

**Burnt Bridge Creek
Public Education and Outreach
Workgroup Meeting**



DEPARTMENT OF
ECOLOGY
State of Washington
SOUTHWEST REGION OFFICE

Welcomes & Introductions

- *Name, Title, Department*



Meeting Objectives

- 1. Review priority locations for water quality improvement from Source Assessment (15 minutes)**
- 2. Begin implementation planning (60 minutes)**
 - Priority areas for implementation.
 - Implementation goals, actions, and opportunities.
 - Implementation challenges.
 - Milestones, targets, and timelines for implementation.
 - Criteria to measure progress (performance measures).
 - Funding sources and implementation partners.
- 3. Next steps (10 minutes)**

Where have we been?

- **October 2020:** Burnt Bridge Creek Source Assessment published
- **February 2021:** Burnt Bridge Creek Partnership kicked off
- **March 2021:** Implementation workgroups assigned
 - Stormwater and capital improvements
 - Operations and maintenance
 - Urban forestry and greenways
 - Sewer connection and septic systems
 - Public education and outreach
 - Other TBD: SEH America, local water use, and monitoring
- **April-May 2021:** Implementation Workgroups
 - *Ecology having internal meeting about SEH America Facility*

Where are we going?

- **June 2021:** Submit completed worksheets to Ecology
- **Summer 2021:** Full Burnt Bridge Creek Partnership meeting
Report out on what we learned at workgroups
- **Summer 2021:** External partnership meeting – LCEP, Watershed Alliance, WSDOT, Clark County Clean water Division, Clark County Public Health, Clark Conservation District, LCFRB, etc.
- **Fall 2021:** Public Webinar
- **January 2022:** Internal Draft (City of Vancouver, Ecology, and EPA)
- **Spring 2022:** External Draft Burnt Bridge Creek Water Cleanup Plan
- **Summer 2022:** Publish *Burnt Bridge Creek Water Cleanup Plan*

Ecology's Objective

- **Lead City of Vancouver through a planning process that results in a Water Cleanup Plan that achieves EPA's requirements.**
 - Identify **causes of pollution.**
 - Estimate pollutant **reductions needed.**
 - Describe **implementation** to achieve pollutant reductions
 - Estimate **technical and financial assistance** needed
 - Develop information and **education** component
 - Develop **implementation schedule.**
 - Establish **milestones and targets**
 - Develop **criteria to measure progress**
 - Monitor to **evaluate effectiveness** of implementation efforts.

Water Quality Priorities



Burnt Bridge Creek Source Assessment

TMDL Study- *Source Assessment*

- Identify critical areas
- Identify shade deficits
- Bacteria load reductions needed
- Implementation recommendations



DEPARTMENT OF
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Burnt Bridge Creek Watershed Fecal Coliform Bacteria, Temperature, Dissolved Oxygen, and pH

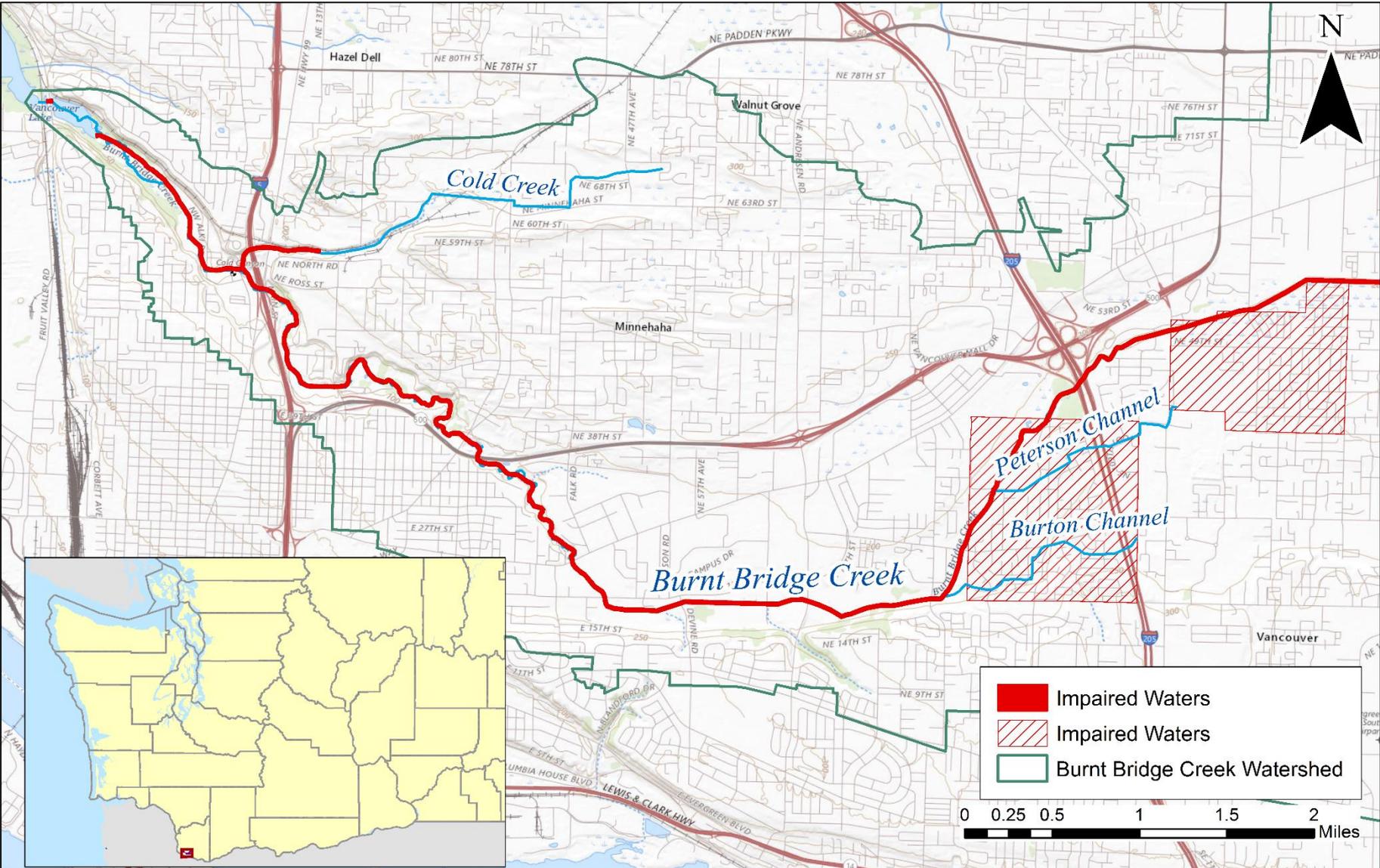
Source Assessment Report

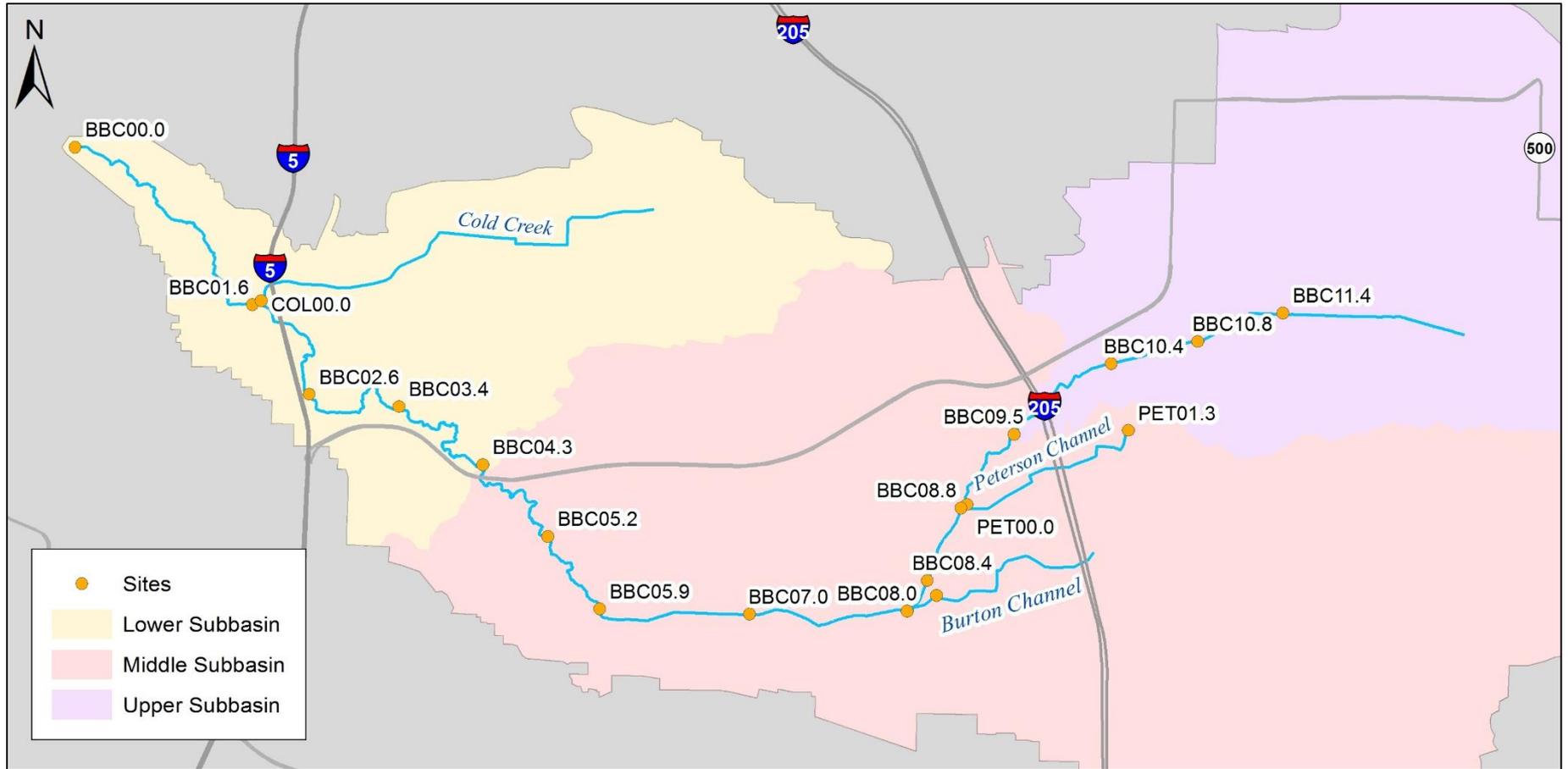


October 2020

Publication 20-03-016

303d list - Bacteria, Temperature, pH, and Dissolved Oxygen

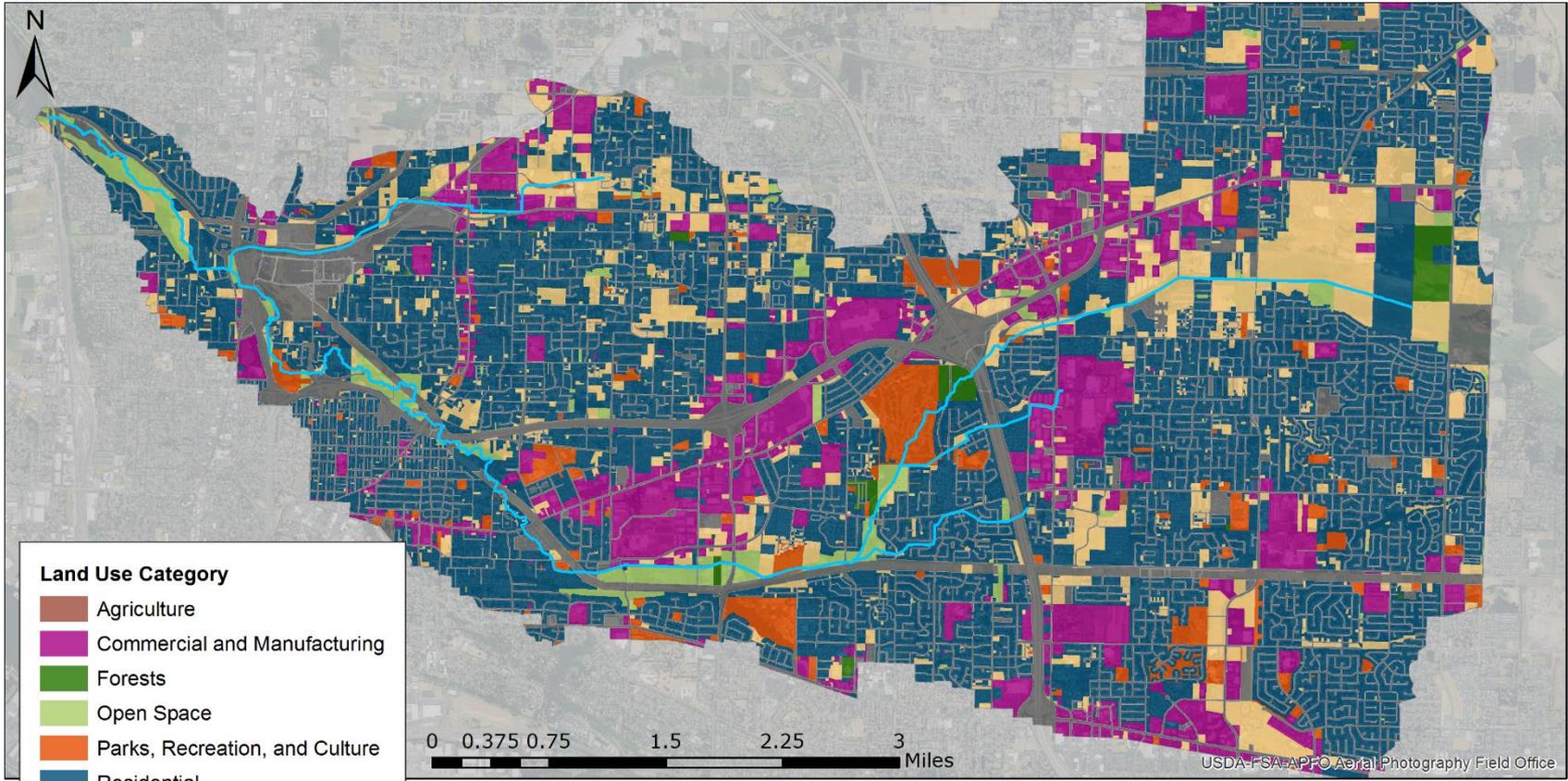


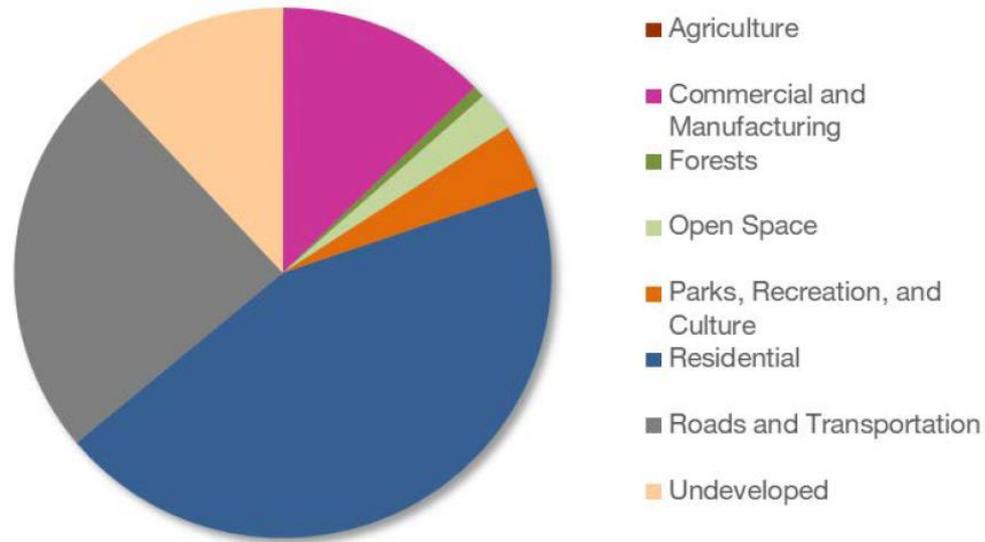


Lower = RM 0 to 5

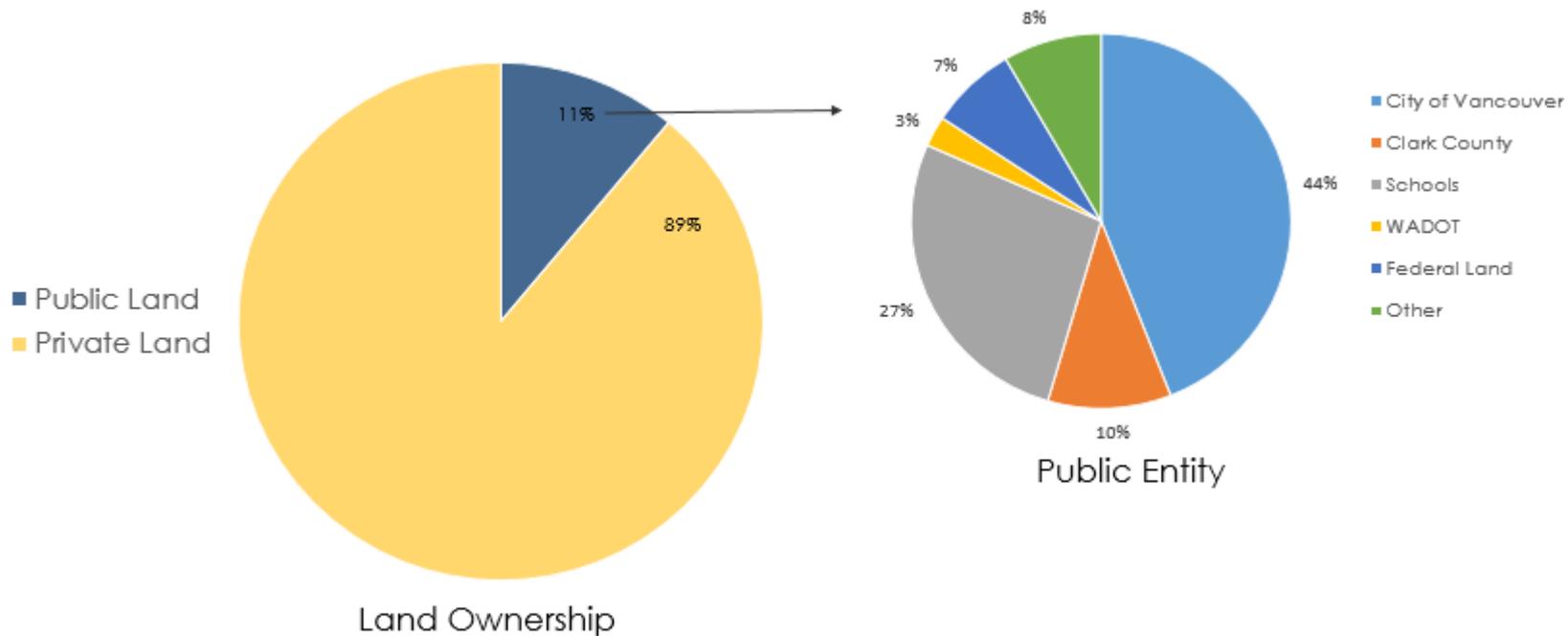
Middle = RM 5 to 10

Upper = RM 10 to 13





Land Use Category	Land Use (acre)	Land Use (%)
Agriculture	12	0%
Commercial and Manufacturing	2,333	13%
Forests	134	1%
Open Space	445	2%
Parks, Recreation, and Culture	736	4%
Residential	8,174	44%
Roads and Transportation	4,478	24%
Undeveloped	2,201	12%



Public Entity	Land Area (acre)	Land Area (%)
City of Vancouver	901	44%
Clark County	215	10%
Schools	554	27%
WSDOT	54	3%
Federal Land	151	7%
Other	171	8%

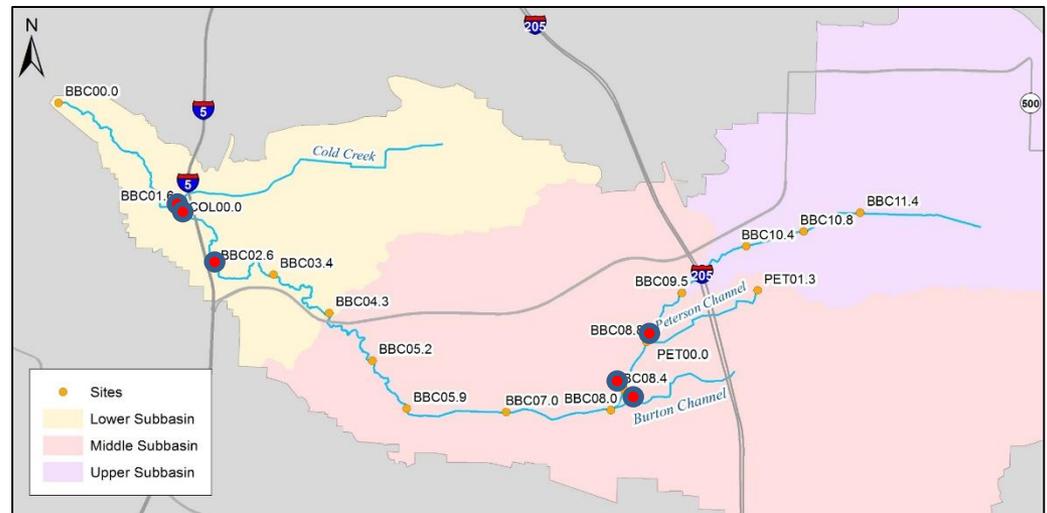
Bacteria Priorities



Recommendations

Focus bacteria reduction efforts to Middle & Lower watershed.

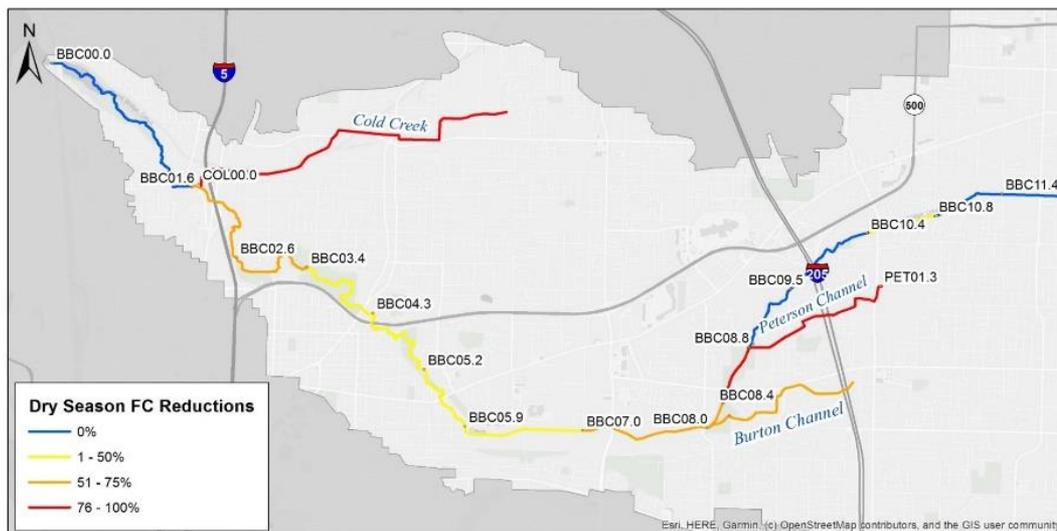
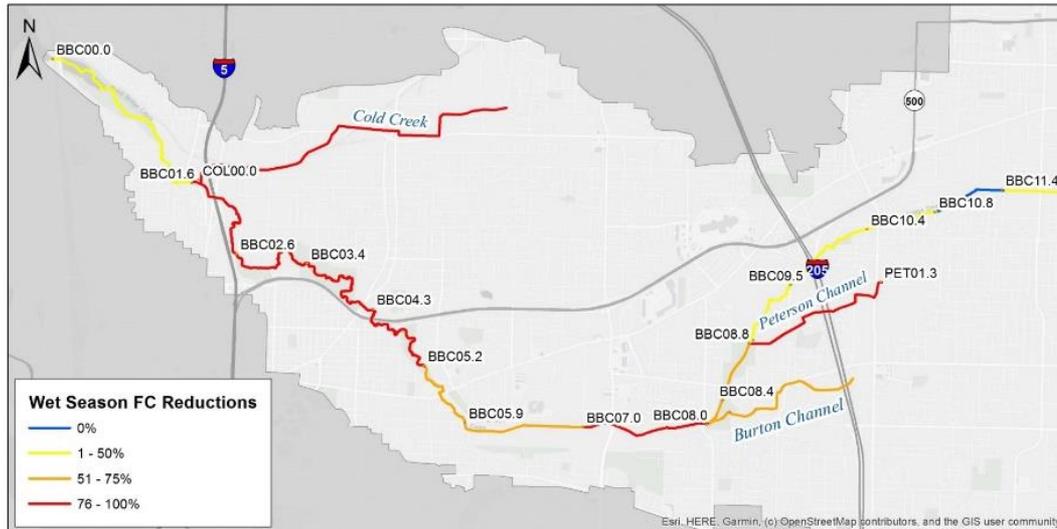
- **Priority 1: Geometric means $>200\text{cfu}/100\text{ml}$ in dry season**
 - Peterson Channel
 - Burton Channel
 - Cold Creek
 - BBC 8.4
 - BBC 2.6
 - BBC 1.6



- Load reductions of over 75% are needed at all of these locations to meet water quality standards.

Recommendations

Focus bacteria reduction efforts to Middle & Lower watershed.



Summary

- **Priority Areas (#1 and #2)**
 - ***Tributaries:*** Peterson Channel, Cold Creek, Burton Channel, RM
 - ***Middle watershed***
 - BBC08.4 during the dry season
 - BBC07.0 during the wet season
 - ***Lower watershed***
 - BBC04.3, BBC03.4, BBC02.6, and BBC01.6 during the wet season.



Dissolved Oxygen Priority Areas

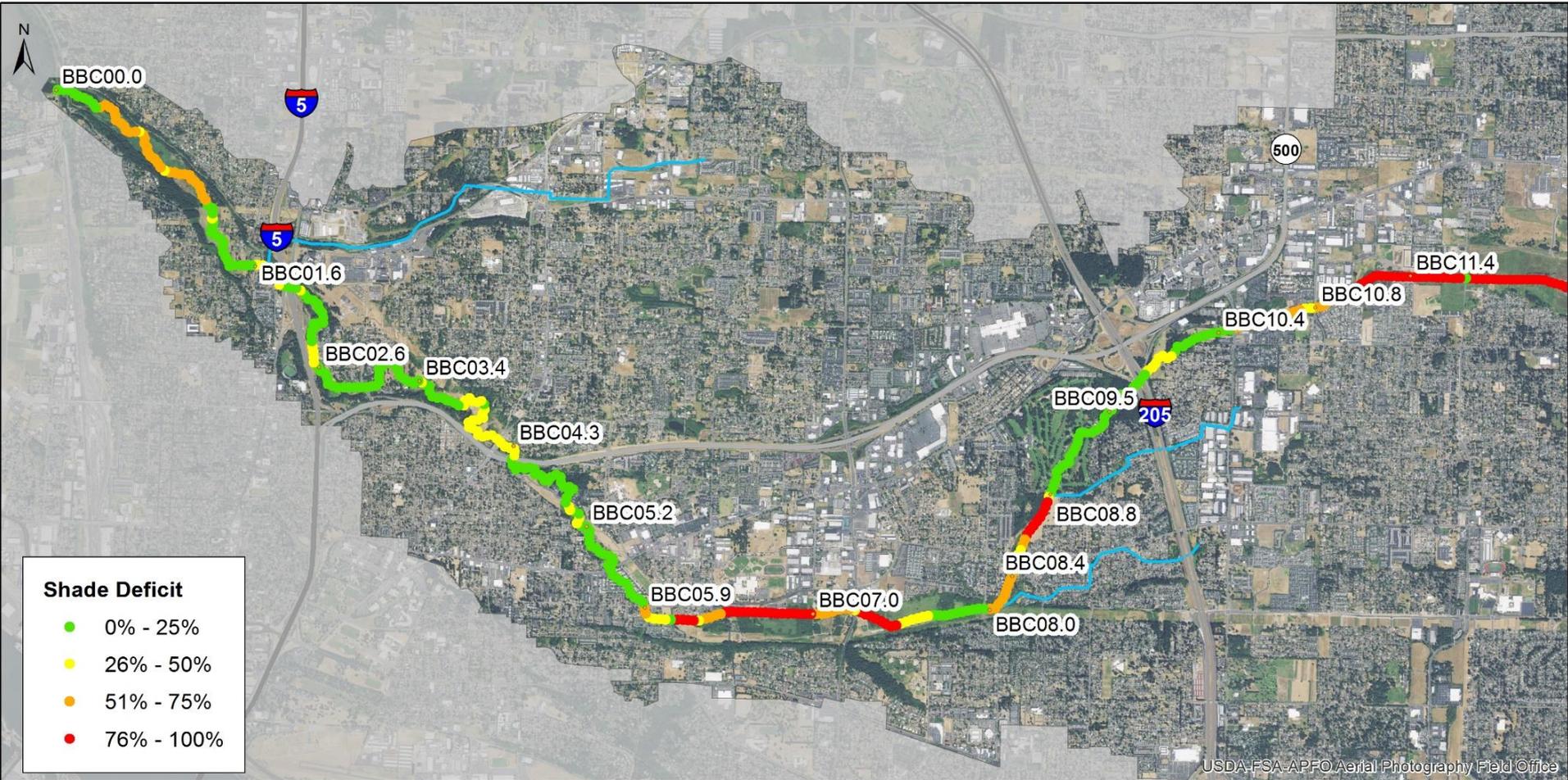
- Sites with most noncompliant days for DO
 - Upper watershed (BBC11.4, BBC10.8)
 - Middle watershed (BBC7.0 and BBC05.9)



Temperature Priority areas

- Middle subbasin had highest number of days above criteria
 - BBC05.9 and BBC07.0
- Maximum temperatures at BBC0.00





BBC00.0

BBC01.6

BBC02.6

BBC03.4

BBC04.3

BBC05.2

BBC05.9

BBC07.0

BBC09.5

BBC08.8

BBC08.4

BBC08.0

BBC10.4

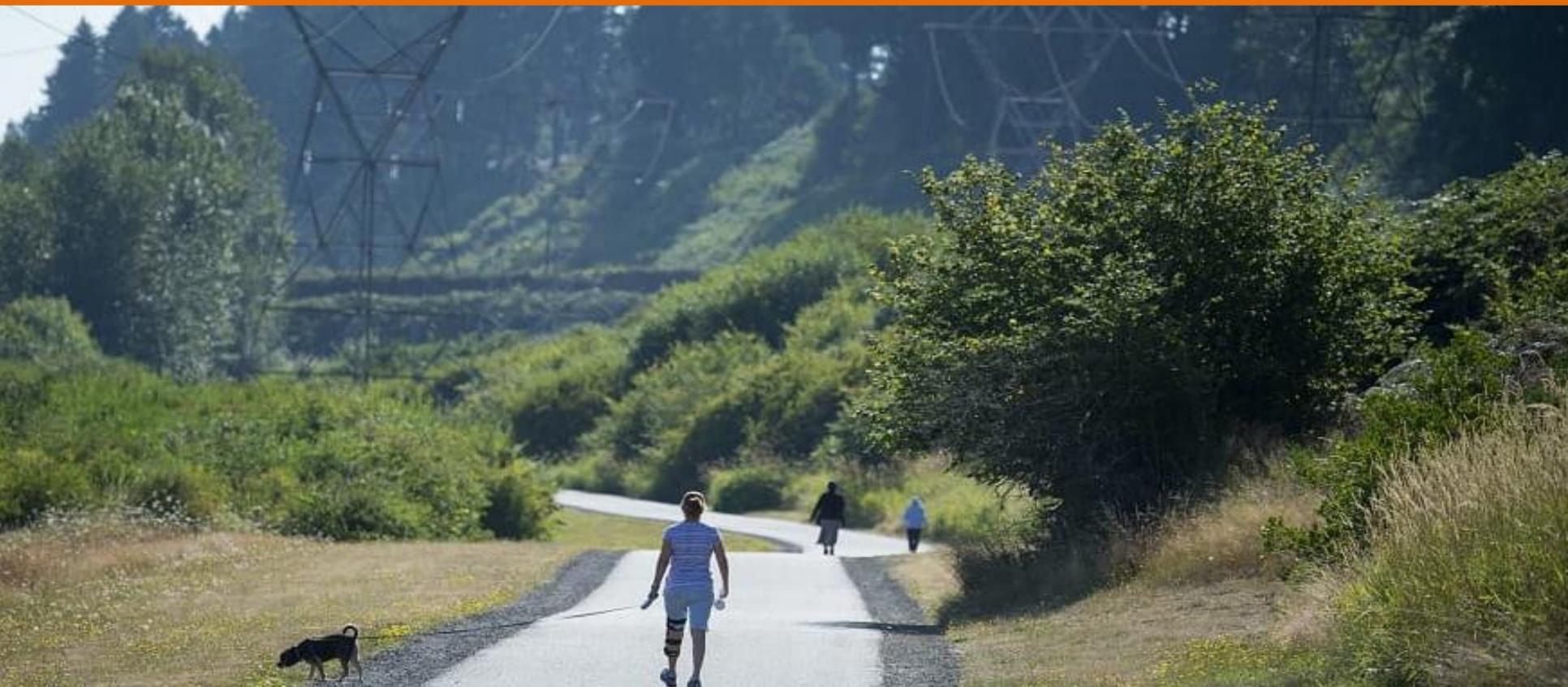
BBC10.8

BBC11.4

Riparian Restoration

- **Riparian restoration**
 - **Upper watershed = 62% average**
 - River miles 12-13 = 87% shade deficit
 - River miles 11-12 = 73% shade deficit
 - **Middle watershed = 39% average**
 - RM 8-9 = 44%
 - River miles 7-8 = 83%
 - RM 6-7 = 35%
 - **Lower watershed = 27% average**
 - RM 4-5 = 36%
 - RM 1-2 = 31%
 - RM 0-1 = 43%

Implementation Planning Review Worksheets



Discussion topics

1. **What are your key messages? Who is your key audience?**
2. **Priority areas for implementation** – Subwatersheds, Catchments or Drainage areas, Neighborhoods, HOAs, Parks, Schools, Organizations or businesses, Priority demographics
3. **Stormwater - Public awareness, behavior change, stewardship**
 - Lawn care and fertilizer use, private stormwater facilities, pet waste pickup
4. **Urban forestry** (preservation and restoration), tree planting, and backyard habitat
5. **Agriculture and livestock**
6. **Sewer connection and septic systems**
7. **Private landowner outreach and technical assistance**
8. **Methods** – Vancouver Water Resources Education Center, Student Watershed Monitoring Network, print material, websites, social media, videos, billboards, mailers newspapers, workshops, StoryMaps etc.
9. **Community based social marketing**
10. **Other?**

Implementation Planning

- Resources, reports, or websites Ecology should reference for information
 - 1.
 - 2.
 - 3.

Implementation Planning

- **Priority areas for implementation**
 - Examples
 - Subwatersheds
 - Catchments or Drainage areas
 - Neighborhoods
 - Parks
 - Schools
 - Organizations or businesses
 - Priority demographics

Implementation Planning

Implementation challenges

1.
2.
3.

Milestones, Targets, and Timelines

Milestones	Target Date
1.	2023
2.	2025
3.	2027
4.	2030
5.	2033

Criteria to measure implementation progress

Performance measures

Criteria to Measure Progress

1.

2.

3.

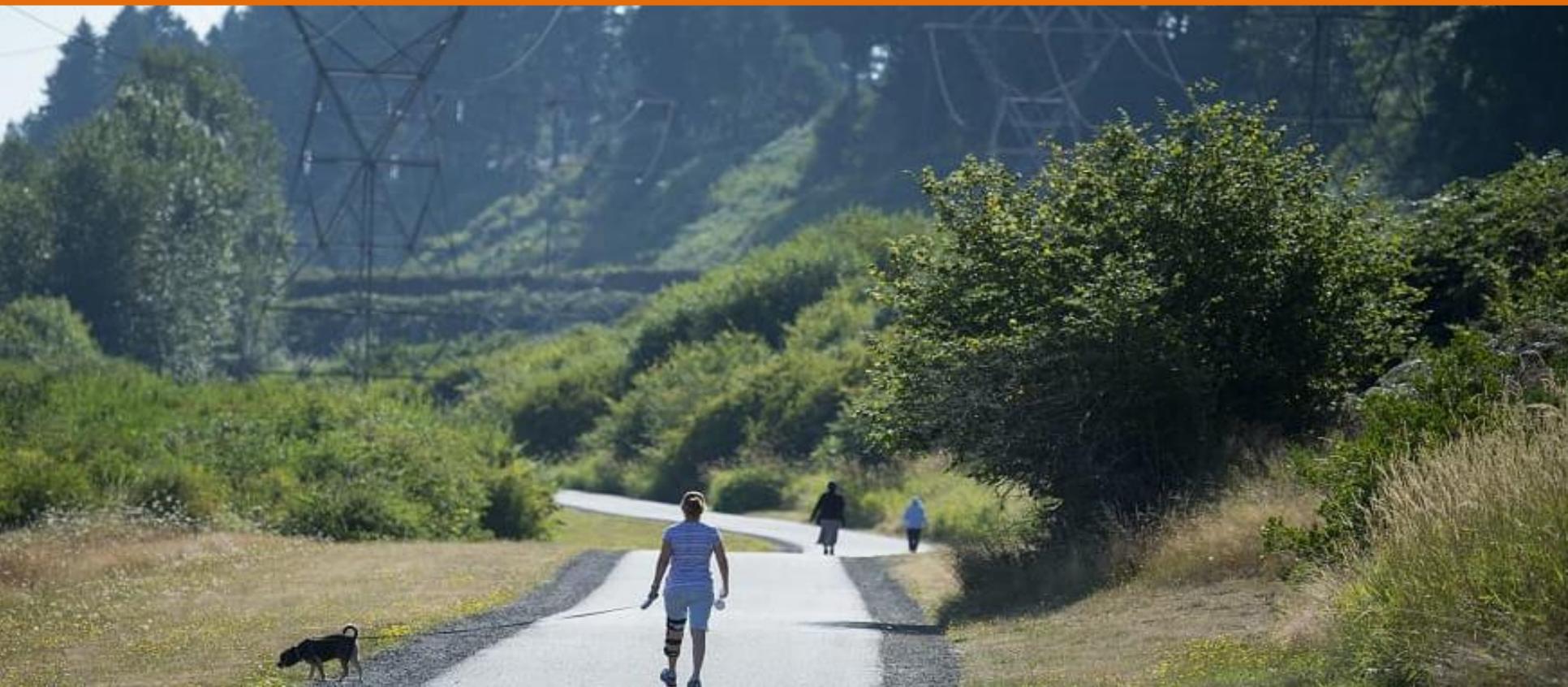
4.

5.

Funding Sources and Partnerships

Funding Sources	
Implementation Partners	

Next Steps



Timeline

- **April-May 2021:** Implementation Workgroups.
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- **Summer 2021:** Full Burnt Bridge Creek Partnership meeting (report out on what we learned at workgroups)
- **Summer 2021:** External partnership meeting – LCEP, Watershed Alliance, WSDOT, Clark County Clean water Division, Clark County Public Health, Clark Conservation District, LCFRB, etc.
- **Fall 2021:** Public Webinar
- **October 2021:** FY 2023 Funding Applications due!
- **January 2022:** Internal Draft (City of Vancouver, Ecology, and EPA)
- **Spring 2022:** External Draft Burnt Bridge Creek Water Cleanup Plan
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www.tinyurl.com/burntbridgecreek

Burnt Bridge Creek Partnership for clean water



[Return to Department of Ecology website](#) | [Burnt Bridge Creek Source Assessment Report](#) | [Report environmental complaints online](#)



Burnt Bridge Creek Watershed Fecal Coliform Bacteria, Temperature, Dissolved Oxygen, and pH

Source Assessment Report



October 2020
Publication 20-04-003

What is the Burnt Bridge Creek Partnership?

The Burnt Bridge Creek watershed located in Vancouver, Washington, is on Washington State's polluted waters list (303d list) for warm water temperatures, bacteria, dissolved oxygen, and pH pollution problems, which drives the need to develop a Water Cleanup Plan. In October 2020, the [Burnt Bridge Creek Source Assessment Report](#) was published to identify critical areas for water quality improvement. This Source Assessment identifies portions of Burnt Bridge Creek that are not meeting water quality standards. The report also identifies the largest shade deficits in the watershed to focus tree planting efforts, and determines the bacteria reductions needed to meet water quality standards.

To implement recommendations from the Source Assessment, the [Burnt Bridge Creek Partnership](#) was formed in February 2021 to develop and implement the Water Cleanup Plan. This Water Cleanup Plan will focus on best management practices and implementation actions to improve water quality. The Partnership will meet regularly through 2022.

Questions about the Burnt Bridge Creek Partnership should be directed to [Devan Rostorfer](#), Water Quality Specialist, Washington State Department of Ecology.

Past Events & Meeting Materials

- [February 2, 2021 - Burnt Bridge Creek Partnership kickoff meeting](#)
 - [Agenda - February 2021](#)
 - [Presentation - Overview of process](#)
 - [Presentation - Burnt Bridge Creek Source Assessment](#)
 - [Burnt Bridge Creek Source Assessment Report](#)
 - [Meeting Summary - February 2021](#)

Local Resources

- [City of Vancouver Stormwater, Surface Water, and Groundwater Utility](#)
- [City of Vancouver Urban Forestry](#)
- [City of Vancouver Water Resources Education Center](#)
- [City of Vancouver Sewer System & Wastewater Treatment Facilities](#)
- [Stormwater Partners of Southwest Washington](#)
- [Burnt Bridge Creek Trail](#)
- [Explore Your Watershed](#)
- [Project Restore](#)

FY 2023 Call for Projects

Grant Funding Opportunities

- One of our regional goals is to help local jurisdictions develop competitive applications for Ecology Water Quality grants.
- To encourage communication earlier in the process and provide more time for project proposal development, Ecology is asking interested applicants to complete a short “Notice of Intent” form by **June 15, 2021**.
- Ecology will still host statewide application workshops in August and the final applications are due October 12, 2021.
- For more details please visit <https://tinyurl.com/ECY-SWRO-Grants>, or contact Leanne Whitesell, Regional Fund Coordinator, *Nonpoint Activity Projects*, (360) 407-6295 or Leaw461@ecy.wa.gov.

Thank You!



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APPENDIX: Recommendations from Source Assessment

Public Education and outreach

- Provide public outreach and education activities throughout the local watershed community about the effects of nonpoint pollution to water quality and human health. This includes nonpoint pollution from pet waste and recreational activities at parks and greenways on the waterfront of Burnt Bridge Creek and its tributaries.
- Increase outreach to private landowners to encourage voluntary implementation of water quality BMPs on streamside properties. These outreach efforts should be targeted towards the following audiences:
 - Agricultural landowners with properties adjacent to Burnt Bridge Creek and its tributaries. Agricultural landowners in areas where there are known bacteria issues are a priority for outreach.
 - Homeowners with septic systems that are past due for inspection and maintenance on properties adjacent to Burnt Bridge Creek and its tributaries. Septic system owners in areas where there are known bacteria issues are a priority for outreach, as well as, homeowners that are eligible for Vancouver's Sewer Connection Incentive Program (SCIP) .
 - Public and private landowners with riparian properties adjacent to the highest shade deficits on the Burnt Bridge Creek mainstem and tributaries. Outreach to these landowners to promote tree planting and riparian restoration is a priority
 - Homeowners Associations (HOAs) with private stormwater facilities and residential landowners with impervious surfaces on their properties that would help improve water quality by implementing pollution prevention and source control activities.