# Welcome! Bitterroot Stakeholder Meeting

Monday February 28, 2022

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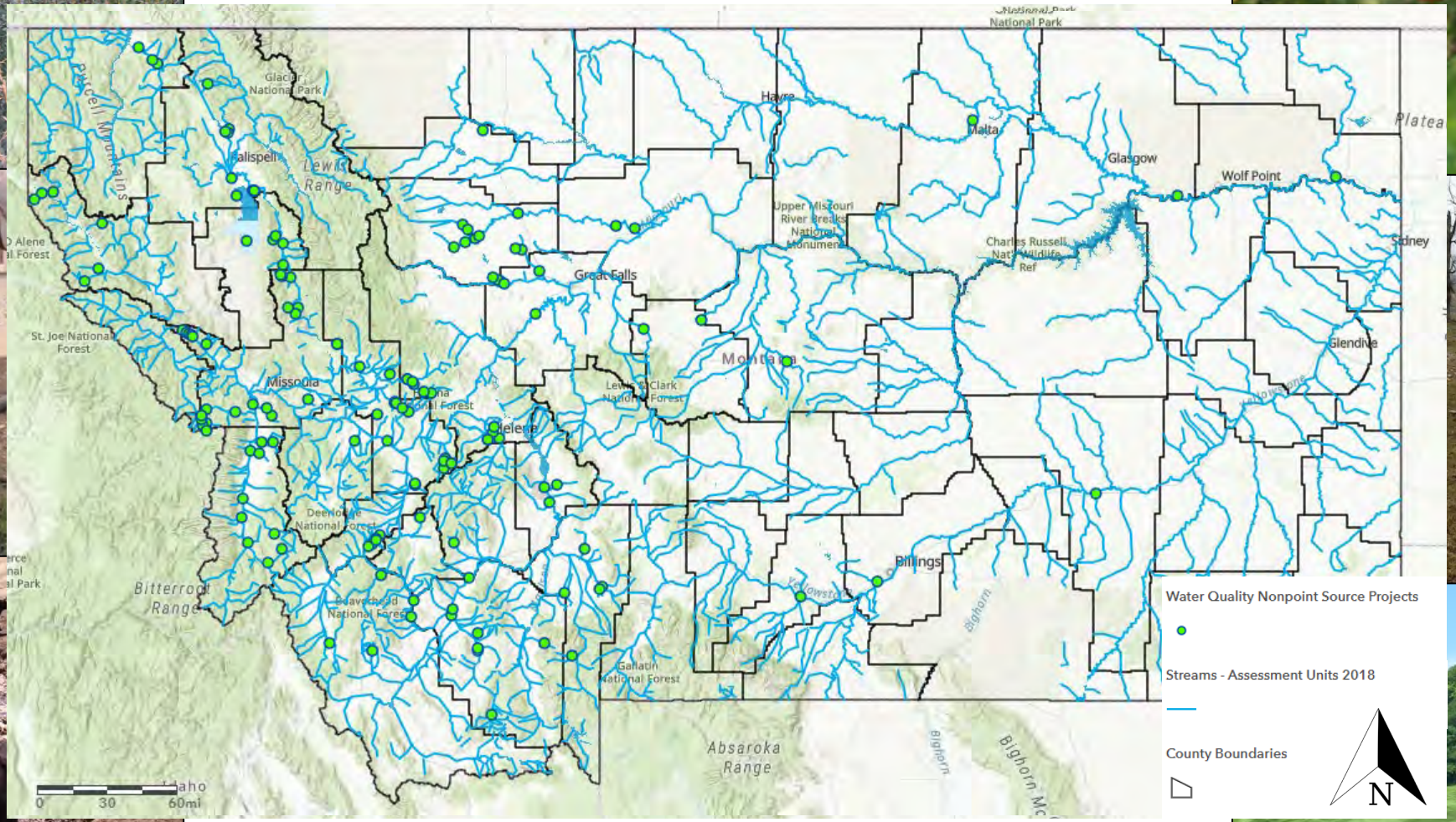
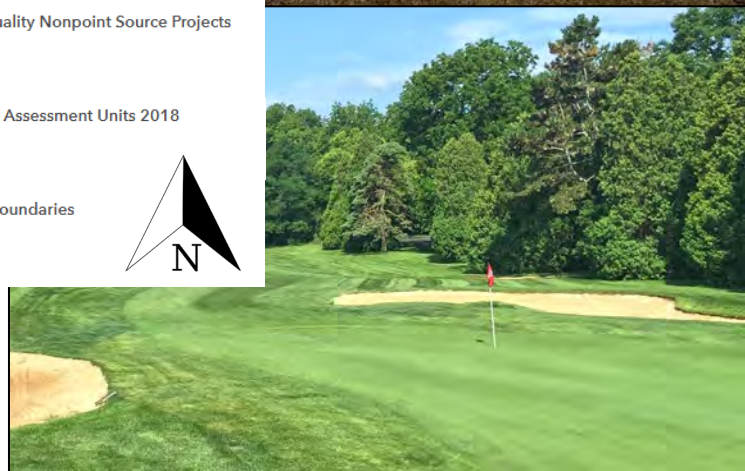

Glacier National Park
Kalispell
Lewis Range
Havre
Malta
Glasgow
Wolf Point
Upper Missouri River Breaks National Monument
Charles Russell Nat'l Wildlife Ref
Great Falls
Sidney
Glendive
St. Joe National Forest
Missoula
Lewis & Clark National Forest
Helena
Montana
Deerlodge National Forest
Billings
Bitterroot Range
Gallatin National Forest
Absaroka Range
Bighorn
0 30 60mi
Water Quality Nonpoint Source Projects
Streams - Assessment Units 2018
County Boundaries
N

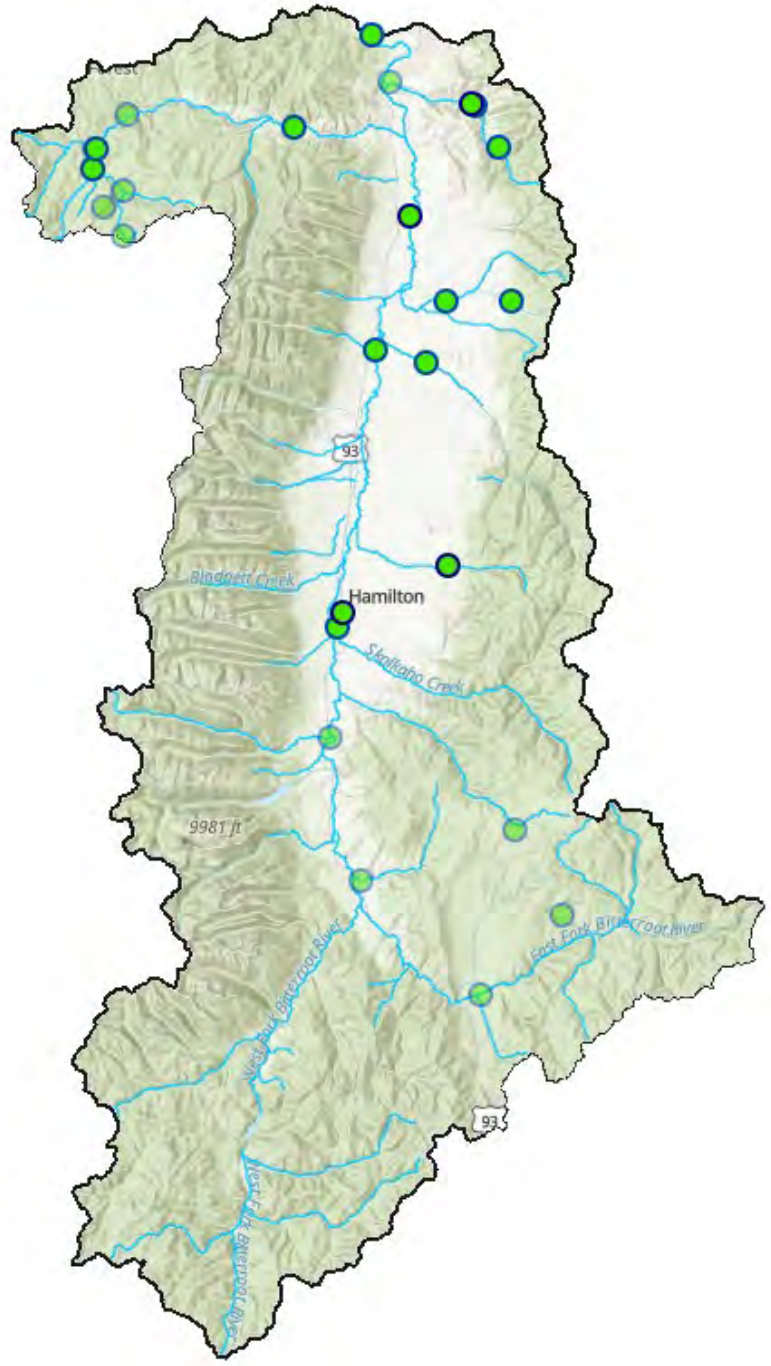


Bitterroot Focus Watershed approach began in 2019

**<u>GOAL</u>**: improve water quality, and demonstrate the success of our program, by generating momentum in the community and tracking interim indicators of success

- Technical resources and monitoring support
- Funding projects

**During Focus Watershed (2019-2022):**
$1.5 million awarded to 6 different organizations, putting 15 projects on the ground.

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Bitterroot Focus Watershed approach began in 2019

**<u>GOAL</u>**: improve water quality, and demonstrate the success of our program, by generating momentum in the community and tracking interim indicators of success

- Learning from past projects


2002


2018


2017


2021

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*"Doubled hay production because of the subirrigation provided by wetland cells"*

Bitterroot Focus Watershed approach began in 2019

**GOAL**: improve water quality, and demonstrate the success of our program, by generating momentum in the community and tracking interim indicators of success

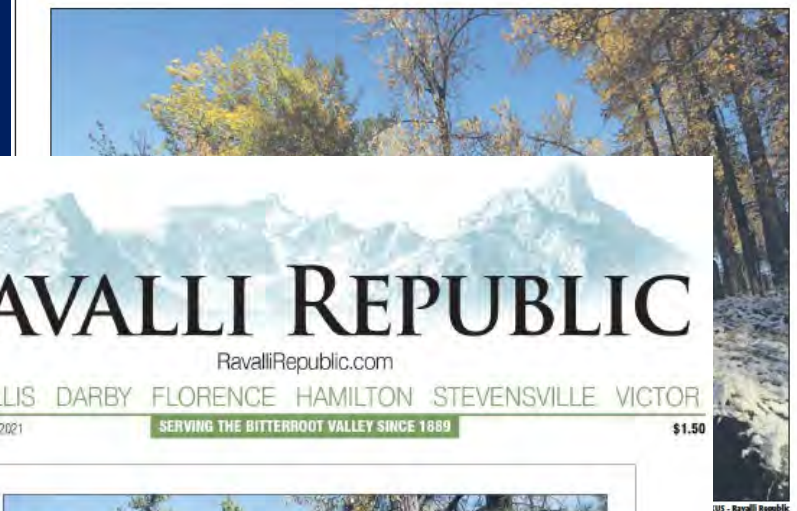
- Sharing success stories

NONPOINT SOURCE SUCCESS STORY

Missoulian

'Good, cold water:' Riparian restoration preserves trout sanctuary

PATRICK REILLY, February 13, 2020



RAVALLI REPUBLIC

RavalliRepublic.com

CORVALLIS DARBY FLORENCE HAMILTON STEVENSVILLE VICTOR

Friday, October 8, 2021 SERVING THE BITTERROOT VALLEY SINCE 1889 $1.50

Montana Fish, Wildlife and Parks' Cory Reisinger was part of the crew who dug about 250 holes this past week that will be filled with native trees and shrubs at the new Fort Owen Fishing Access Site near Stevensville.

Work begins at new fishing access site in Stevensville

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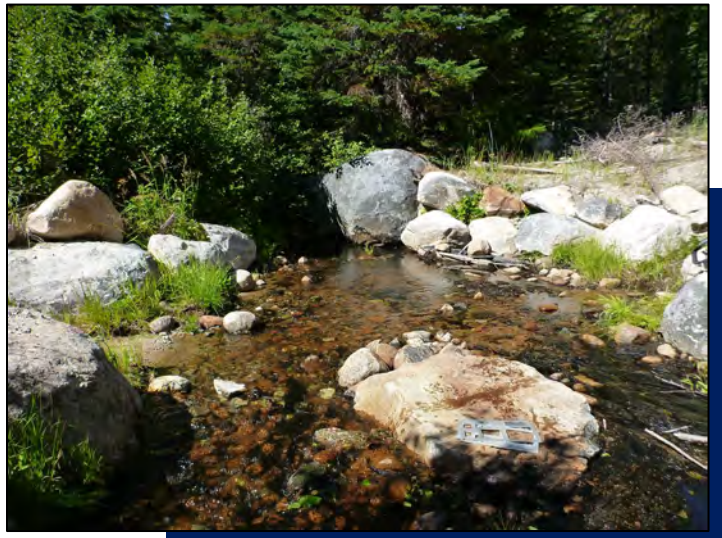
# Sharing success stories

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# Questions?

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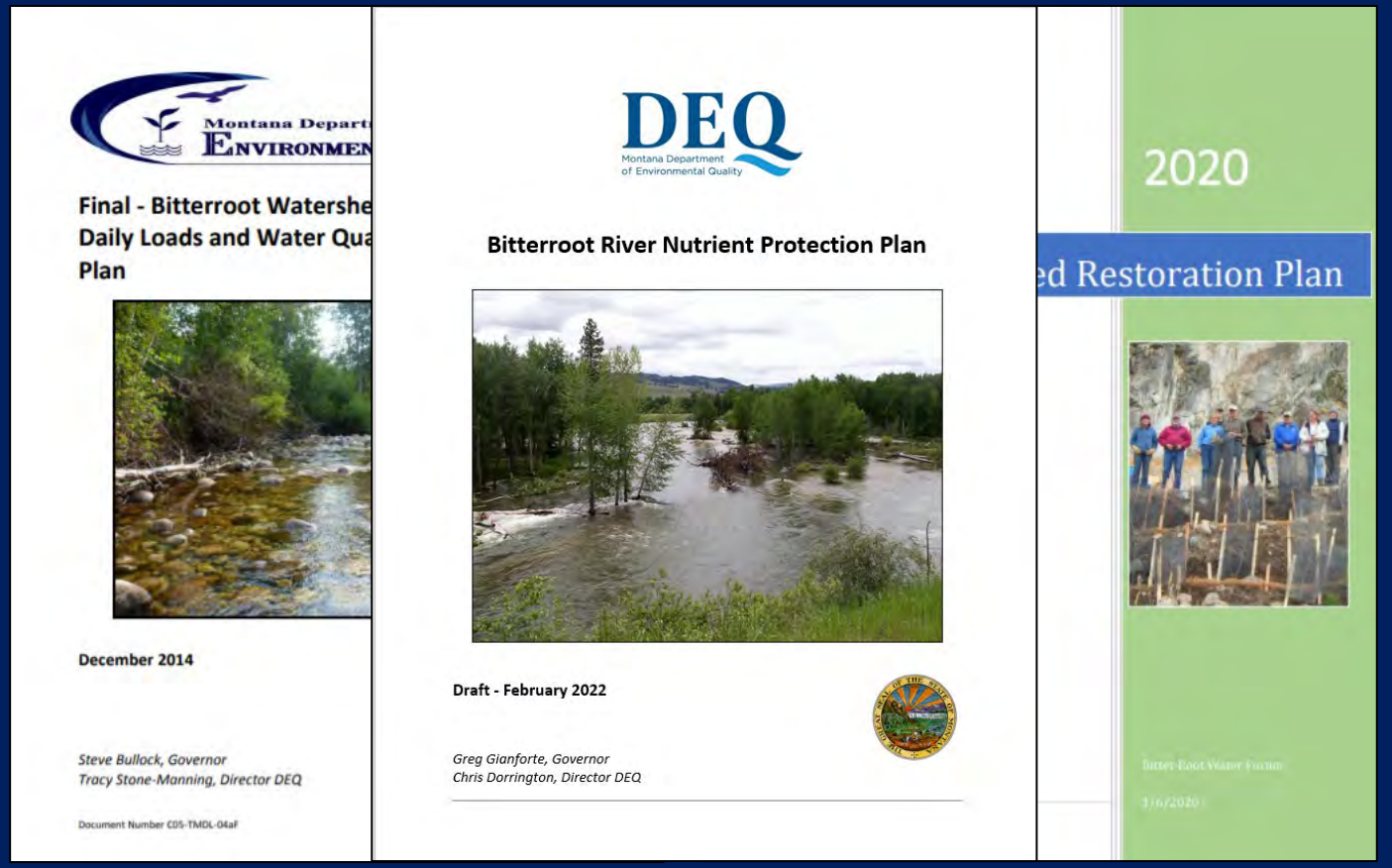
# What is a protection plan?

- Montana Constitution: “The state and each person shall ***maintain*** and improve a clean and healthful environment”
- Goal: minimize or avoid water quality degradation from stressors that may threaten the current condition
- Nonregulatory
- Protection avoids costs of lost revenue, expanding restoration, regulation

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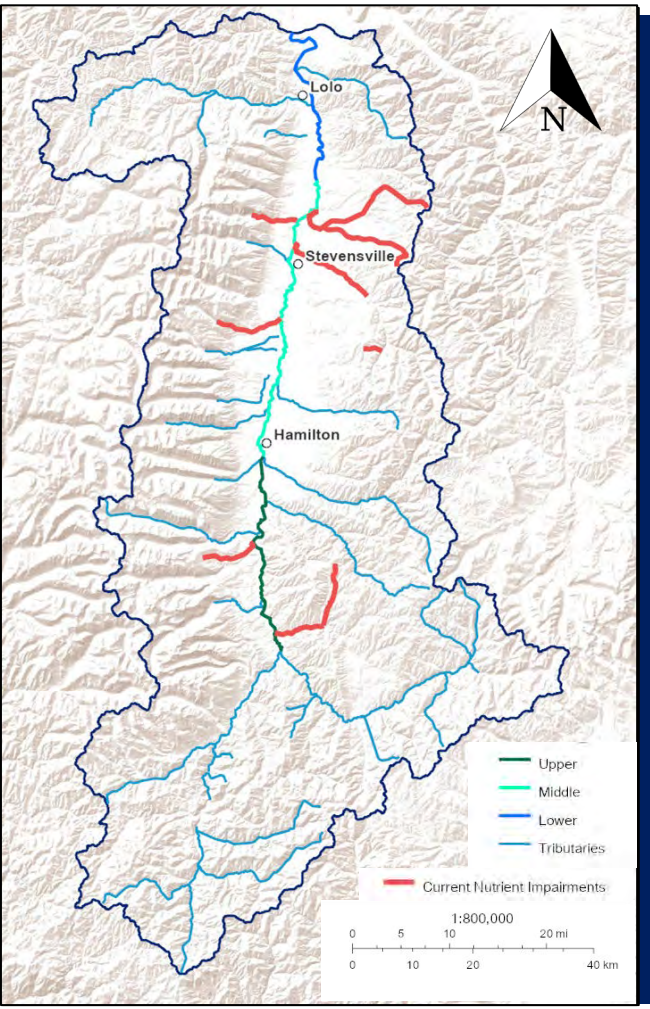
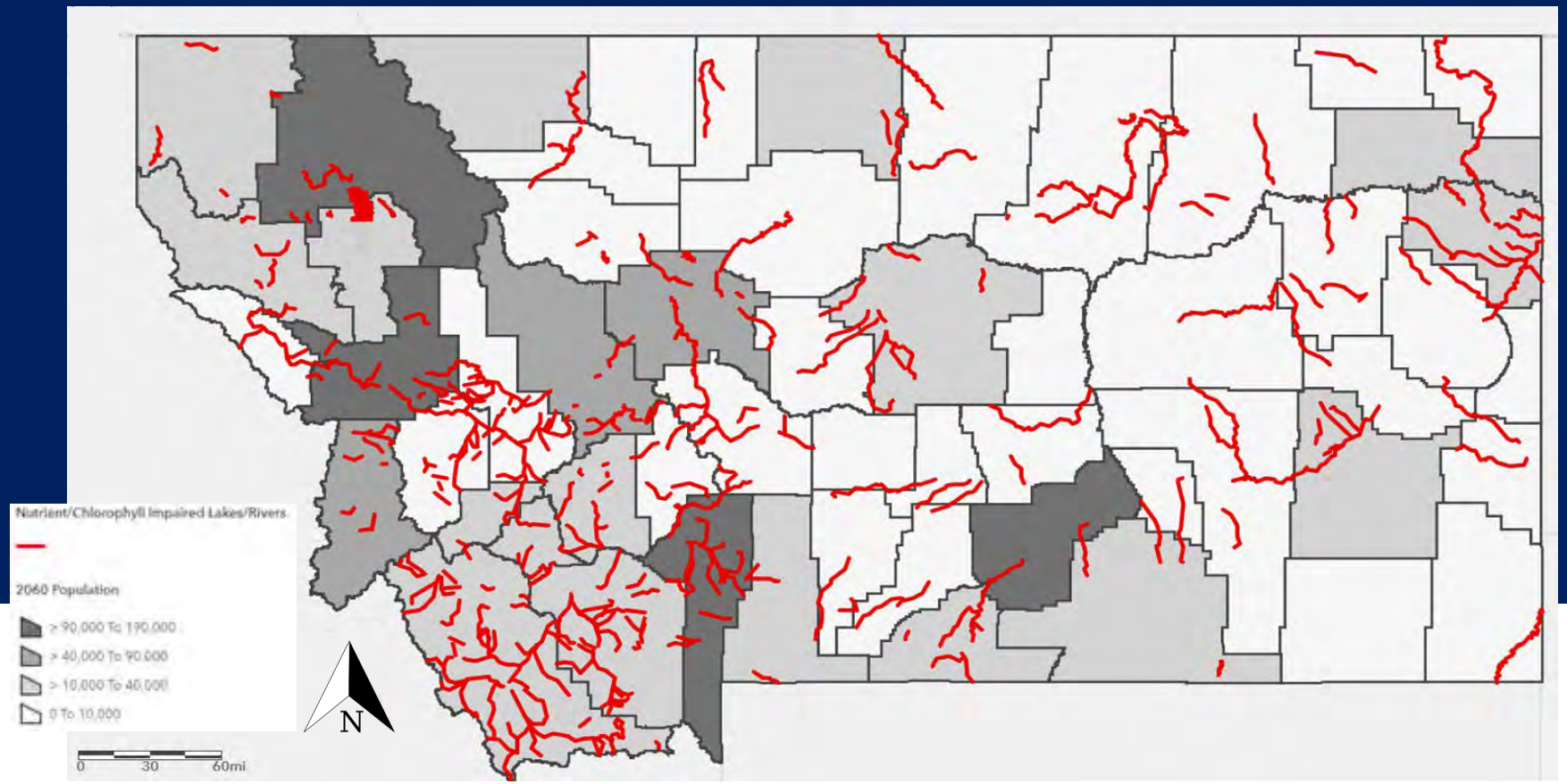
# Why write one for the Bitterroot?




- One of the fastest growing populations in the state
- A number of tributaries impaired by nutrients
- The Bitterroot River is ***not*** yet impaired for nutrients

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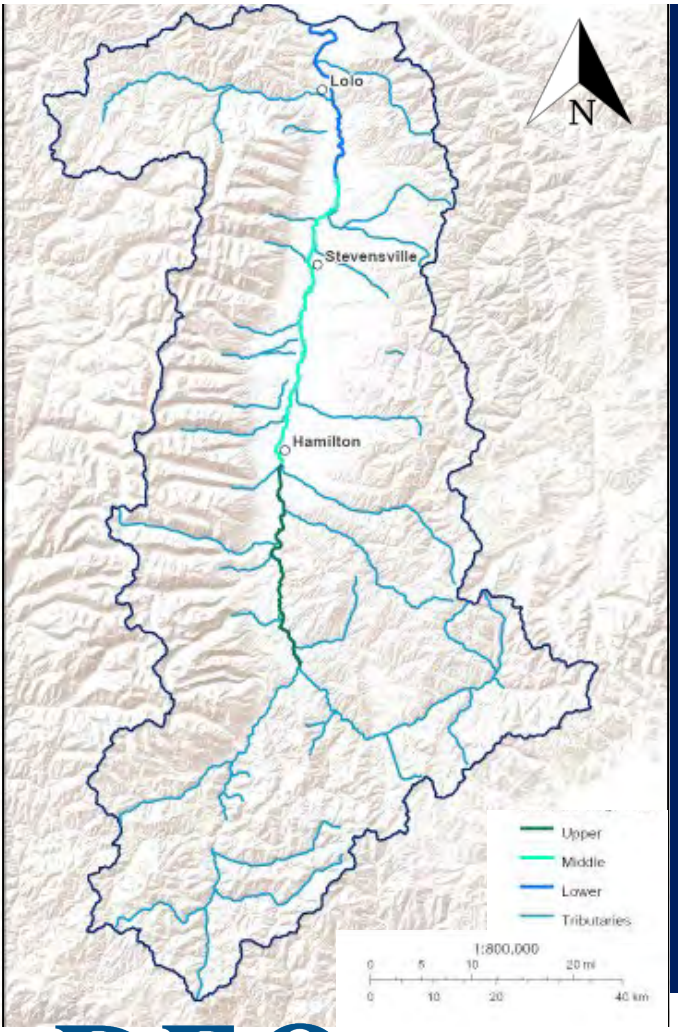


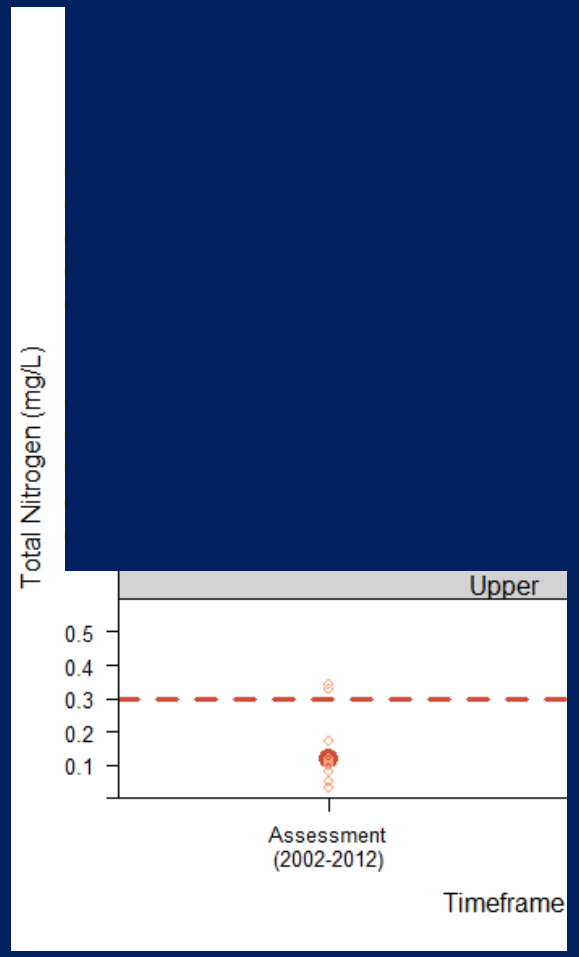


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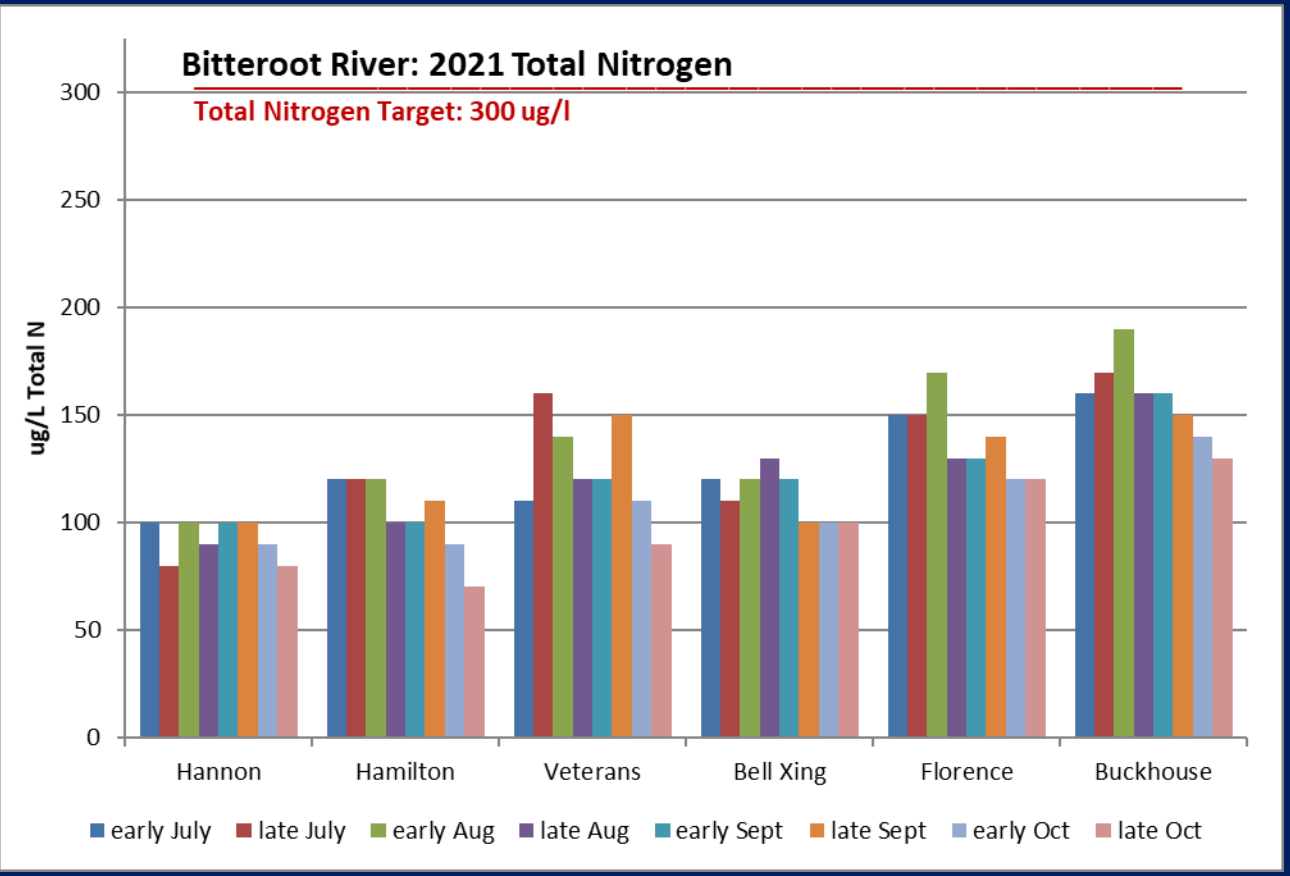


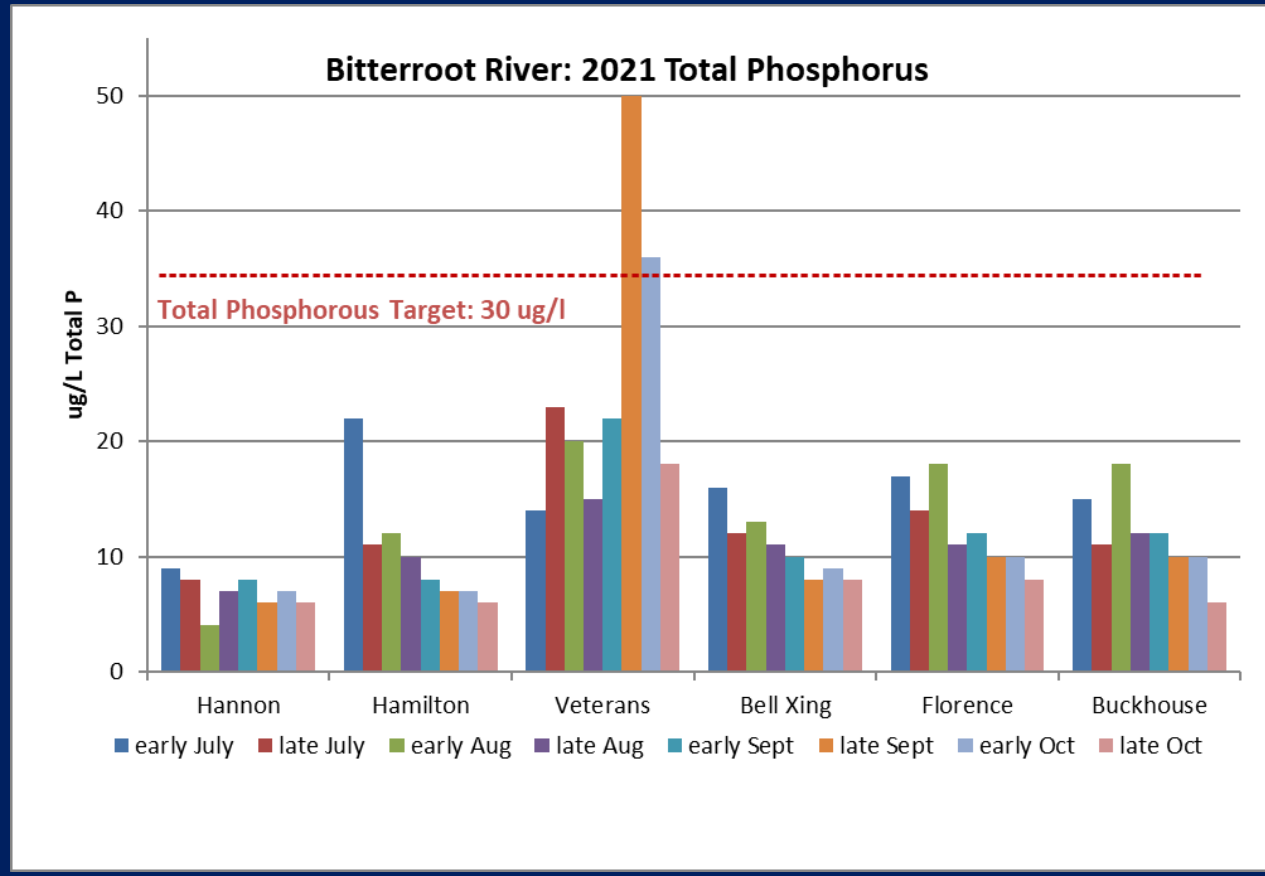


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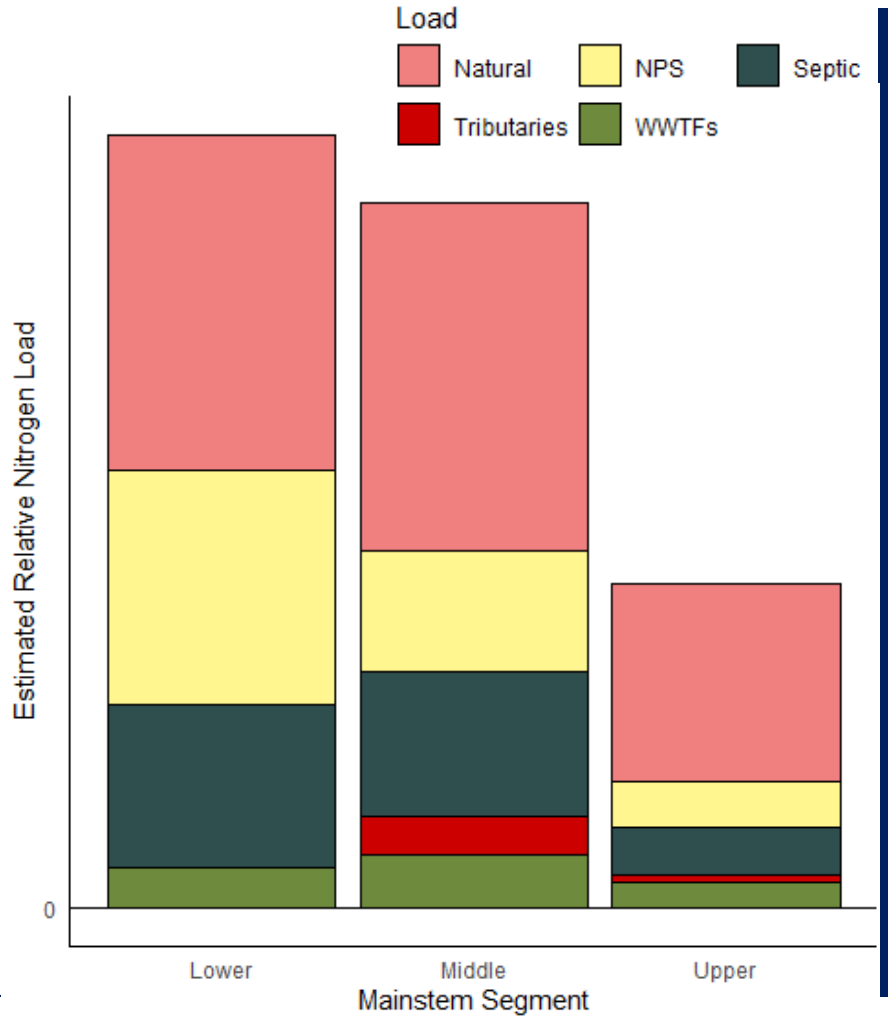
# Nutrient Sources



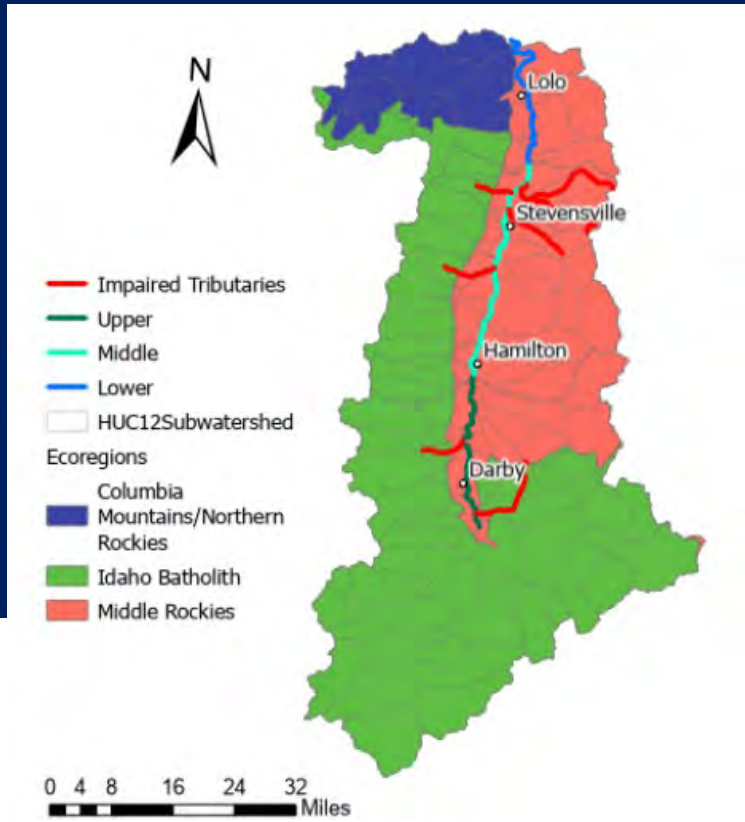

**Natural Background Load = (X) (Y) (5.4)**

*Load from sources regardless of human influence, in units of lbs/day*

*X = watershed area-based weighted average of 75th percentile ecoregional concentrations at reference sites*

*Y = example streamflow in cubic feet per second (cfs)*

*5.4 = conversion factor*

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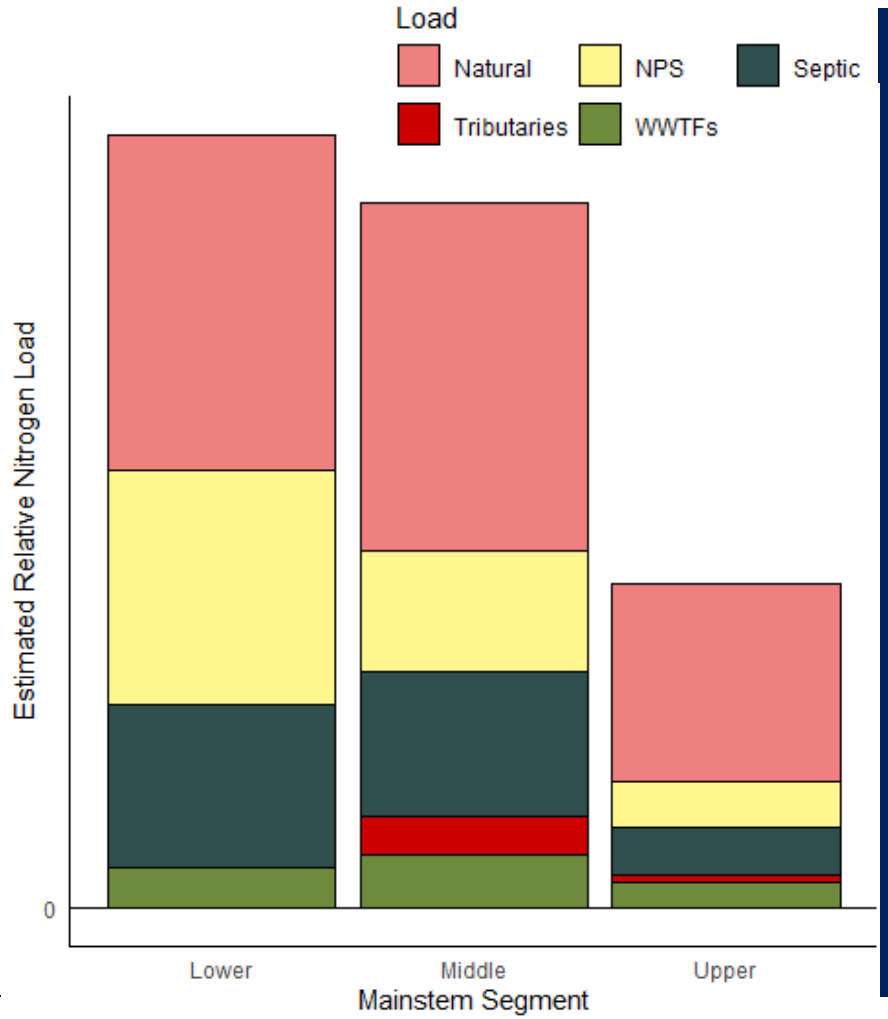



**Impaired Tributary Load = (X - NB) (Y) (5.4)**

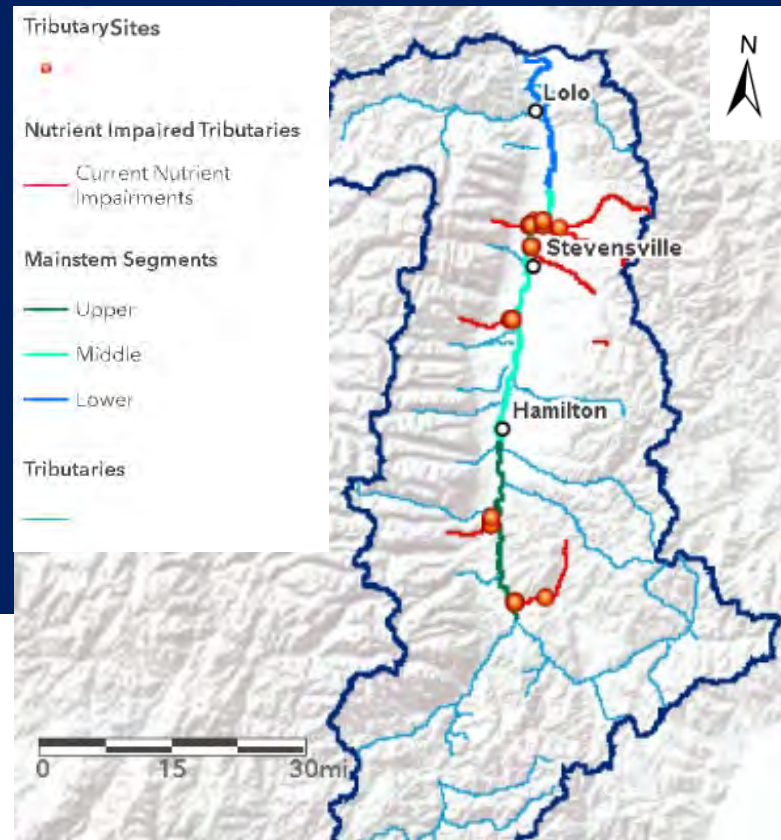
*Human-caused load, in units of lbs/day, in the mainstem Bitterroot that is attributable to tributaries impaired by nutrients*

*X = 75$^{th}$ percentile concentration, in units of mg/L, measured near tributary confluence*

*NB = Watershed area-based weighted average natural background ecoregional nutrient concentration*

*Y = streamflow in cubic feet per second (cfs)*

*5.4 = conversion factor*

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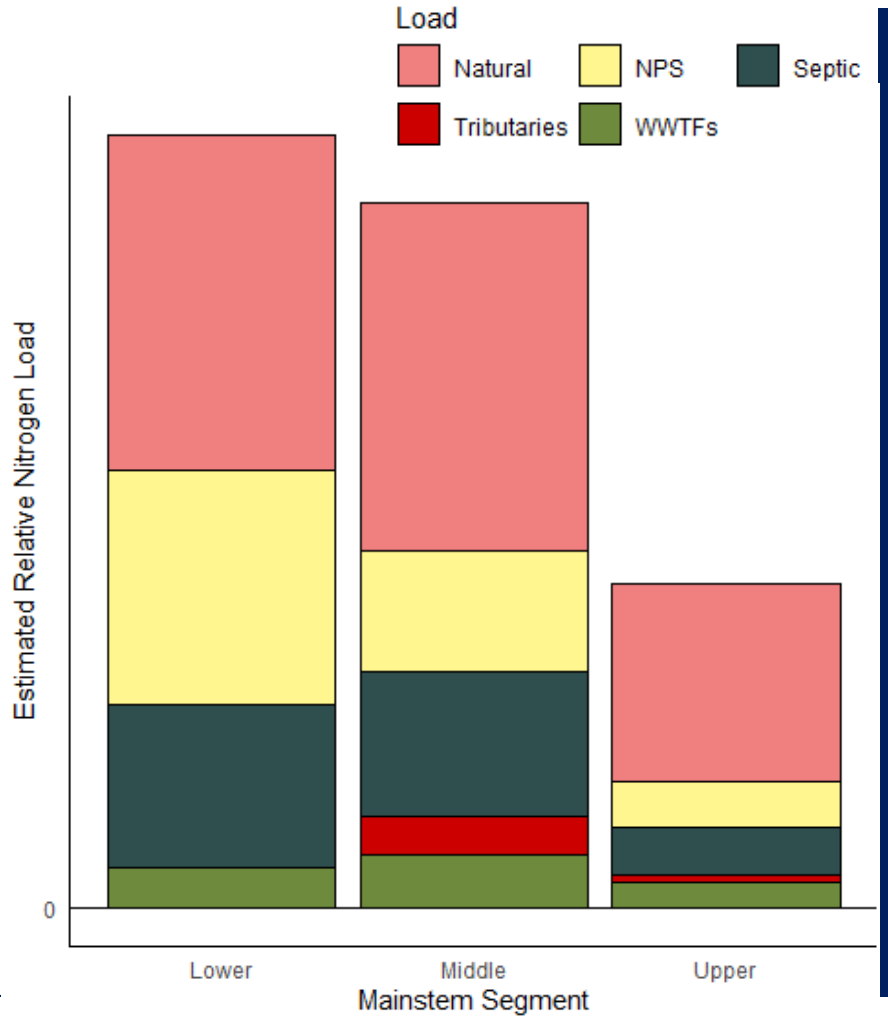
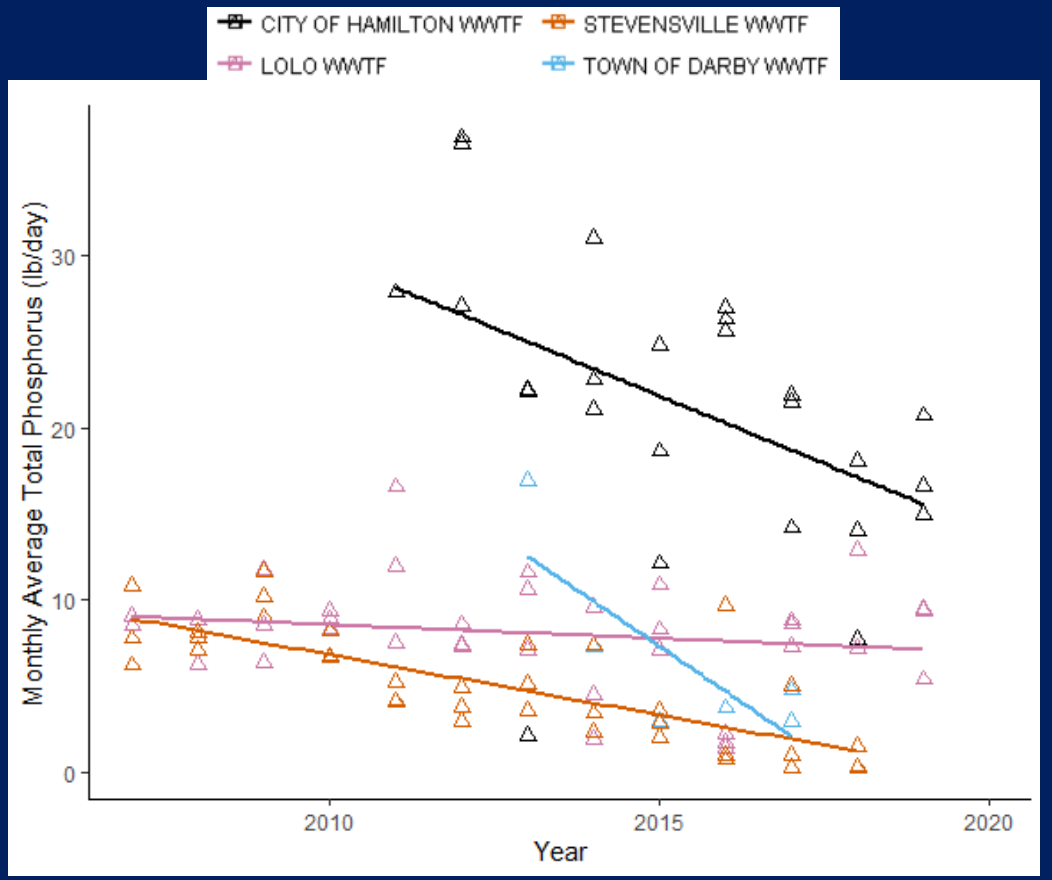



## WWTFs: discharge monitoring report data

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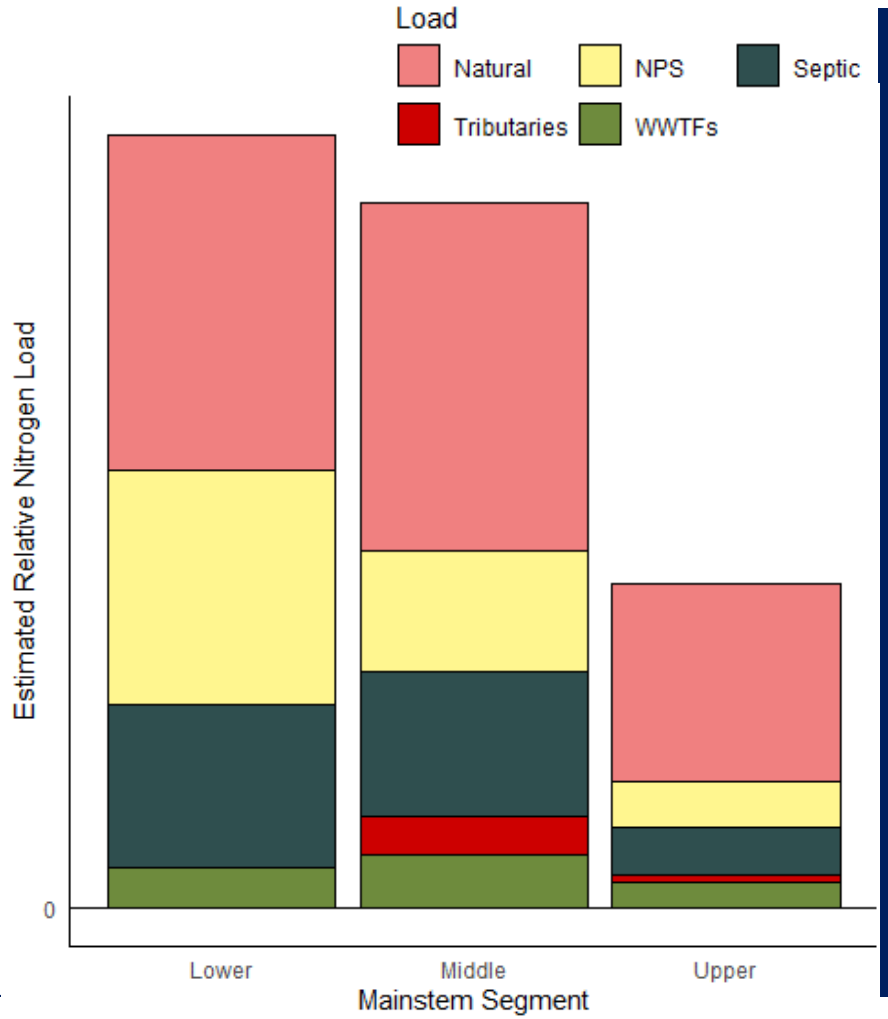
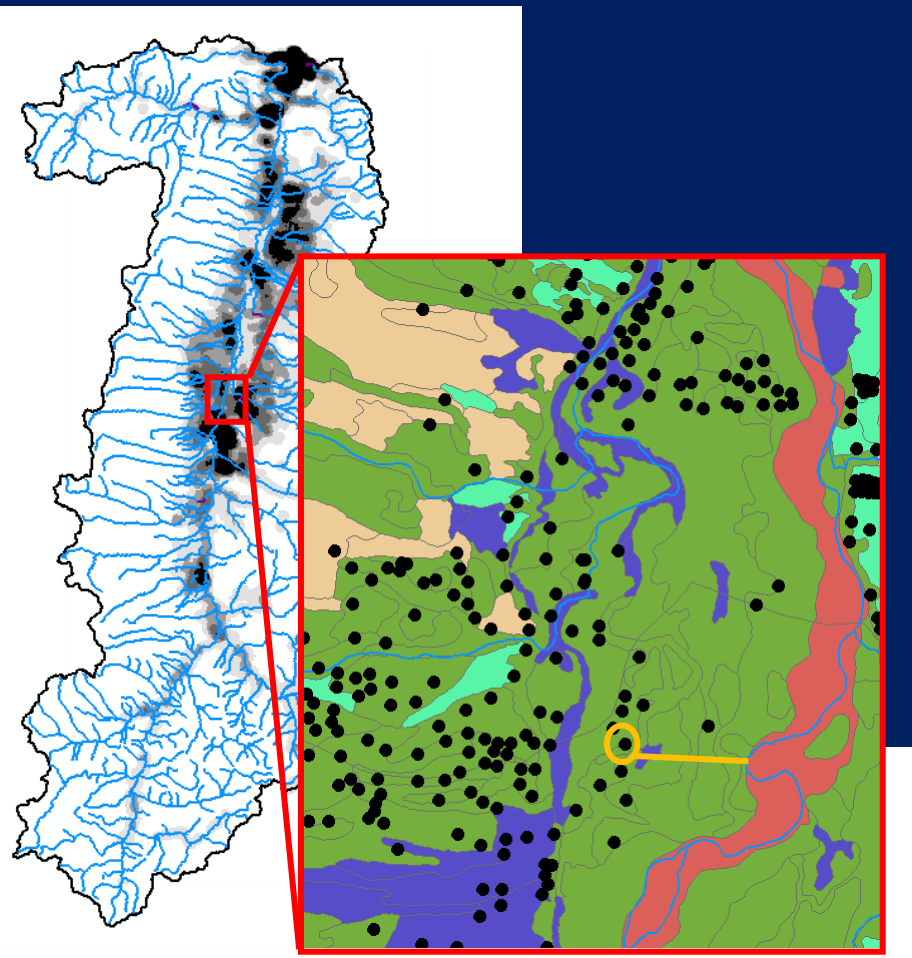
# Nutrient Sources




## Septic Systems: MEANSS modeling

**Septic systems release pollutants at the same rate**
**A portion never reaches surface water based on:**

- **Soil type**
- **Distance to surface water**



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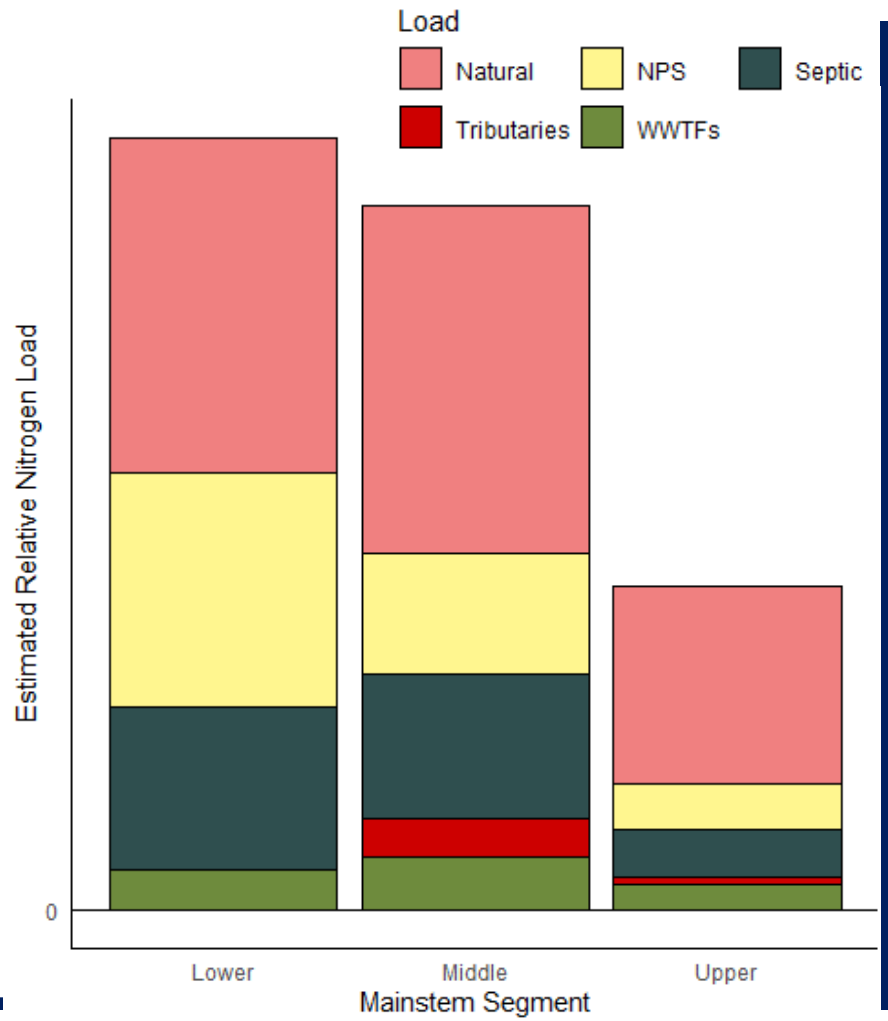


**NPS = Current – NB – WWTF – (Tributaries - $NB_{Tributaries}$) – Septic**

*NPS Load = Nutrient load, in units of lbs/day, in the mainstem Bitterroot that is attributable to nonpoint sources of nutrients, excluding septic systems*

*Current = Current nutrient load*

*NB = Natural background nutrient load*

*WWTF = Wastewater treatment facility load*

*Tributaries = Human-caused nitrogen- and/or phosphorus-impaired tributary load*

*Septic Systems = Septic system load*

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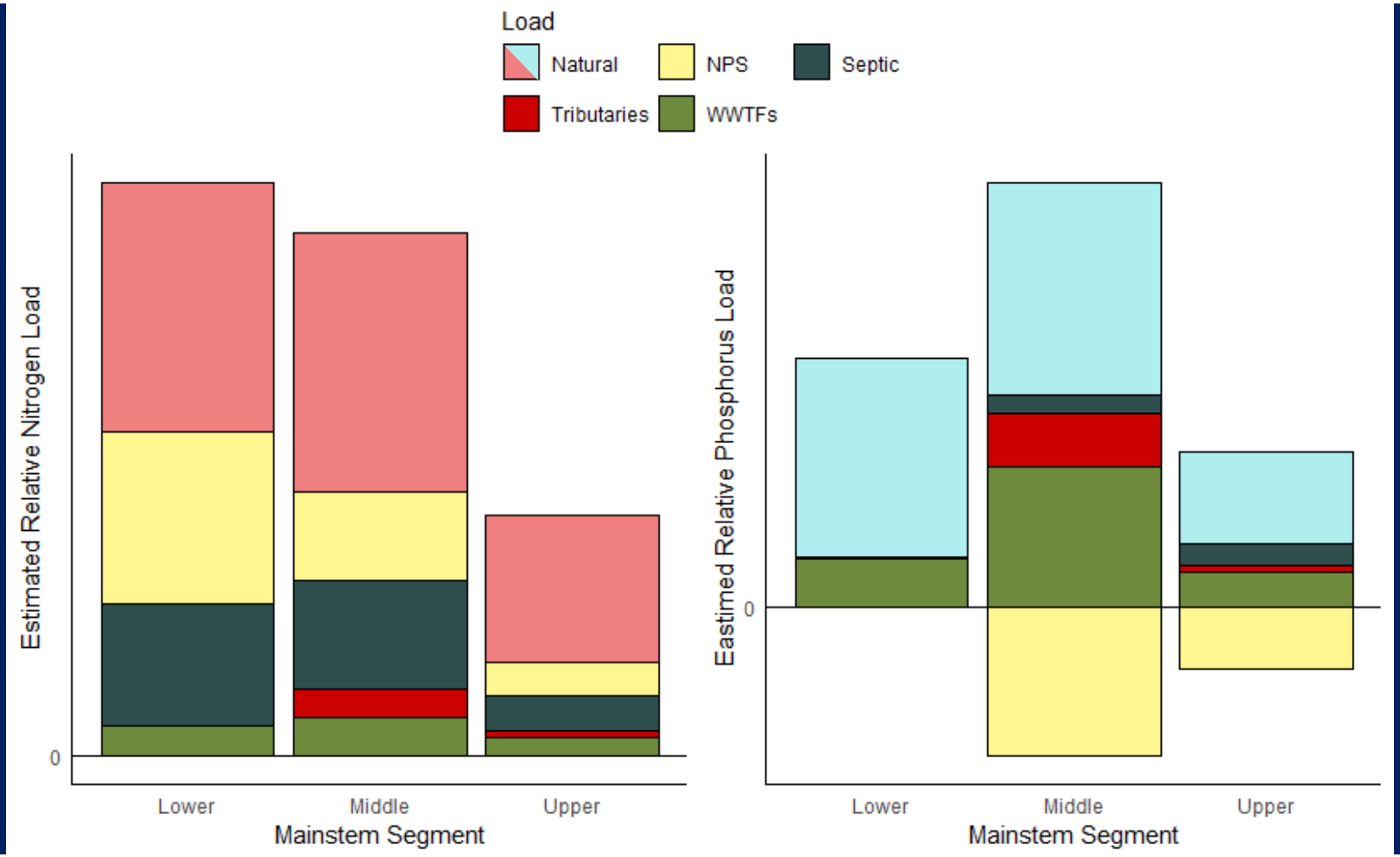
# Nutrient Sources

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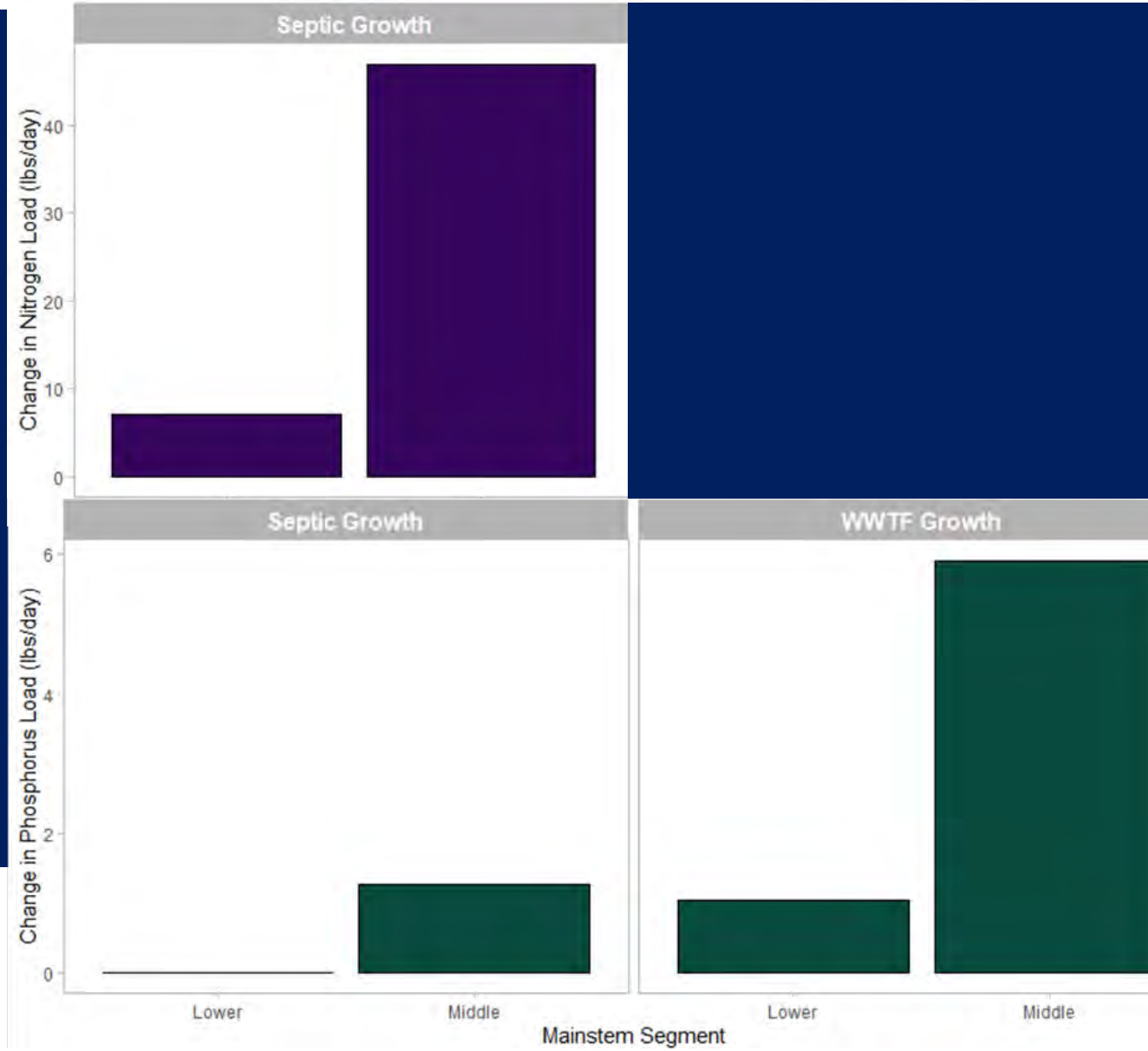
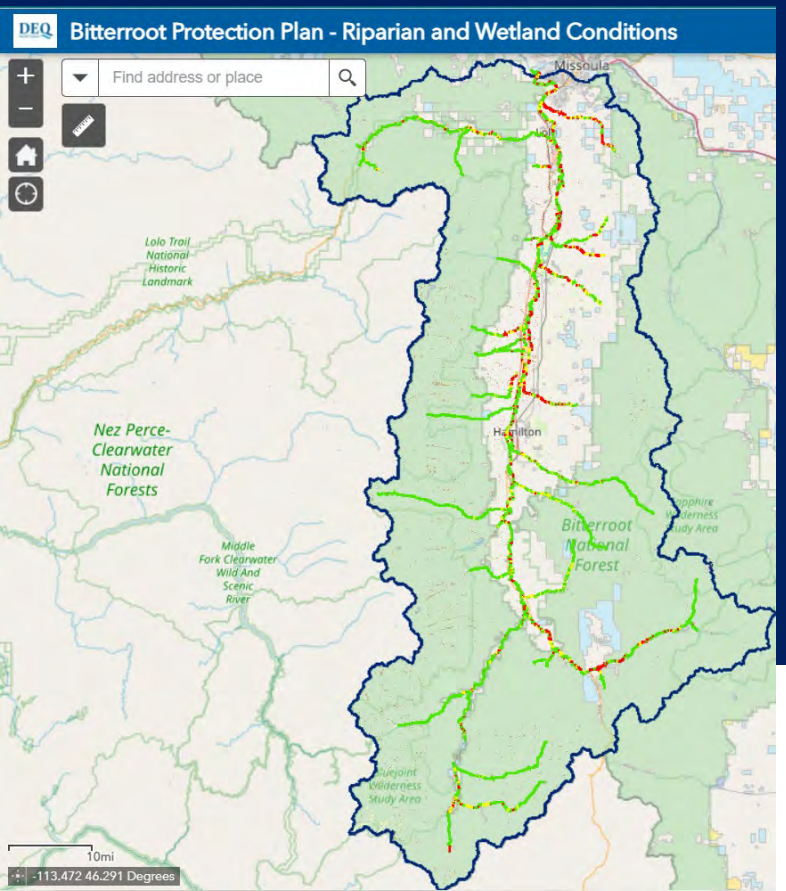
# How long can we expect high quality condition?

- Primarily accomplished through long-term trend monitoring
- Population growth scenarios



# Recommended activities and measures of success

- Continue Implementing the Bitterroot Watershed Restoration Plan and Recommendations from the TMDLs
- Prioritize Riparian and Wetland Projects by Existing Condition




**MEASURES OF SUCCESS**

- Number of projects or best management practices implemented
- Acres of new conservation easements along streams and wetlands
- Miles of riparian fencing installed
- Number of septic systems upgraded or hooked into centralized wastewater treatment systems
- Miles of streambank with riparian vegetation restored

tinyurl.com/BitterrootProtectionPlan

# Recommended activities and measures of success

- Consider Local Regulation and Education to Ensure Water Quality-Friendly Development
- Continue Developing Strategies to Address Water Shortages

MEASURES OF SUCCESS
- Number of distinct outreach campaigns
- Number of County, City, or Homeowner Association level ordinances for water quality friendly development

MEASURES OF SUCCESS
- Number of instream flow leases secured
- Number of irrigation improvement projects
- Number of stakeholder meetings to address voluntary drought management
- Reduction in the number of days hoot owl restrictions (i.e., temporary fishing closures due to high water temperatures) are placed on the Bitterroot River

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# Next steps….

- Submit public comment through March 28th, 2022

  **deq.mt.gov/public/publiccomment**

- Incorporate substantive public comment and submit for EPA review

- Publish final draft

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