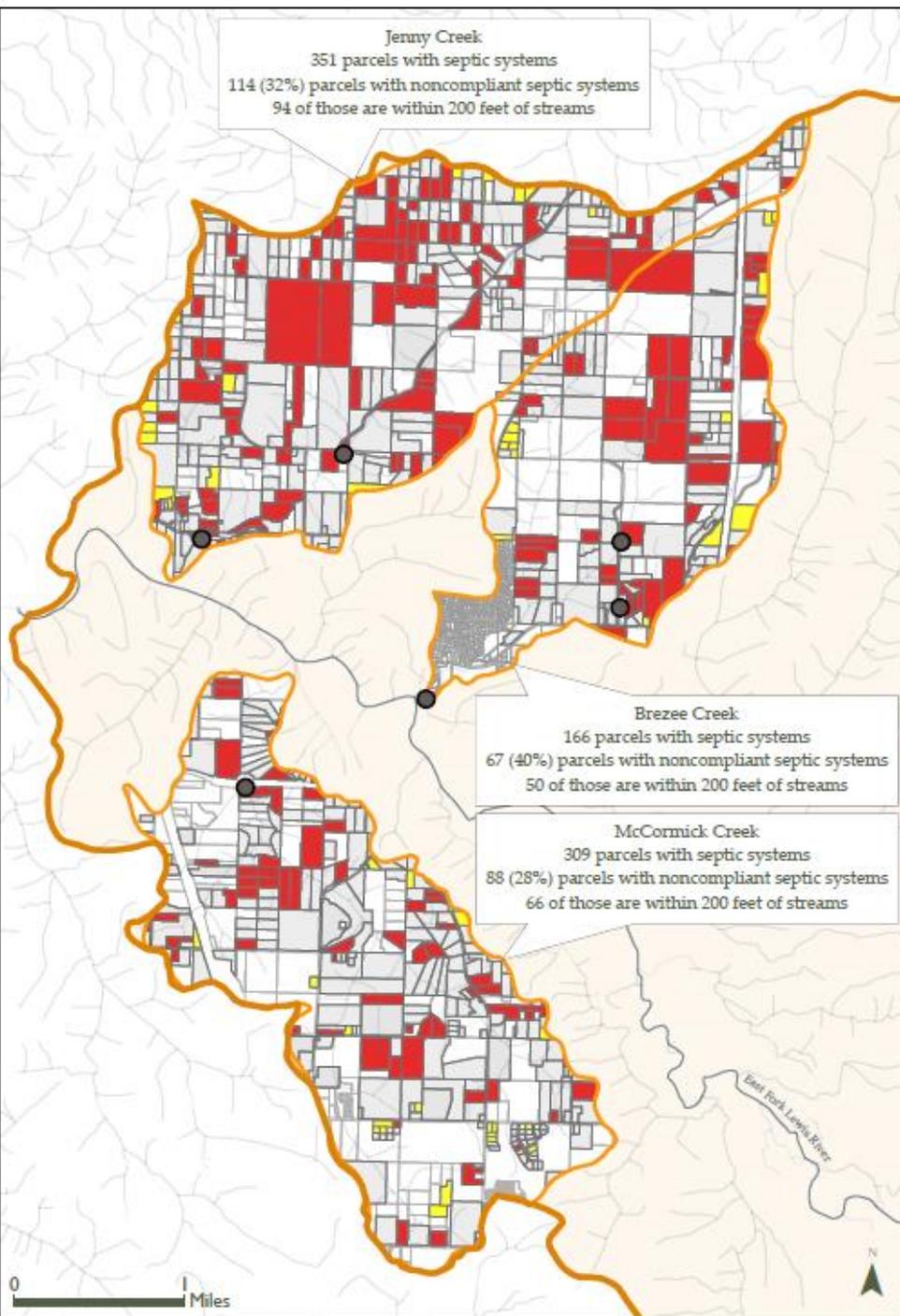
Poop Smart Clark

1. Clark County Clean Water Division
2. Clark County Public Health
3. Watershed Alliance of Southwest Washington
4. Washington State University Extension
5. US Department of Agriculture
6. Washington State Conservation Commission
7. Washington State Department of Health
8. City of Battle Ground
9. Lower Columbia Fish Recovery Board
10. City of La Center
11. Craft 3 Regional Loan Program
12. Septic System Contractor
13. Skagit County Public Works
14. Fiends of the East Fork
15. Clark Conservation District Board





- **855** Agricultural parcels in priority water quality areas
- **689** within 200 feet of stream



- **6,161** septic systems in watershed, **1,995** noncompliant
- **1798 septic systems** in priority areas **581** noncompliant, **449** within 200 feet of stream

Goals for 2021

- **Achieved Federal and State support for nonpoint source agriculture and septic work!!!**
 - USDA NRCS
 - Washington State Department of Ecology
 - Washington State Conservation Commission.
 - 15 organizations wrote letters of support.

Goals for 2021

- **Achieve local support for Poop Smart Clark.**
 - Septic system inspections, maintenance, and replacement.
 - Local funding for agricultural assistance.
 - Nonpoint source compliance and code enforcement for water quality.





Lacamas Creek
Partnership
for clean water

Lacamas Creek

- Impairments
 - Bacteria
 - Temperature
 - pH
 - Dissolved Oxygen

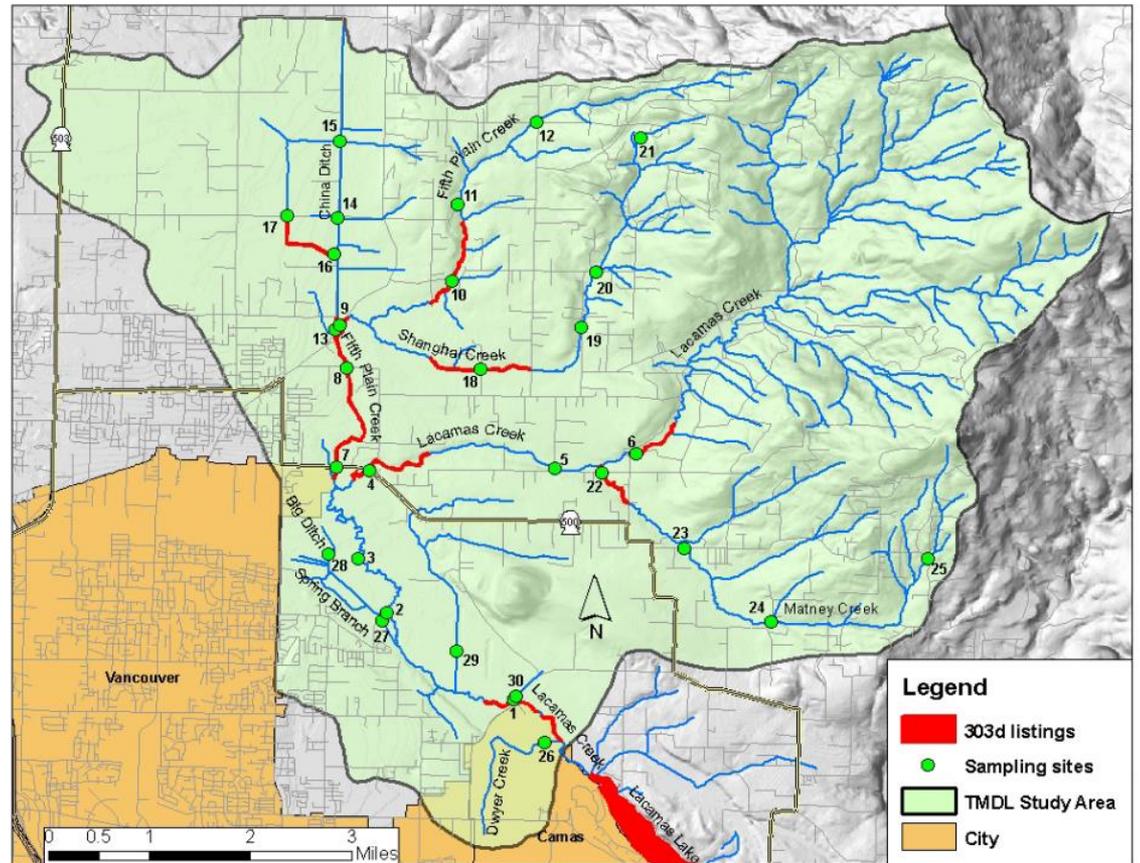
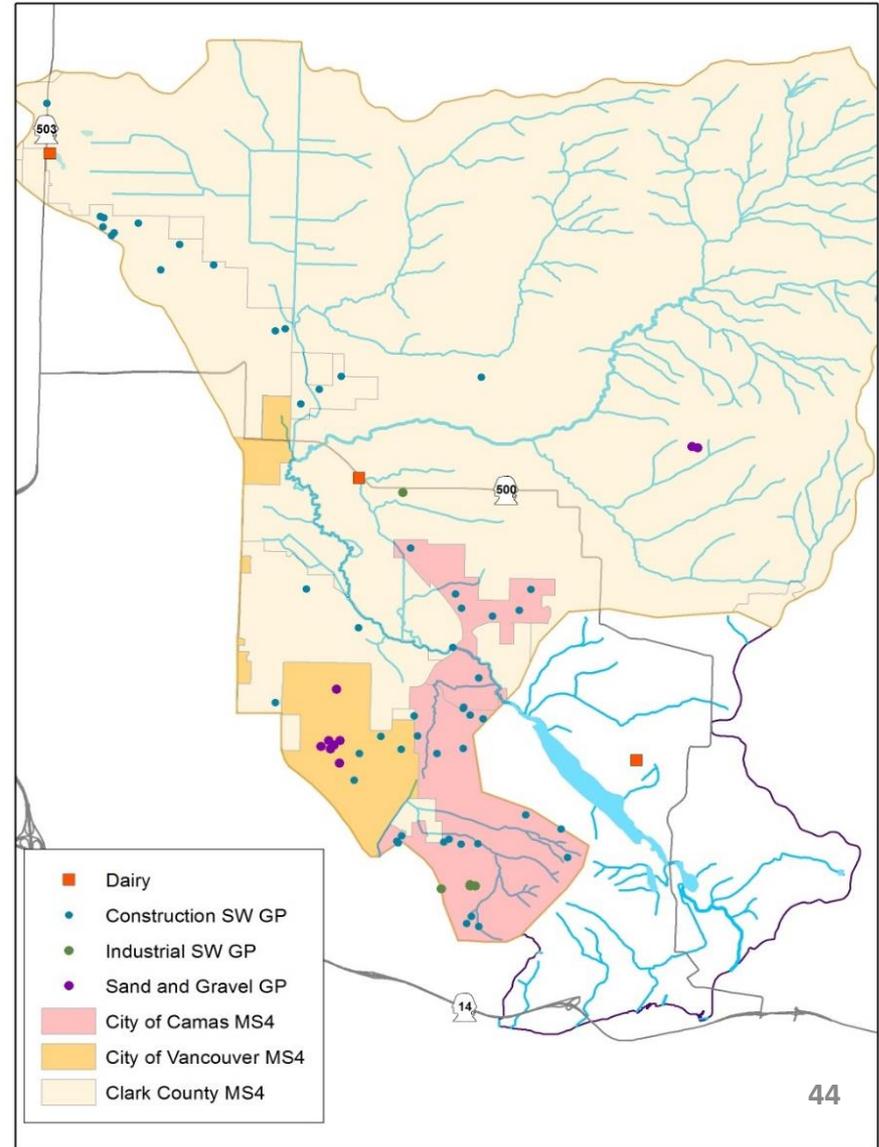


Figure 3. Fixed-network sampling locations in the Lacamas Creek watershed.

Lacamas Creek

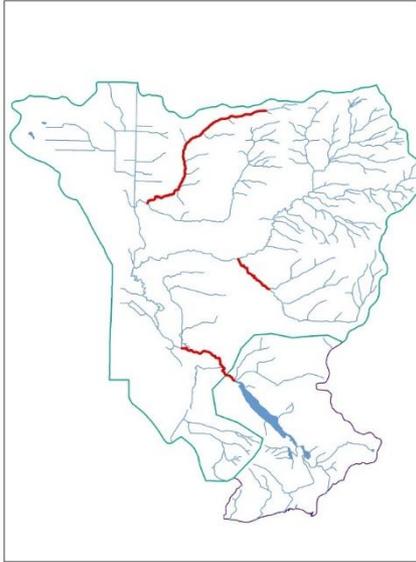
MS4 Permit Area	% Area
Clark County, Phase 1	88%
City of Vancouver, Phase 2	4%
City of Camas, Phase 2	7%

- 22% of the watershed is publicly owned

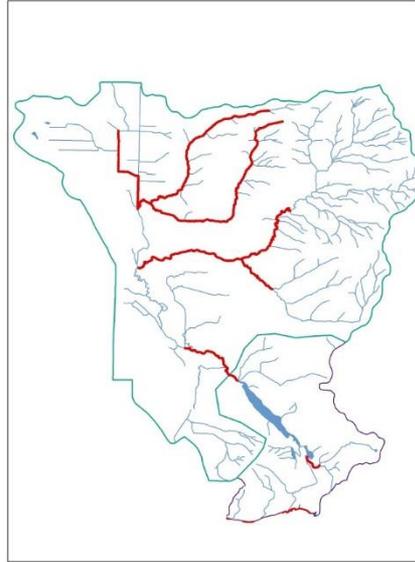


Polluted Waters

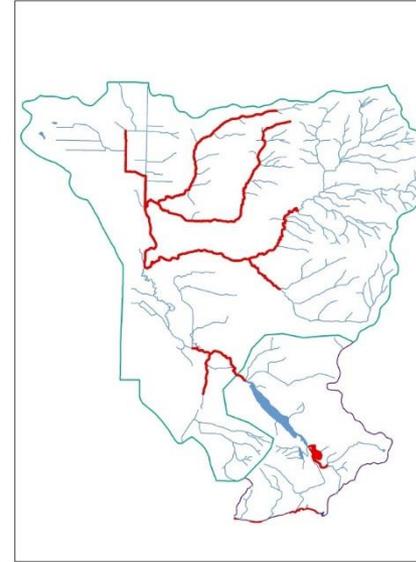
Bacteria



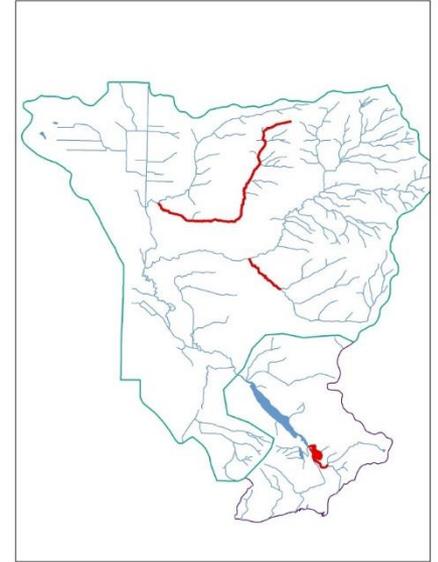
Temperature



Dissolved Oxygen



pH



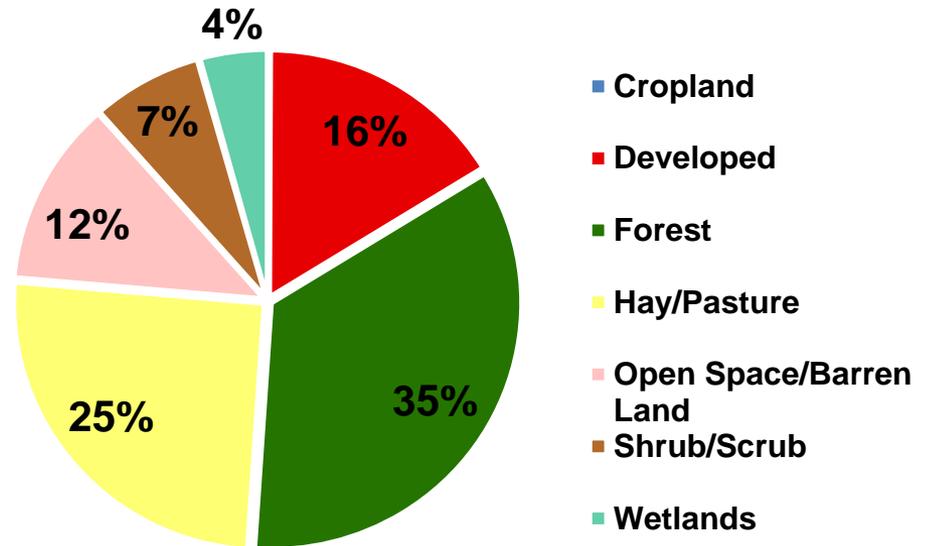
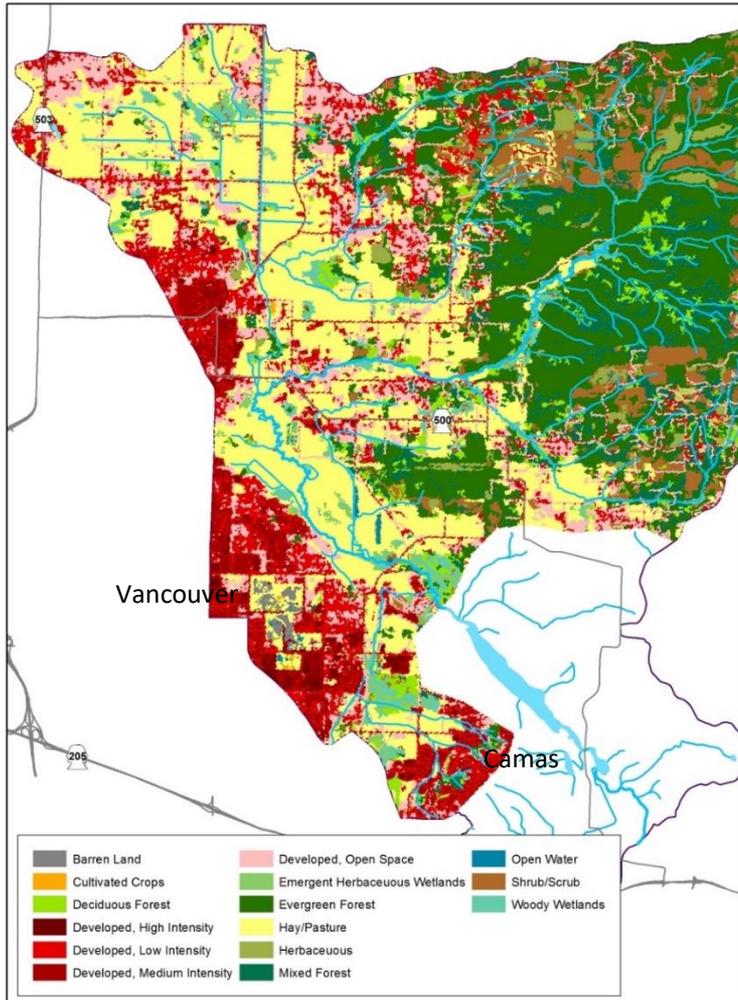
- Lacamas Creek
- Fifth Plain Creek
- Matney Creek

- Lacamas Creek
- Fifth Plain Creek
- Shanghai Creek
- Matney Creek
- Dwyer Creek
- China Ditch

- Lacamas Creek
- Fifth Plain Creek
- Shanghai Creek
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- Shanghai Creek
- Matney Creek

Landcover



NLCD Land Use (2016)

Current Lacamas Projects

- **Step 1** - Ecology data collection
- **Step 2** - Ecology's Source Assessment
- **Step 3** – Water Cleanup Plan
- **Step 4** – Implementation
- **Partner efforts**
 - Lacamas Lake Management Plan
 - Lacamas Watershed Council
 - Stormwater Grants
 - Salmon Recovery

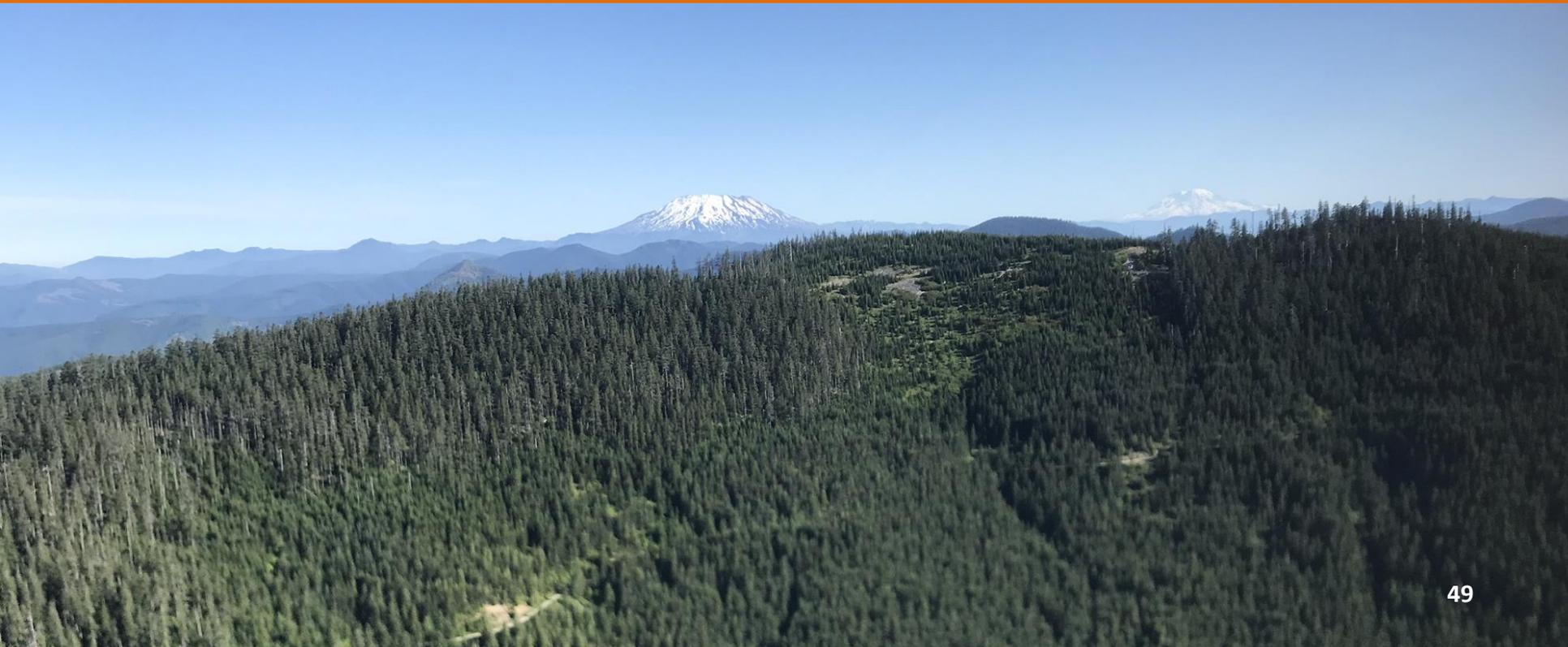


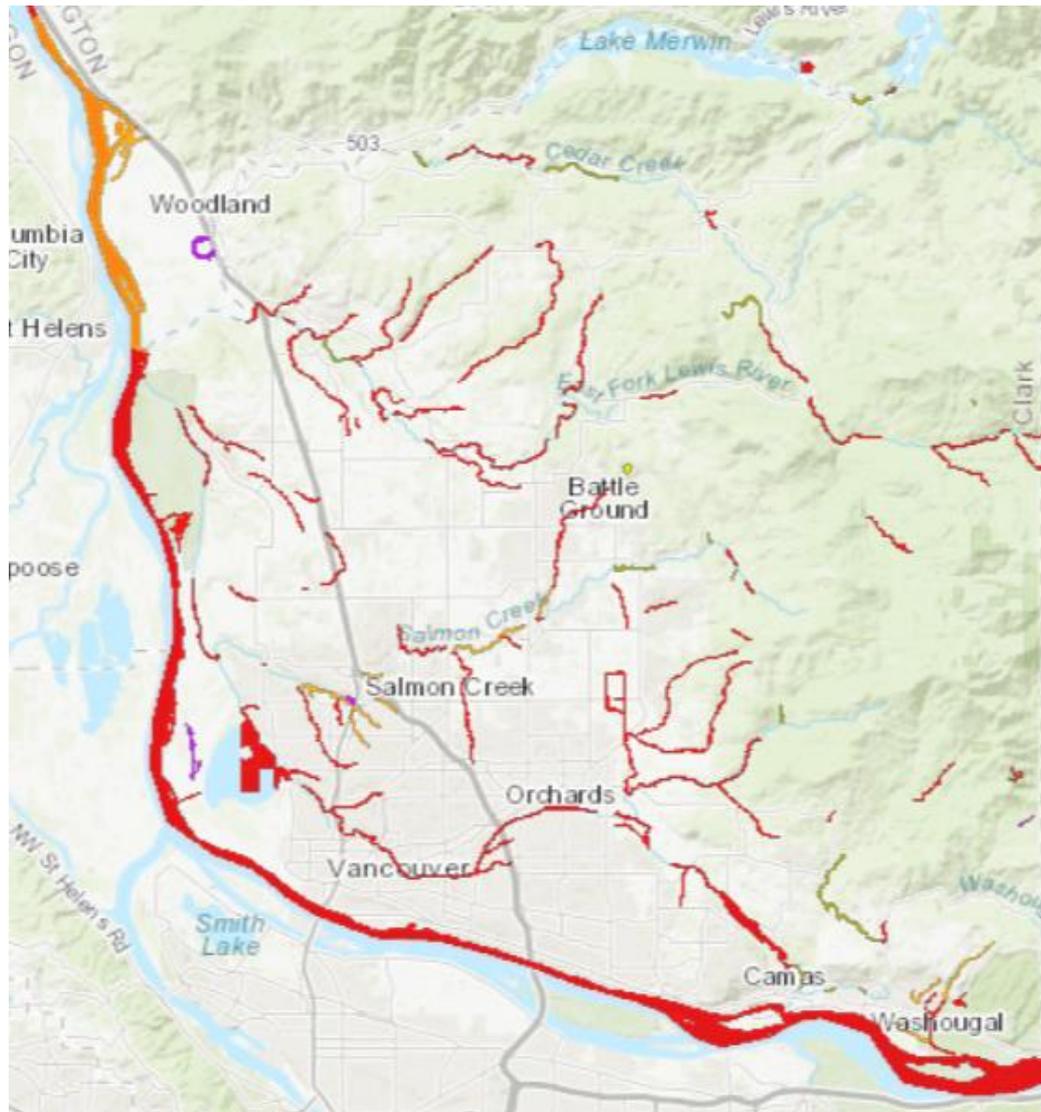
Opportunity

Use Poop Smart Clark to find and fix pollution issues in the Lacamas watershed.



Next Steps





Environmental Complaints

ecology.wa.gov/ReportAnIssue

Southwest Regional Office

Counties: Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, and Wahkiakum

Online: [Statewide reporting form](#)

Email: swroerts@ecy.wa.gov

Phone: 360-407-6300



**NO
SWIMMING**

WARNING!

CYANOBACTERIA (BLUE GREEN ALGAE) IS PRESENT
AVOID WATER CONTACT



**No swimming No wading No wind surfing
Keep animals out of water**

For information contact Clark County:
Public Health at 397-8428 or Parks Dept. at 619-1111

Investment in watersheds = Investment in lakes

**NO
SWIMMING**

WARNING!
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**Thank you for your
commitment to clean water!**

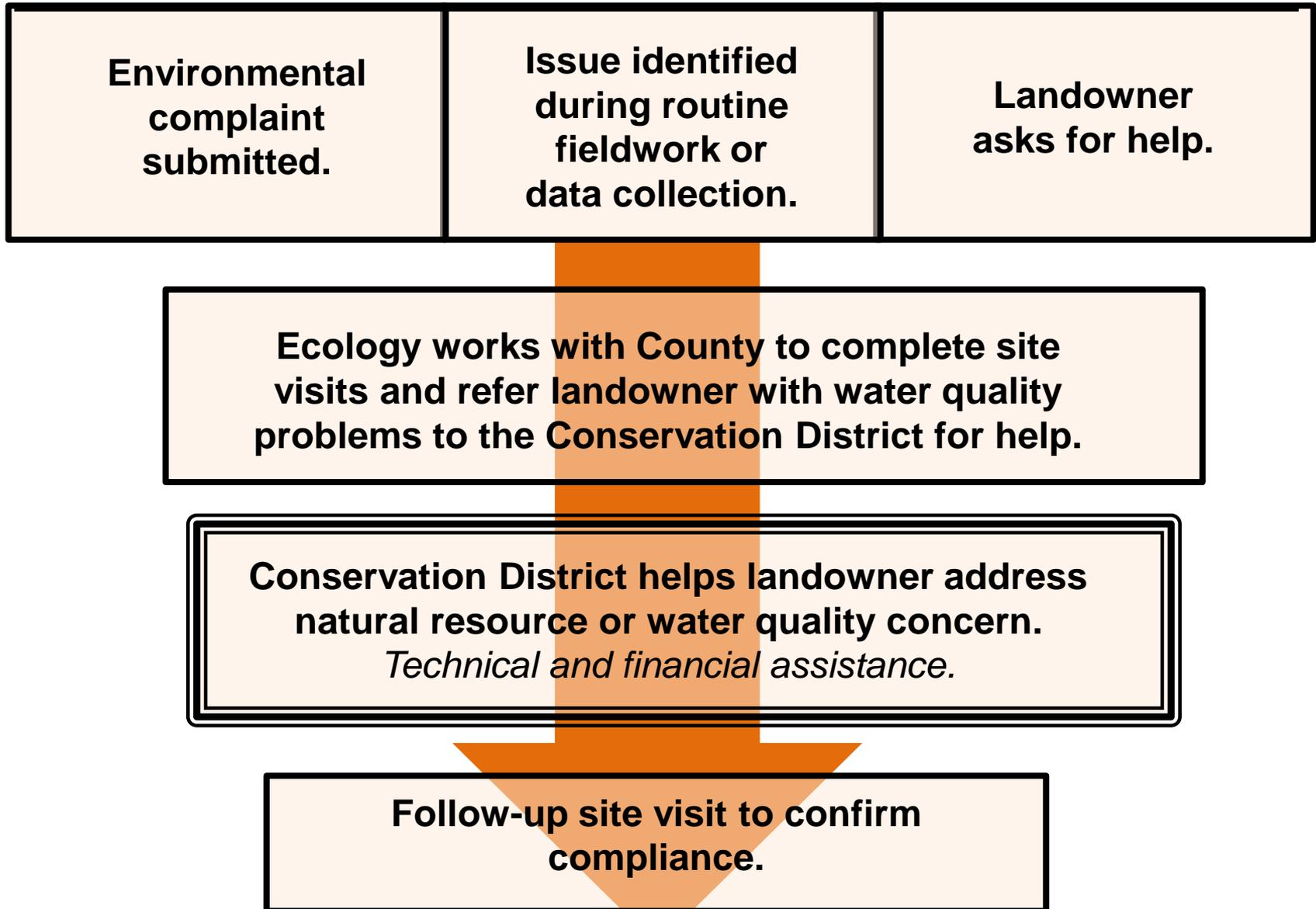


Thank you!

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Pathways to Compliance



Transcript of Presentation

is available online.

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