

# Idaho Department of Environmental Quality

Revision of Idaho's Human Health  
Criteria for Arsenic  
Docket No. 58-0102-1801  
Negotiated Rulemaking  
November 20, 2019

Jason Pappani

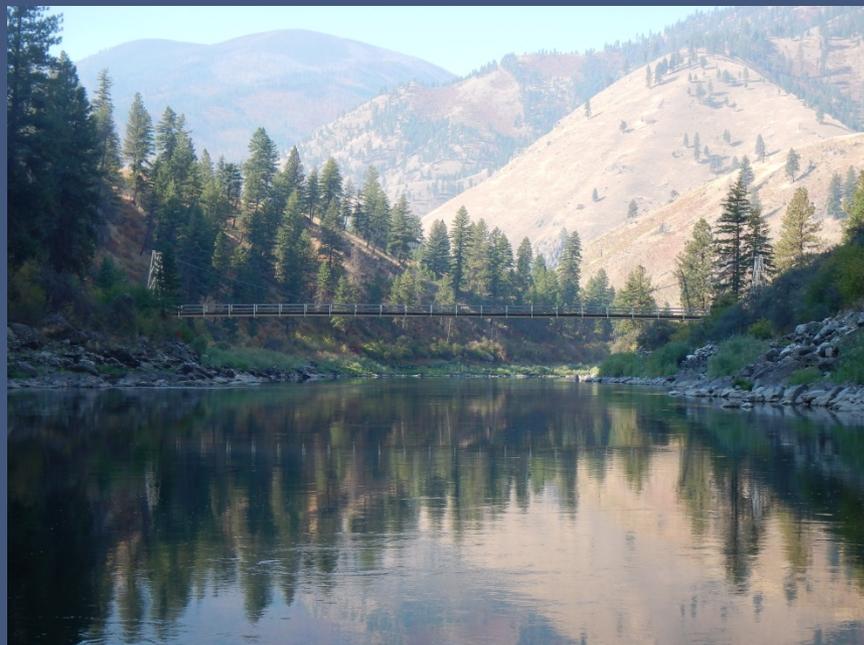
07.01.2014

South Fork Payette River



# Outline

- Review
- History
- Monitoring
- Next Steps



# Human Health

Recreation

Domestic Water  
Supply

Fish Only

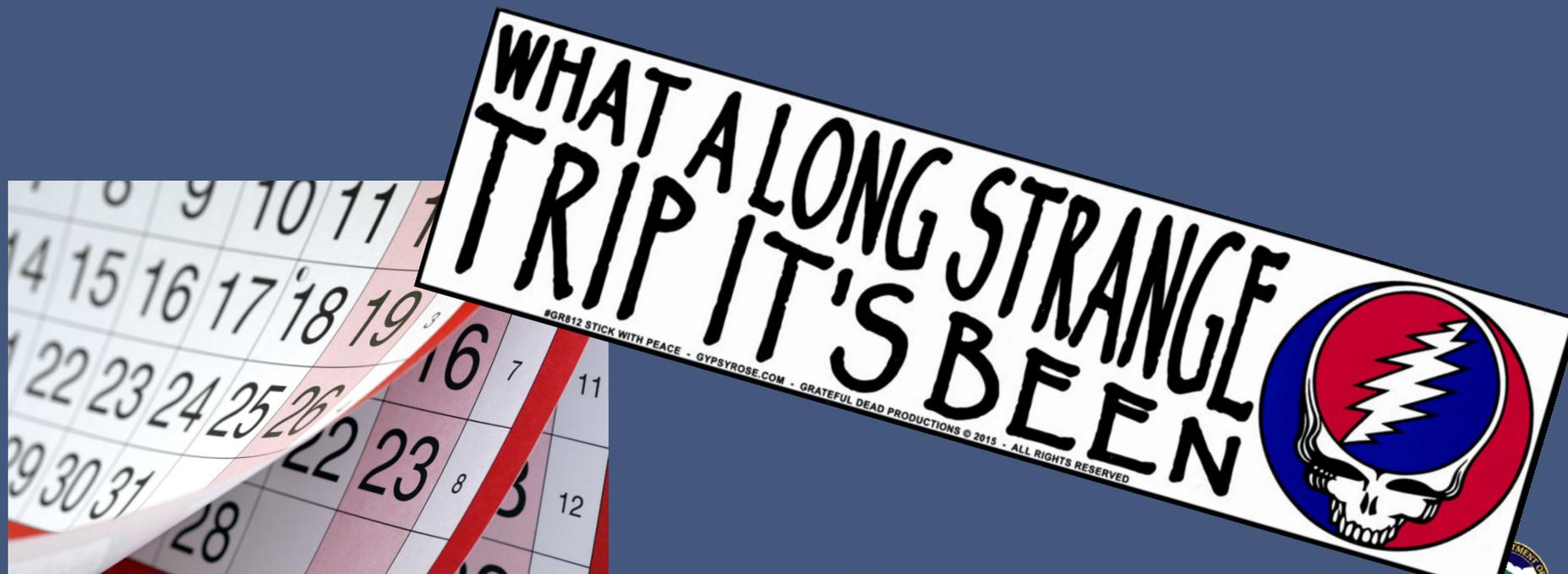
Fish + Water



+

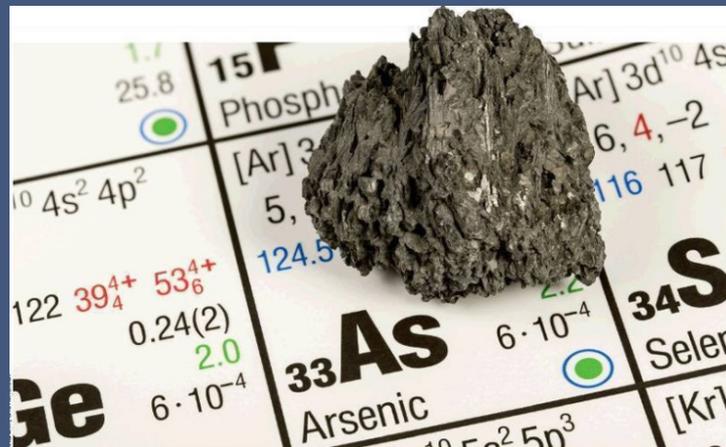


1992	1995	1999	2010	2016	2018	2023
National Toxics Rule	Idaho Revises	Idaho Adopts MCL	Idaho Revises to new MCL	EPA reconsiders, disapproves	Idaho initiates rulemaking, EPA and NWEA modify consent decree	New state or Federal Criteria



# Overview of Rulemaking

- Previous Meetings
  - April 19, 2018
  - May 23, 2018
  - June 27, 2018
  - July 13, 2019



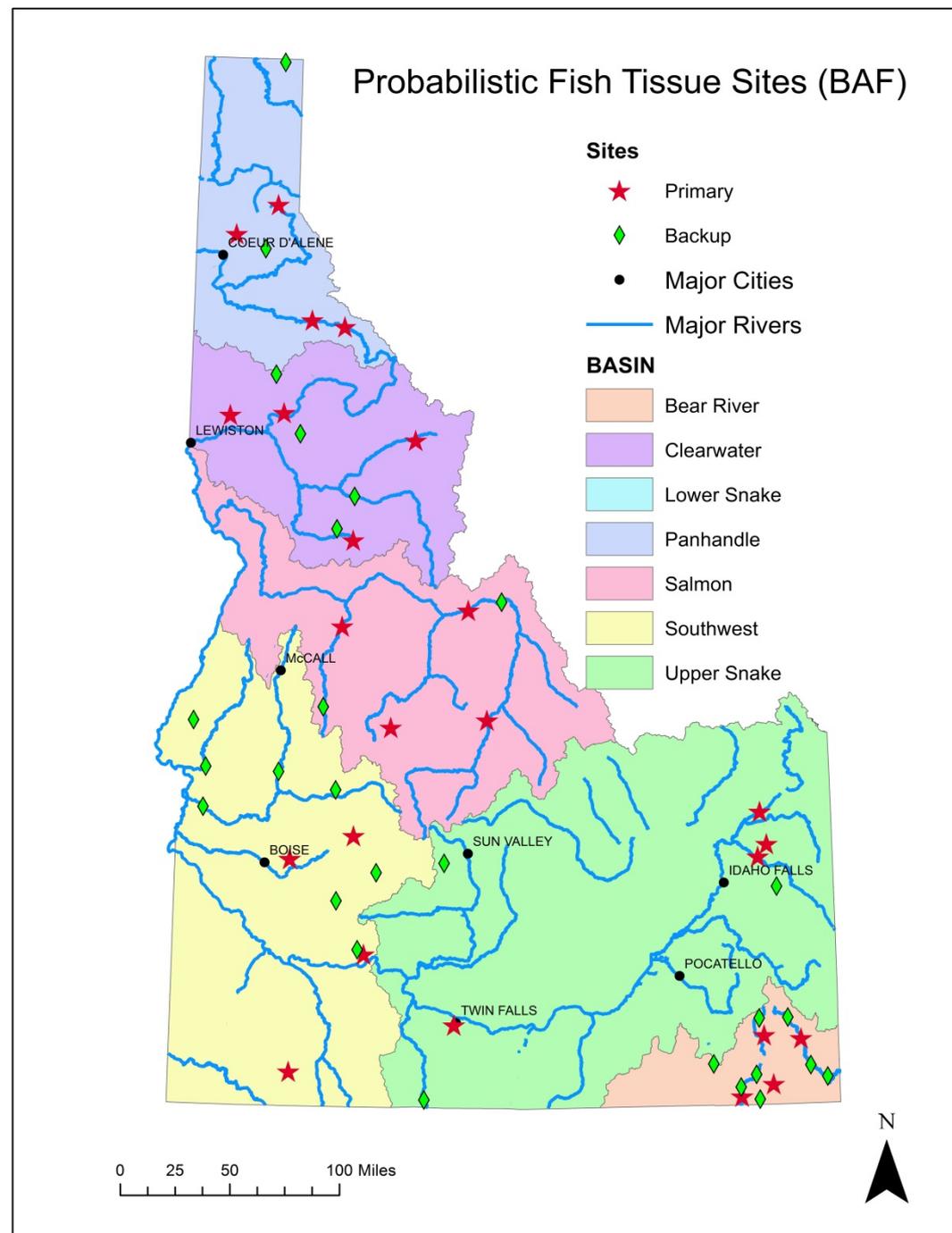
# Monitoring

- Probabilistic Arsenic Accumulation in Fish
- Targeted Ambient in Water



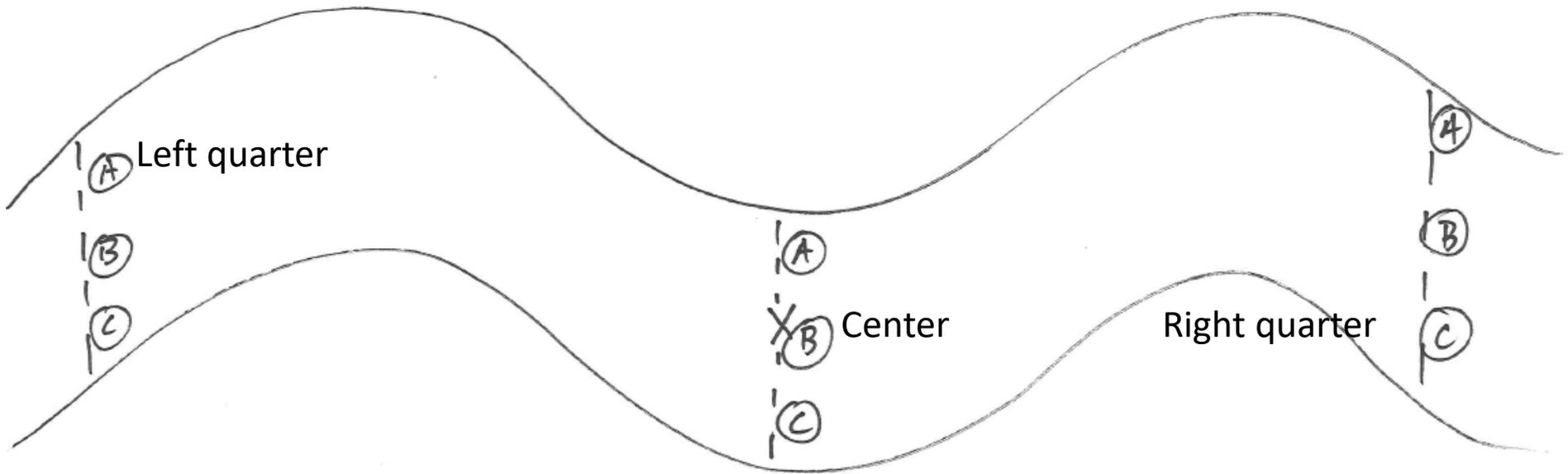
# Probabilistic As Accumulation

- 24 Sites
- Arsenic in gamefish and water



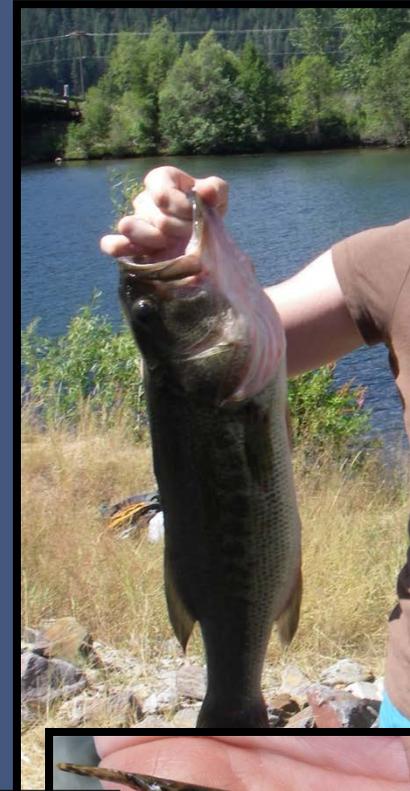
Flow 

  
40 x wetted width



# Results

- Goal: 24 sites X 2 Species
- Sampled: 24 sites
  - 19 had two species
- total 46 samples
  - 19 samples had 5 fish



# Detection Limits - Fish

- MDL range: 0.3 – 0.4  $\mu\text{g}/\text{kg}$
- MRL range: 0.8 – 1.0  $\mu\text{g}/\text{kg}$



# Results – PRELIMINARY and Incomplete

\*Results based on 23 samples representing 12 sites

	(i)As in Fish (mg/kg)	(T)As in Fish (mg/kg)
Minimum	0.0003*	0.008
Median	0.0008**	0.062
Average	0.002	0.10
Maximum	0.01	0.58

\* MDL

\*\* MRL

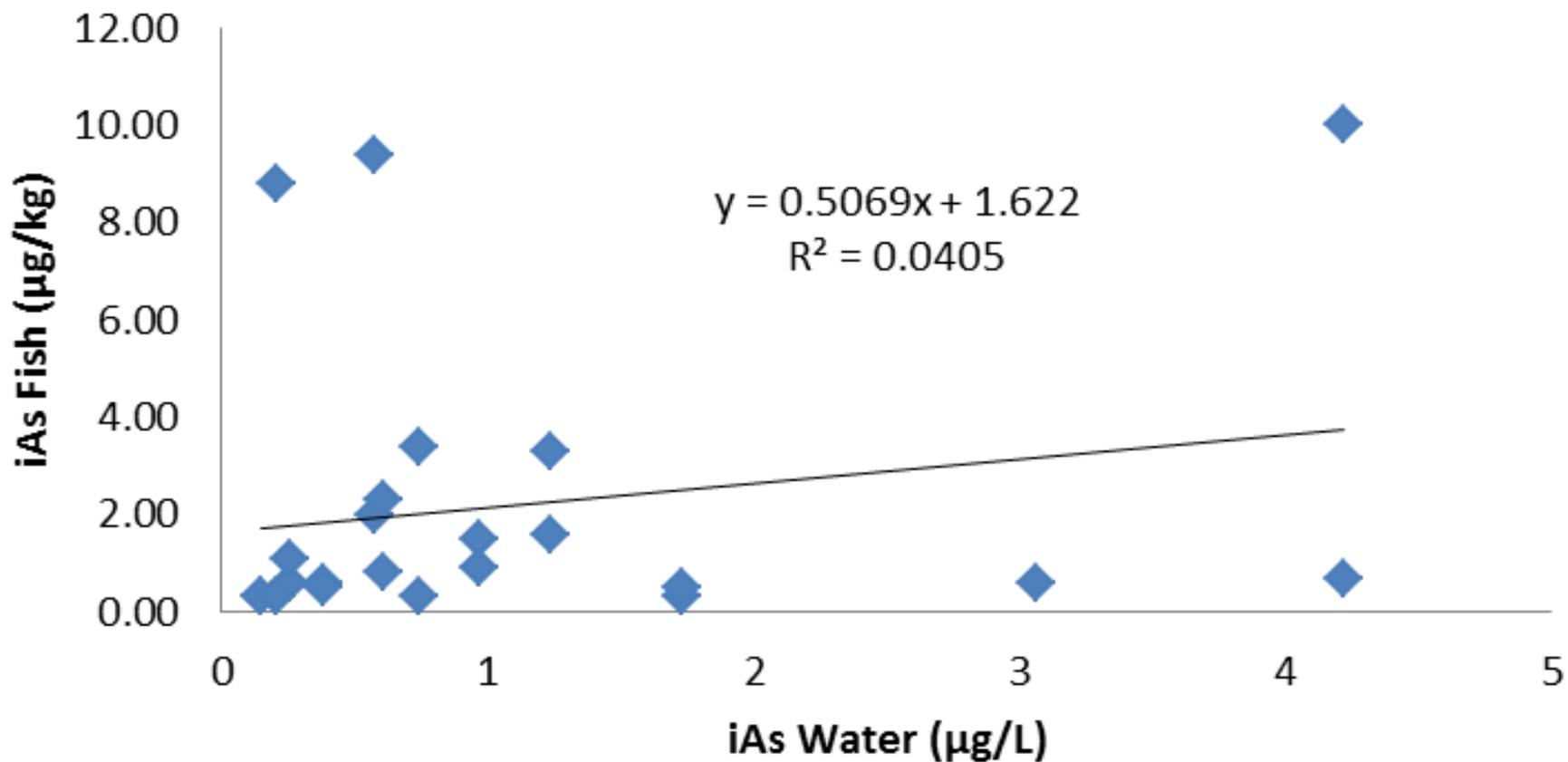


# Results – PRELIMINARY and Incomplete

Species	# of Samples	Range (i)As (µg/kg)	Range (i)As BAF (L/kg)
Brook Trout	1	2.00	3.45
Brown Trout	1	0.90	0.92
Cutthroat Trout	5	0.30 – 8.80	0.40 – 42.72
Rainbow Trout	5	0.30 – 9.40	0.17 – 16.21
Smallmouth Bass	1	0.30	0.17
Bridgelip Sucker	2	2.30 – 10.00	2.37 – 3.78
Northern Pikeminnow	3	0.30 – 0.80	0.20 – 1.95
Sculpin	3	1.10 – 3.40	1.29 – 4.59
Redside Shiner	2	0.30 – 0.50	0.29 – 1.95



# iAs in Water and Fish



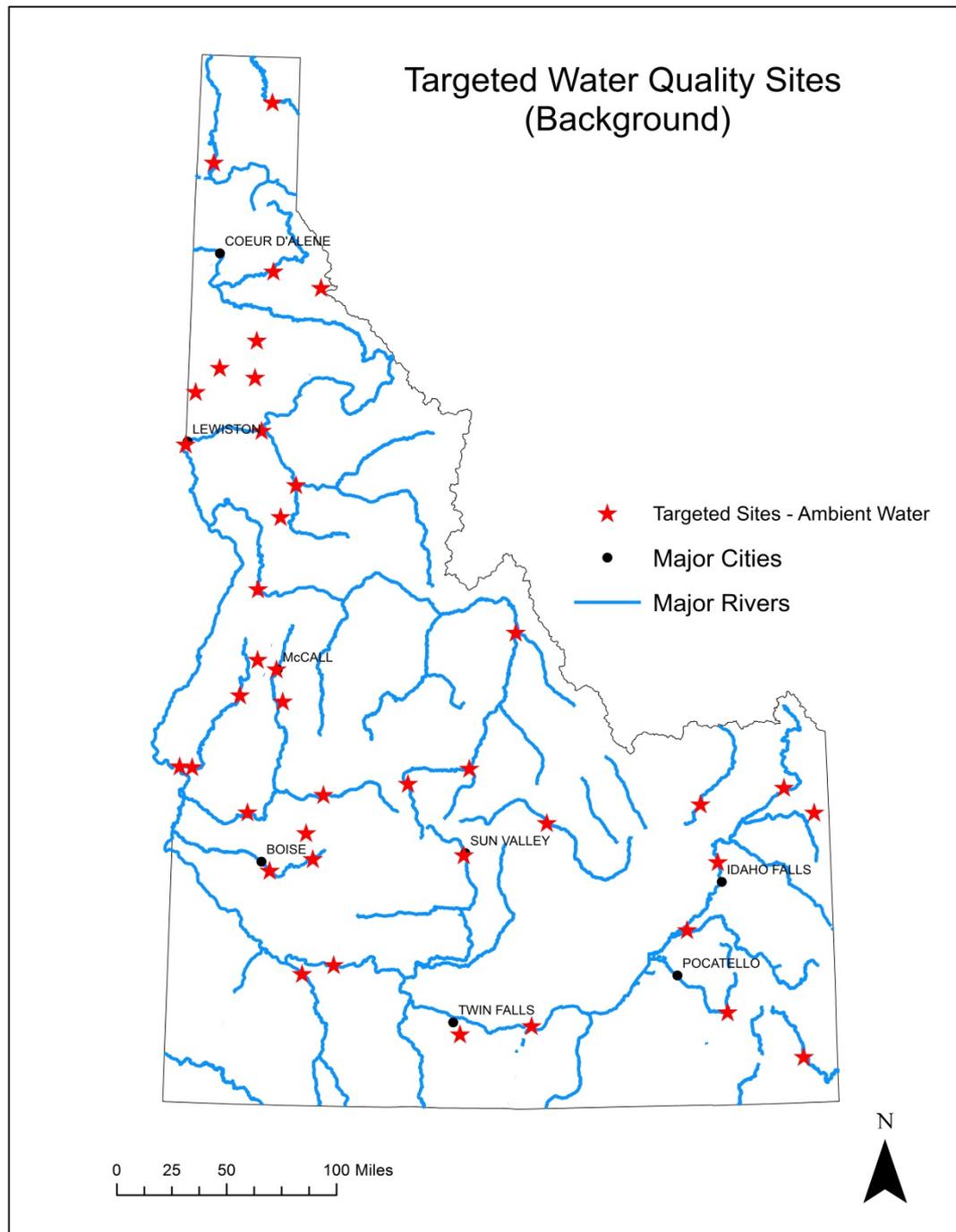
# PRELIMINARY Results: BAF and (i)As:(T)As

	(i)As BAF (L/kg)	(i)As:(T)As (%)
Minimum	0.17	0.2
Median	1.57	2.9
Average	4.21	3.4
Maximum	42.72	16.3



# Targeted Ambient Arsenic

- Monthly total and inorganic in water
- Easily accessible throughout year
- Areas of interest
- Above major anthropogenic sources
- Spread throughout state



# Preliminary Results – Water Column Inorganic - August

<b><i>N</i></b>	<i>40</i>
<b><i>MDL</i></b>	<i>0.040 µg/L</i>
<b><i>MRL</i></b>	<i>0.200 µg/L</i>
<b><i>Min</i></b>	<i>0.049 µg/L</i>
<b><i>Avg</i></b>	<i>1.97 µg/L</i>
<b><i>Max</i></b>	<i>11.9 µg/L</i>

- All results were >0.040 µg/L
- 9 results were < MRL



# Preliminary Results – Water Column Inorganic - September

<b><i>N</i></b>	<i>40</i>
<b><i>MDL</i></b>	<i>0.040 µg/L</i>
<b><i>MRL</i></b>	<i>0.200 µg/L</i>
<b><i>Min</i></b>	<i>0.052 µg/L</i>
<b><i>Avg</i></b>	<i>1.71 µg/L</i>
<b><i>Max</i></b>	<i>9.5 µg/L</i>

- All results were >0.040 µg/L
- 11 results were < MRL







CJ Strike Reservoir

Wilkins Gulch

Crane Falls Rd

78

Coffeywood Rd

Coyote Rd

78

51

Rancho Rd

Bruneau

Jacks Creek Rd

Jacks Creek

51

SUGAR VALLEY

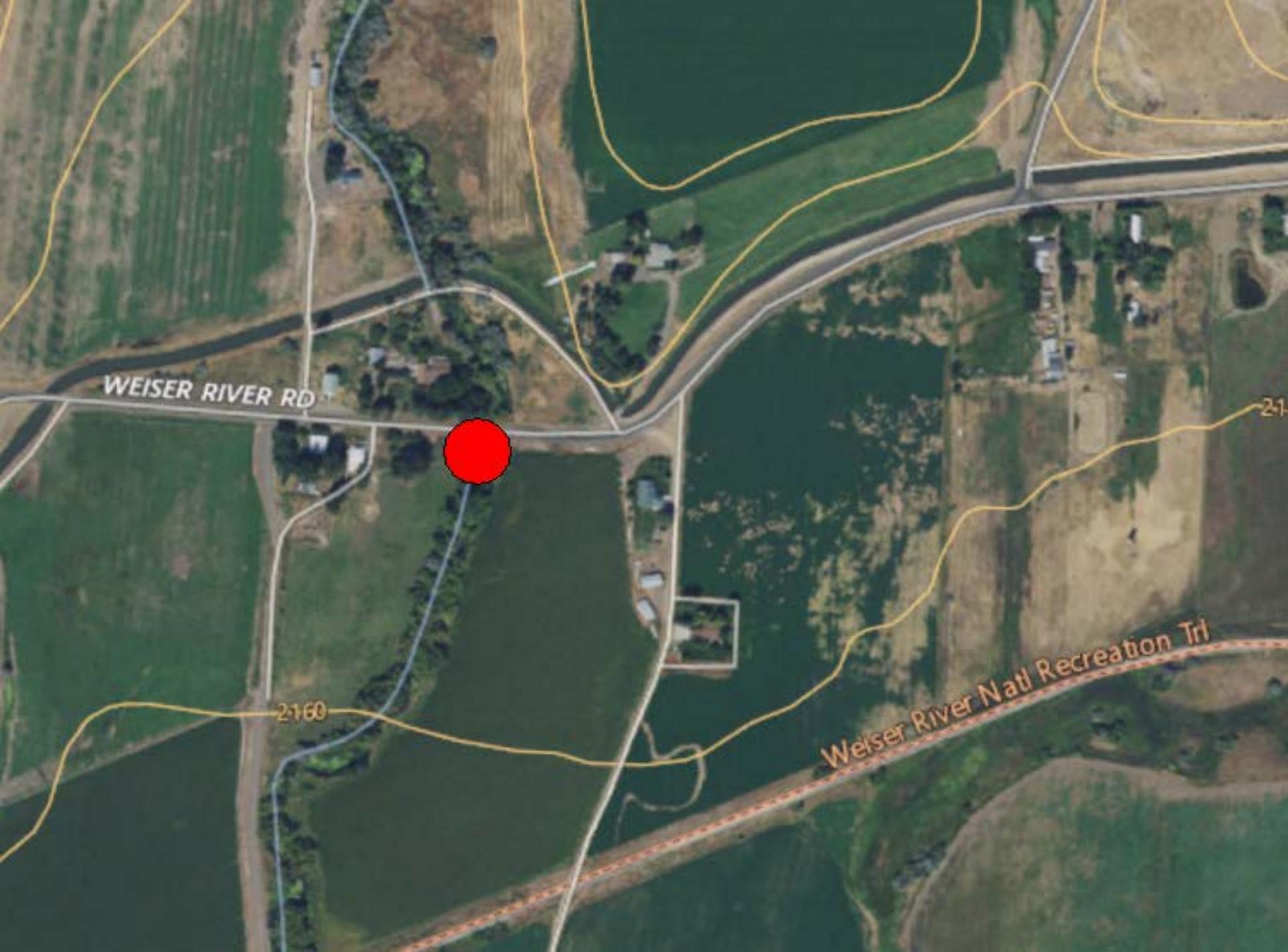
BRUNEAU VALLEY

2500 ft

2600 ft

Benham Canal

s Rd



WEISER RIVER RD



2160

Weiser River Natl Recreation Trl

21





CJ Strike Reservoir

Wilkins Gulch

Crane Falls Rd

78

Coffeywood Rd

Coyote Rd

78

51

Rancho Rd

Bruneau

Jacks Creek Rd

Jacks Creek

51

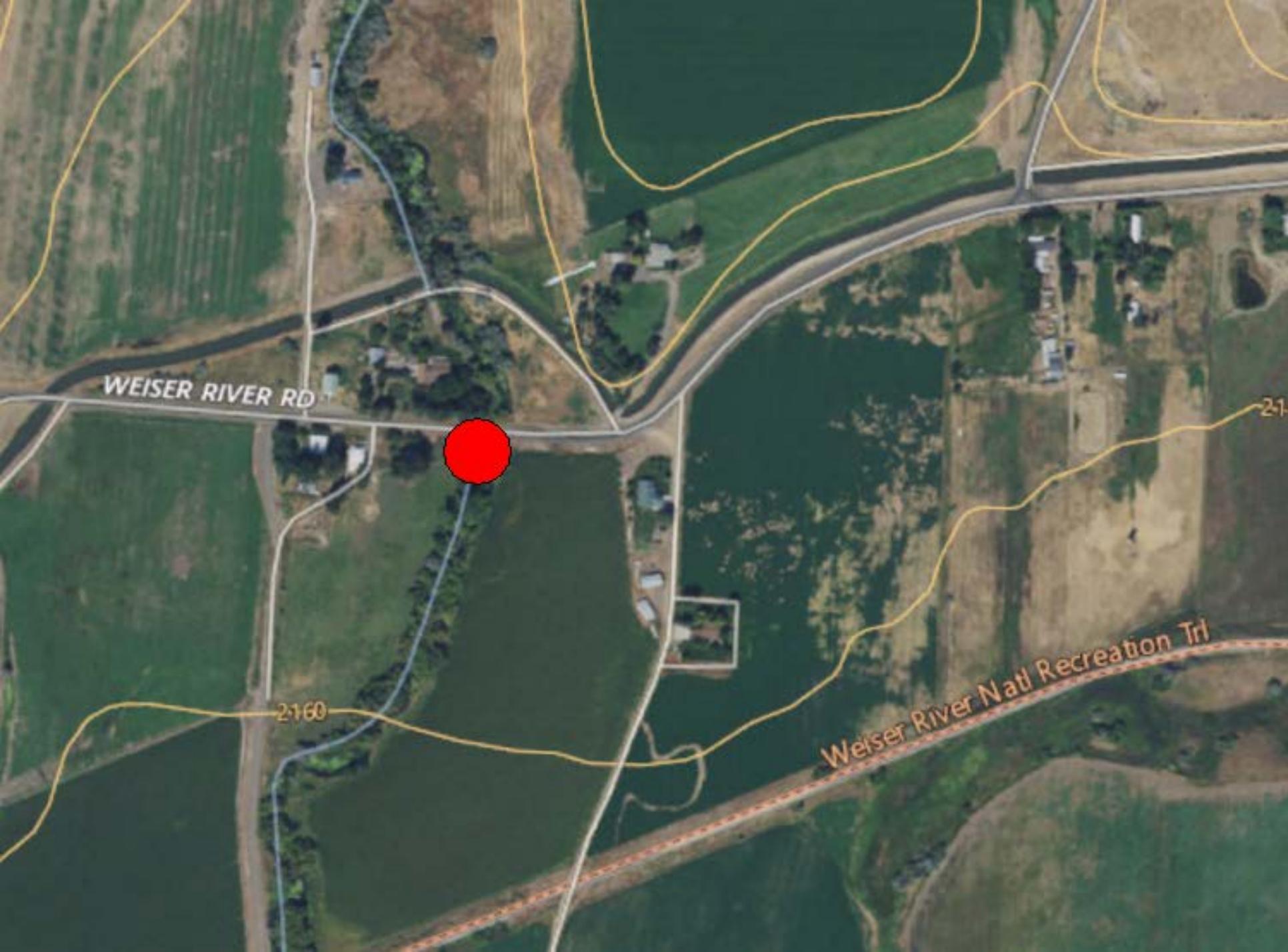
Benham Canal

SUGAR VALLEY

BRUNEAU VALLEY

2500 ft

2500 ft



WEISER RIVER RD



2160

Weiser River Natl Recreation Trl

21

# Data...

- Still receiving data
  - Review and QA data
  - Draft Report

All data and draft report will be available for review and comment



# Next Steps...

- Continue rulemaking through 2022
  - Monitoring through 2021
  - Report
    - BAF and background (i)As
  - Background
  - EPA IRIS inorganic As assessment (2023)



# Next Steps...

- Proposed rule for Board adoption November 2022
- Legislative approval 2023



# Questions?

