Ground Water Quality Concerns:

Addressing Nitrate through Priority Area Designations

Kathryn D Elliott

Idaho Department of Environmental Quality

Direction for Designations

DEQ POLICY MEMORANDUM PM-004 Policy for Addressing Degraded Ground Water Quality Areas (March 2000)

1. **Identify**
2. **Prioritize (Rank)**
3. Develop (Management Strategies)
4. Evaluate
5. Remove (ultimate goal)

Ground Water Monitoring Technical Committee

- DEQ (Chair)
- Idaho Dept. of Water Resources (IDWR)
- Idaho State Dept. of Agriculture (ISDA)
- United States Geological Survey (USGS)
- Idaho Health Districts
- Idaho Dept. of Health and Welfare (IDHW)
- Idaho Bureau of Laboratories (IBL)
- Idaho Dept. of Lands (IDL)
- Natural Resource Conservation Service (NRCS)
- Idaho Soil & Water Conservation Commission (ISWCC)
- Idaho Geological Survey (IGS)

#1 - Identify Areas (Significant Degradation)

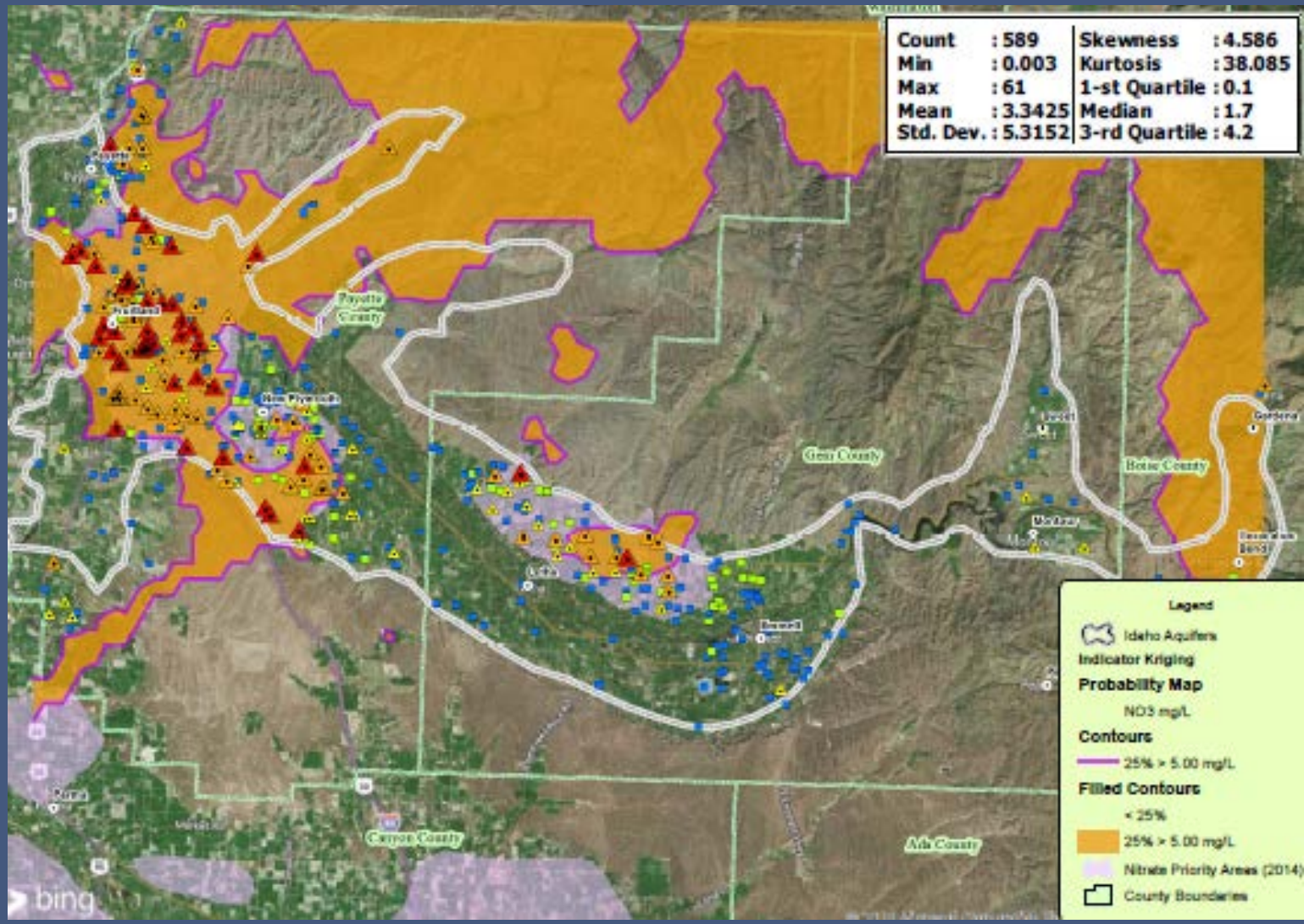
Gather (& process) data:

- IDWR Statewide data
- USGS
- ISDA – Nutrient (DEQ) and Dairy Monitoring
- DEQ:
  - PWS (regulatory)
  - DEQ regional and local data
  - INL

Evaluate data:

- Compare with est. criteria:
  - Minimum #/% of sampled wells over 5 mg/L (25%)
  - Size of area (>10 mi2)

Utilize Geostatistics (Kriging)



#2 - Prioritize (Significantly Degraded Areas)

[Trend]

Trend Analyses for Idaho's Nitrate Priority Areas, 1994-2007

Kenneth W. Neely
Technical Hydrogeologist
Idaho Department of Water Resources
Planning & Technical Services Division

322 E. Front Street
Boise, ID 87320
208-287-4800
www.idwr.idaho.gov/

Prepared for the Idaho Department of Environmental Q

Water Information Bulletin, No. 50, Part 7

September 2008

Trend Analyses for Idaho's Nitrate Priority Areas, 2002-2011

Kenneth W. Neely
Technical Hydrogeologist
Idaho Department of Water Resources
Planning & Technical Services Division

322 E. Front Street
Boise, ID 87320
208-287-4800
www.idwr.idaho.gov/

Prepared for the Idaho Department of Environmental Quality

Water Information Bulletin, No. 50, Part 8

December 2013

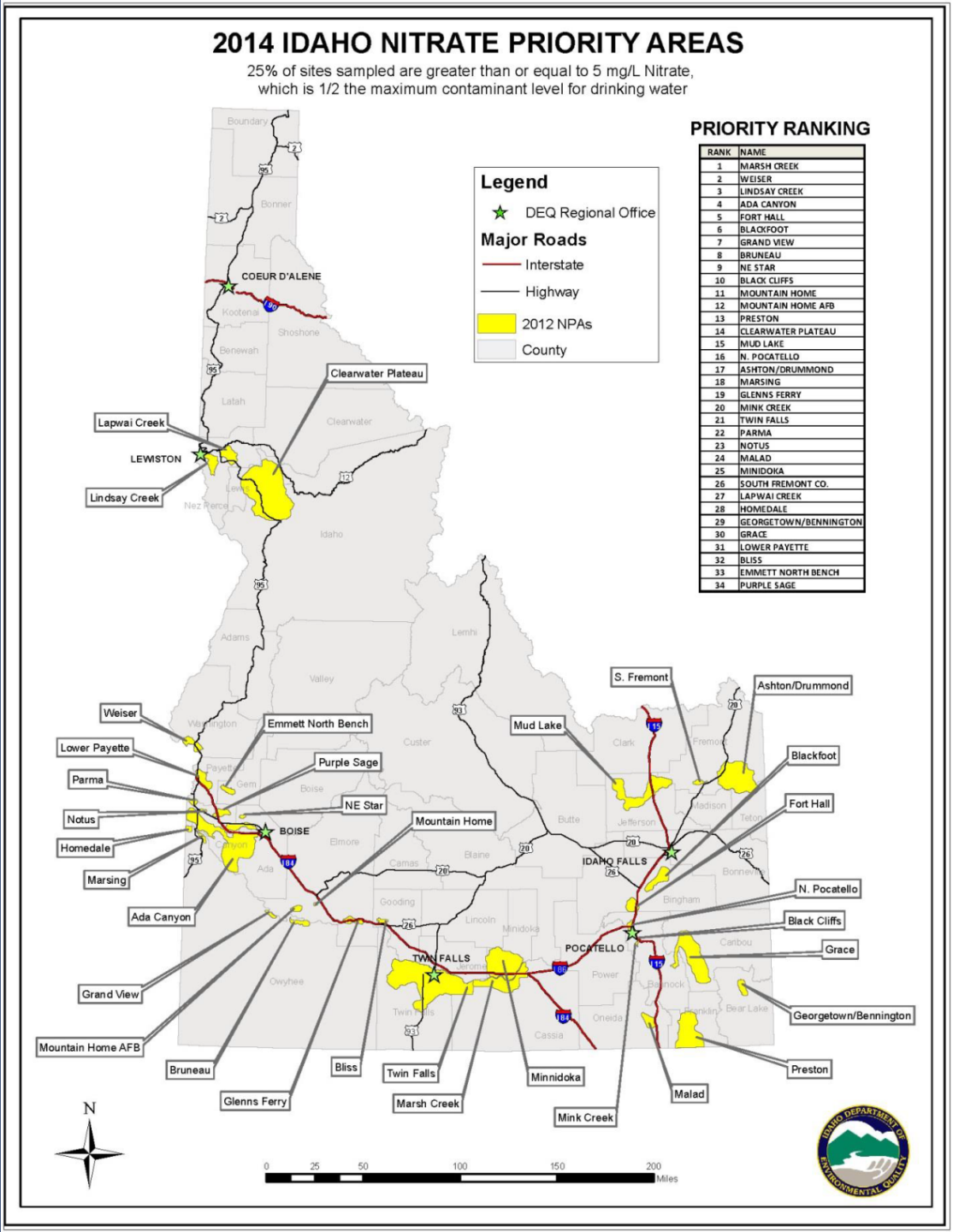
Nitrate Priority Area Trend Analysis, 2007–2016

Idaho Department of Environmental Quality
Technical Services Division

October 2018

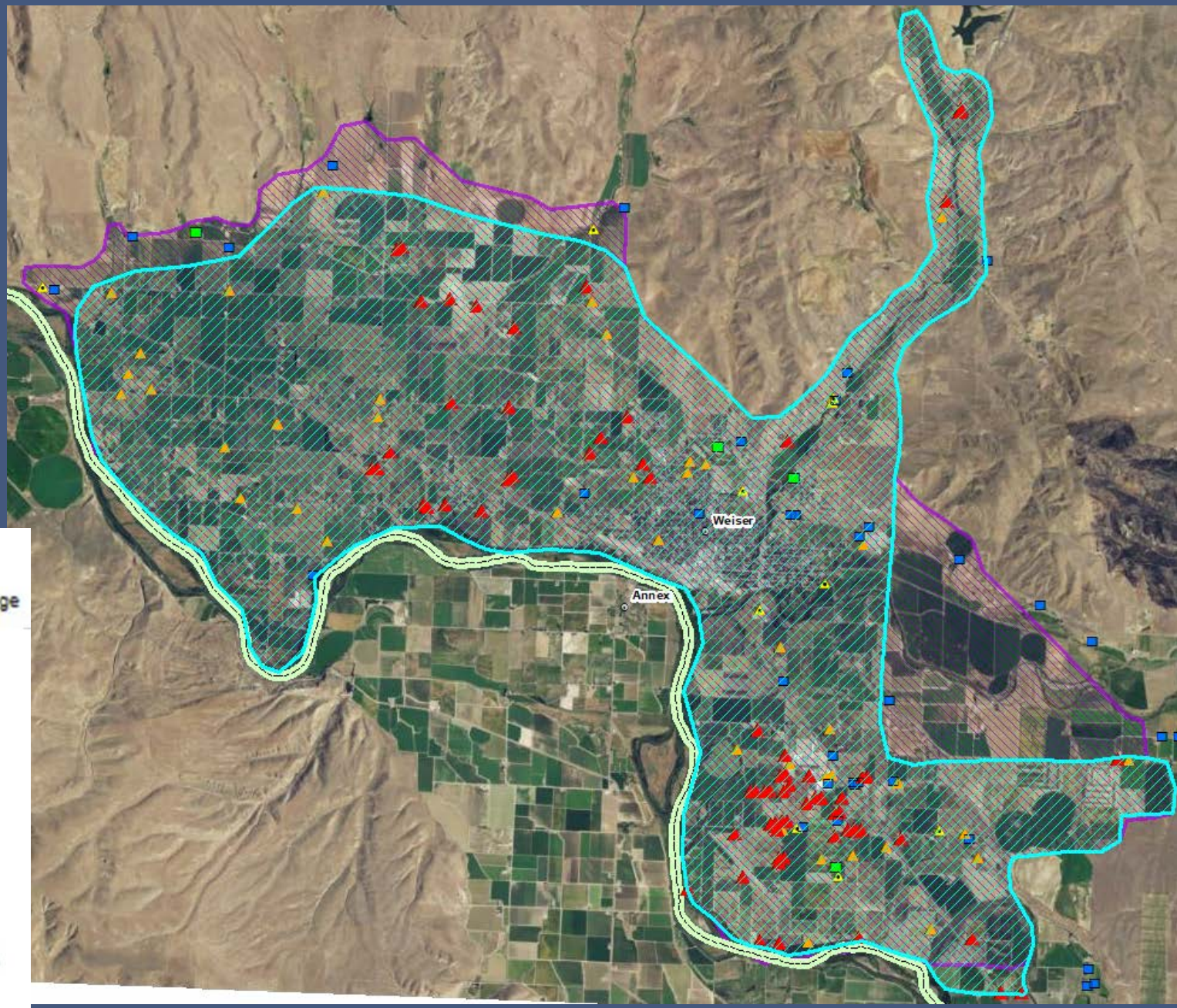
Trend Analysis

Current NPAs Available on DEQ's Website



Screen Captures of Revised Draft Boundaries: Boise Region

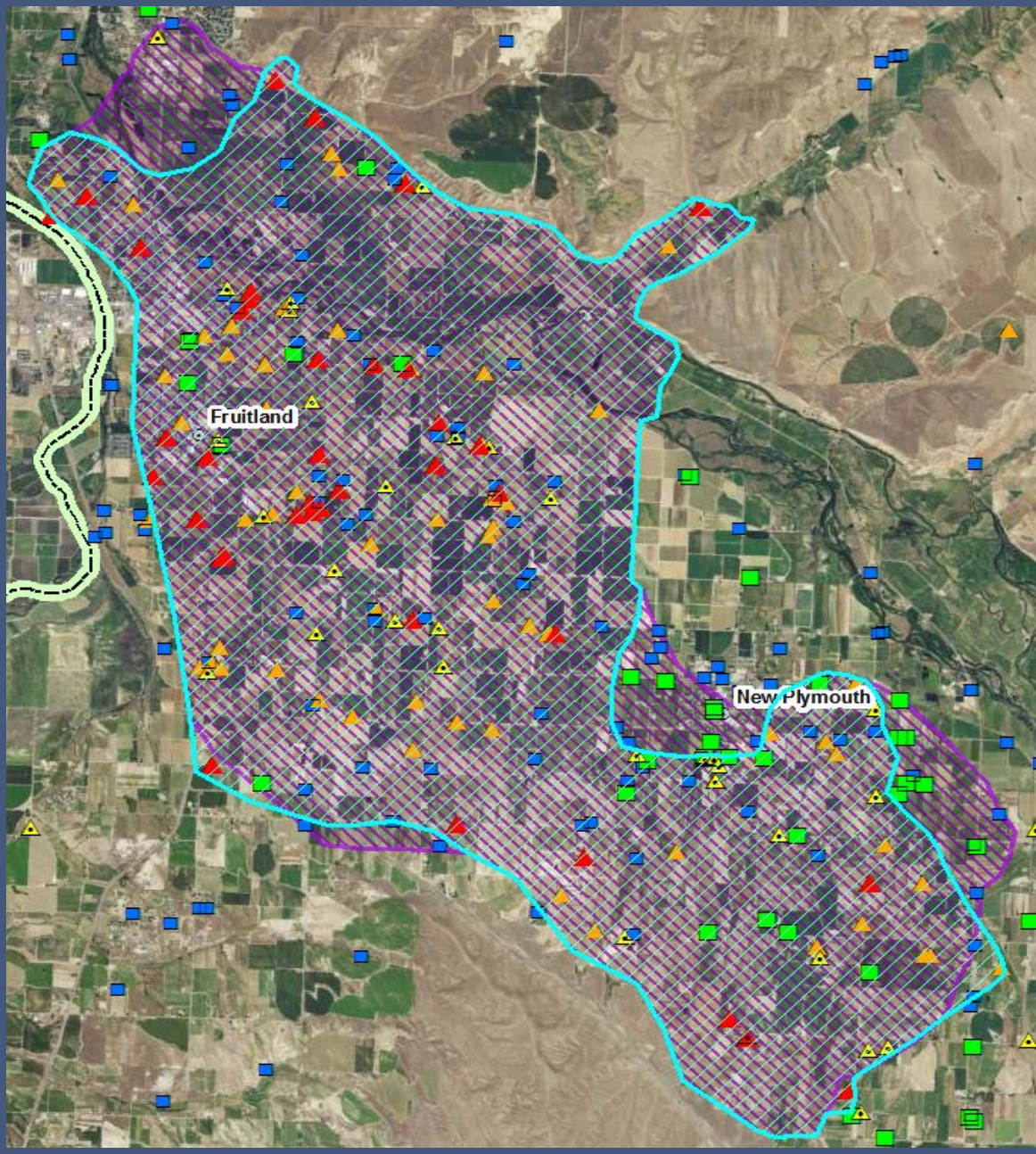
Weiser



Screen Captures of Revised Draft Boundaries:

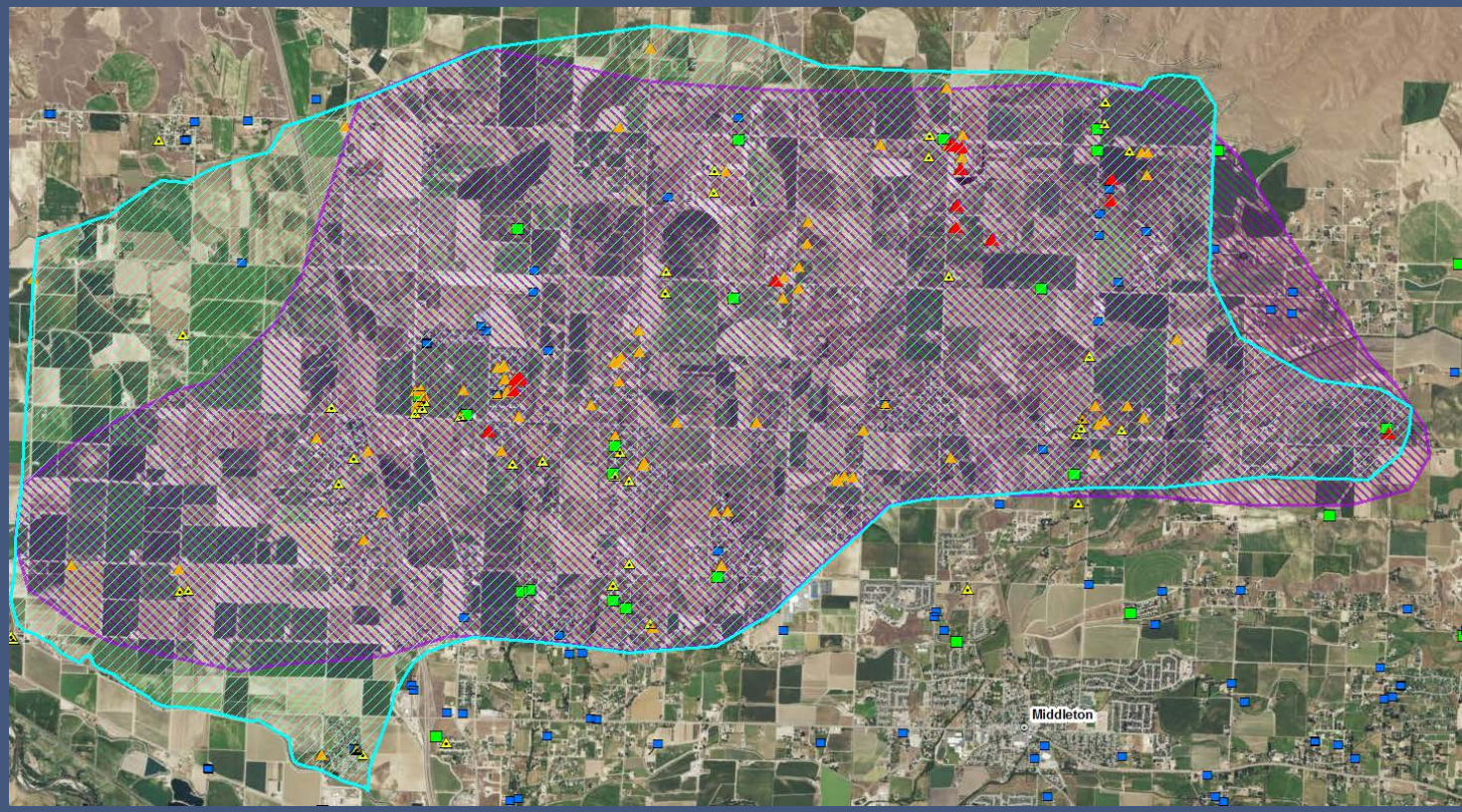
Boise Region

Lower Payette



Screen Captures of Revised Draft Boundaries: Boise Region

Purple Sage



Legend

Draft_2019 NPAAreas_Merge

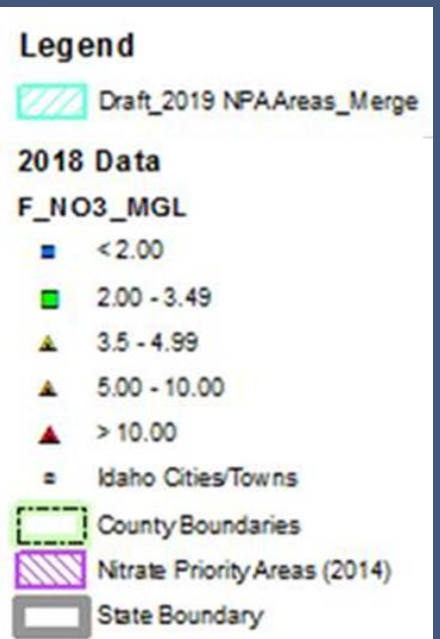
2018 Data

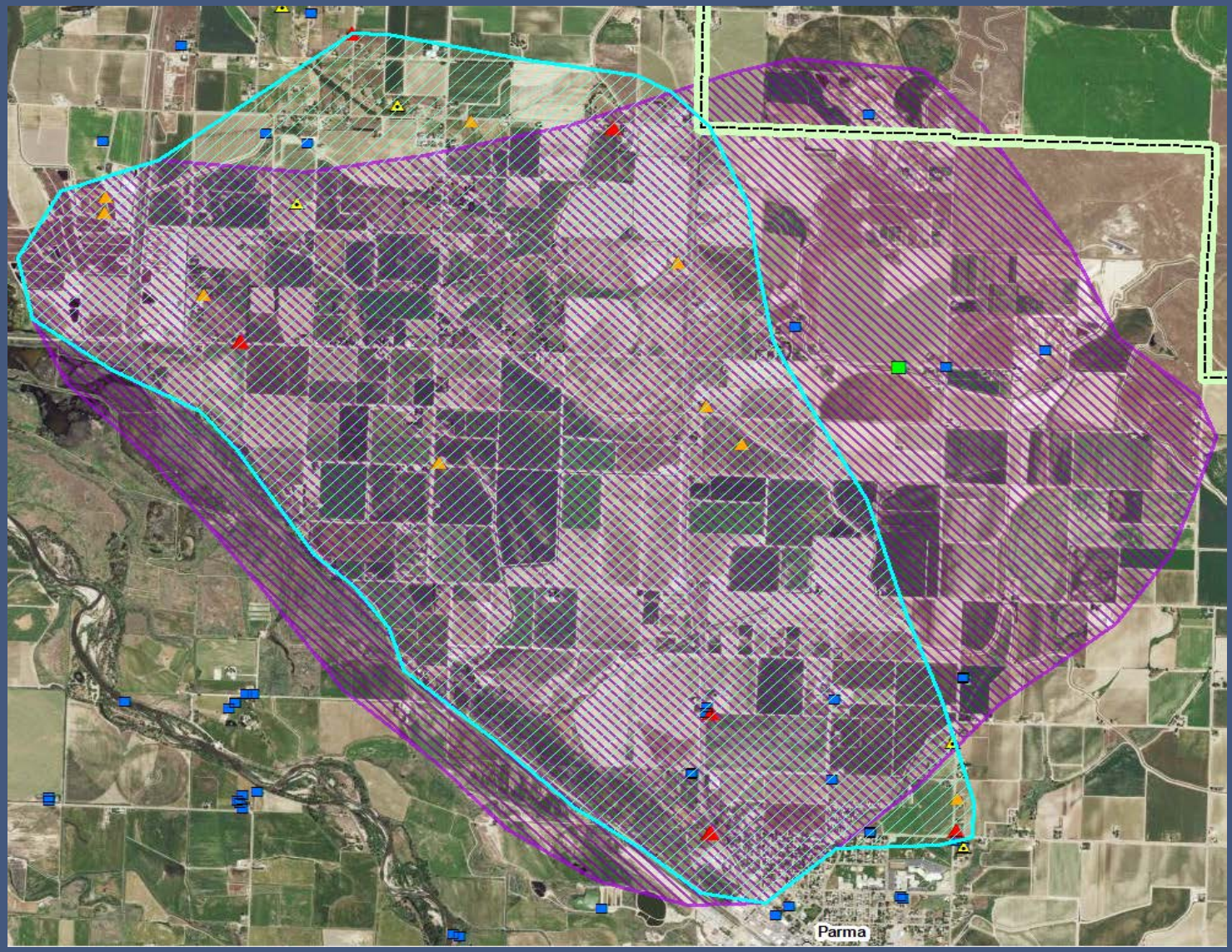
F_NO3_MGL

- < 2.00
- 2.00 - 3.49
- 3.5 - 4.99
- 5.00 - 10.00
- > 10.00
- Idaho Cities/Towns
- County Boundaries
- Nitrate Priority Areas (2014)
- State Boundary

Screen Captures of Revised Draft Boundaries: Boise Region

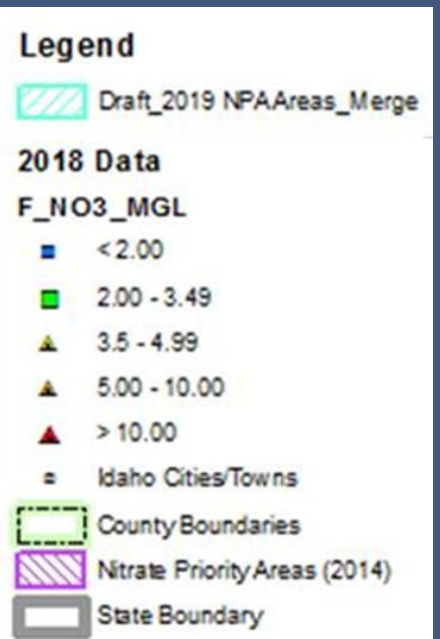
Parma

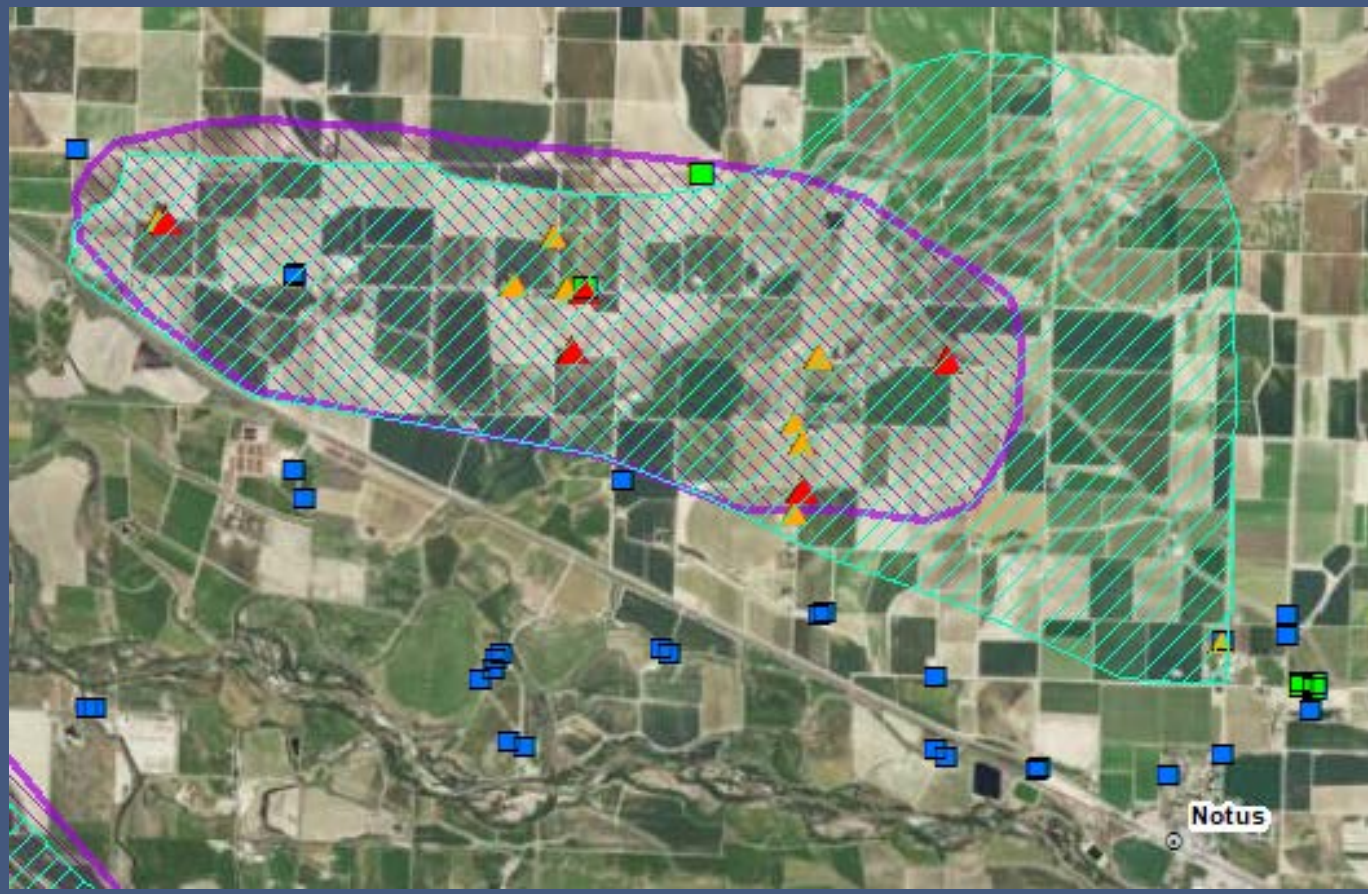




Screen Captures of Revised Draft Boundaries: Boise Region

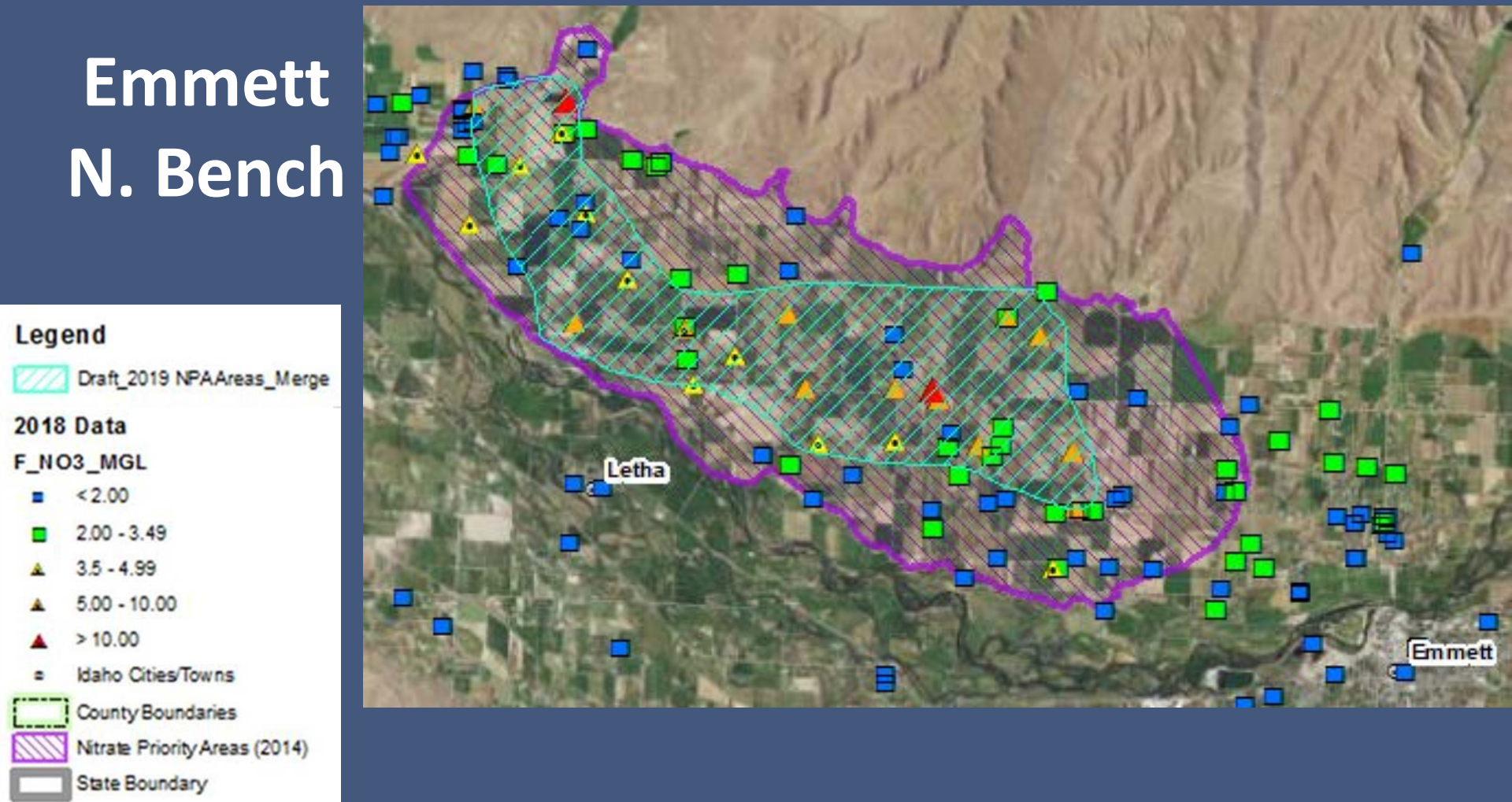
Notus





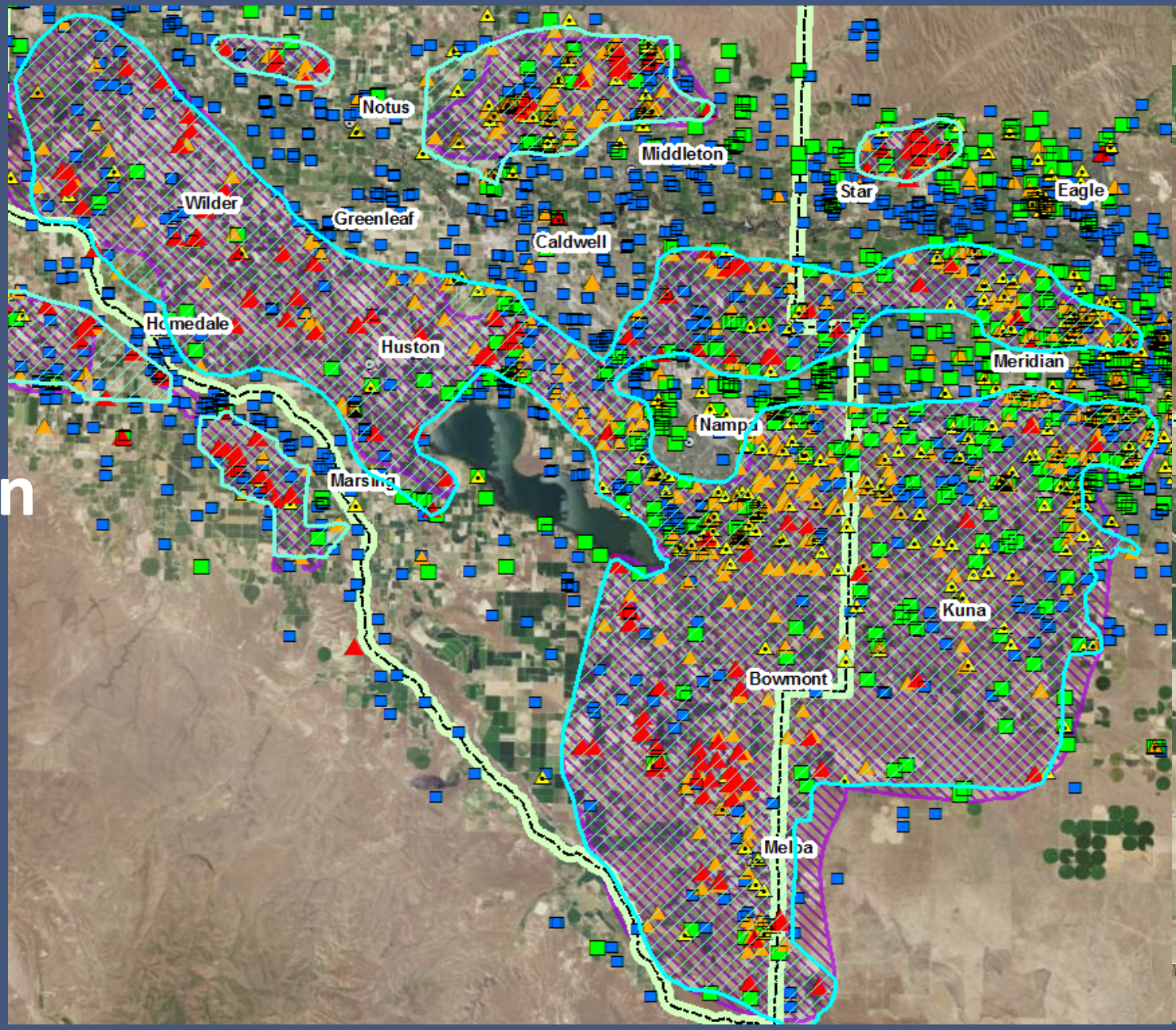
Screen Captures of Revised Draft Boundaries: Boise Region

Emmett N. Bench



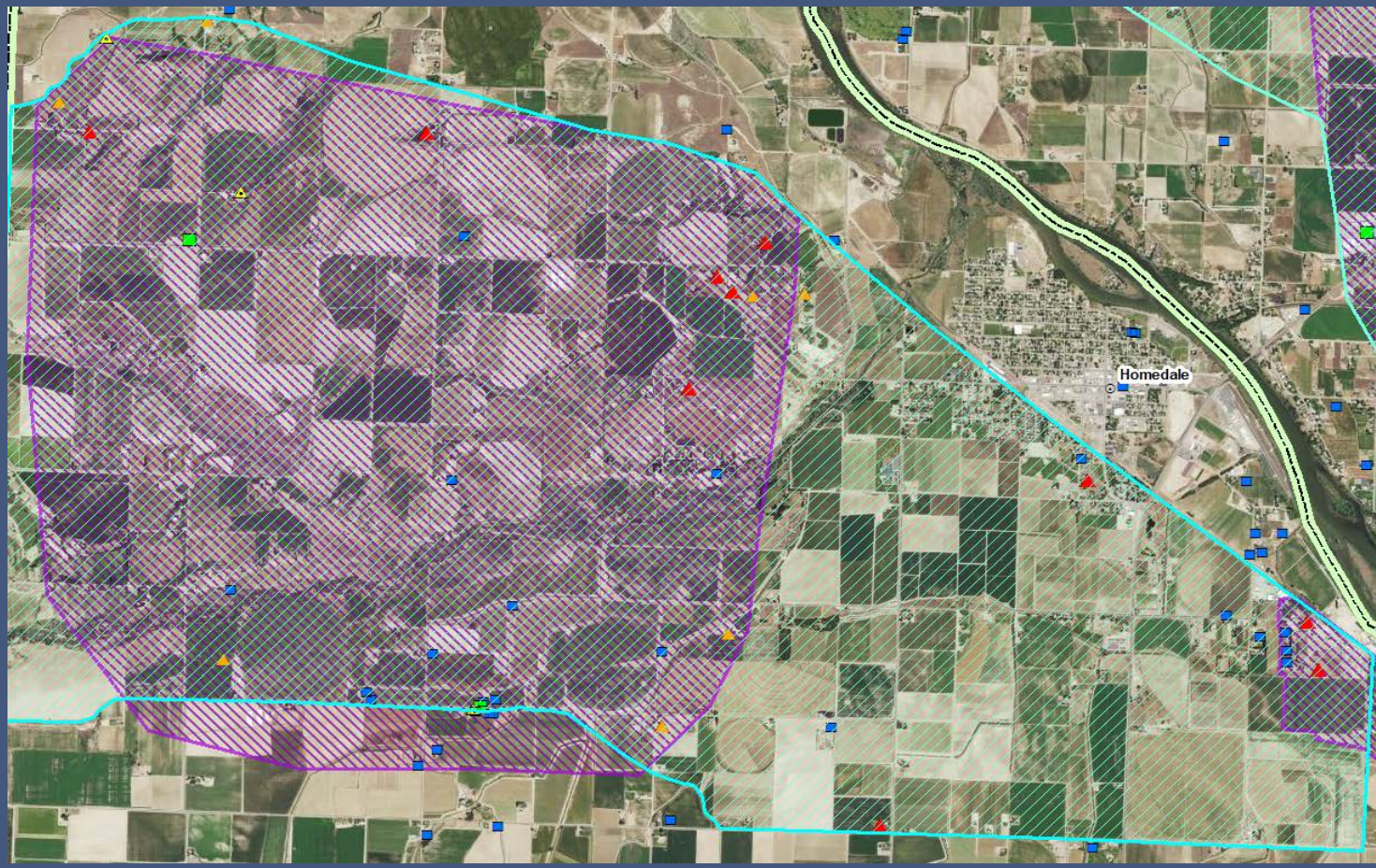
Screen Captures of Revised Draft Boundaries: Boise Region

Ada-Canyon



Screen Captures of Revised Draft Boundaries: Boise Region

Homedale



Legend

Draft_2019 NPAAreas_Merge

2018 Data

F_NO3_MGL

- < 2.00
- 2.00 - 3.49
- 3.5 - 4.99
- 5.00 - 10.00
- > 10.00

Idaho Cities/Towns

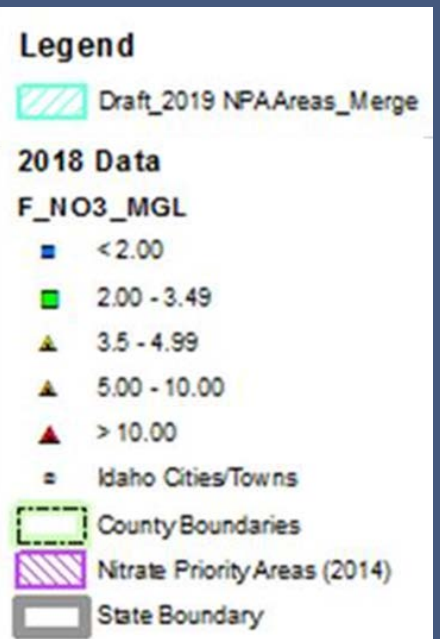
County Boundaries

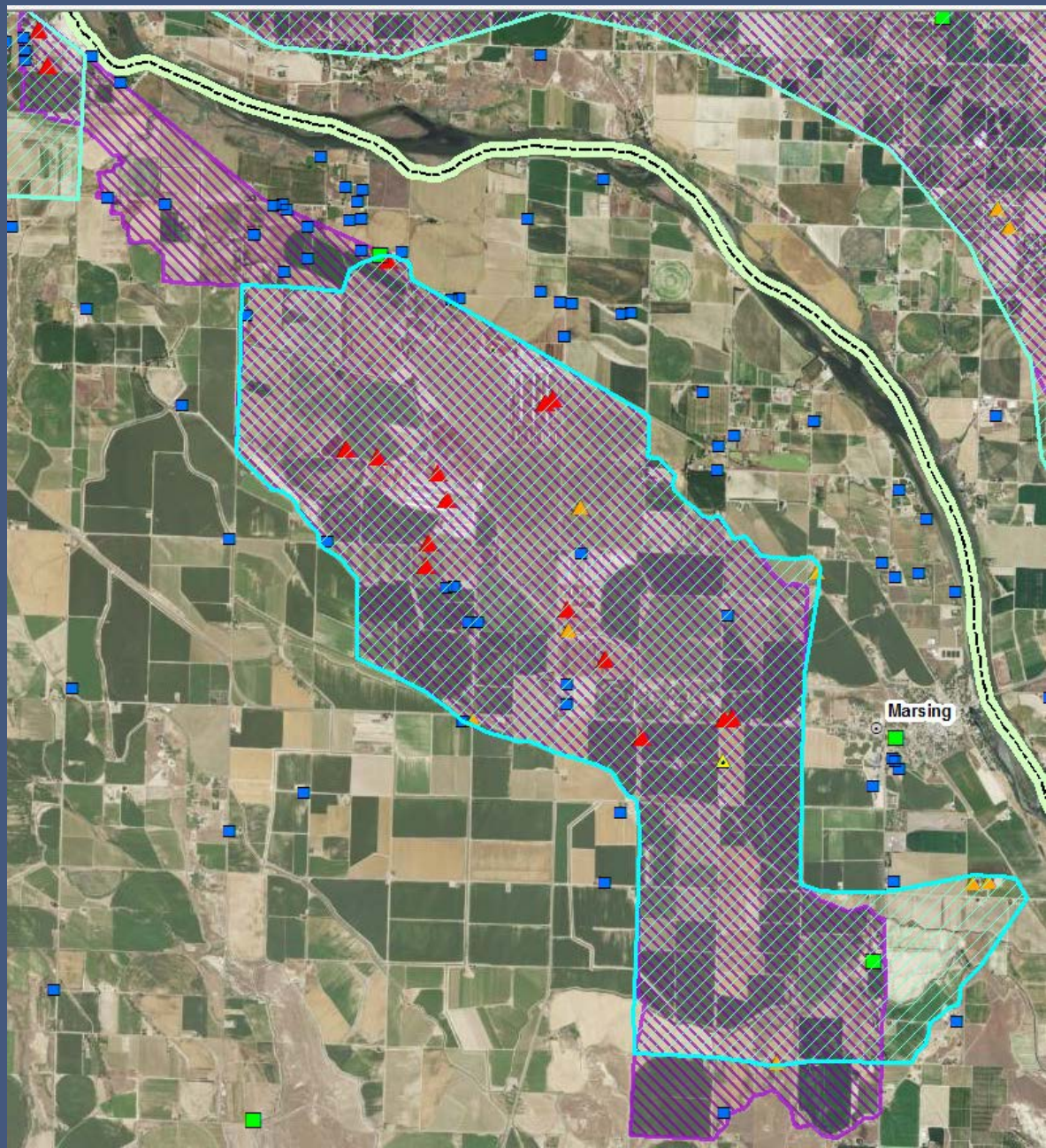
Nitrate Priority Areas (2014)

State Boundary

Screen Captures of Revised Draft Boundaries: Boise Region

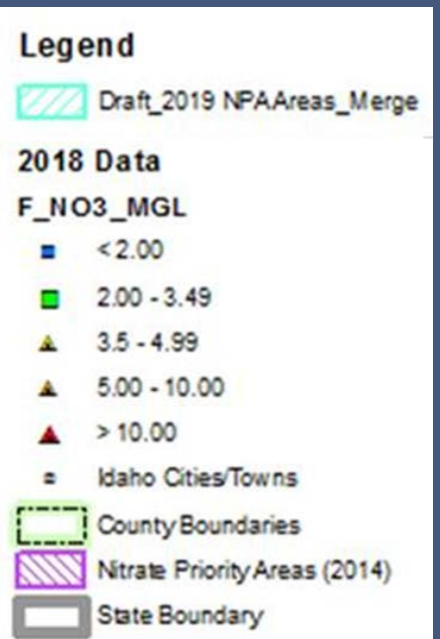
Marsing

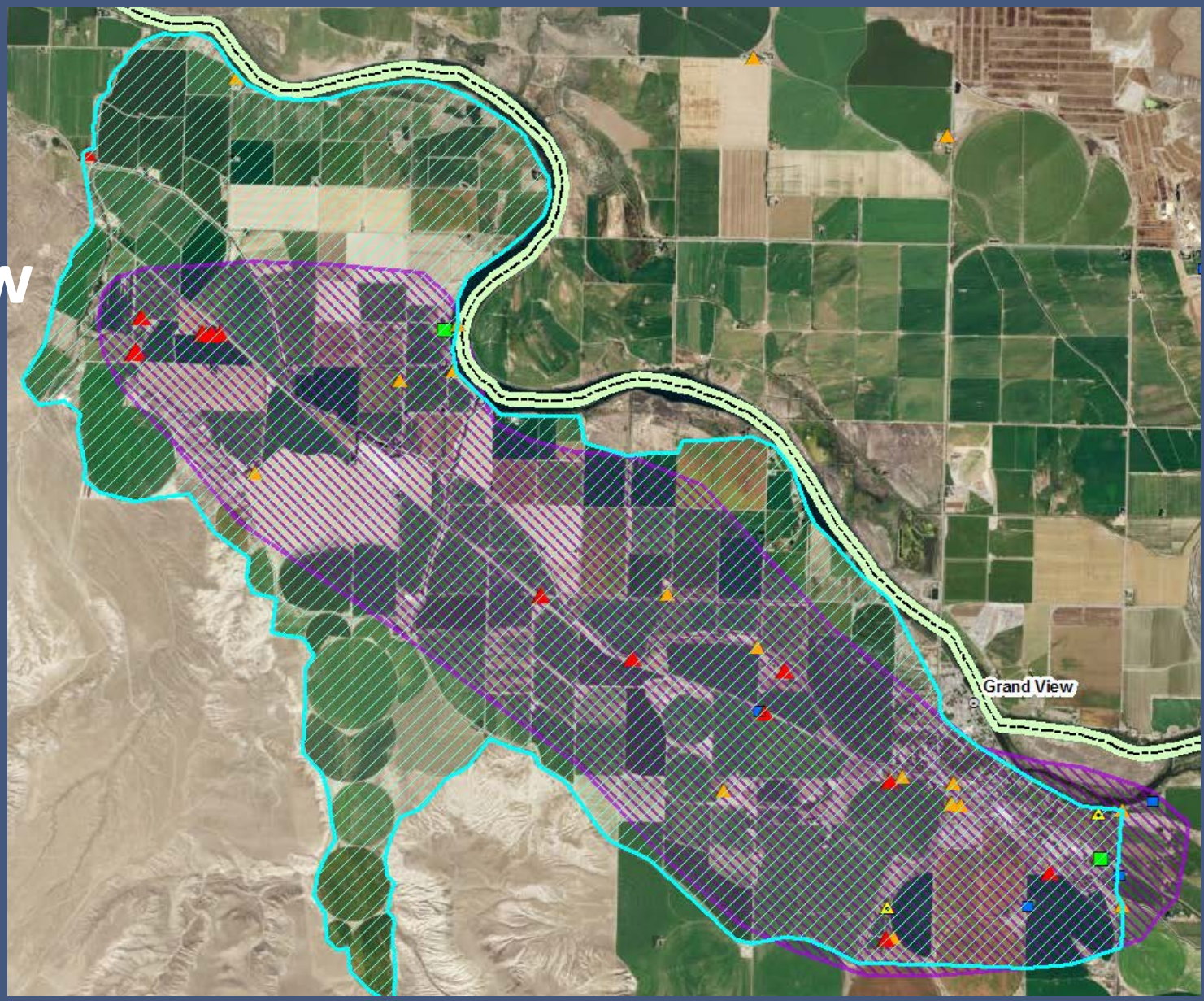




Screen Captures of Revised Draft Boundaries: Boise Region

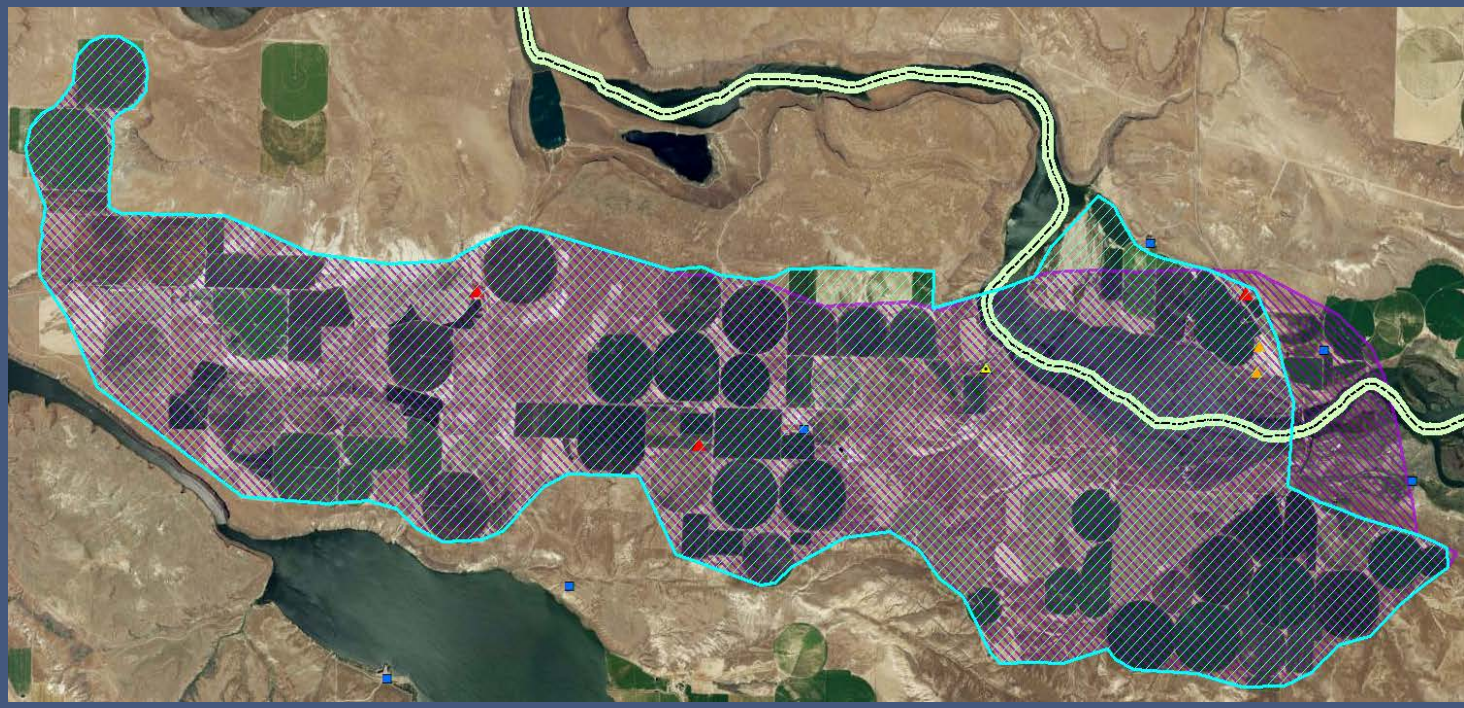
Grand View

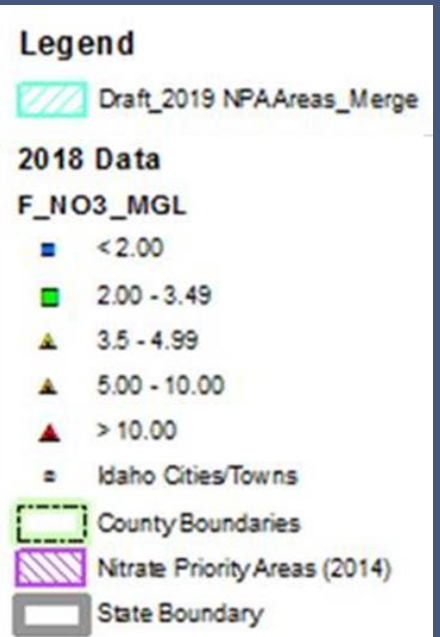




Screen Captures of Revised Draft Boundaries: Boise Region

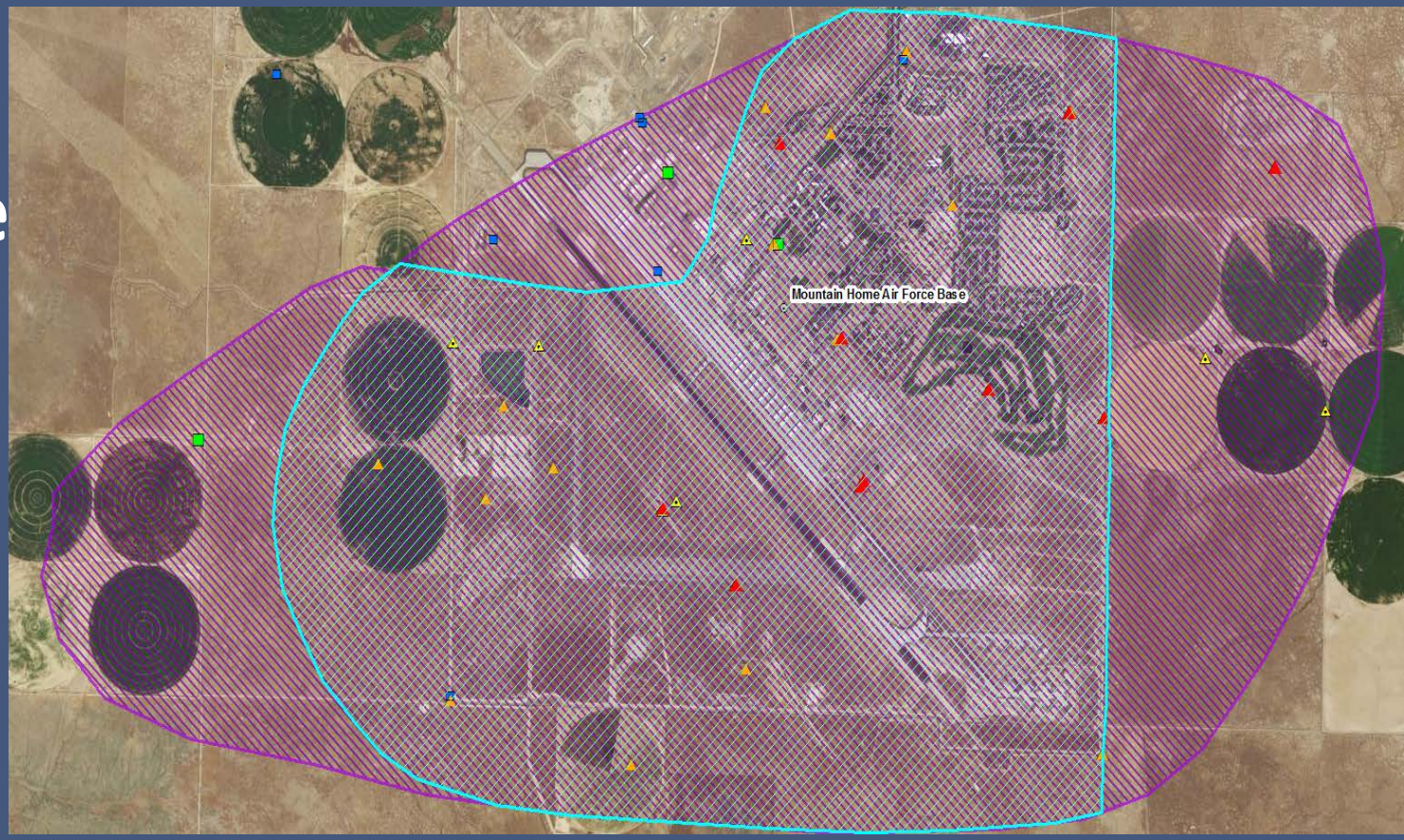
Bruneau



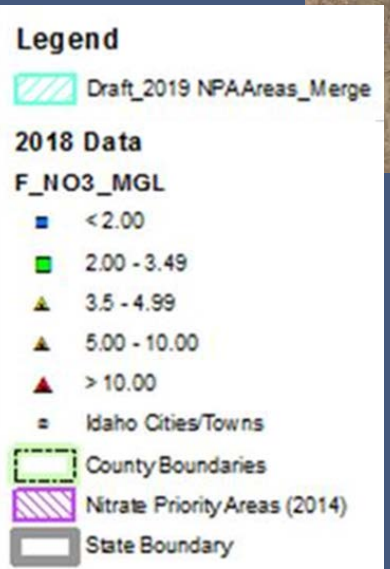


Screen Captures of Revised Draft Boundaries: Boise Region

Mt. Home AFB

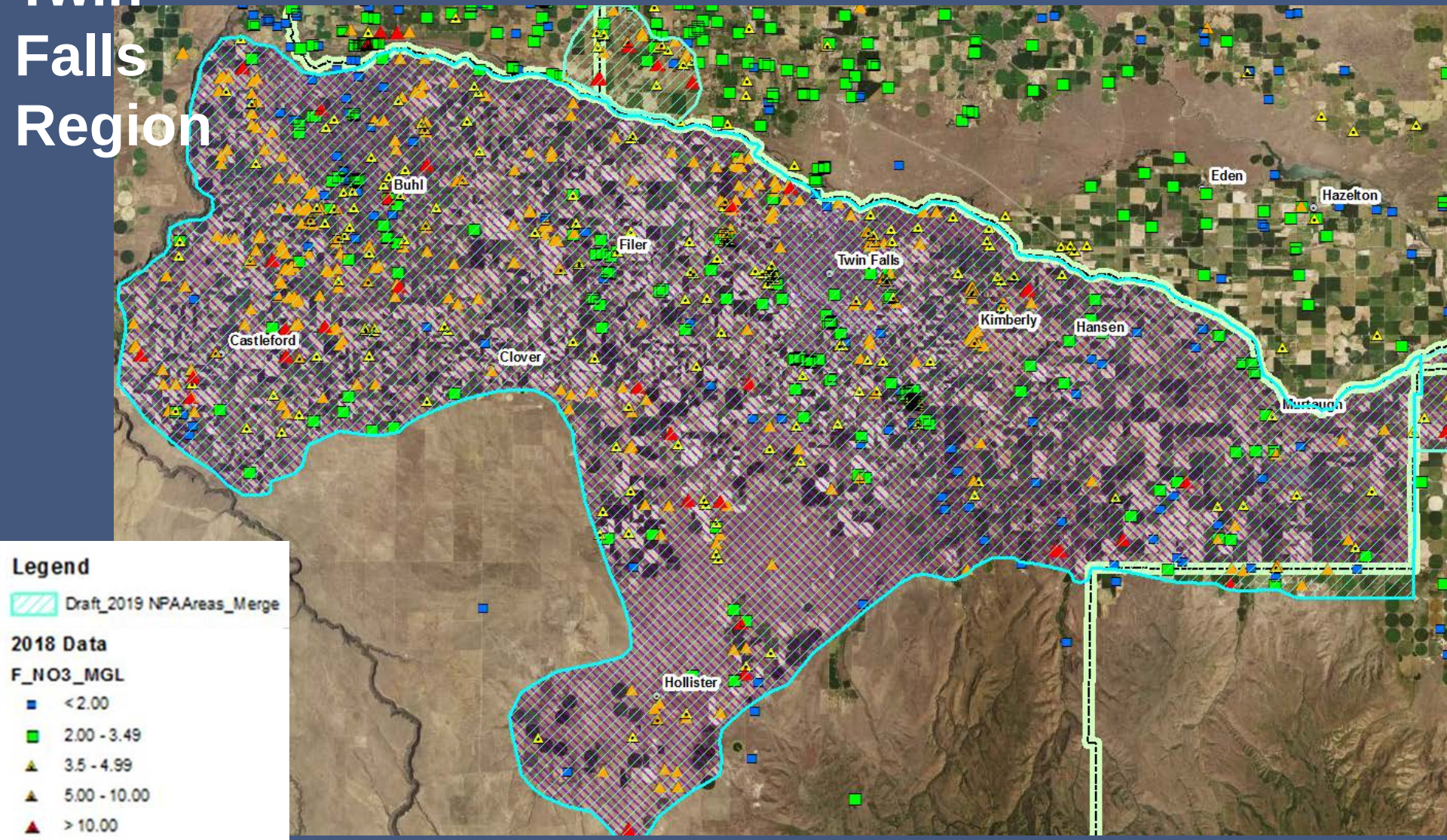


Screen Captures of Revised Draft Boundaries: Twin Falls Region



Bliss

Screen Captures of Revised Draft Boundaries: Twin Falls Region

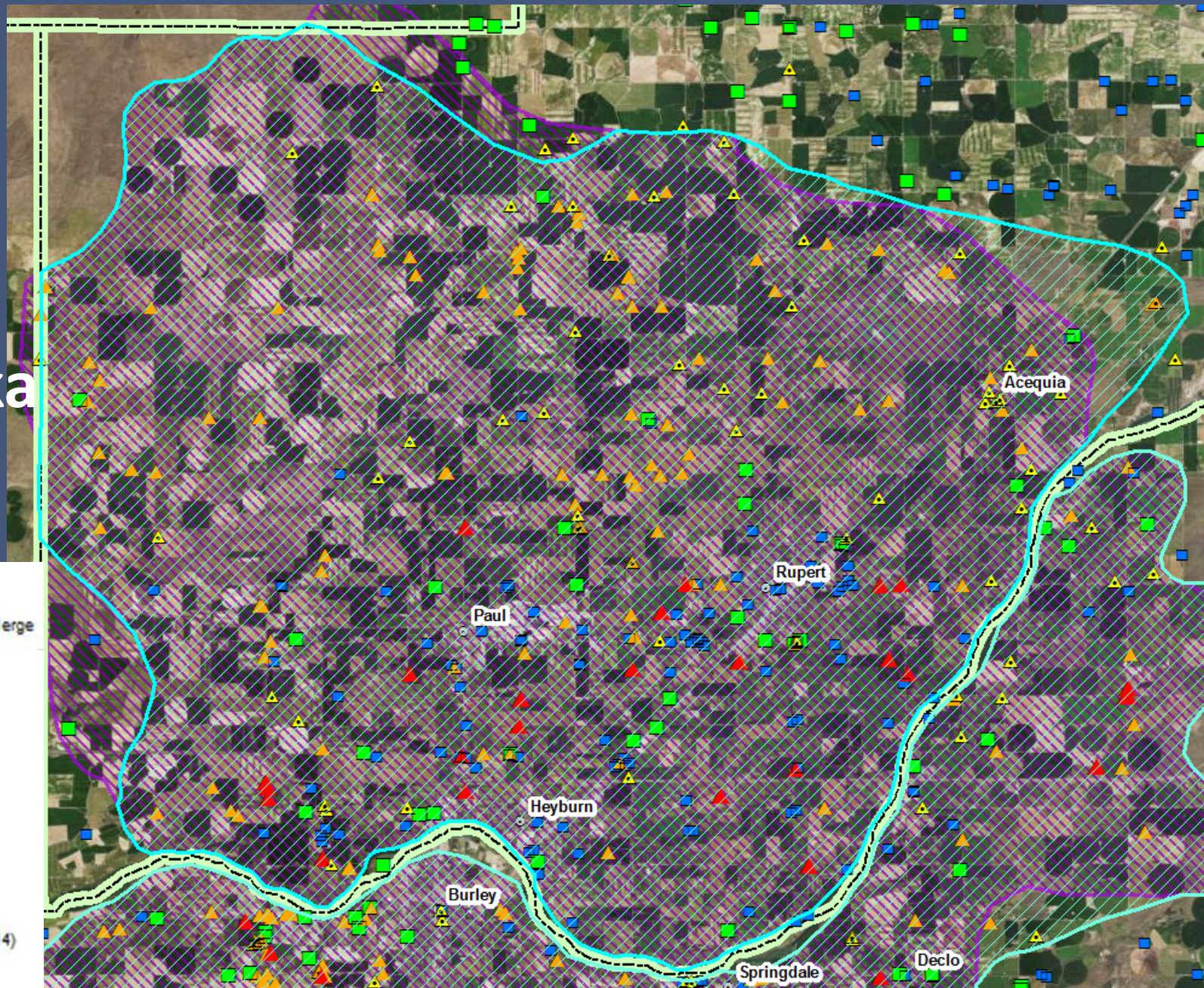


Twin Falls

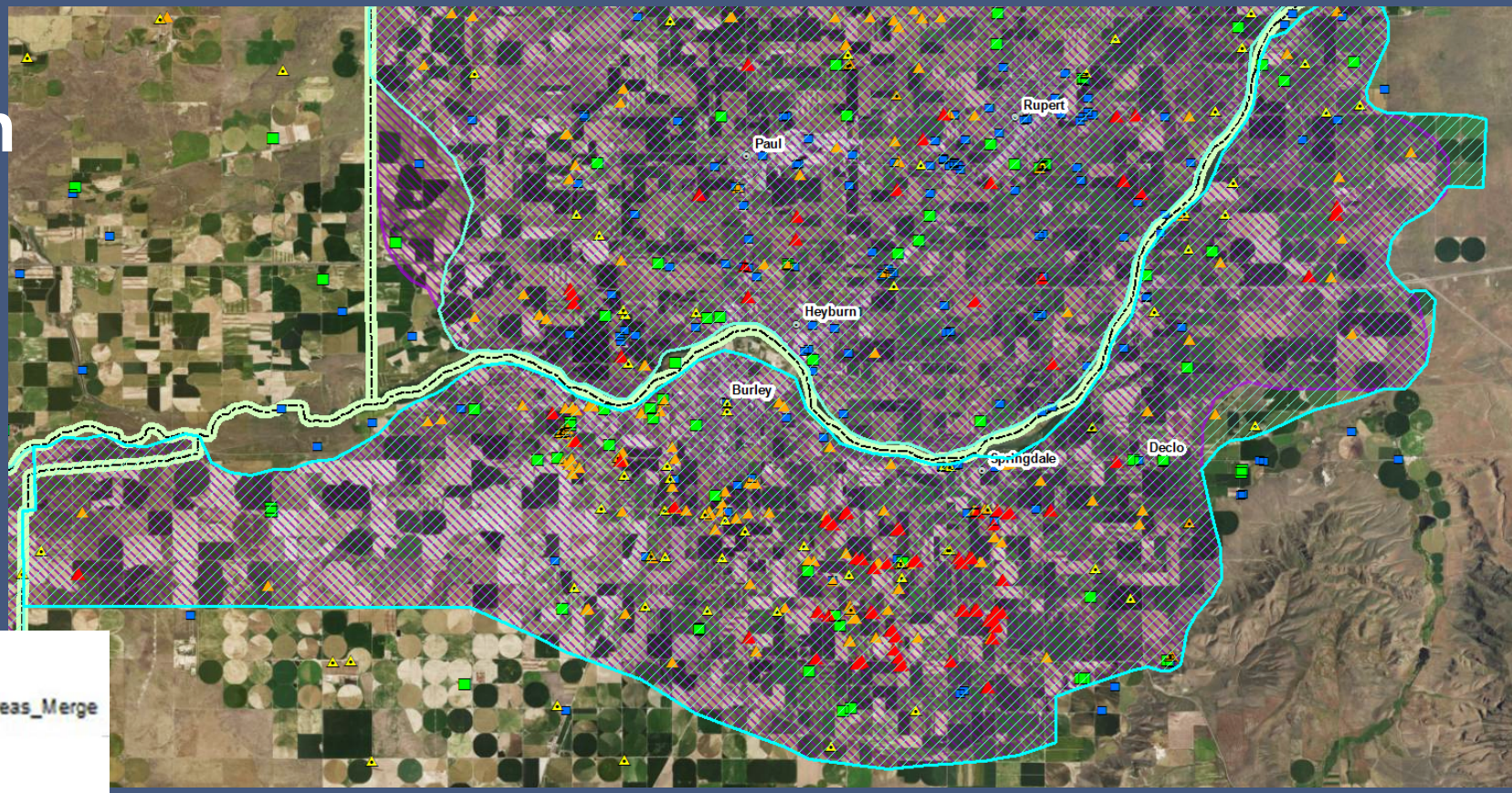
Screen Captures of Revised Draft Boundaries:

Twin Falls Region

Minidoka



Screen Captures of Revised Draft Boundaries: Twin Falls Region



Legend

Draft_2019 NPAAreas_Merge

2018 Data

F_NO3_MGL

- < 2.00
- 2.00 - 3.49
- 3.5 - 4.99
- 5.00 - 10.00
- > 10.00

Idaho Cities/Towns

County Boundaries

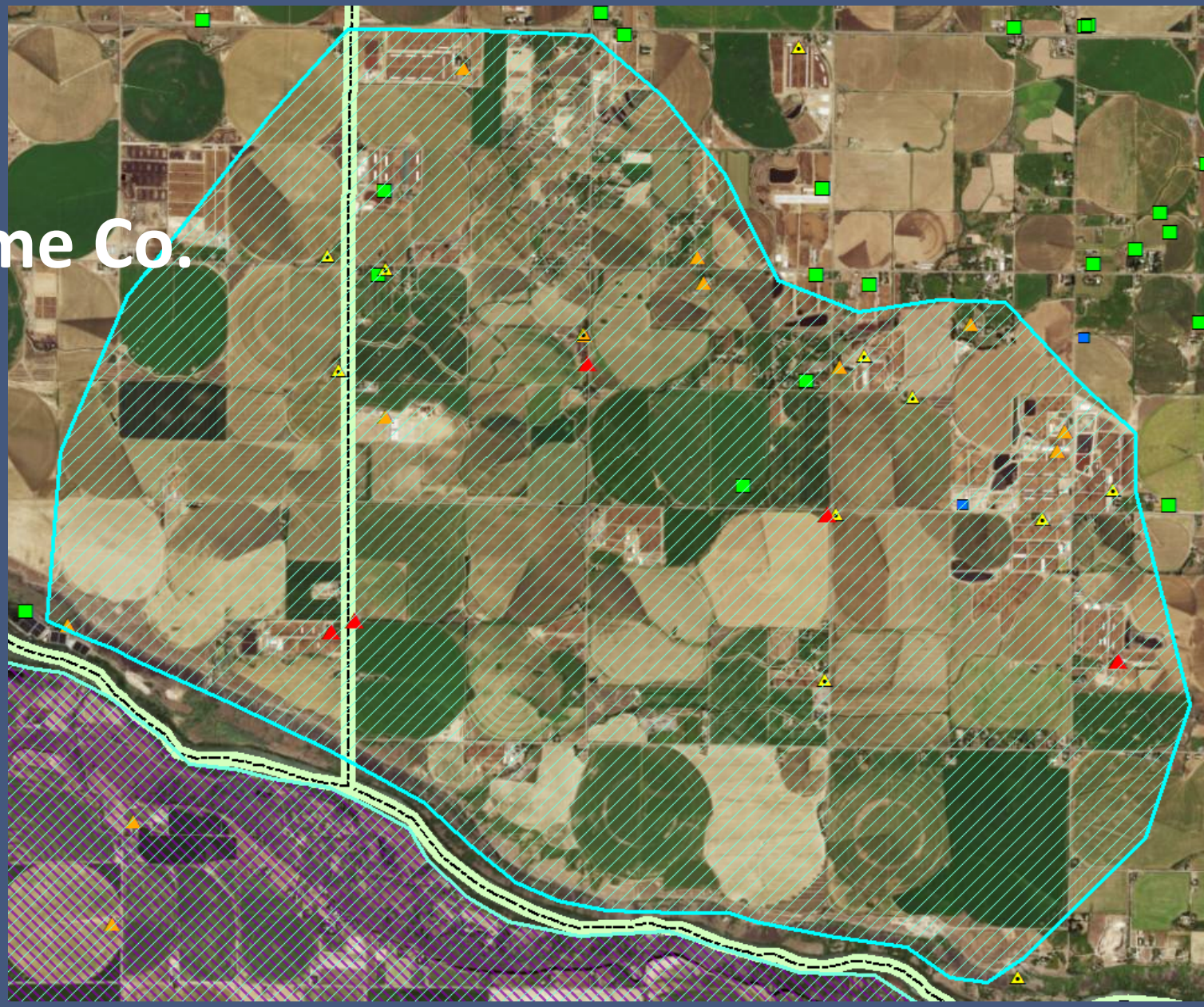
Nitrate Priority Areas (2014)

State Boundary

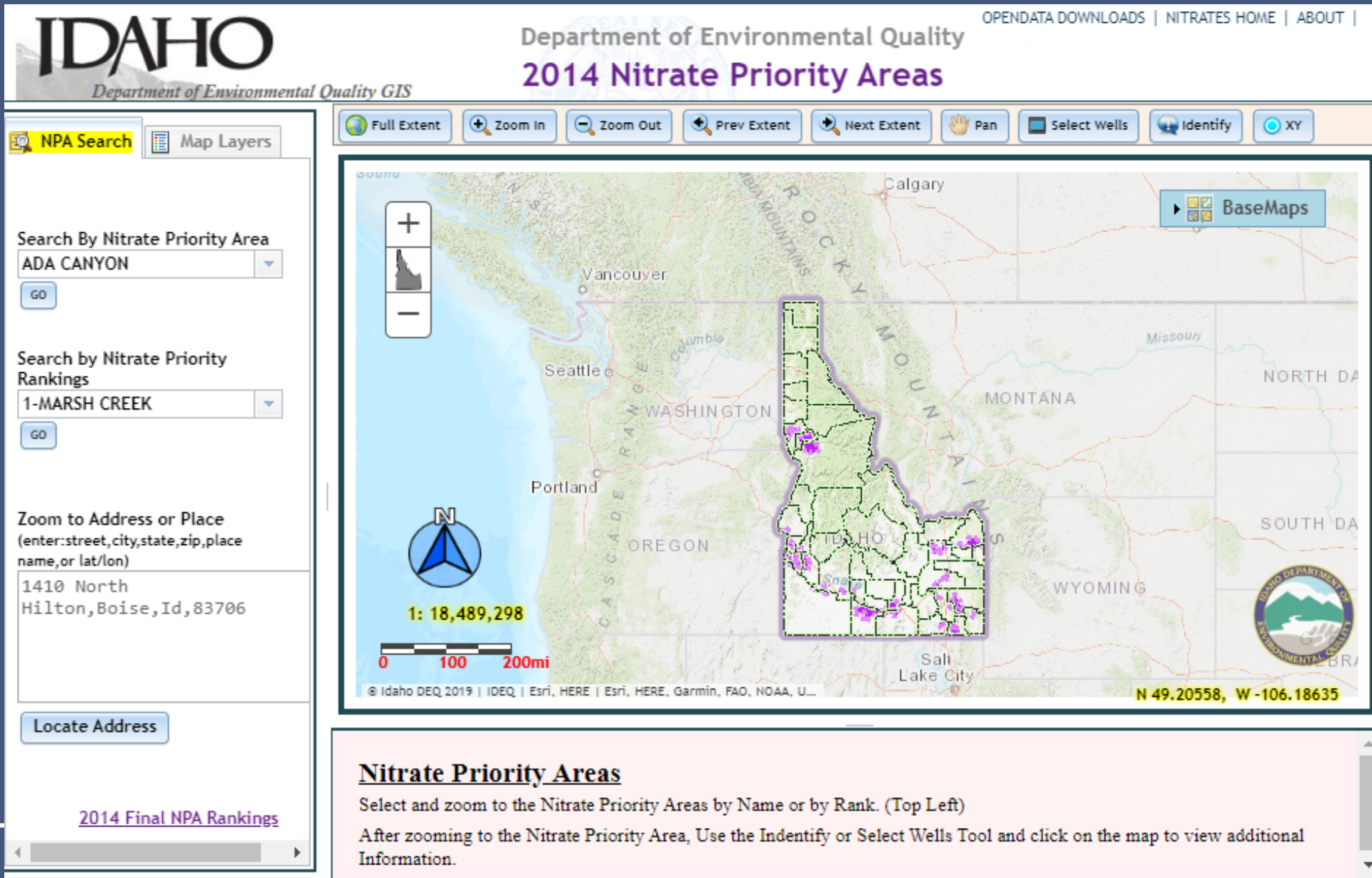
Marsh Creek

Screen Captures of Revised Draft Boundaries: Twin Falls Region

SW Jerome Co.



2014 NPAs and Report accessible online.



Thank you.

Kathryn D Elliott

Ground Water Coordinator
Idaho DEQ

Office: (208) 373-0191

http://www.deq.idaho.gov/