

Negotiated Rulemaking Docket

No. 58-0102-1803

De Minimus Heat Additions

July 20, 2018



Outline

- Background
 - Review of current Aquatic life rules
- Issue Discussion
- Proposal
- Next Steps

Aquatic Life Temperature Criteria:

250.02. Cold Water

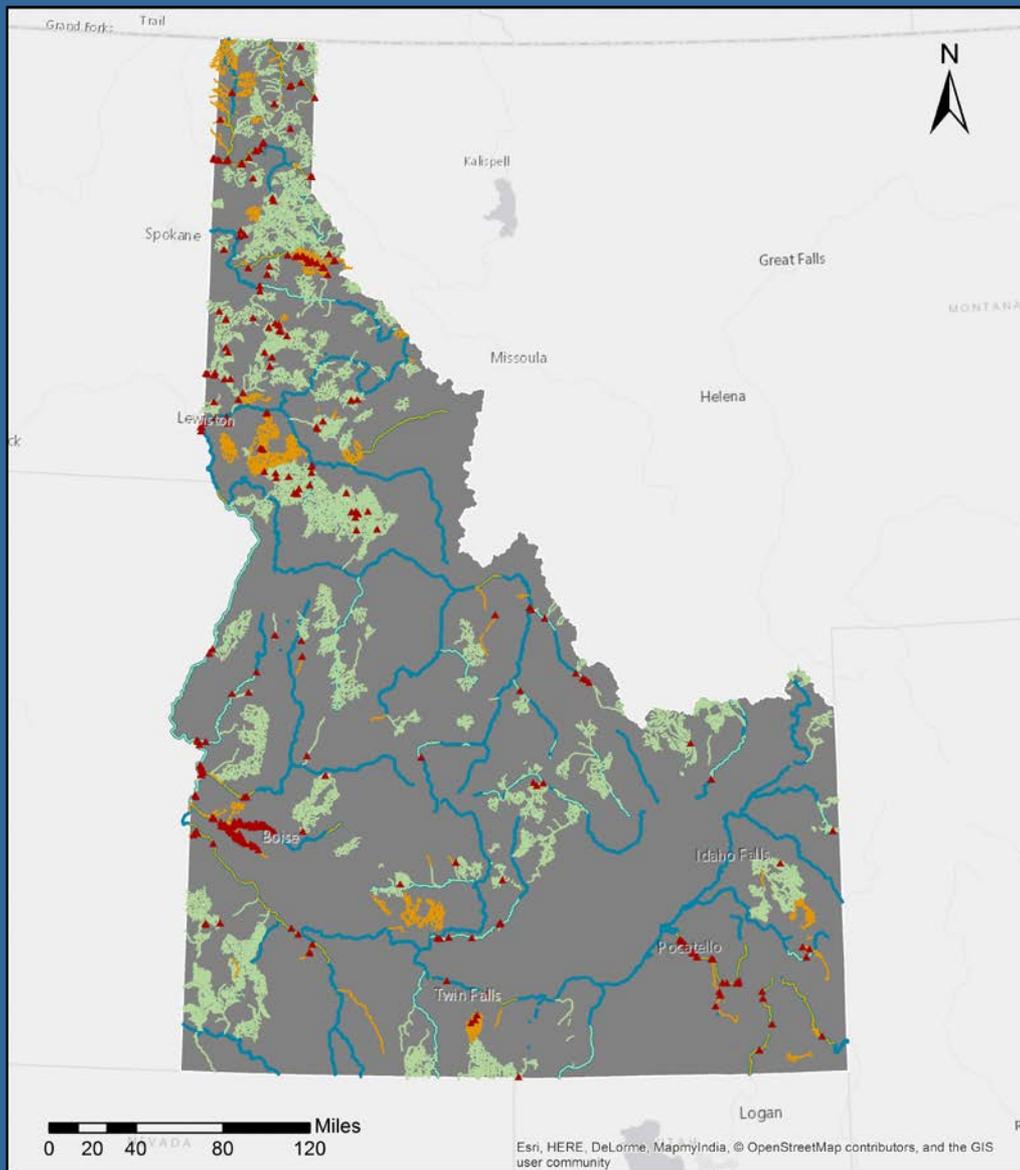
b. *Water temperatures of twenty-two (22) degrees C or less with a maximum daily average of no greater than nineteen (19) degrees C.*

f. *Salmonid Spawning*

ii. *Water temperatures of thirteen (13) degrees C or less with a maximum daily average no greater than nine (9) degrees C.*



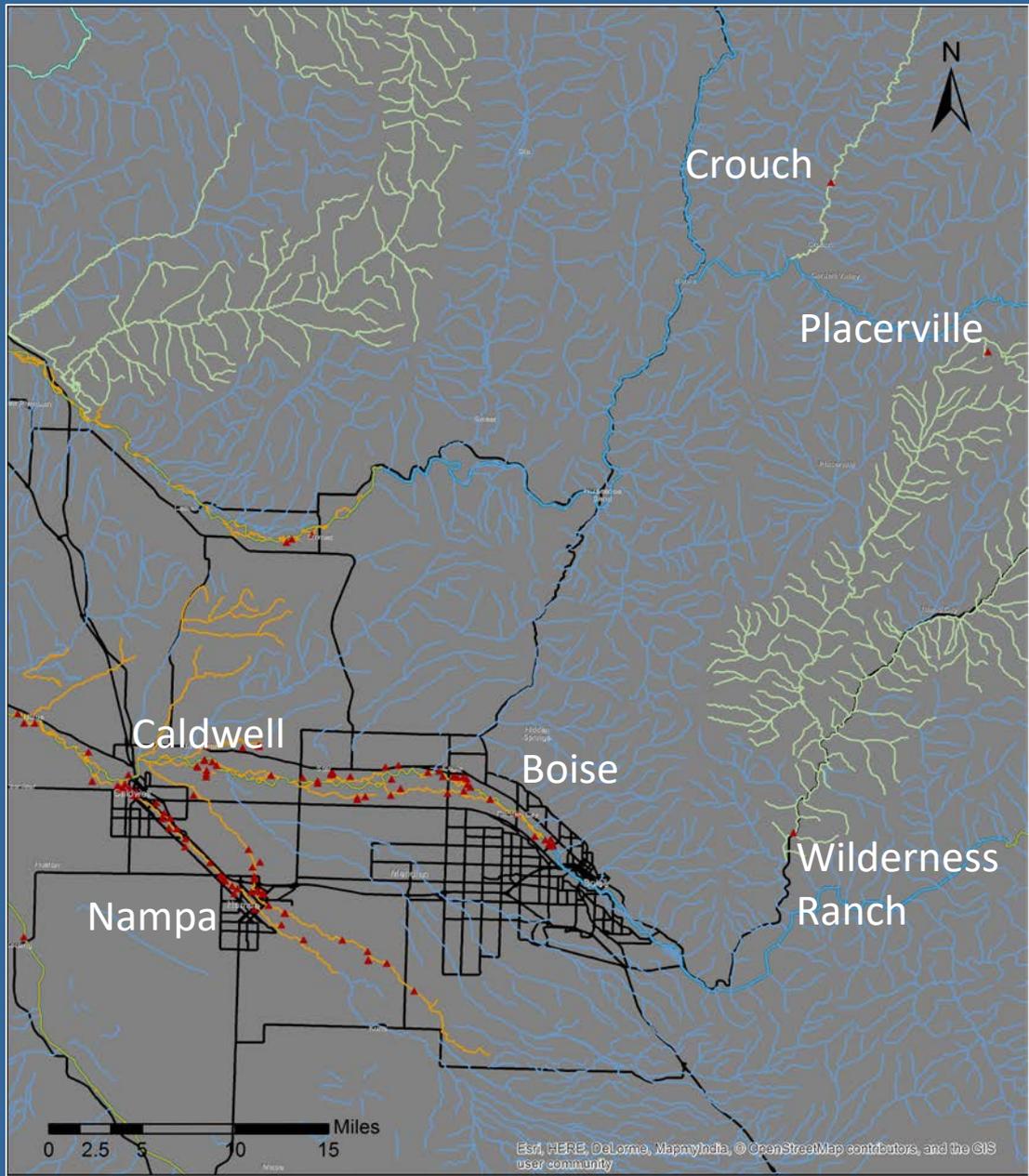
Photo by Jay Fleming,
Nat. Geographic



- 115 communities
- 415 Temp. affected facilities:
 - Bio solids (3)
 - CAFO (16)
 - ICIS-NPDES major (2)
 - ICIS-NPDES minor (21)
 - ICIS-NPDES non-major (153)
 - ICIS-NPDES unpermitted (48)
 - NPDES Permit (10)
 - NPDES Pretreatment Program(4)
 - Phase II MS4 (2)
 - POTW (19)
 - Storm water construction (92)
 - Storm water-industrial (45)

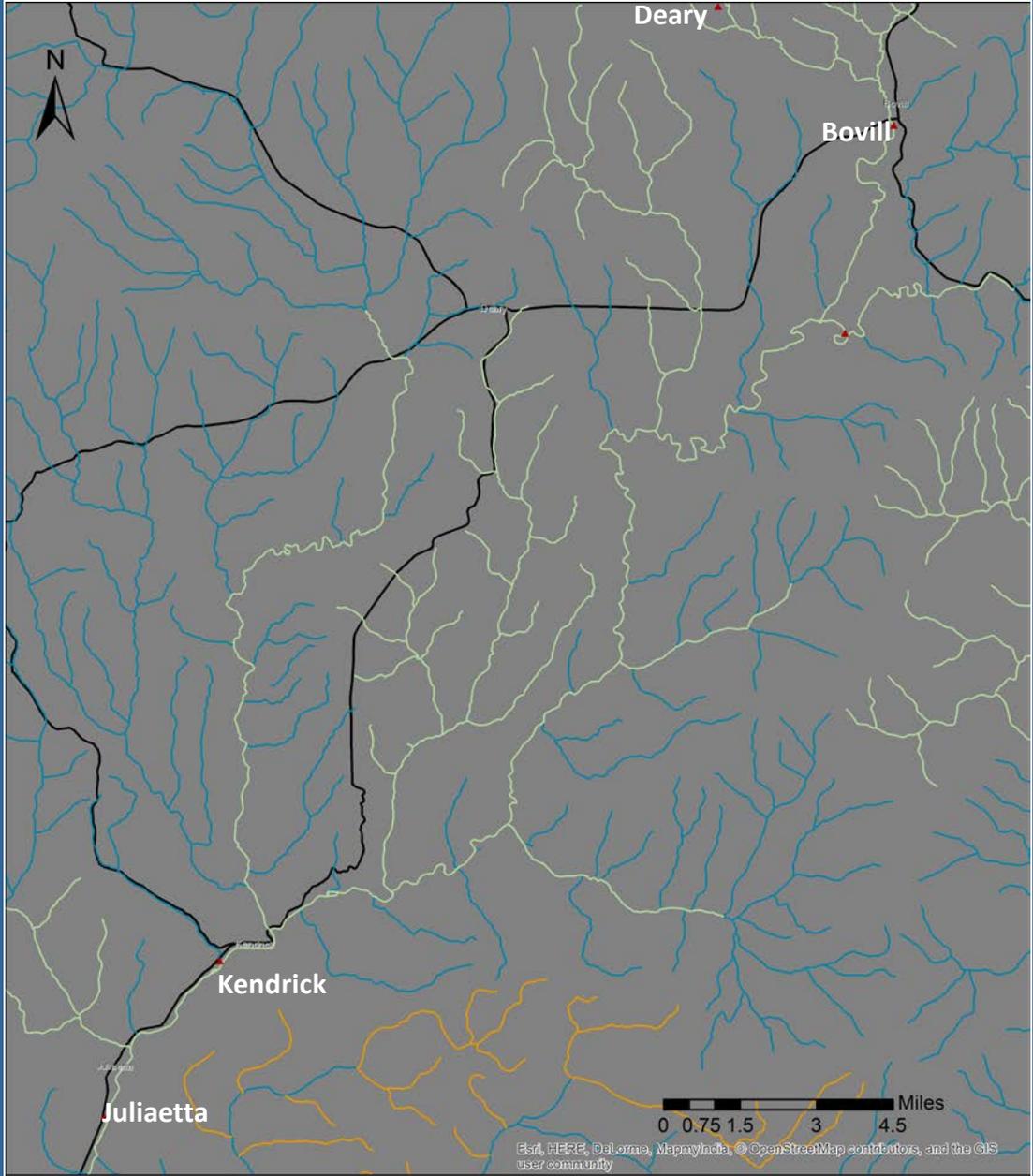
Temperature affected facilities and water bodies

- ▲ Temperature Affected Facilities
- Temperature TMDLs
- Temperature Impaired
- Major Rivers



Temperature affected facilities and water bodies

- ▲ Temperature Affected Facilities
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- Major Roads



Temperature affected facilities and water bodies

- ▲ Temperature Affected Facilities
- Temperature Impaired
- Temperature TMDLs
- Potlatch River Watershed
- Major Rivers
- Major Roads



Troy

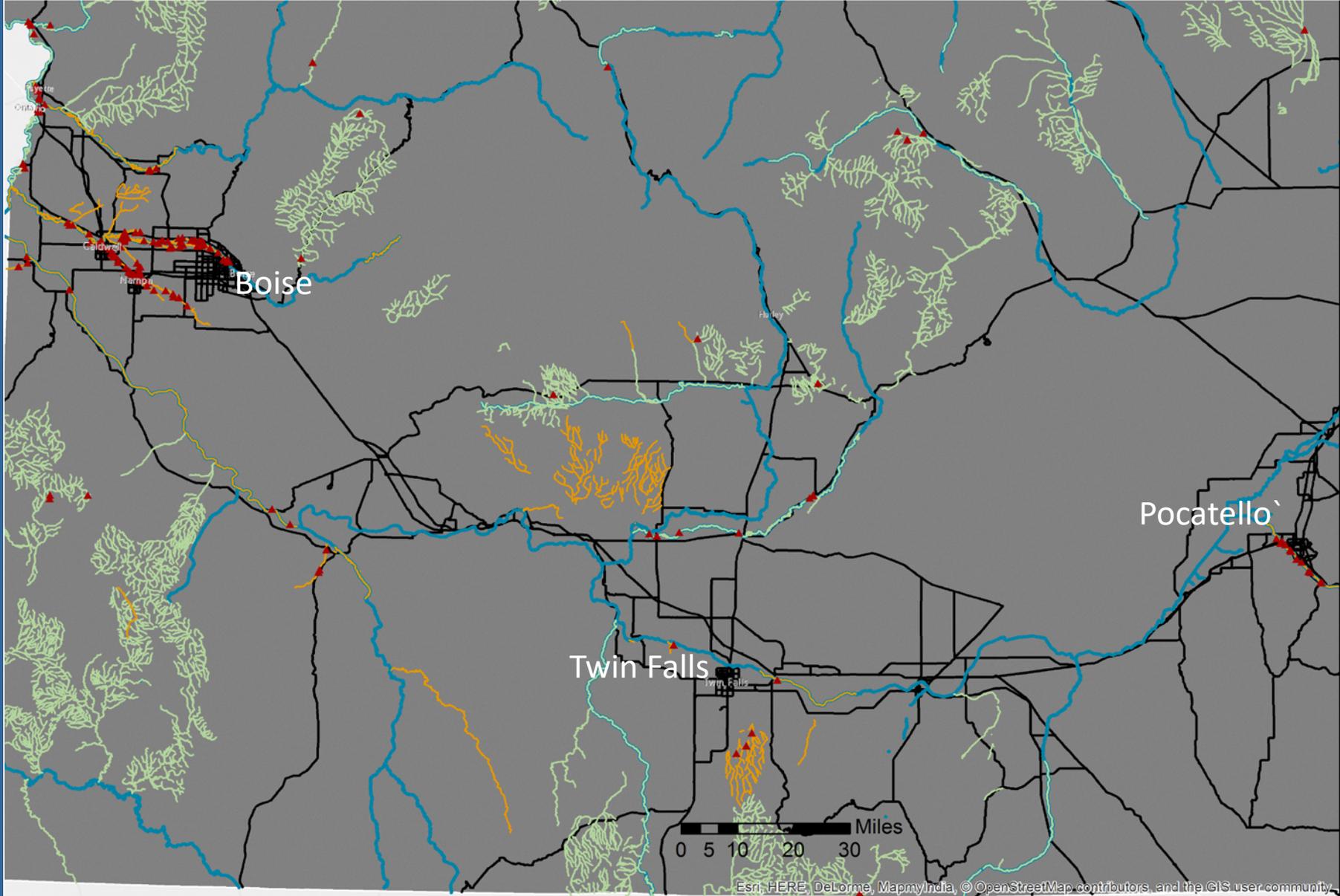
Deary

Kendrick

Google Earth
Juliaetta
© 2013 Google

4000 ft





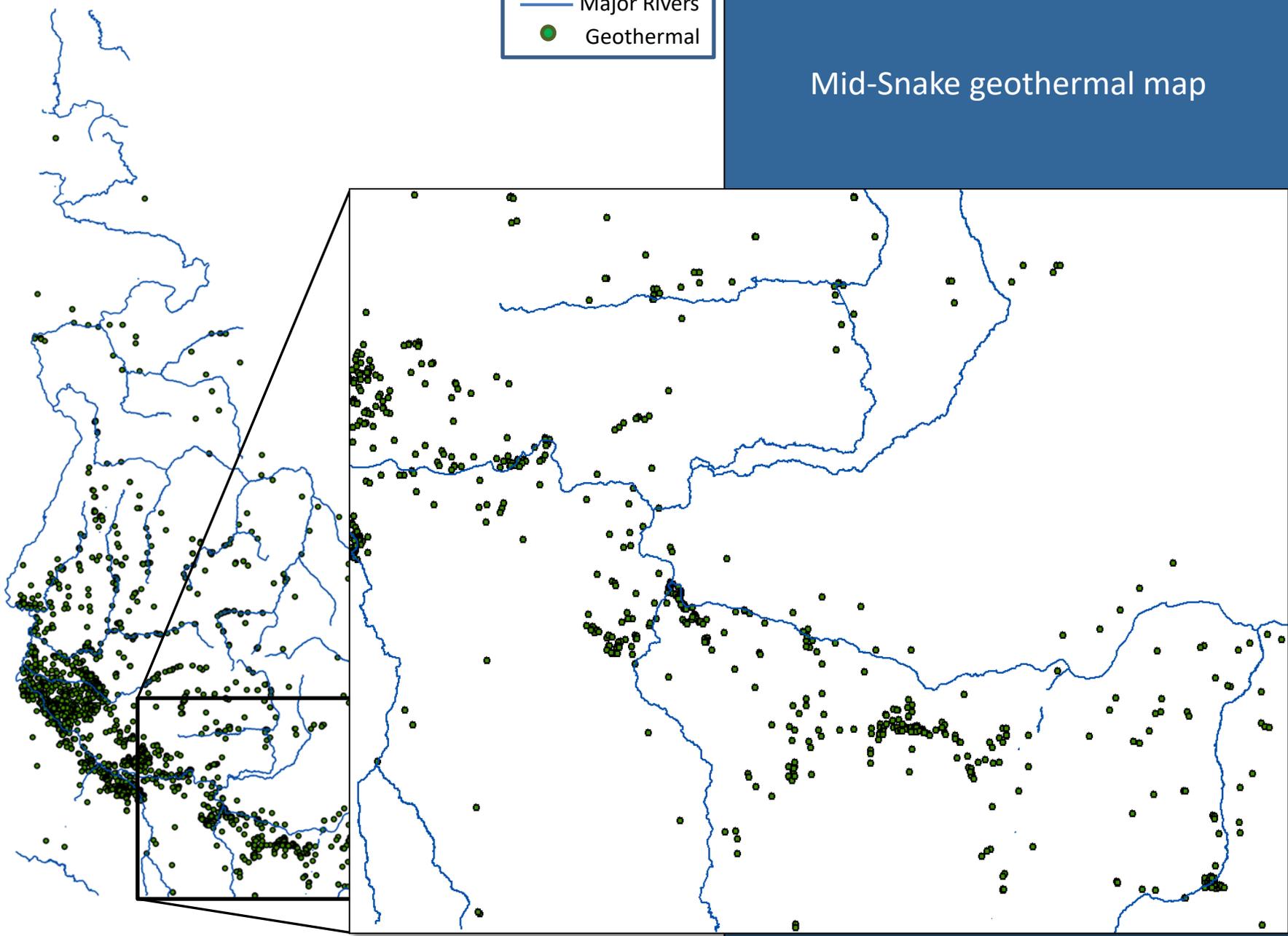
**Temperature affected facilities
and water bodies**

- ▲ Temperature Affected Facilities
- Major Rivers
- Temperature Impaired
- Major Roads
- Temperature TMDLs

Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community.



Mid-Snake geothermal map



De Minimus heat additions

POINT SOURCE WASTEWATER TREATMENT REQUIREMENTS

Current rule

- 400.01.c:

If temperature criteria for the designated aquatic life use are exceeded in the receiving waters upstream of the discharge due to natural background conditions, then wastewater must not raise the receiving water temperatures by more than three tenths (0.3) degrees C.

De Minimus heat additions

POINT SOURCE WASTEWATER TREATMENT REQUIREMENTS

Proposed rule

- 400.01.c:

If temperature criteria for the designated aquatic life use are exceeded in the receiving waters upstream of the discharge ~~due to natural background conditions~~, then wastewater must not raise the receiving water temperatures by more than three tenths (0.3) degrees C.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION 10
 1200 Sixth Avenue, Suite 155
 Seattle, WA 98101-3140

JUL 12 2018

OFFICE OF
 WATER AND WATERSHEDS

Mr. Barry Burnell, Administrator
 Water Quality Division
 Department of Environmental Quality
 1410 North Hilton
 Boise, Idaho 83706-1255

Re: Approval of the Potlatch River Watershed TMDLs (HUC: 17060306)

Dear Mr. Burnell:

The Idaho Department of Environmental Quality (IDEQ) submitted the Potlatch River Watershed Total Maximum Daily Loads (TMDLs) to the U.S. Environmental Protection Agency on April 6, 2018. IDEQ revised the temperature TMDLs using a different methodology for the following waterbodies to address the temperature impairments. The EPA had previously approved these temperature TMDLs for these waterbodies in 2009. Following our review, the EPA is pleased to approve 21 revised TMDLs for the waters and pollutants listed in the table below.

Name of Creek/Water Segment	Assessment Unit #
Potlatch River - Headwaters	ID17060306CL049_02
Potlatch River - 3rd Order	ID17060306CL049_03
Potlatch River - 4th Order	ID17060306CL049_04
Potlatch River - 4th Order	ID17060306CL048_04
Potlatch River - 5th Order	ID17060306CL048_05
Potlatch River - 5th Order	ID17060306CL045_05
Potlatch River - 6th Order	ID17060306CL044_06
Cedar Creek - 4th Order	ID17060306CL046_04
Boulder Creek - 3rd Order	ID17060306CL047_03
East Fork Potlatch River - 4th Order	ID17060306CL051_04
Ruby Creek - 3rd Order	ID17060306CL052_03
Moose Creek - Headwaters	ID17060306CL053_02
Moose Creek - 3rd Order	ID17060306CL053_03
Corral Creek - Headwaters	ID17060306CL054_02
Corral Creek - 3rd Order	ID17060306CL054_03
Pine Creek - Headwaters	ID17060306CL055_02
Pine Creek - 3rd Order	ID17060306CL055_03
Big Bear Creek - 4th Order	ID17060306CL056_04
Big Bear Creek - 5th Order	ID17060306CL056_05
Middle Potlatch Creek - Headwaters	ID17060306CL062_02
Middle Potlatch Creek - 3rd Order	ID17060306CL062_03

established at a level that, when fully
 quality standards addressed by these TMDLs.

A TMDL was completed and does not constitute
 Hydrologic Unit Code 17060306
 of waters will be considered at the time of
 rs.

ies for the TMDLs. IDEQ developed and submitted
 greement of July 2002. As you know, the EPA has
 strategies under Section 303(d) of the Clean Water
 on these strategies. Implementation is the critical
 and we encourage IDEQ to continue their work with
 egies.

e IDEQ Lewiston Regional Office on this TMDL,
 ent period and the sharing of a pre-public comment
 ke to recognize the effort put forth to complete this

orporated into the State's Water Quality Management
 mments or questions, please feel free to call me at
 art in our Idaho Operations office at

Sincerely,

Daniel D. Opalski, Director
 Office of Water and Watersheds

al Office, IDEQ (by email)
 anager, Lewiston Regional Office, IDEQ (by email)
 m Manager, IDEQ (by email)
 gram Manager, IDEQ (by email)
 Attorney General, Idaho (by email)
 neral, Idaho (by email)
 Vest (by email)
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 1200 Sixth Avenue, Suite 155
 Seattle, WA 98101-3140

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OFFICE OF
 WATER AND WATERSHEDS

Mr. Barry Russell, Administrator
 Water Quality
 Department
 1410 North
 Boise, Idaho

Re: Approval

Dear Mr. Russell,

The Idaho
 Maximum
 revised to
 the temp
 waterbo
 waters a

Our review indicates that these allocations have been established at a level that, when fully implemented, will lead to the attainment of the water quality standards addressed by these TMDLs.

This approval only includes those waters for which a TMDL was completed and does not constitute approval for the proposed de-listing of waters within Hydrologic Unit Code 17060306 from the Idaho §303(d) list. Any proposed de-listing of waters will be considered at the time of submission of the next §303(d) list of impaired waters.

Your submittal also includes implementation strategies for the TMDLs. IDEQ developed and submitted these strategies pursuant to the TMDL Settlement Agreement of July 2002. As you know, the EPA has no duty to approve or disapprove implementation strategies under Section 303(d) of the Clean Water Act (CWA); therefore, the EPA is not taking action on these strategies. Implementation is the critical next step to realize improvements in water quality, and we encourage IDEQ to continue their work with responsible parties on implementation of these strategies.

The EPA appreciates the cooperation and work of the IDEQ Lewiston Regional Office on this TMDL, especially the coordination prior to the public comment period and the sharing of a pre-public comment draft with EPA staff. In particular, the EPA would like to recognize the effort put forth to complete this document by Sujata Connell of your staff.

By the EPA's approval, these TMDLs are now incorporated into the State's Water Quality Management Plan under §303(e) of the CWA. If you have any comments or questions, please feel free to call me at (206) 553-1855, or have your staff contact Bill Stewart in our Idaho Operations office at (208) 378-5753.

Sincerely,

Daniel D. Onaleki, Director

Thermal wasteload calculation

$$0.3^{\circ}\text{C} = 0.54^{\circ}\text{F}$$

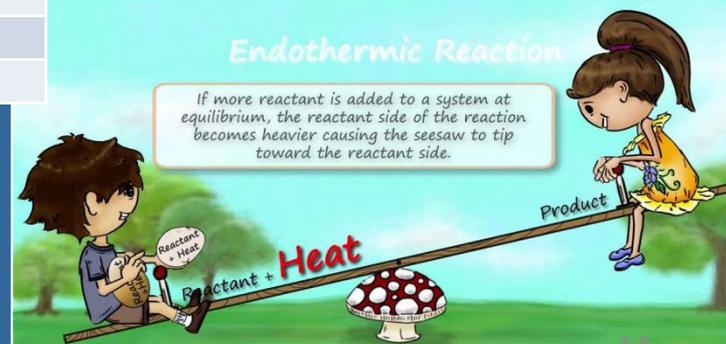
$$\text{BTU} = \text{Den. Water (62.4 lb/ft}^3) \times \text{allowed increase (0.54}^{\circ}\text{F)}$$

$$\div +1^{\circ}\text{F / lb} = 33.7 \text{ BTU/ft}^3$$

$$33.7 \text{ BTU/ft}^3 \times \text{ft}^3 / \text{sec} = 33.7 \text{ BTU/sec}$$

Receiving Stream	In stream	In stream	Allowed Heat load	In stream	Discharge
Current temp.	Allowed increase	Allowed temp	BTU/ ft ³	cfs	BTU/sec
13	0.3	13.3	33.7	1	33.7
14	0.3	14.3	33.7	2	67.4
15	0.3	15.3	33.7	3	101.1
16	0.3	16.3	33.7	4	134.8
17	0.3	17.3	33.7	5	168.5
18	0.3	18.3	33.7	6	202.2
19	0.3	19.3	33.7	7	235.9
20	0.3	20.3	33.7	8	269.6
21	0.3	21.3	33.7	9	303.3
22	0.3	22.3	33.7	10	337

Table 1. Increasing the temperature of a waterbody by 0.3 °C requires the same thermal input, regardless of the starting temperature.



De Minimus heat additions

- Provide relief for small communities
- Authorize current practices
- Little-to-no measurable effect to COLD water bodies



Photo by Idaho Department of Fish and Game

