

# Clean Water Work Group



Dungeness River Management Team Update  
March 2024

# Funding and Partner Support!



# Presentation Outline

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1. Who is the Clean Water Work Group (CWWG) ?
2. History of Shellfish closures in Dungeness Bay
3. Dungeness Watershed - CWWG efforts
4. Water Quality Project Status Update

# Who is the Clean Water Work Group (CWWG) ?

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- The CWWG is a subcommittee of the DRMT
- Formed in 1998

## CWWG Partners:

Clallam County Env. Health  
Streamkeepers

Clallam Conservation District

WA Department of Health

WA Department of Ecology

Dungeness Farms

Clallam County MRC

Private Citizens

and more

# Who is the Clear

- The CWWG is a subcommittee
- Formed in 199

- **Goal:** To address pollution concerns in the waters that run to Dungeness Bay





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**What was happening around 1998?**

# Shellfish Closures in Dungeness Bay

- 13 WA DOH marine monitoring stations
- 1997 - Station fails
  - Bacteria levels exceed federal standards
  - JS'KT, CCD, and partners develop “**Dungeness Bay Shellfish Closure Prevention Response Strategy**”



# Shellfish Closures in Dungeness Bay

- 1998 – WA DOH enacts first shellfish closure, and forms “**Response Team**”
- Clallam County agrees to be lead agency, forms the **Shellfish Protect District**, and develops a response plan alongside partners
- 1999 – TMDL study for the Dungeness River begins



# Shellfish Closures in Dungeness Bay

- 2000 – 2 more stations fail



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# Shellfish Closures in Dungeness Bay

- 2000 – 2 more stations fail
- 2001 – 1 more station fails



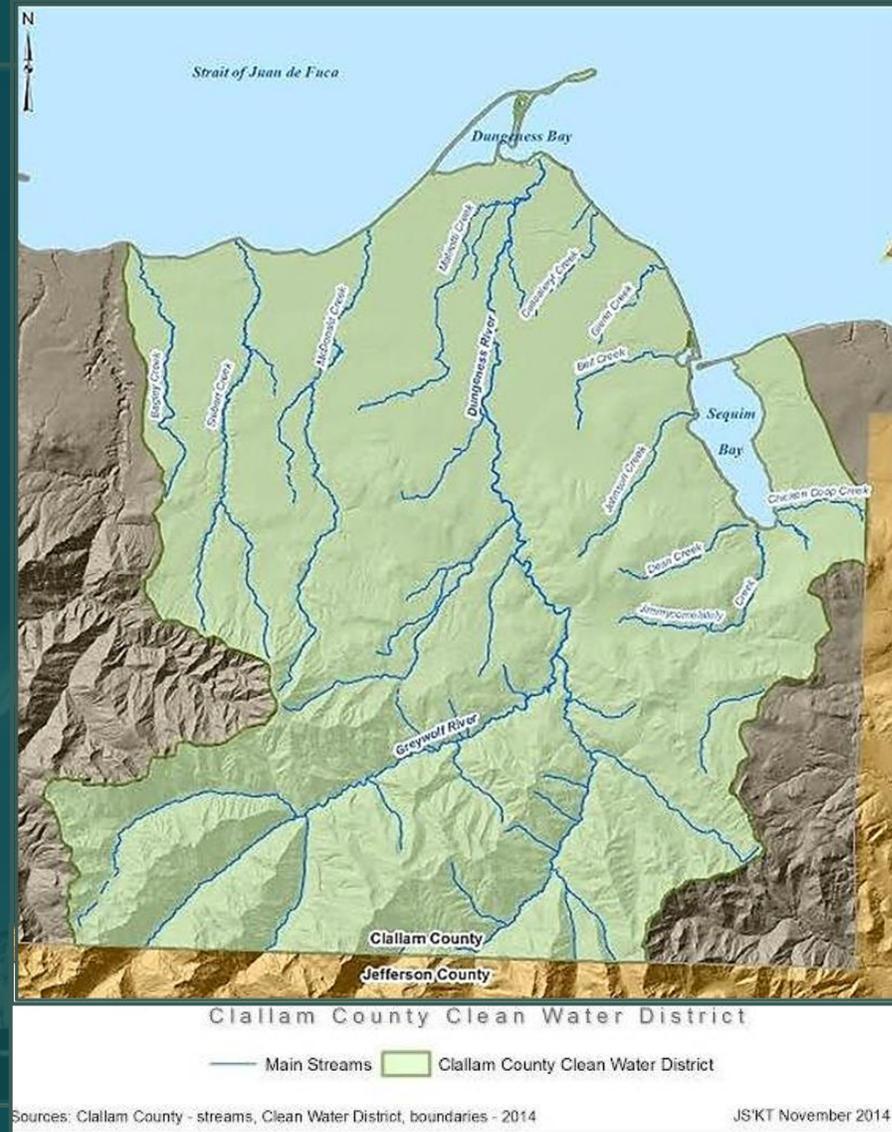
# Shellfish Closures in Dungeness Bay

- 2000 – 2 more stations fail
- 2001 – 1 more station fails



# Shellfish Closures in Dungeness Bay

- 2000 – 2 more stations fail
- 2001 – 1 more station fails
- 2001 – Dungeness-Sequim Bay Watershed **Clean Water District** is formed
- 2001 - “Response Team” renamed **Clean Water Work Group**



# Shellfish Closures in Dungeness Bay

- 1999 – TMDL study for the Dungeness River begins
- 2000 – 2 more stations fail
- 2001 – 1 more station fails
- 2001 – CWD/CWWG
- 2002 – DR TMDL ends, DB TMDL begins



# Shellfish Closures in Dungeness Bay

- 2001 – CWD/CWWG
- 2002 – DR TMDL ends, DB TMDL begins
- 2003 – Seasonal Closure goes into effect
- 2004 – DB TMDL ends
- 2004 – CWWG develops “Clean Water Strategy for Addressing Bacteria Pollution in the Bay and Watershed”



# Shellfish Closures in Dungeness Bay

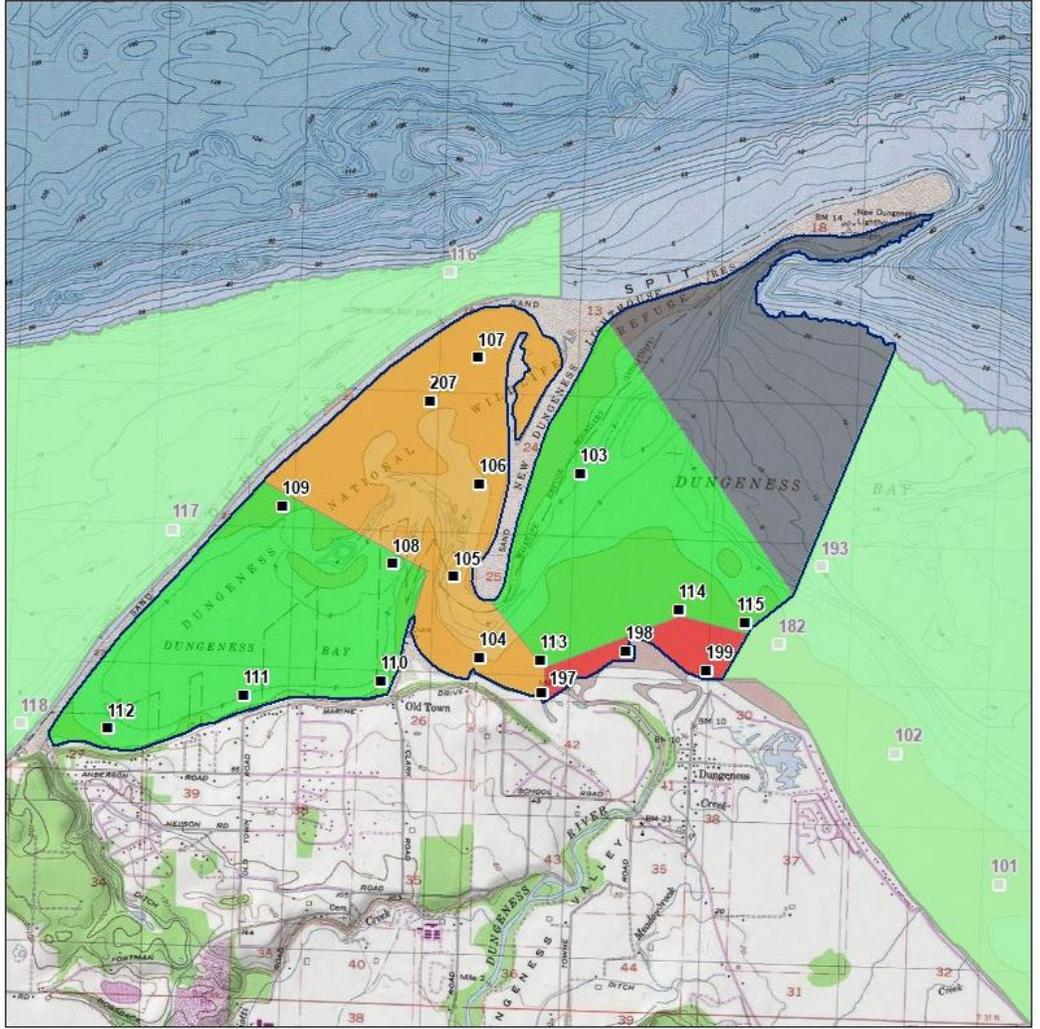
- 2003 → 2011 – Closure status remains the same



# Shellfish Closures in Dungeness Bay

- 2003 → 2011 – Closure status remains the same
- 2011 → 2016 - Parts of the Seasonal Closure area are removed, changed to Approved



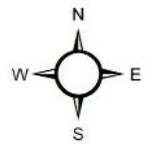


**Classification**

Green	Approved
Orange	Conditional
Red	Prohibited
Blue	Restricted
Grey	Unclassified

**Sampling Stations**

■



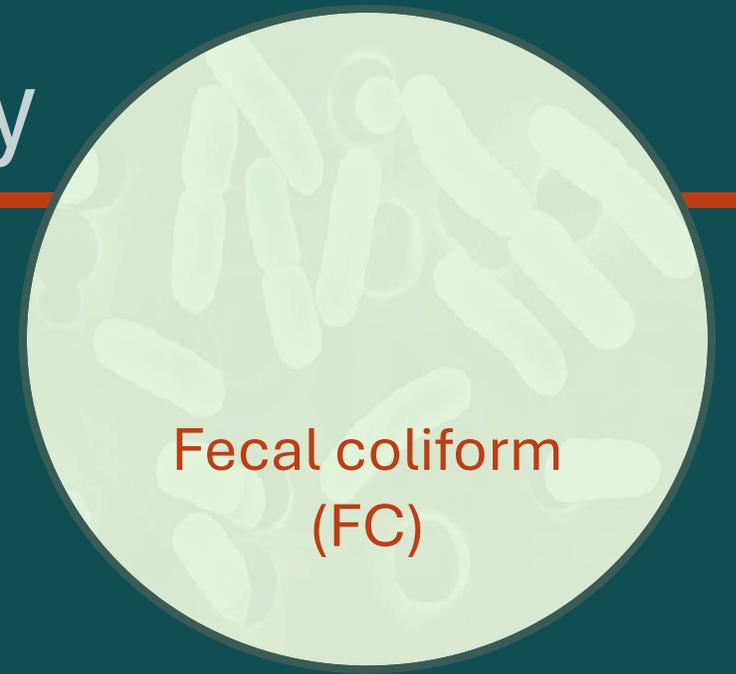
\* Some sampling stations are highlighted with grey box for ease of reading.

# Shellfish Closures in Dungeness Bay

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What is fecal coliform?

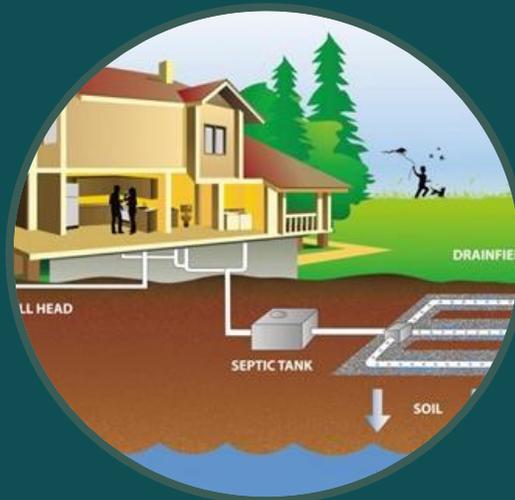
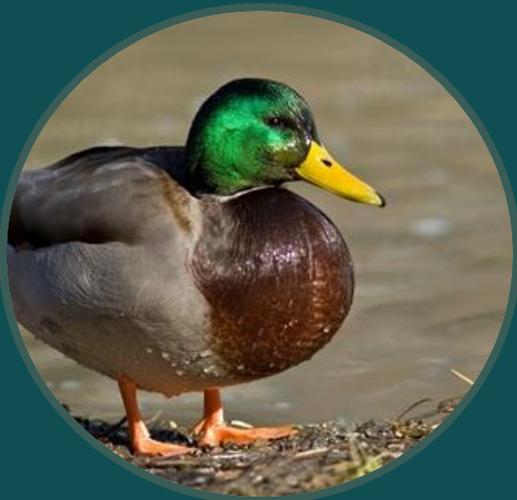
- A group of different bacteria types



# Shellfish Closures in Dungeness Bay

## What is fecal coliform?

- A group of different bacteria types
- Present in the gut and feces of warm-blooded animals



# Shellfish Closures in Dungeness Bay

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## What is fecal coliform?

- A group of different bacteria types
- Present in the gut and feces of warm-blooded animals

## Why look for fecal coliform pollution?

1. Harmful bacteria
  - Fecal coliform bacteria may be harmful, but not always
2. Pathogens
  - If fecal coliform is present, dangerous pathogens may be present

# Shellfish Closures in Dungeness Bay

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What is fecal coliform?

- A group of different bacteria types
- Present in the gut and feces of warm-blooded animals

Why care if FC is in our waters?

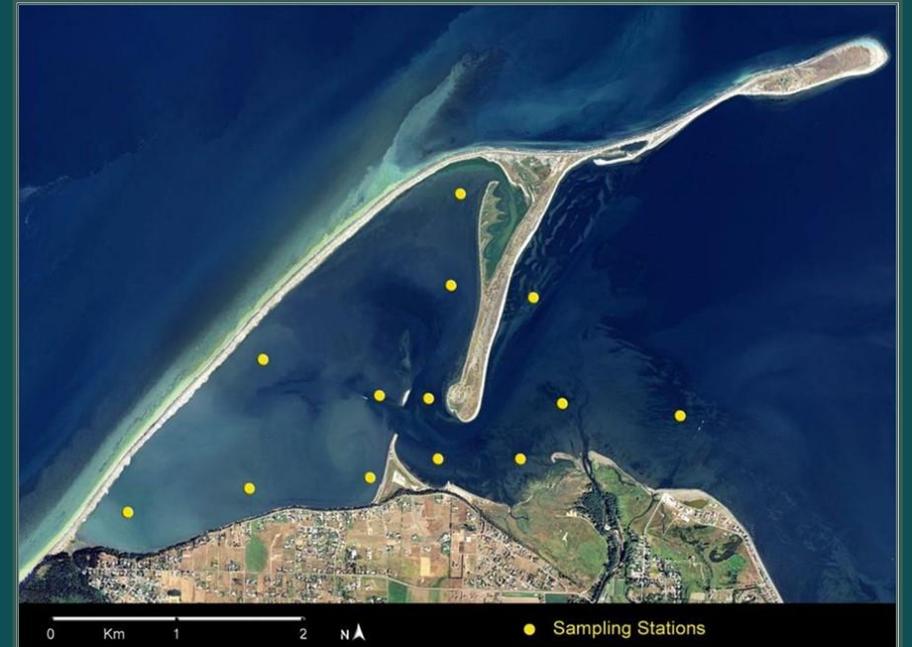
- Ingesting the water
- Ingesting shellfish from that water



# Dungeness Watershed – CWWG efforts

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- Support for WA DOH monitoring



# Dungeness Watershed – CWWG efforts

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- Support for WA DOH monitoring
- Septic system care and maintenance
  - Septic 101/201 (2003/2008)
  - Realtor's Meetings
  - Training for building and OSS industry professionals
  - Septic Inspection Compliance
  - Rebates/Incentives as available



# Dungeness Watershed – CWWG efforts

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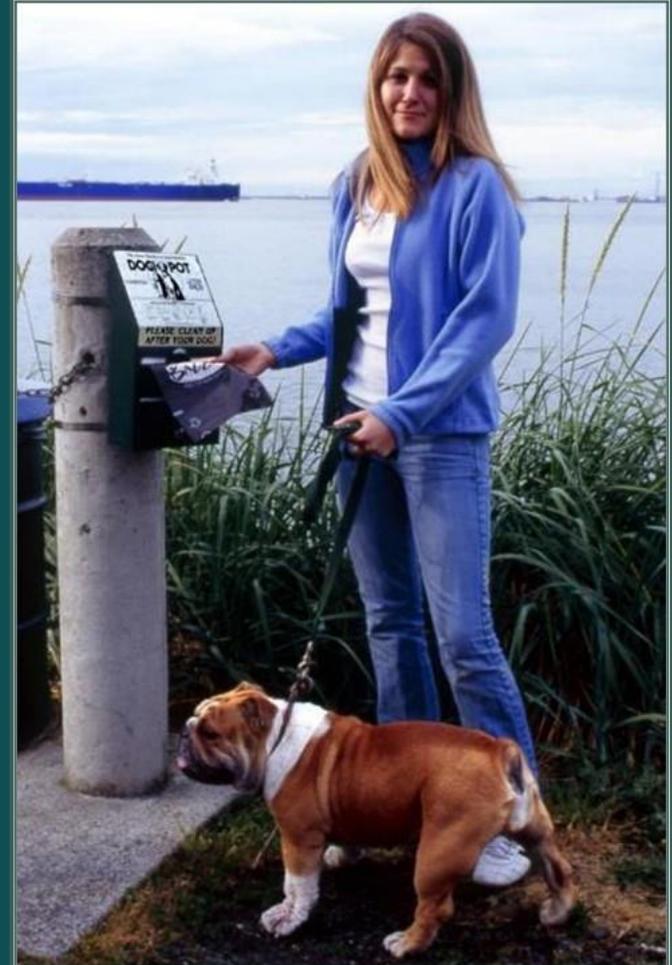
- Support for WA DOH monitoring
- Septic system care and maintenance
- Irrigation Piping (CCD)
  - 2005 – 2011
  - 16 miles of irrigation ditch piping installed
  - Promotes water conservation
  - Minimizes contaminants, like bacteria, from getting into the irrigation waters
  - CCD oversaw project design and management



# Dungeness Watershed – CWWG efforts

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- Support for WA DOH monitoring
- Septic system care and maintenance
- Irrigation Piping (CCD)
- Pet owner outreach and support
  - Outreach and education materials created and distributed to raise awareness
  - 2010's study – “Pile counts” to determine how bad the problem was at high use county parks



# Dungeness Watershed – CWWG efforts

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- Support for WA DOH monitoring
- Septic system care and maintenance
- Irrigation Piping (CCD)
- Pet owner outreach and support
- Landowner outreach, education, and assistance
  - Farm best practices
  - Septic Cost-Share Program (CCD)



# Dungeness Watershed – CWWG efforts

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- Support for WA DOH monitoring
- Septic system care and maintenance
- Irrigation Piping (CCD)
- Pet owner outreach and support
- Landowner outreach, education, and assistance
- Streamkeepers long-term monitoring
- Water Quality studies – TWIG



# Dungeness Watershed – What is the PIC Project?

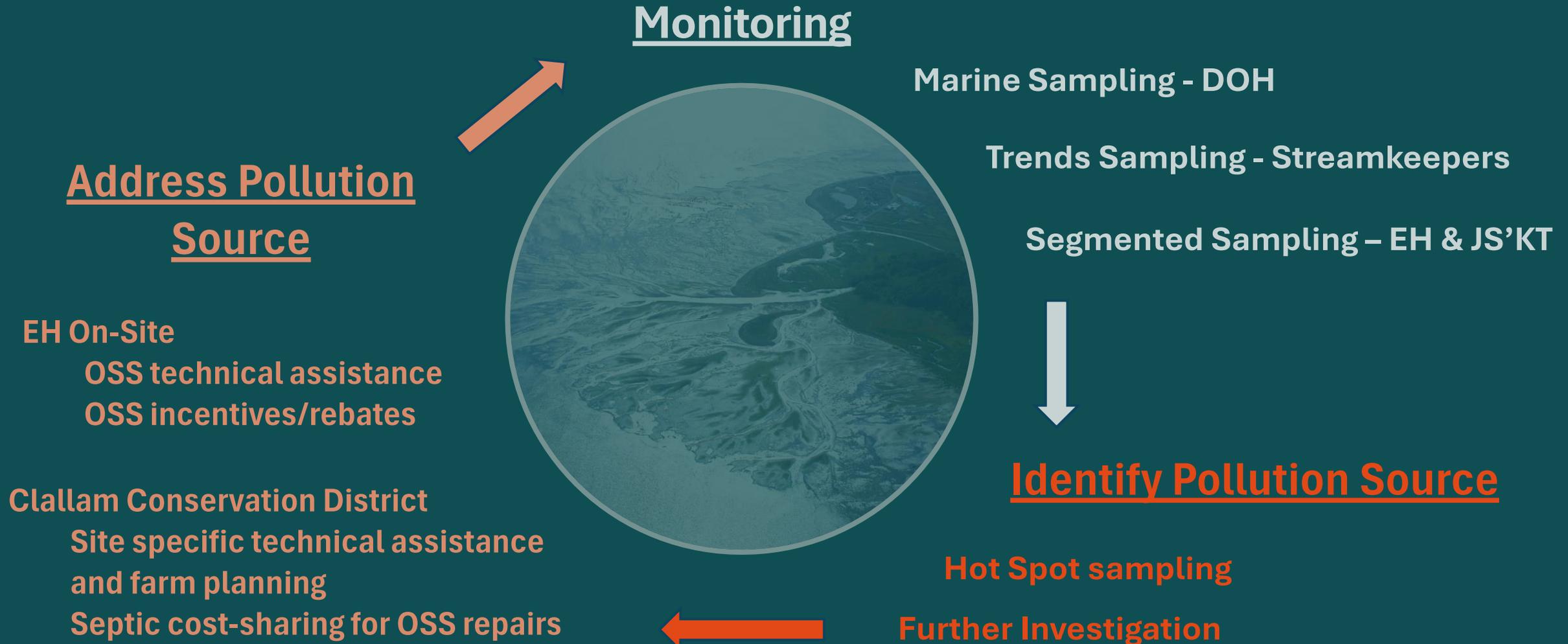
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**PIC = Pollution  
Identification  
Correction**

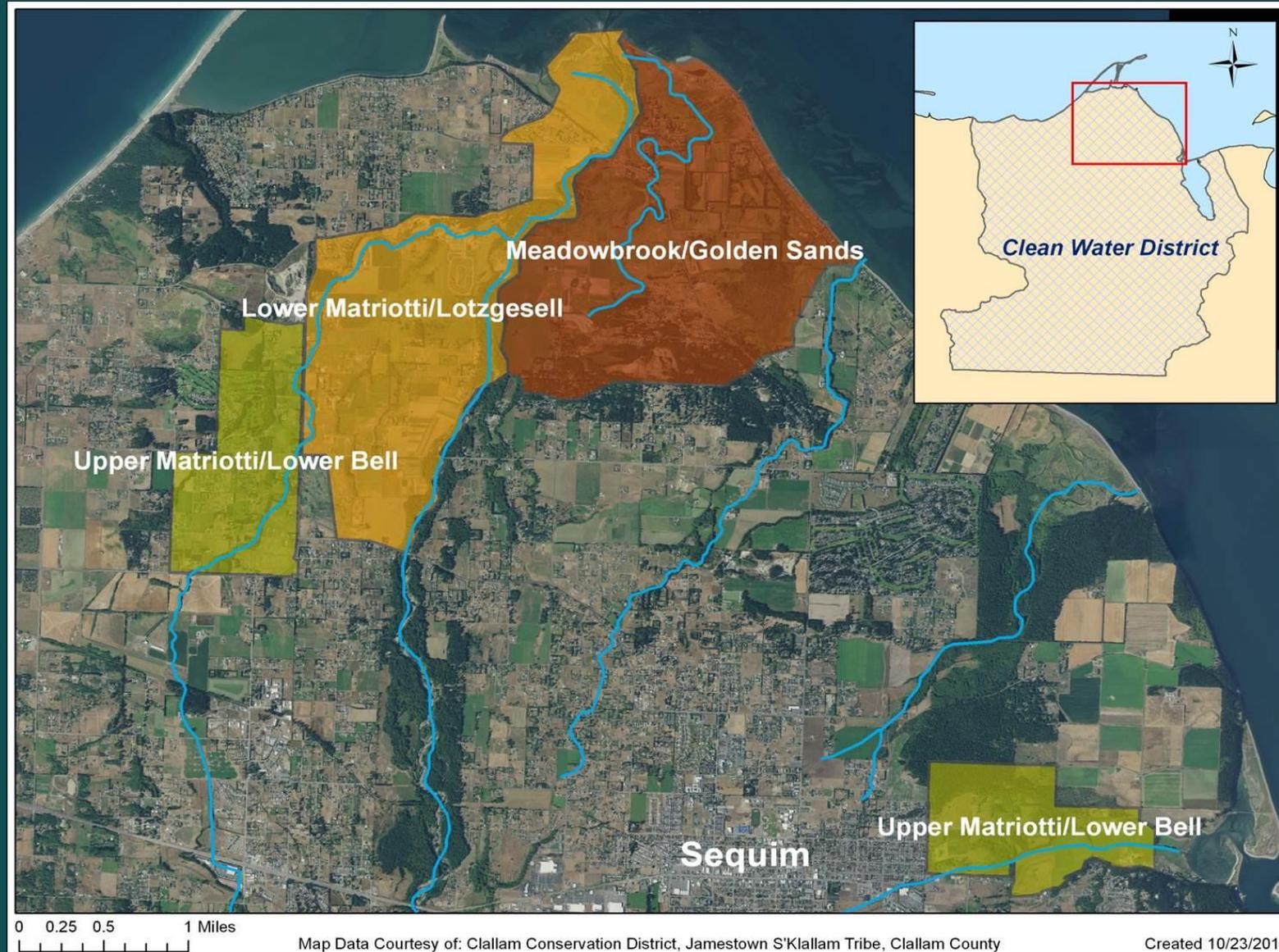


**Goal:** To consistently monitor and identify bacterial pollution sources within the Dungeness-Sequim Bay watershed, and take corrective actions to remove pollution.

# How does the PIC Project address pollution?



# PIC Project – Past Phases 1-3



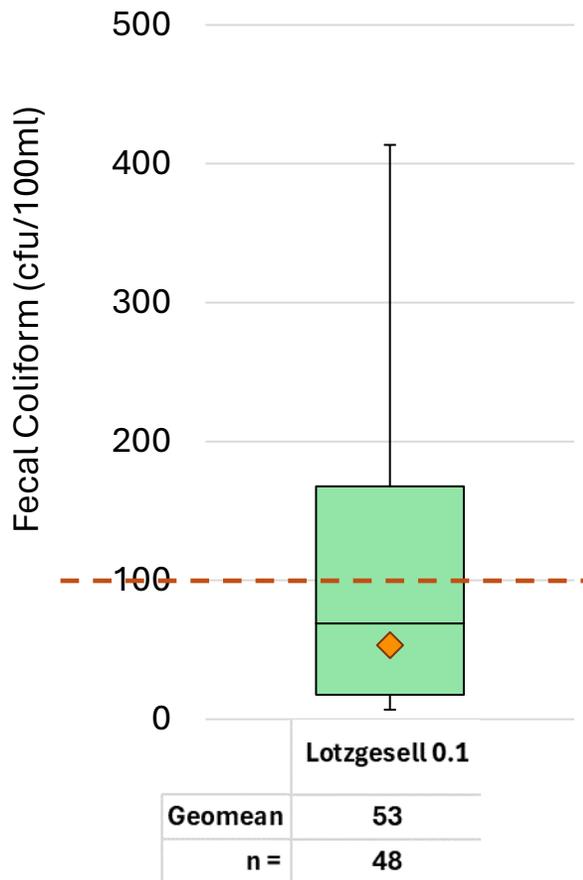
# PIC Project – Phase 3 results

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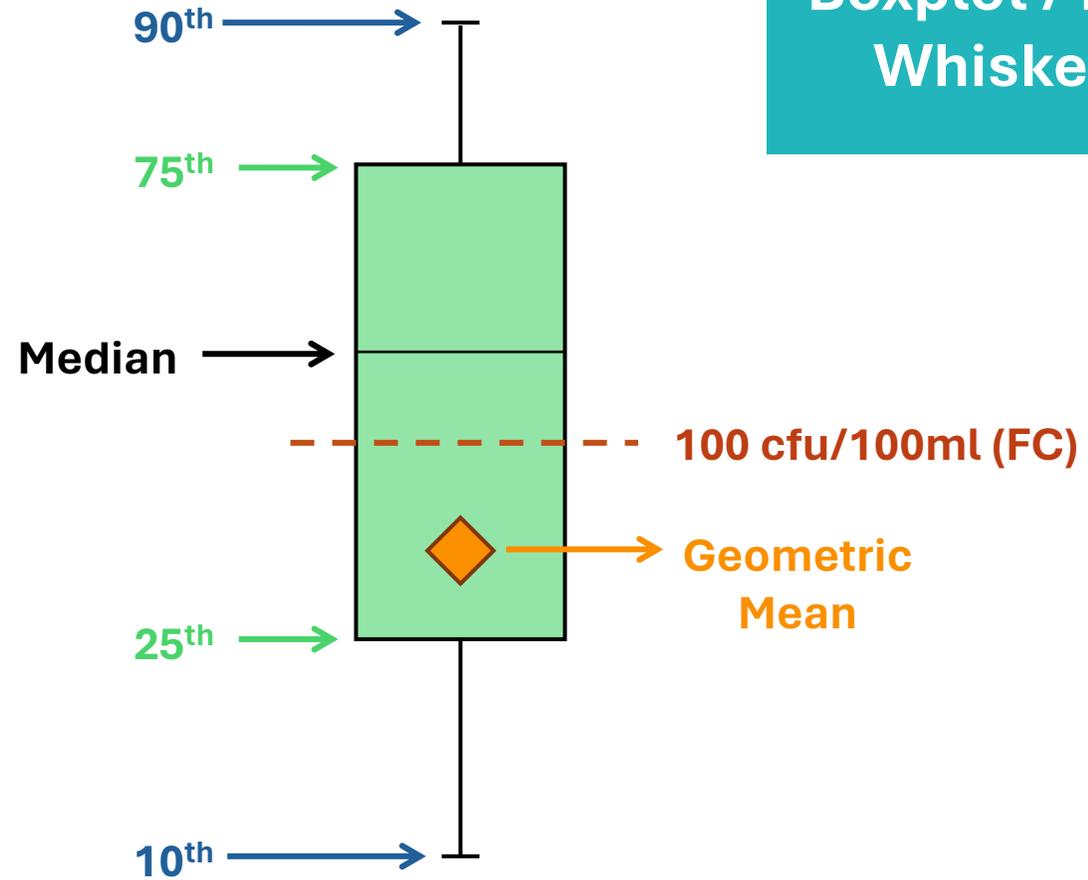
- Trends data
- Segmented data
- MST study data
  - Microbial Source Tracking

# PIC Project – Phase 3 results

Trends Tier 1, 2020-2023



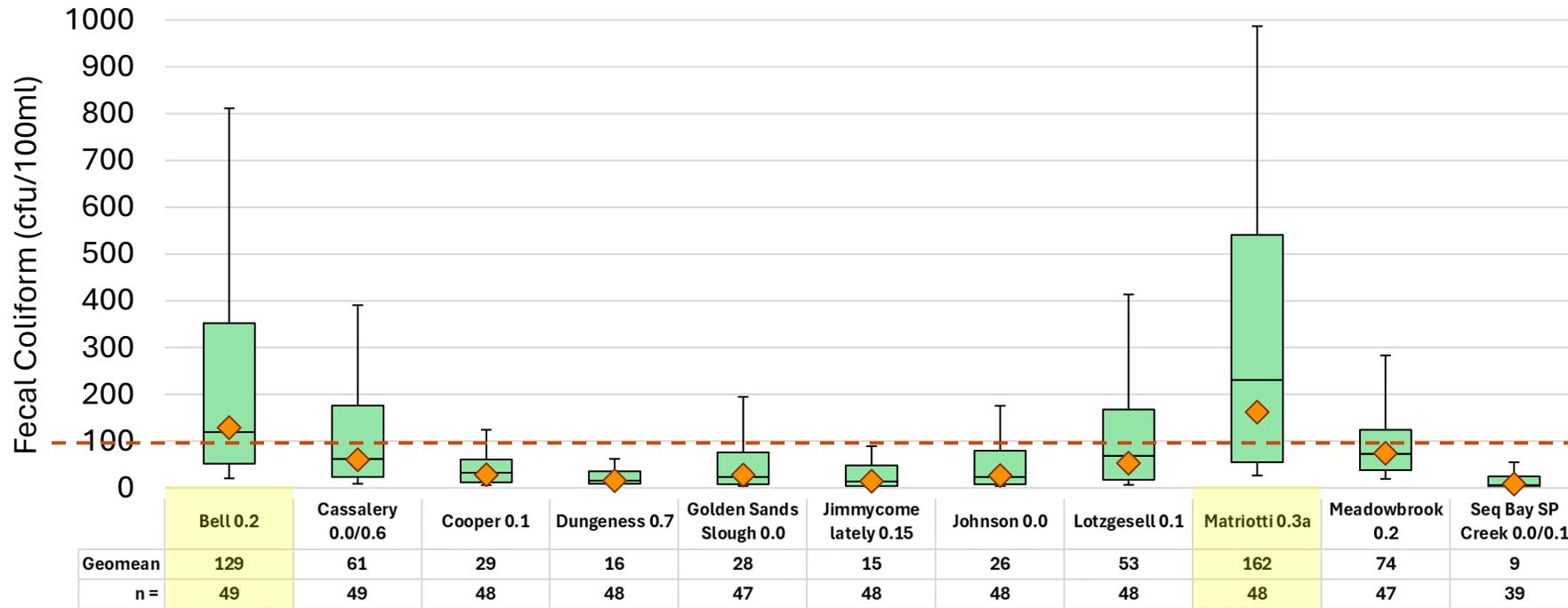
## Percentiles



Boxplot / Box and Whisker Plot

# PIC Project – Phase 3 results - Trends

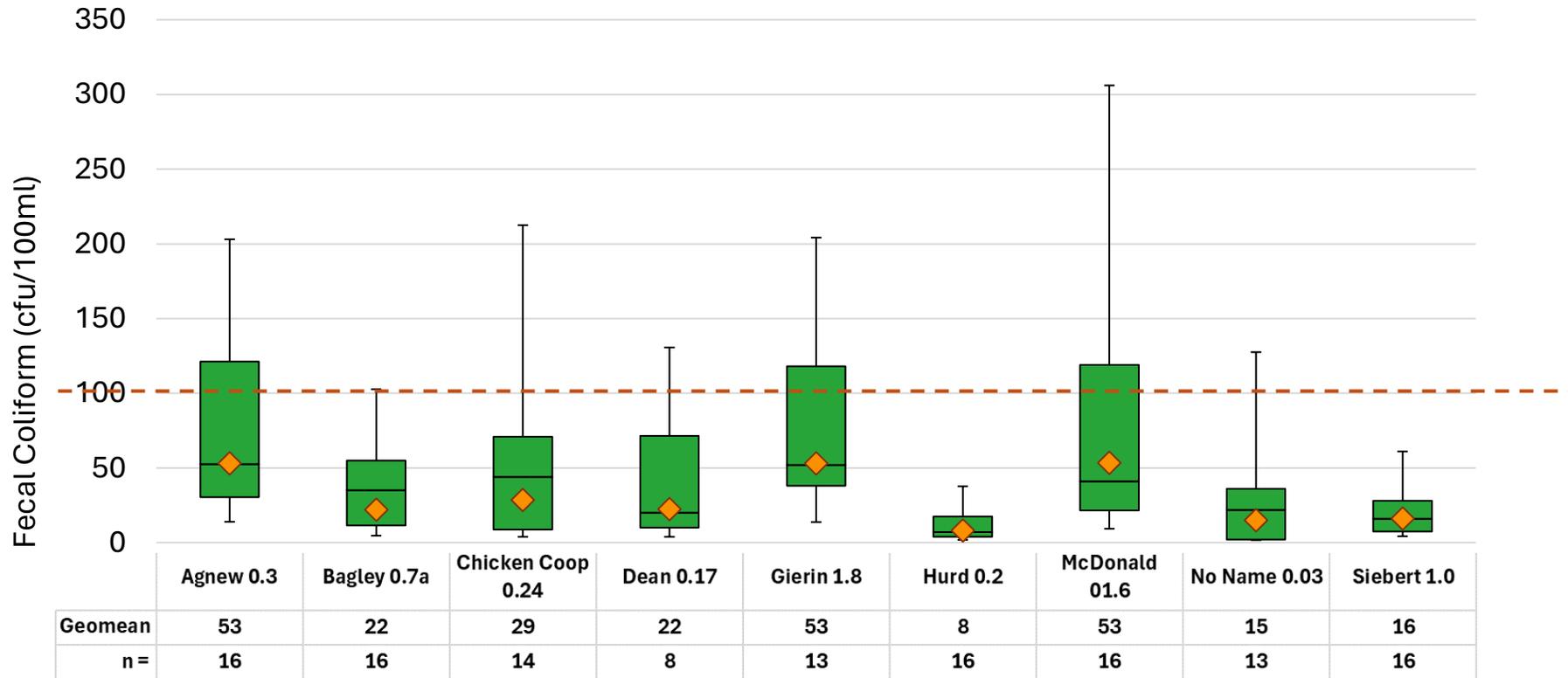
PIC Trends Tier 1, 2020-2023





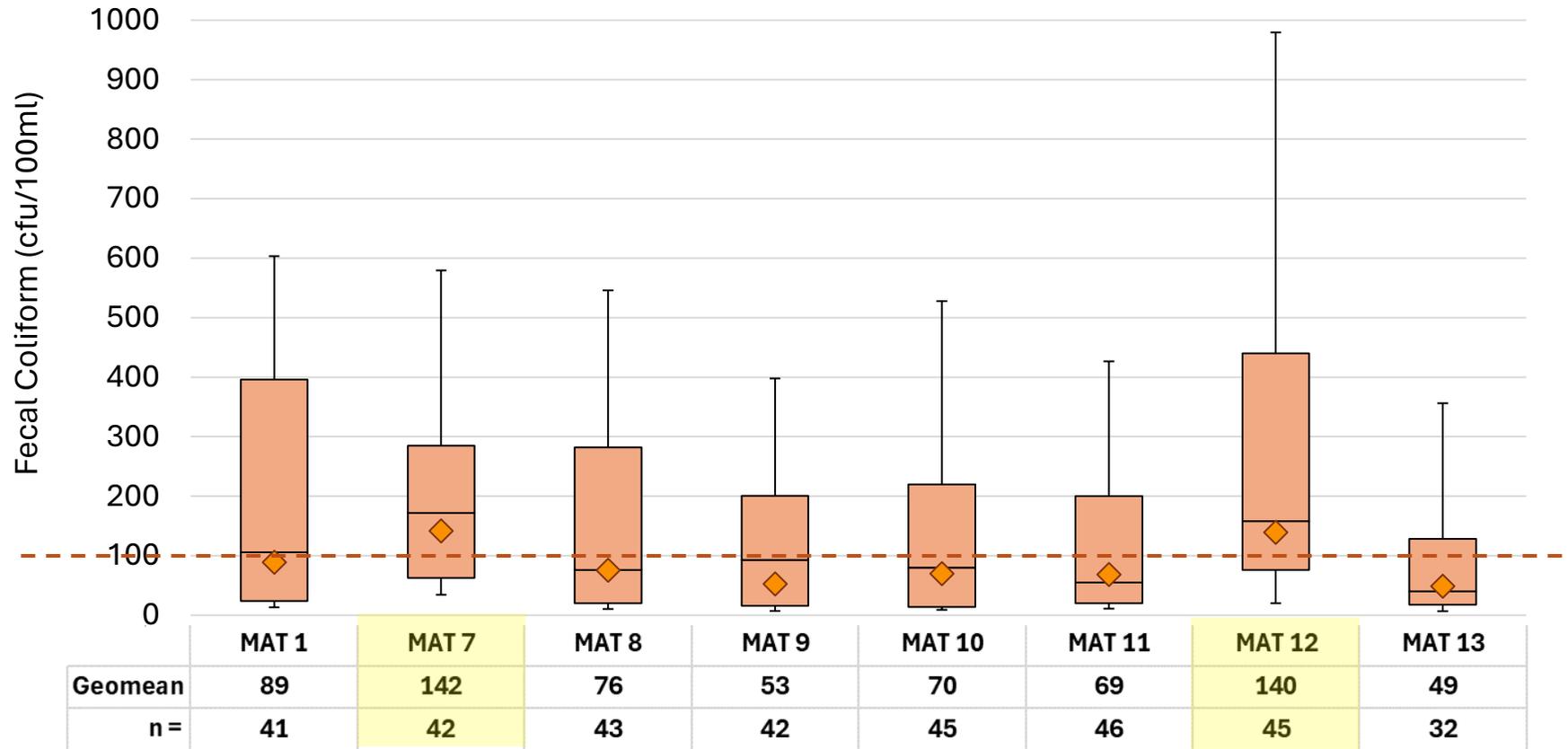
# PIC Project – Phase 3 results - Trends

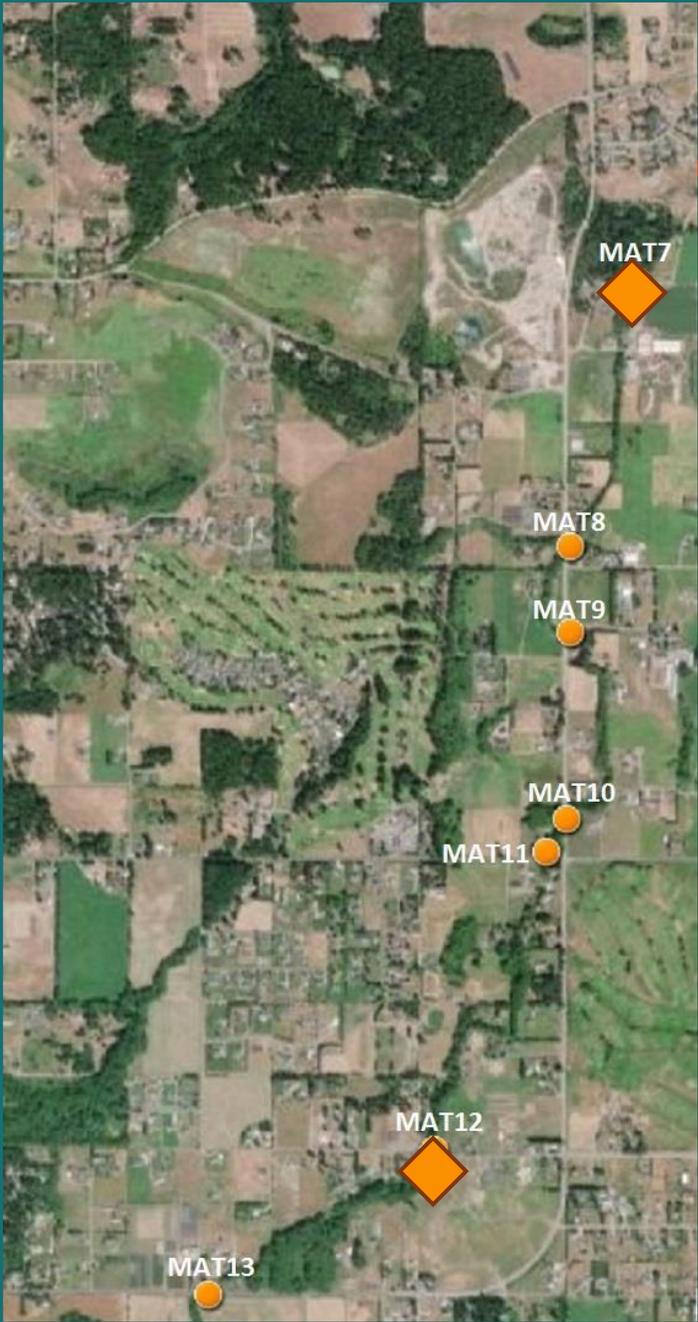
Trends Tier 2, 2020-2023



# PIC Project – Phase 3 results - Segmented

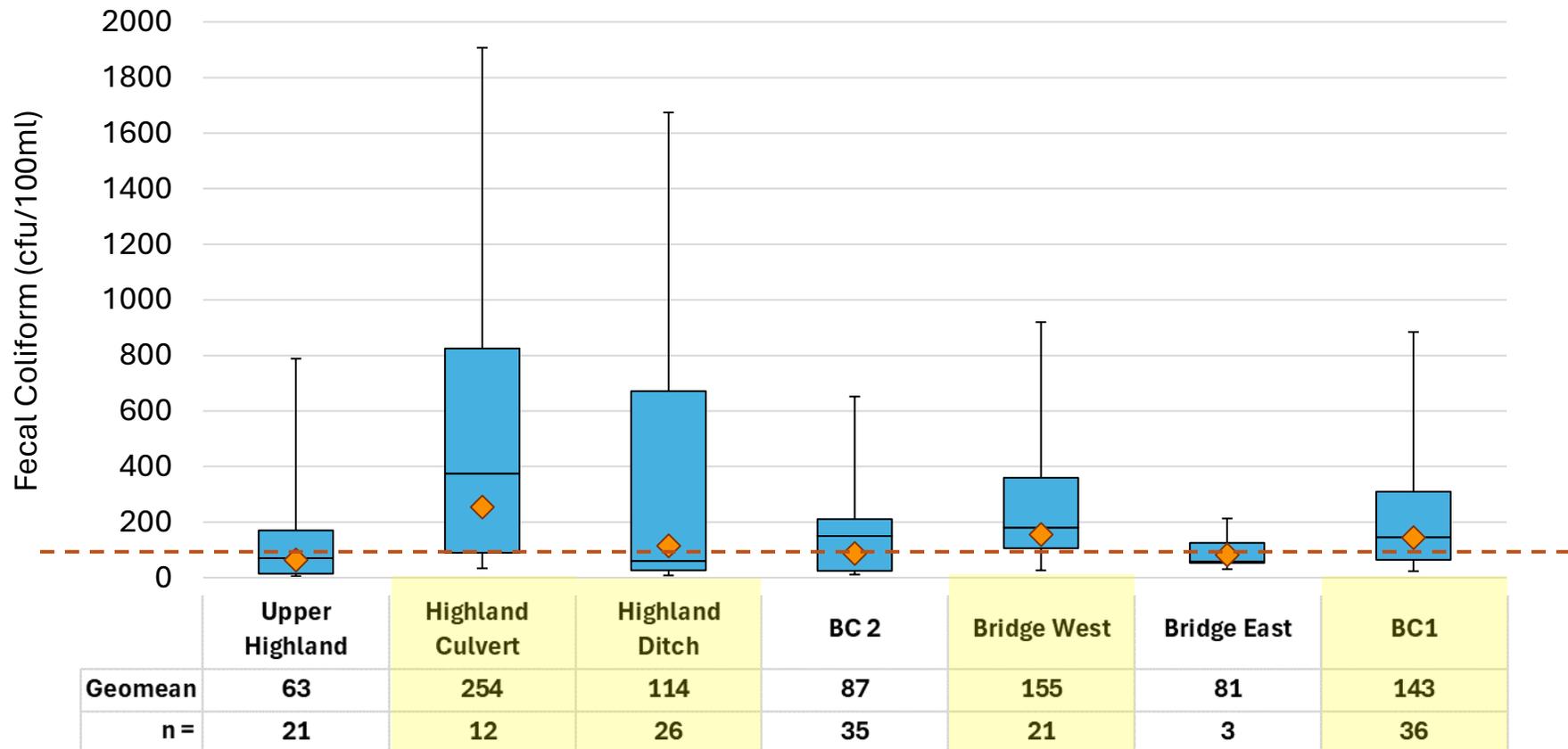
PIC Segmented - Matriotti Creek, 2020-2023



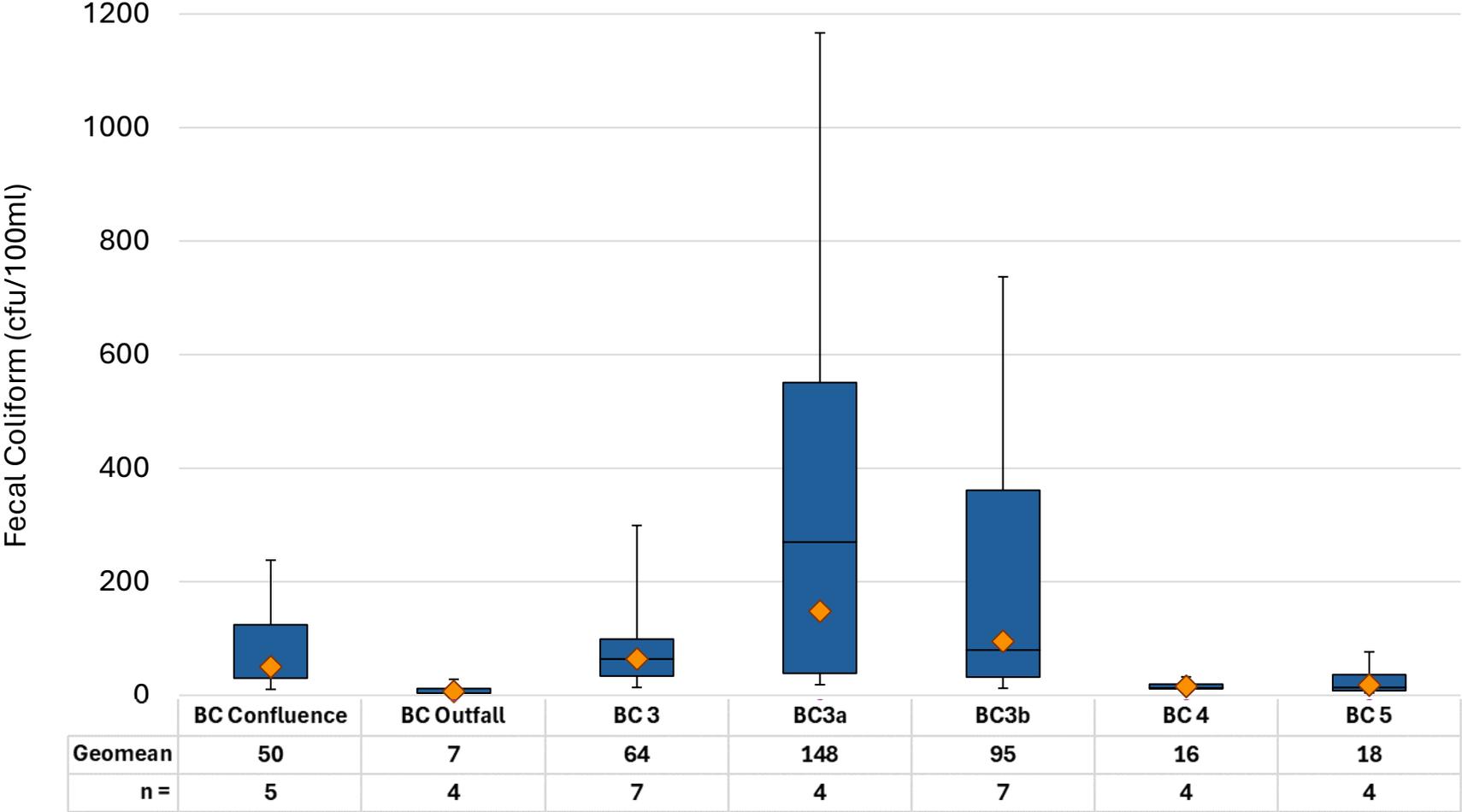


# PIC Project – Phase 3 results - Segmented

PIC Segmented - Bell Creek - Highland Ditch, 2021-2023



# Bell Creek - Western Tributary, 2021



# PIC Project – MST Study (Microbial Source Tracking)

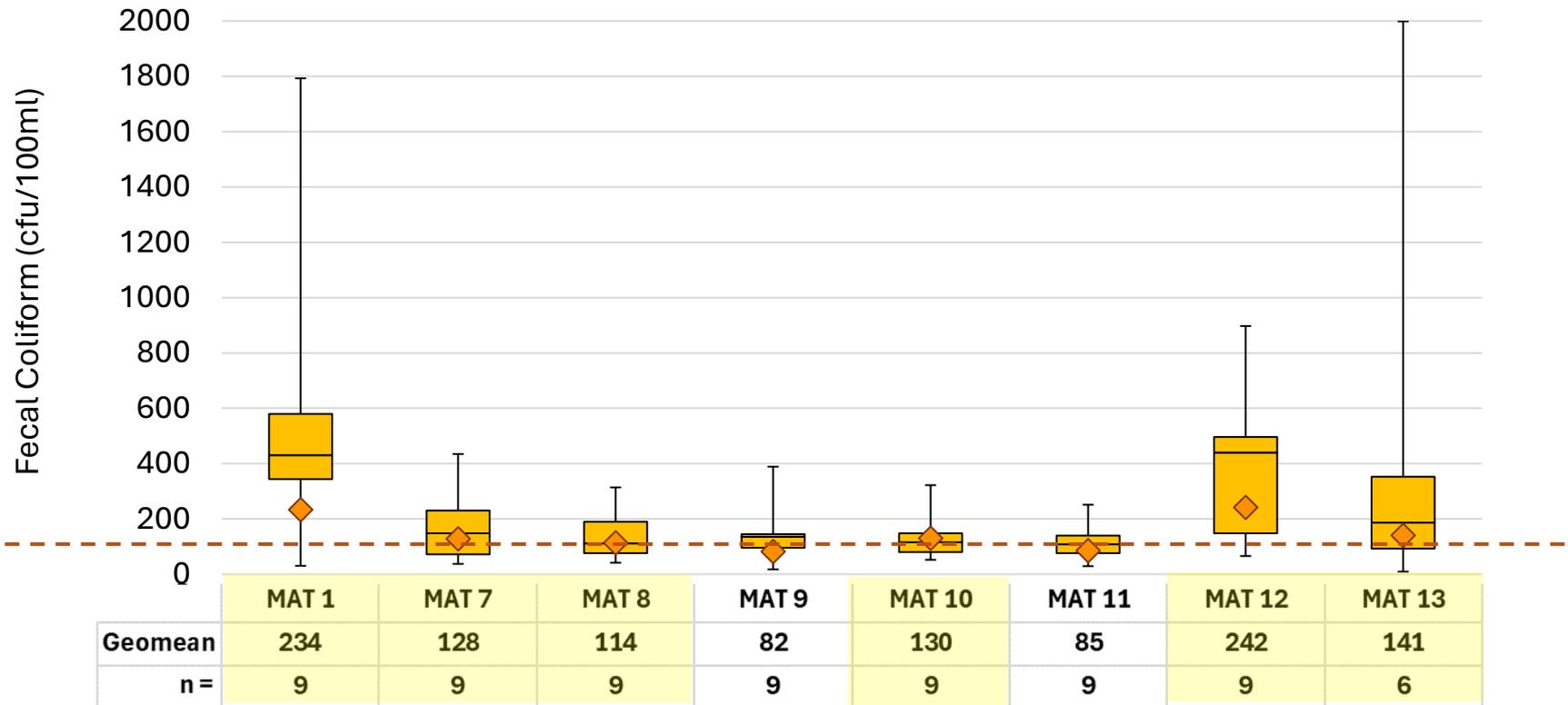
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- May - October 2023
- **Goal: Identify DNA sources of FC in Matriotti Creek**
- Water samples collected alongside PIC samples at 8 sites on Matriotti Creek
- DNA markers
  - Humans, Dogs, Cows, Ruminants (goat, elk, deer, sheep)



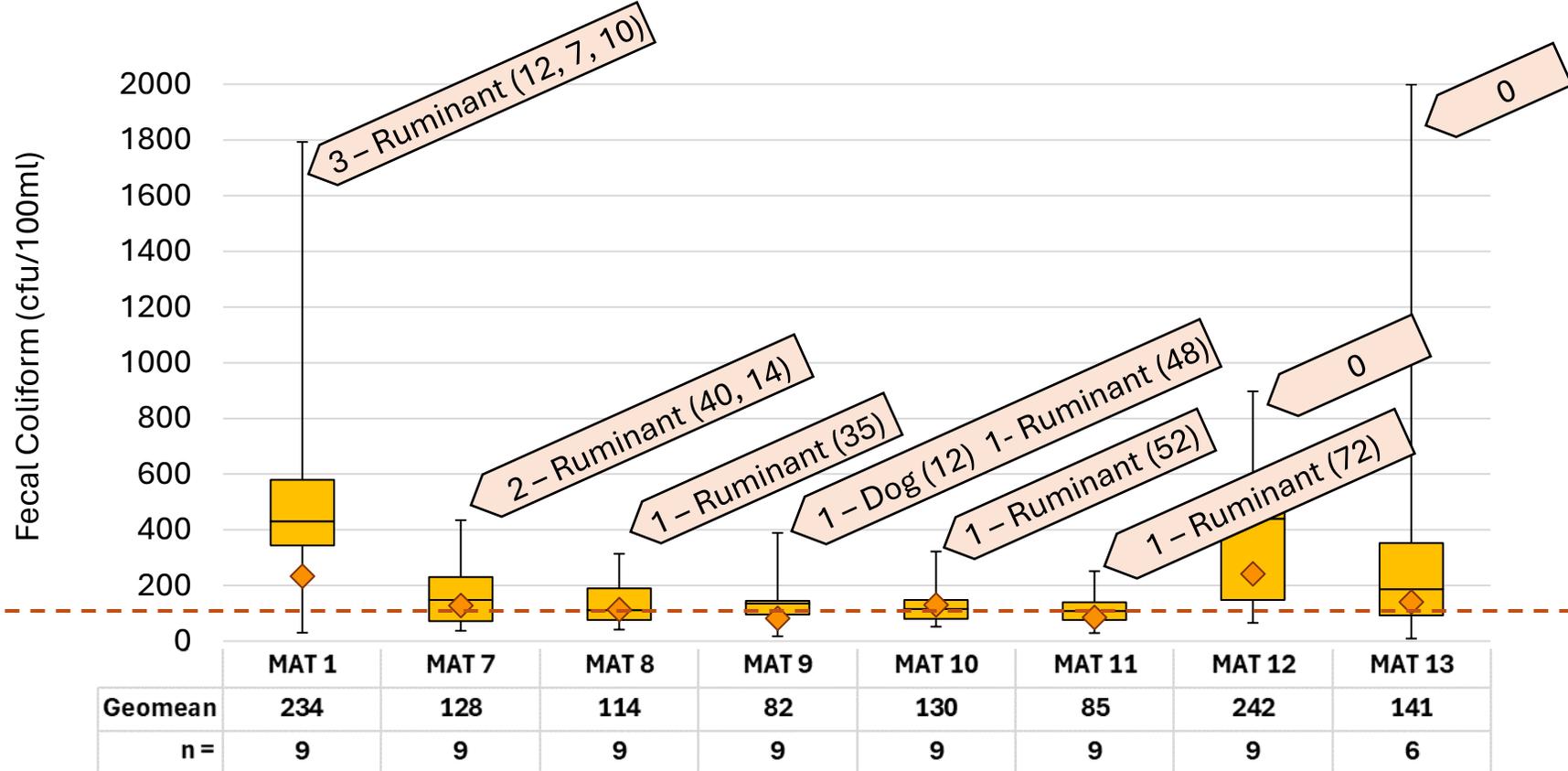
# PIC Project – MST Study

PIC Segmented - Matriotti Creek, May - October 2023



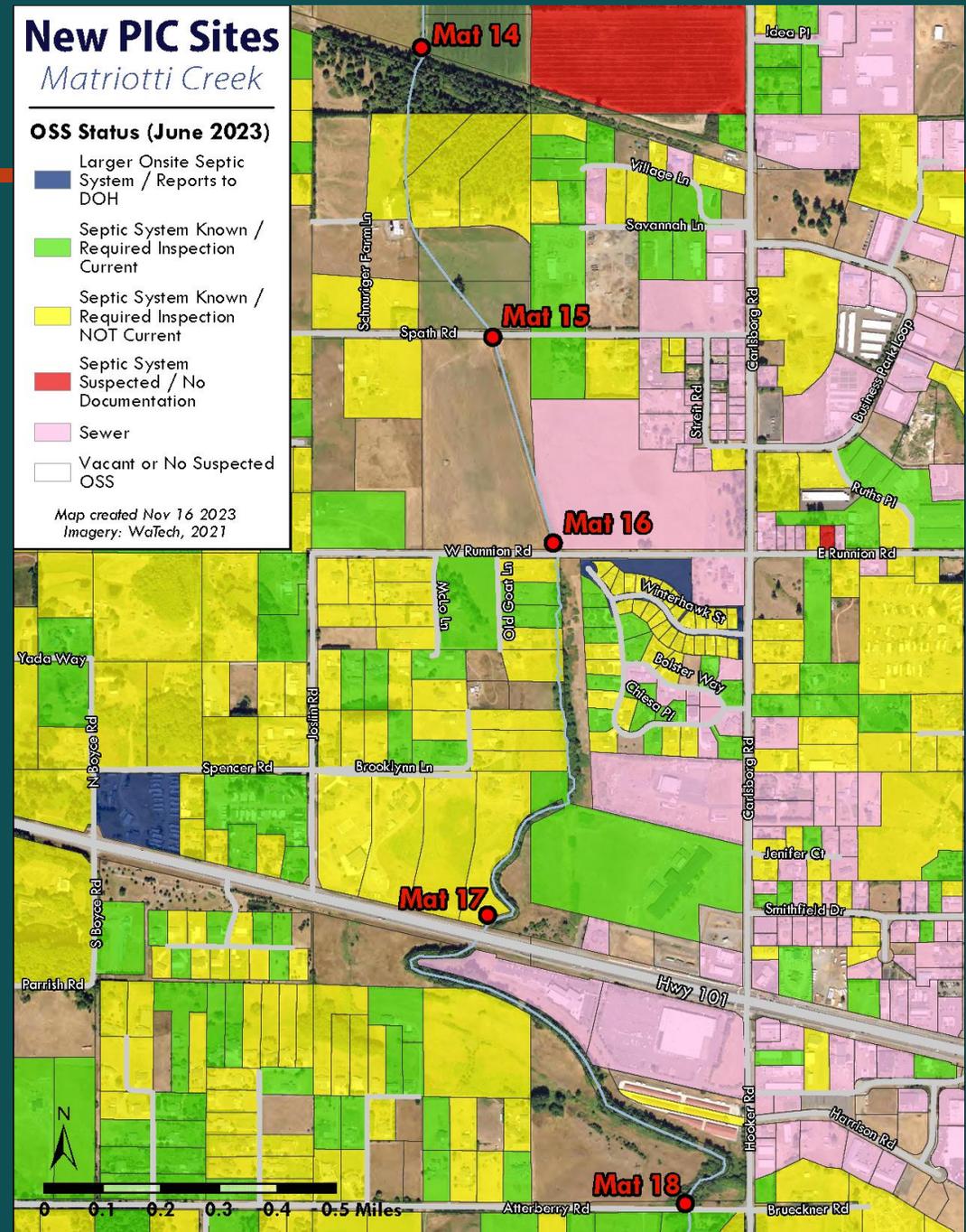
# PIC Project – MST Study

PIC Segmented - Matriotti Creek, May - October 2023



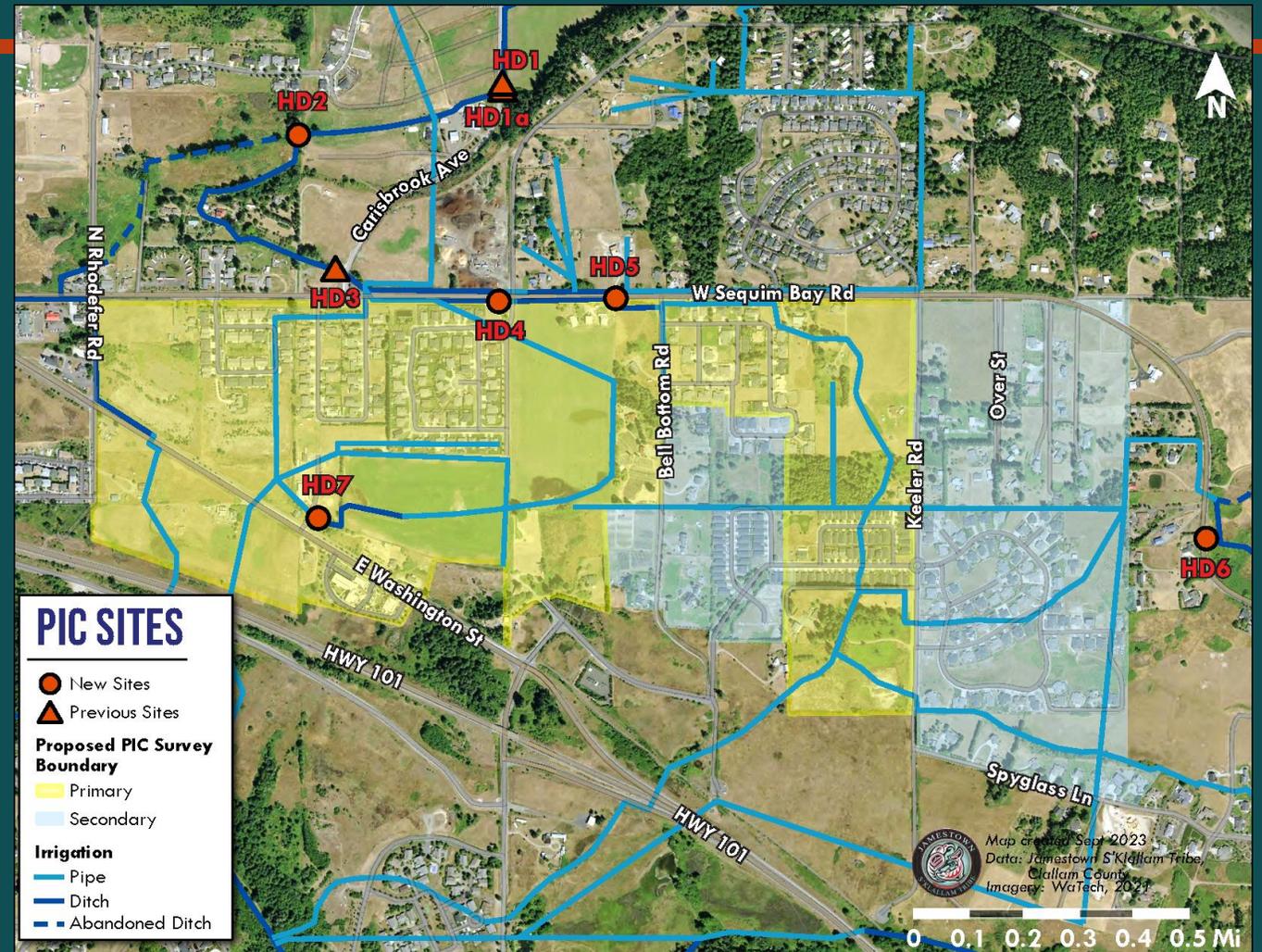
# PIC Project – Phase 4

- Matriotti Creek
- 5 sites
- Old Olympic to Atterbury Road



# PIC Project – Phase 4

- Highland Ditch
- 4 sites
- Between W. Sequim Bay Road and HWY 101



# Questions? Contact Us!

Clallam County Environmental Health

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[www.clallamcountywa.gov/pic](http://www.clallamcountywa.gov/pic)

A decorative horizontal bar at the bottom of the slide, featuring a blurred image of a natural landscape with green hills and a blue sky.