# Treasure Valley BMP Grant Program

1. LBWC applies for 319 and State Ag. BMP grants.

2. LBWC, CSWCD, NRCS notify landowners of available funding & grant application opportunities.

3. CSWCD receives applications and assists landowners with BMP project designs, work plans, & cost estimates.

4. LBWC 319 TAC Committee (LBWC, CSWC, NRCS, DEQ et al) reviews, ranks and recommends grant applications for LBWC's approval.

5. Prioritize projects that maximize sediment and phosphorus load reductions to meet TMDL objectives.

6. Grants approved by the LBWC are secured by agreements with grantees to ensure:
   A. compliance with federal and state grant requirements
   B. accountability for implementation and performance reporting.

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# Treasure Valley BMP Grant Program

Three categories of projects:

A. On-farm BMPs consisting mostly of conversions from flood to pressure irrigation

B. No-till drills that are utilized on multiple fields throughout the watershed

A. Tributary (drain & canal) treatment basins called “watershed scale” projects

# Treasure Valley BMP Projects- 2009-2020: Acres Treated & Load Reductions

| | Landowner | Grant Source | Subwatershed | Acres | Annual Total | T1 | T2 | T3 | Sediment (tons/acre/yr) | Sediment (tons/yr) | Total Phosphorus (lbs/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2009 | Watson #1 | Fed 319 | Sand Hollow | 284.8 | | 142.4 | 142.4 | | 5.22 | 1,486 | 2,972 |
| 2009 | Skogsberg #1 | Fed 319 | Riparian (BR outlet) | 44.1 | | 44.1 | | | 2.14 | 94 | 189 |
| 2009 | Rueth Dairy | Fed 319 | Sand Hollow | 30.8 | | 30.8 | | | 5.4 | 166 | 333 |
| 2009 | Nichols | Fed 319 | Snake River | 34.6 | | 34.6 | | | 6.8 | 235 | 471 |
| 2009 | Ubilla Farms | Fed 319 | Sand Hollow | 61.4 | 456 (2009) | 61.4 | | | 10.33 | 634 | 1,269 |
| 2011 | McKellip #1 | Fed 319 | Fivemile Creek | 37.4 | | 37.4 | | | 3.32 | 124 | 248 |
| 2011 | Hungate | Fed 319 | Dixie or Lowline | 25.3 | | | 25.3 | | 0.35 | 9 | 18 |
| 2011 | Burris | Fed 319 | Riparian (BR outlet) | 38.1 | | | | 38.1 | 2.56 | 98 | 195 |
| 2011 | McKellip #2 | Fed 319 | Fivemile Creek | 57 | | 57 | | | 3.32 | 189 | 378 |
| 2011 | Marchbanks #1 | Fed 319 | Fivemile Creek | 37.4 | | 37.4 | | | 8.43 | 315 | 631 |
| 2011 | Maxwell | Fed 319 | Dixie Slough | 34.4 | 230 (2011) | 34.4 | | | 2.47 | 85 | 170 |
| 2014 | Marchbanks #2 | Fed 319 | Riparian (BR outlet) | 70 | | 70 | | | 8.82 | 617 | 1,235 |
| 2014 | Gooding Farms | Fed 319 | Riparian (BR outlet) | 81.3 | | | 81.3 | | 1.96 | 159 | 319 |
| 2014 | BPO Farms | Fed 319 | Riparian (BR outlet) | 106 | | 106 | | | 2.25 | 239 | 477 |
| 2014 | Ada SWCD (no-till) | Fed 319 | various | 7,190 | | | | | 3.5 | 25,165 | 50,330 |
| 2014 | Riverside/Indian/Dixie | IPCo | Indian Cr/Dixie | 21,276 | 28,723(2014) | | | | NA | ??? | 24,328 |
| 2016 | Dixie Drain | Boise | Dixie Slough | 10,665 | 10,665(2016) | | | | NA | 512 | 8,760 |
| 2017 | Watson #2 | State & Fed | Conway Gulch | 120 | | 120 | | | 2.3 | 276 | 552 |
| 2017 | Clayton Tree Farm | Fed 319 | Dixie Slough | 160 | | | 160 | | 3 | 480 | 960 |
| 2017 | Mill Slough | State | Mill Slough | 8,500 | 8,780 (2017) | | | | NA | 900 | 1,800 |
| 2018 | Farmers Co-Op | State & Fed | Sand Hollow | 4,000 | | | | | NA | 5,712 | 12,060 |
| 2018 | Pintail Ranch | State | Riparian (BR outlet) | 190 | | 190 | | | 8.37 | 1,590 | 3,181 |
| 2018 | Vandenberg & Sons | State & Fed | Hartley Gulch | 137 | | 39 | 98 | 136 | 4.47 | 612 | 1,225 |
| 2018 | Bicandi | State & Fed | Mason Creek | 34 | 4,361 (2018) | 34 | | | 4.73 | 161 | 322 |
| 2019 | Skogsberg #2 | State | Riparian (BR outlet) | 65 | 65 (2019) | | 65 | | 5.71 | 369 | 738 |
| 2020 | Canyon SWCD (no-till) | State & Fed | various | 984 | | | | | 3.5 | 3,444 | 6,888 |
| 2020 | Watson (no-till) | State | various | 984 | | | | | 3.5 | 3,444 | 6,888 |
| 2020 | Villifana | State | Low Line Canal | 65 | | | | 65 | 2.7 | 176 | 352 |
| 2020 | Frederick | State | Indian Creek | 14 | | 14 | | | 1.9 | 27 | 54 |
| | | | | | | | | | | | |
| | **State & fed grants** | **12 state/21 fed** | | **55,327** | **55,400** | **1,053** | **572** | **239** | **no-till =** | **47,320** | **127,340** |
| | **Drain/Watershed** | **7 projects** | | **53,599** | **55,599** | | | | **70% eff.** | **39,177** | **111,054** |
| | **On Farm** | **21 projects** | | **1,728** | **1,801** | | | | | **8,143** | **16,286** |

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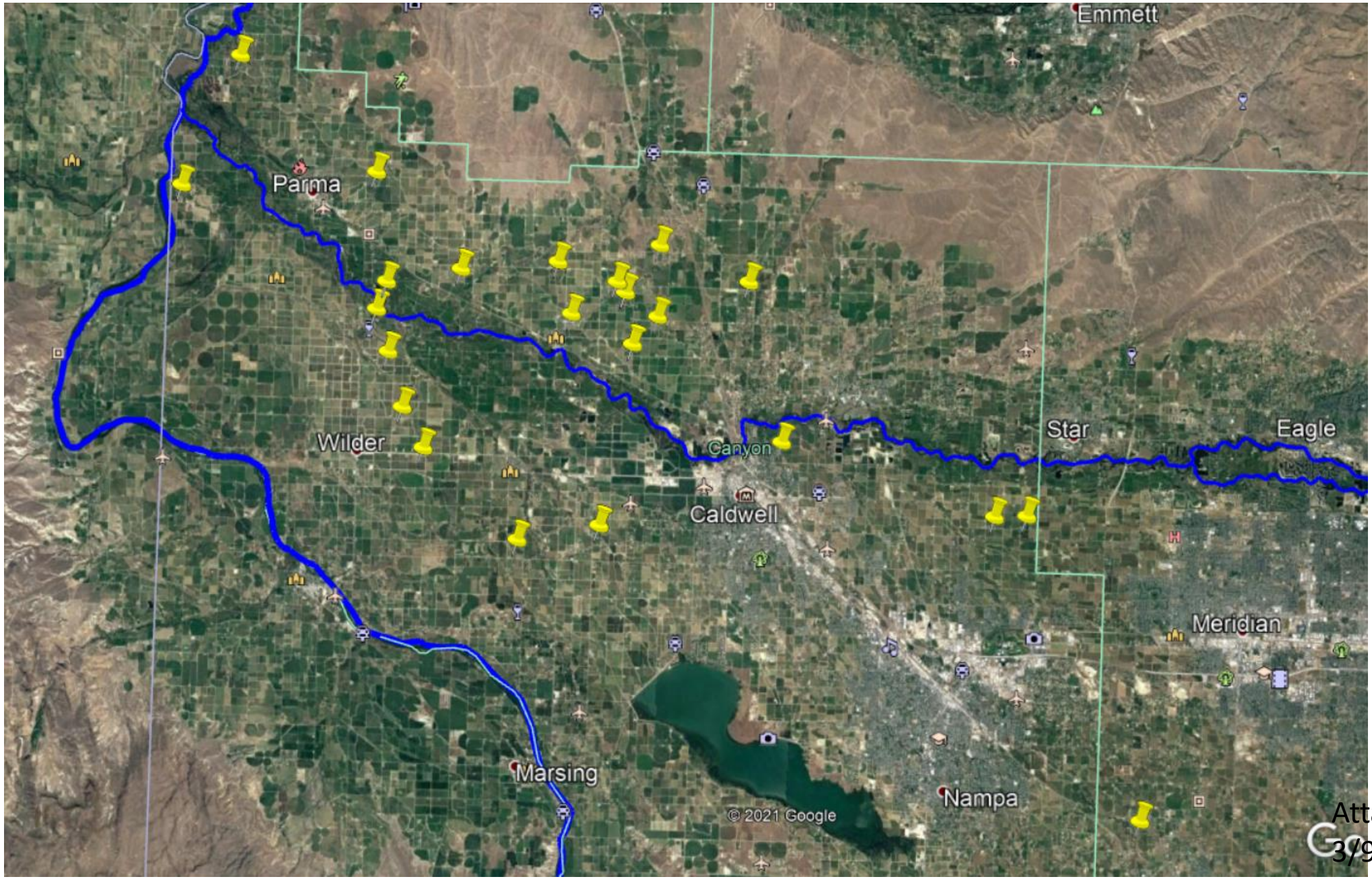
# Implementation: On Farm Projects

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# Conversion Projects

**Pressure Irrigation (pivots, wheel Lines, drip)**


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# No Till Drills and Roller Crimper

- Estimated improvements:
  - Decreased runoff
  - Increased infiltration and soil health
  - In much demand (Treasure Valley Soil Health Initiative)
  - Used for organic, row crop and pasture renovation



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# No Till Drills

**Water Quality Benefits**: Estimate 70% reduction in soil loss, sediment and phosphorus loading

**Financial Benefits**:

- Add grazing value of $150 per acre by using cover crops as a feed source
- No-till drills save around $100 per acre for each crop planted based off fuel and labor
- Reduce or eliminate the need to till
- Reduce the wear and tear on equipment
- Plant crops earlier due to fewer ground preparation requirements

**Soil Management:**

- Growing diverse crops increases soil organic matter, biodiversity, & water retention
- Cover crops provide nutrients for cash crops, suppress weeds and reduce erosion
- Adding legumes into your rotation fixes nitrogen into the soil

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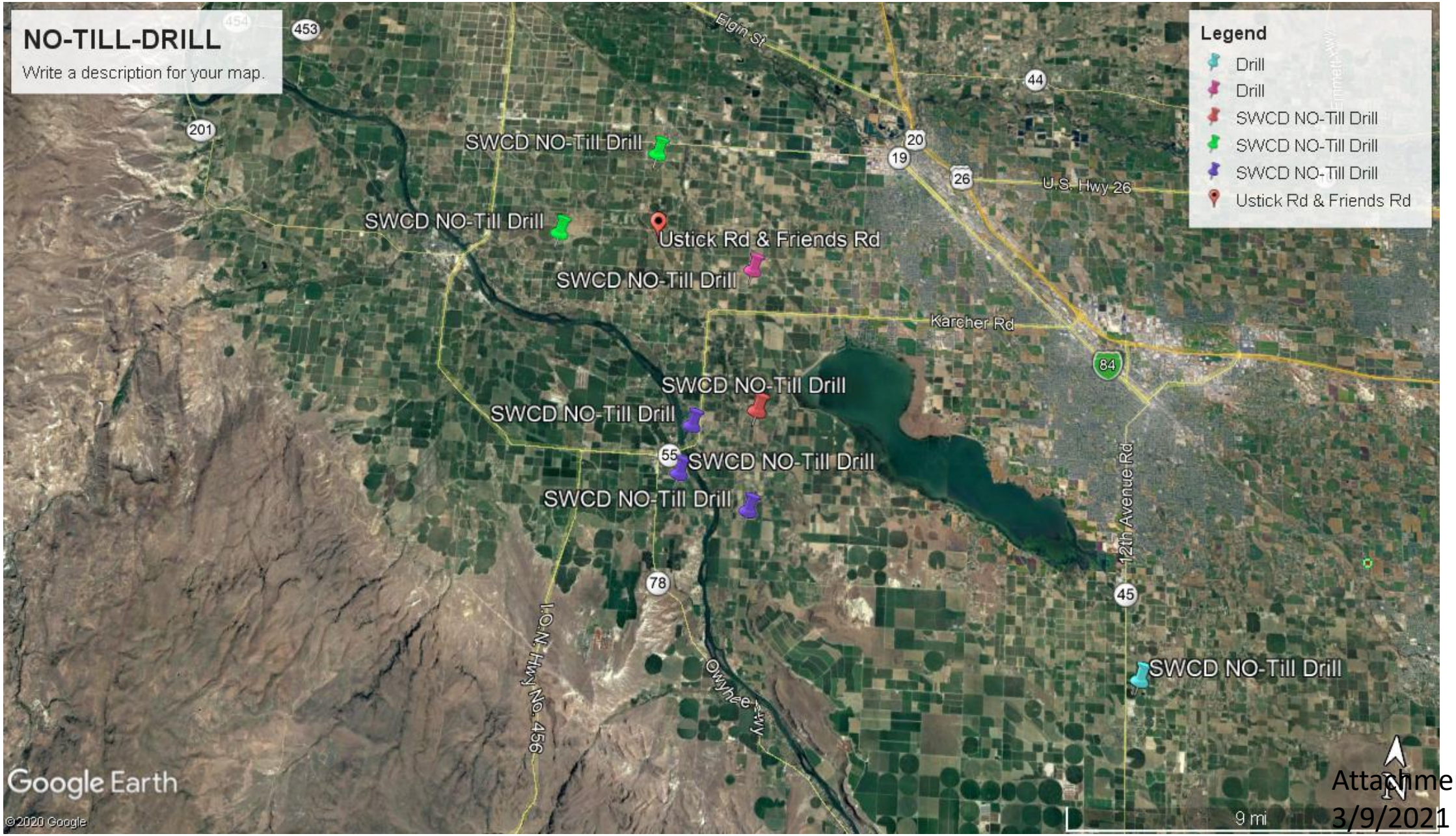
# Implementation: 2020 CSWCD No-Till Drill Projects

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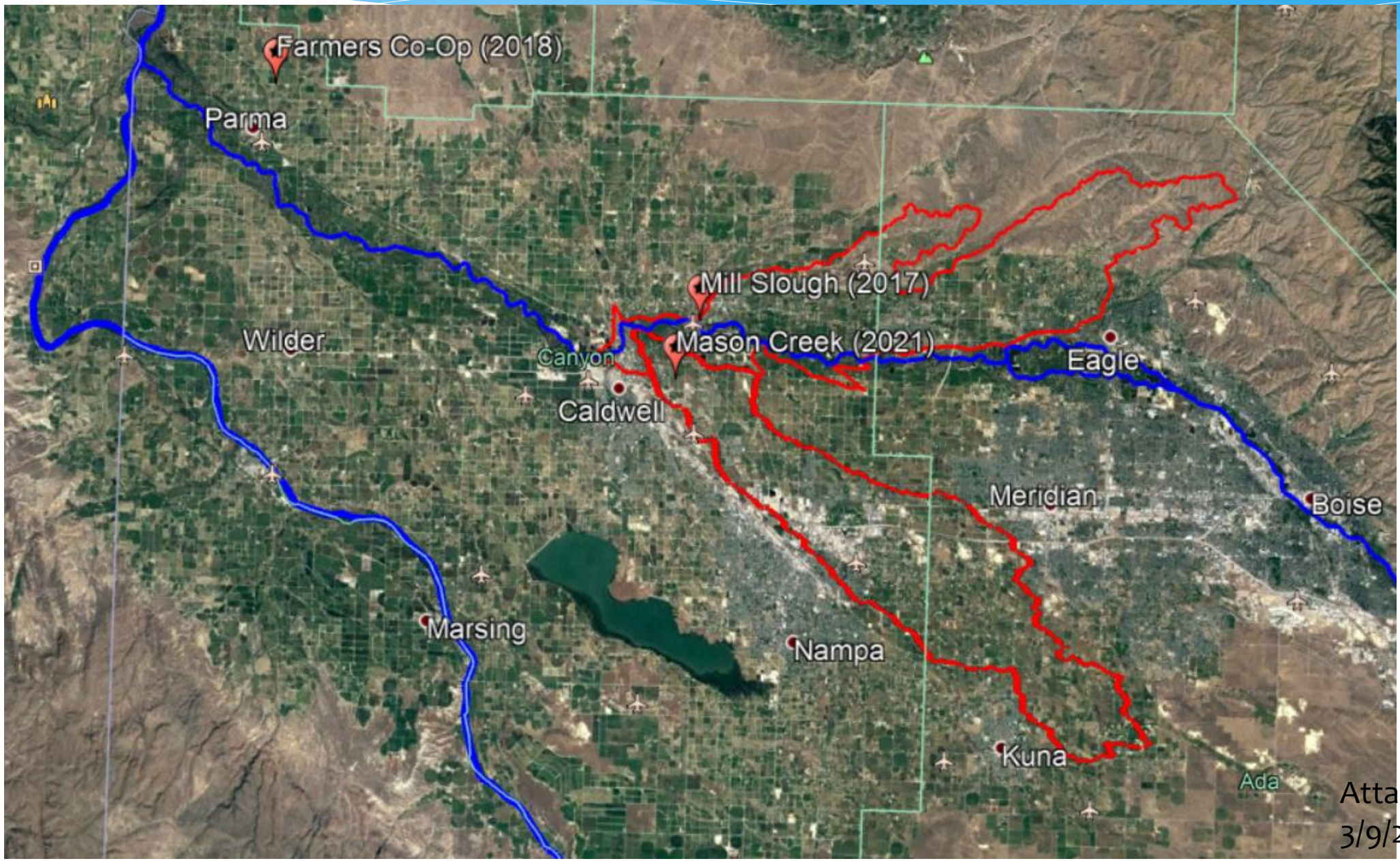
# Drain Treatment Projects

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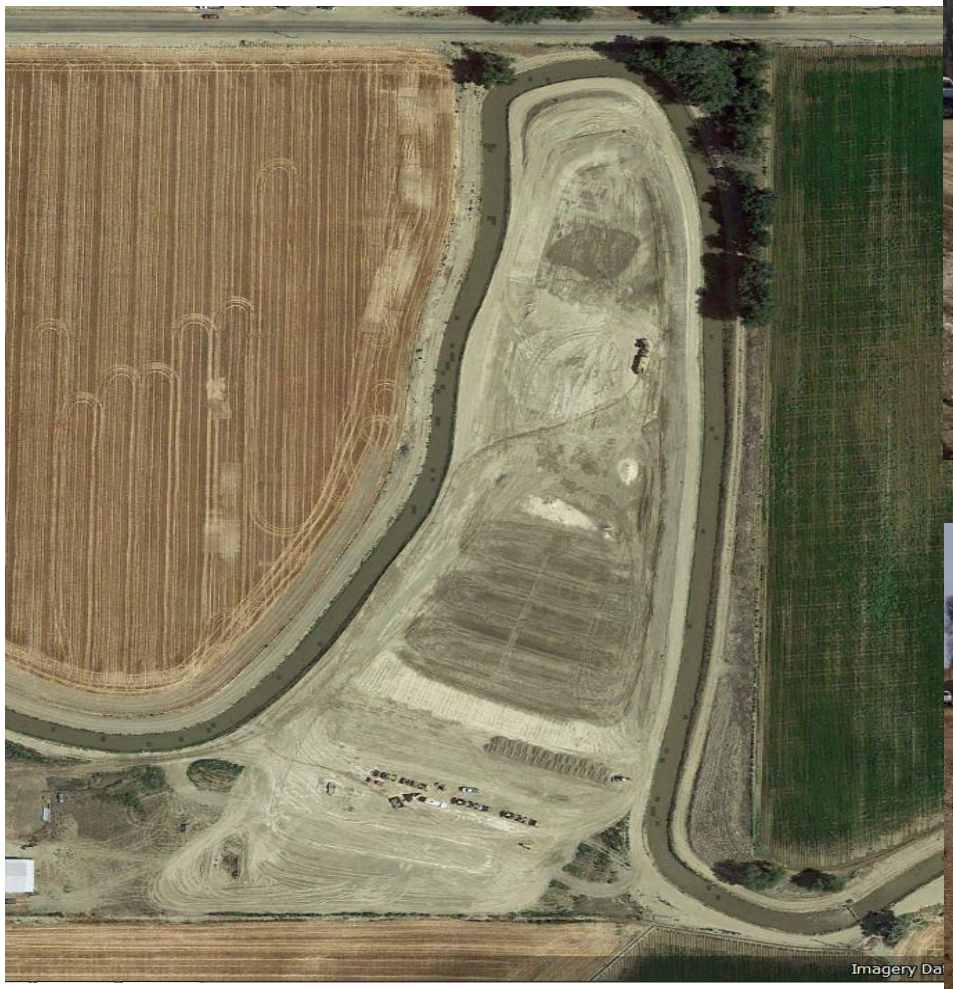
# Drain Treatment Projects:  Farmers Co-Op Canal



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# Drain Treatment Projects:  Mill Slough


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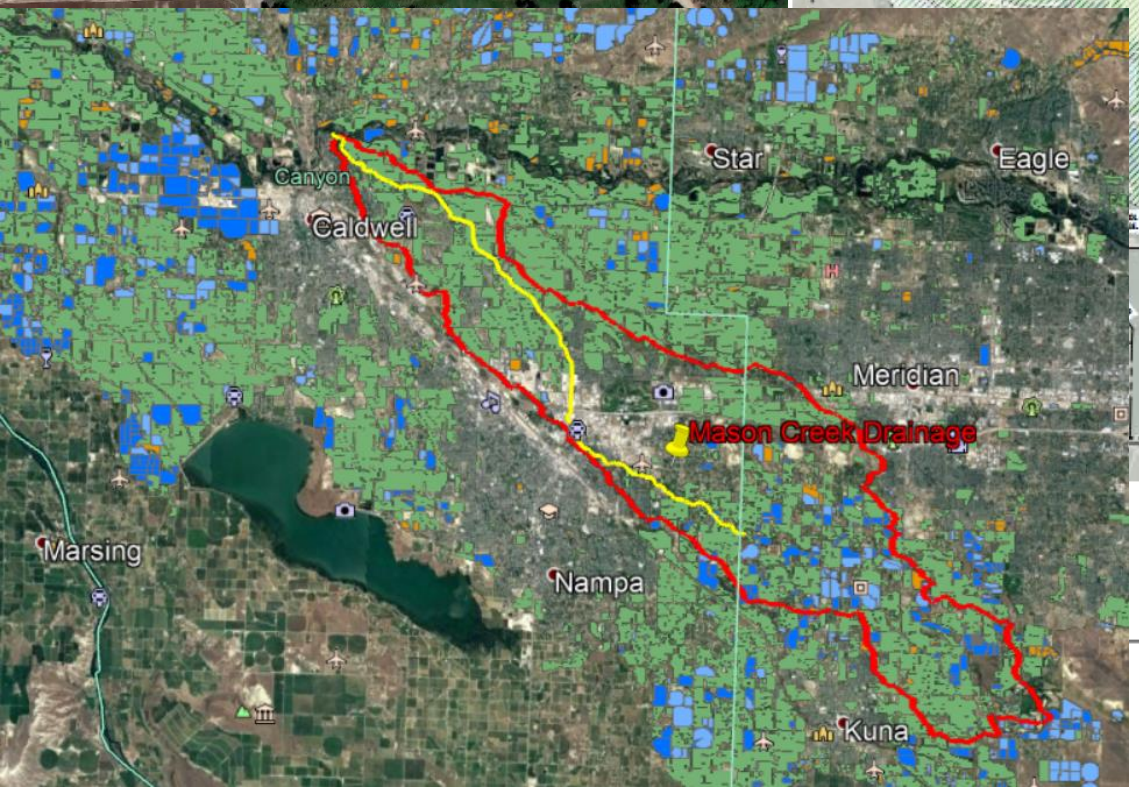
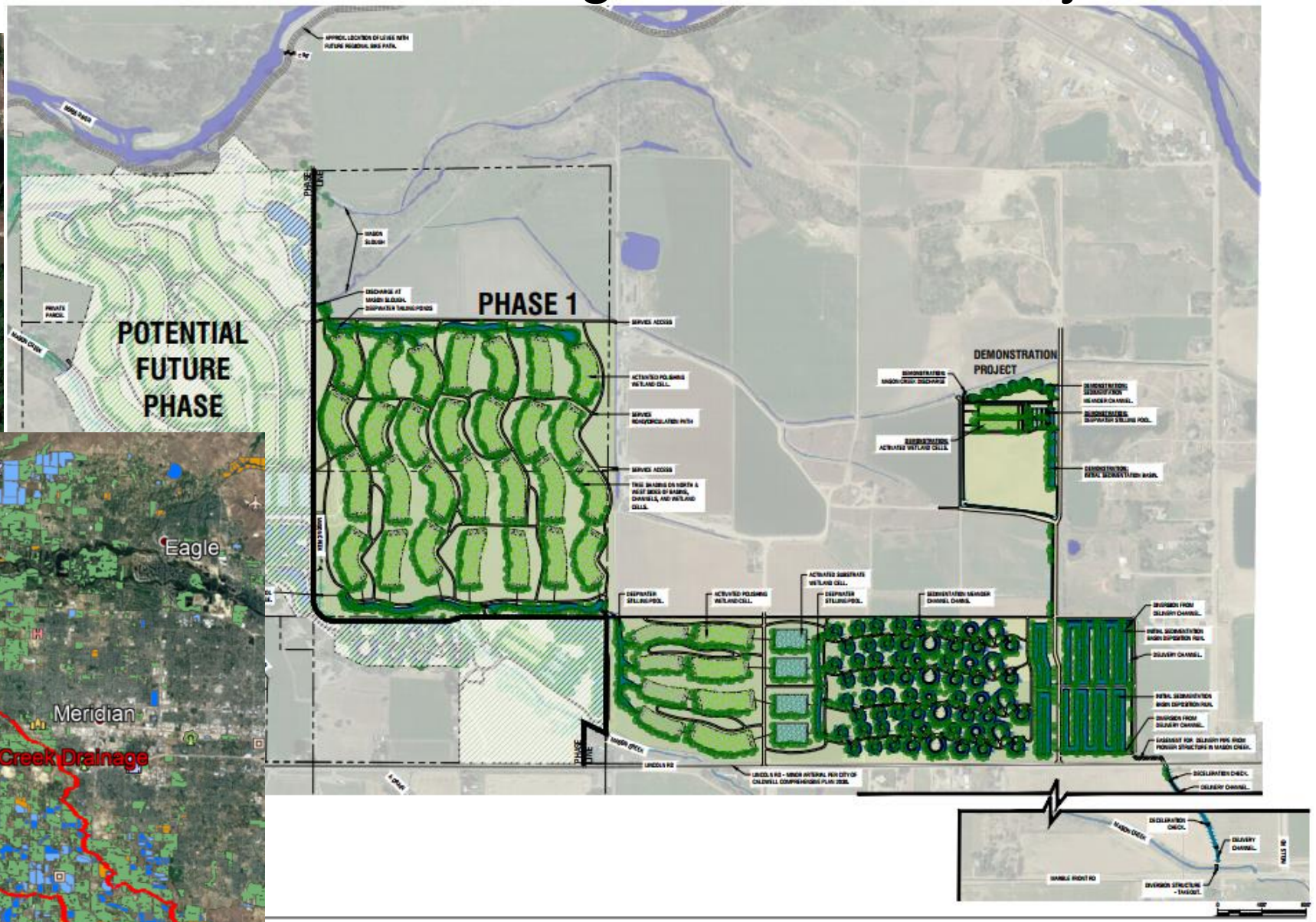
# Mason Creek Drain Treatment & WQ Trading Demonstration Project

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# Implementation Results: Monitoring

USGS
science for a changing world

## Lower Boise River
## WY2019 Monitoring Update
## FY2020 Options

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U.S. Geological Survey

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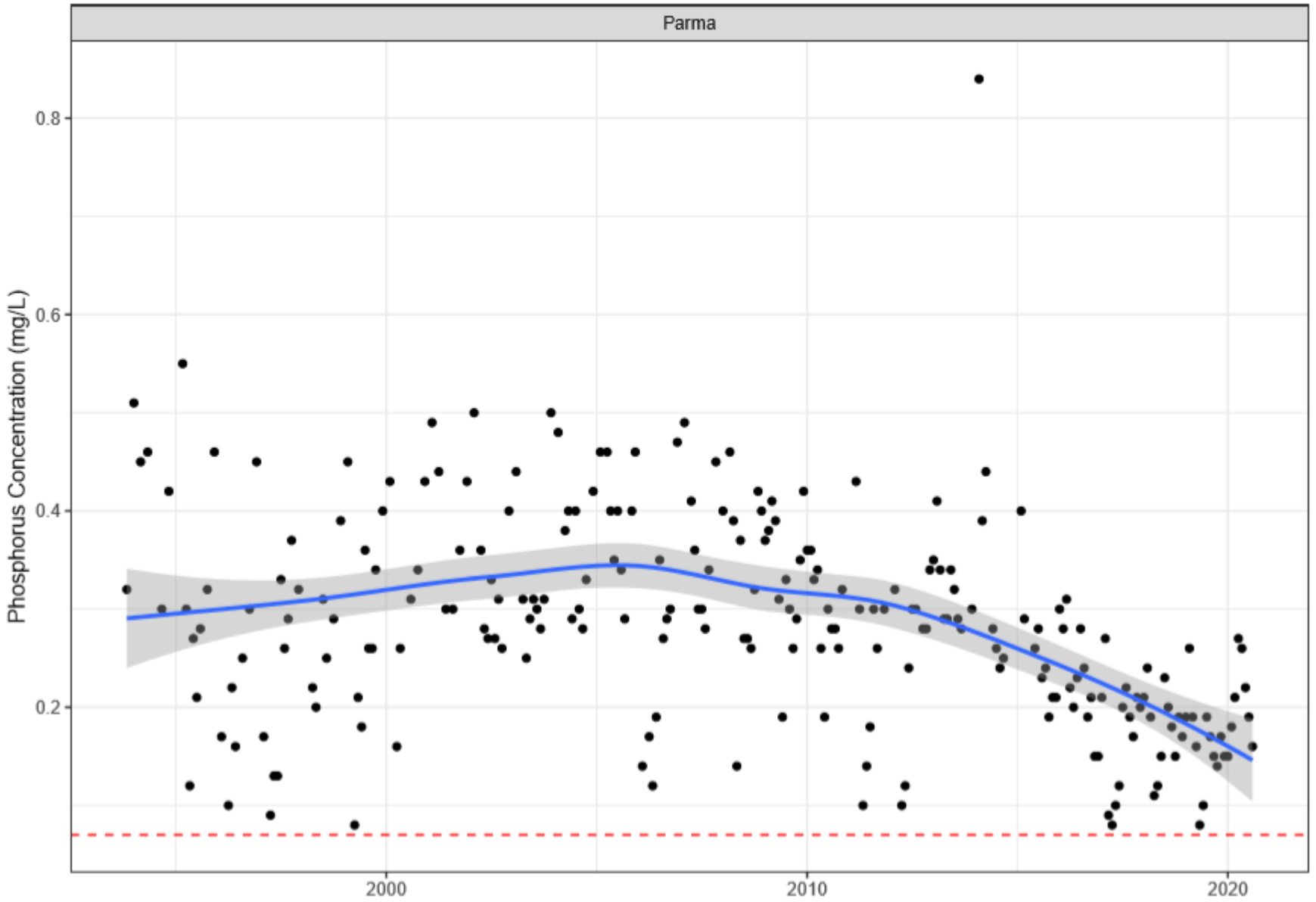
# Implementation Results: Monitoring

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# Implementation Results: Monitoring

## WY19 – Tributary Monitoring, TP, OP, PP


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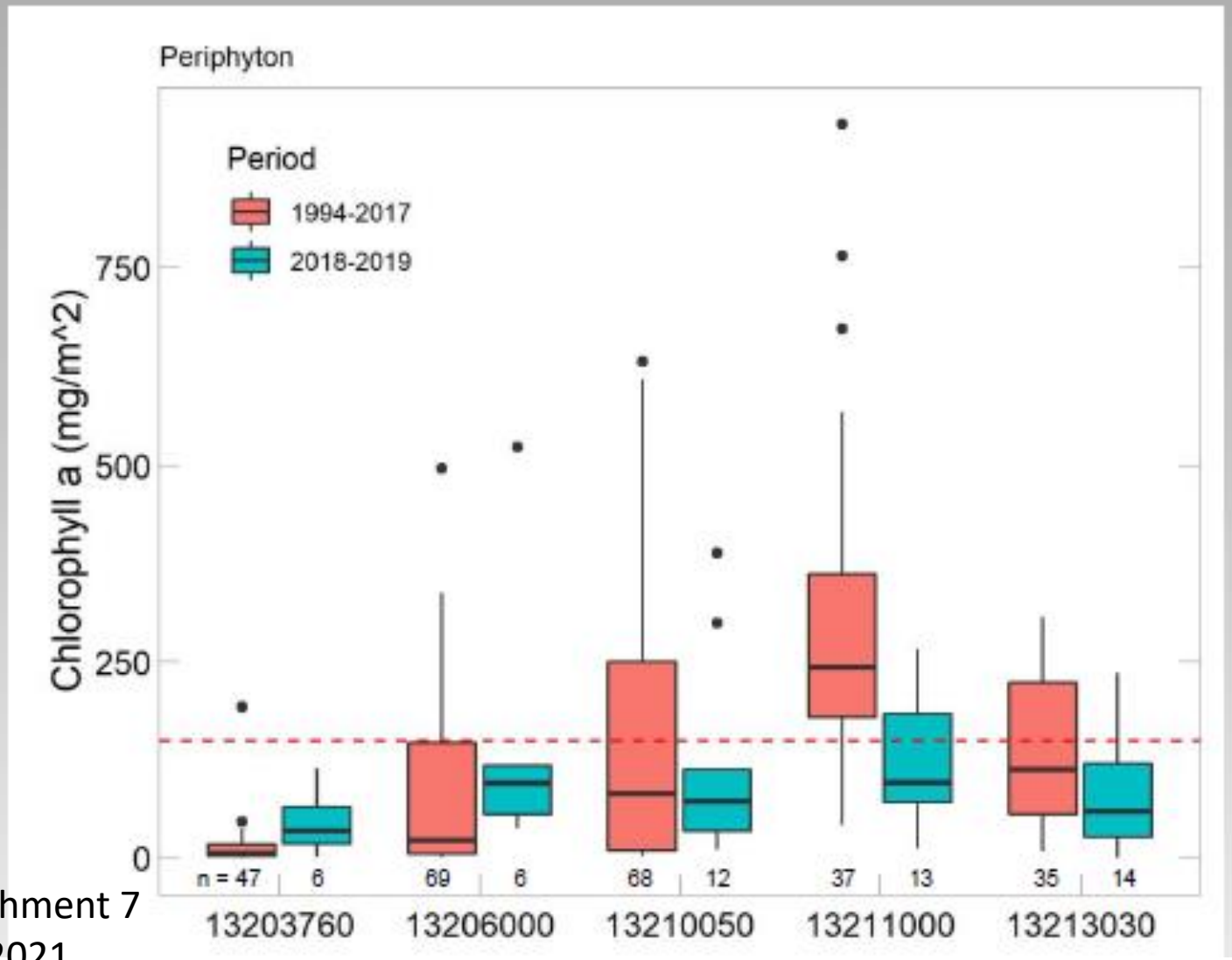
# Implementation Results: Monitoring

## WY19 – Periphyton Chlorophyll-a




- Eckert
- Glenwood
- Middleton
- Caldwell
- Parma

# Implementation Results: Monitoring

## Summary of findings

- TP and OP loads and concentrations are lower overall in the Boise River
- TP and OP loads and concentrations are lower overall in most tributaries
- Decreasing TP is largely due to decreasing OP
- Periphyton chlorophyll-a are somewhat lower at Middleton, Caldwell and Parma and somewhat higher at Eckert and Glenwood

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