

DRAFT

Assessment of EPA Bull Trout Temperature Criteria Compliance in the North Fork Coeur d'Alene River Subbasin (HUC 17010301)

February 6, 2009
Assessment by Kajsa Stromberg and Kelli Duncan
Idaho Department of Environmental Quality
Coeur d' Alene Regional Office



Photo: Bull trout from Little Lost River, Bart Gamett.

Conservation Status

The bull trout (*Salvelinus confluentus*) is a native salmonid fish occurring in the Pacific Northwest, including Idaho. Bull trout require cold water, clean spawning substrate, and complex, connected habitats. It is considered a threatened species under the federal Endangered Species Act (ESA). Idaho's bull trout were first listed as threatened species in 1998. A U.S. Fish and Wildlife Service 5-year review of the species status concluded in 2008 that the species status should remain threatened. Information on the species and its federal status may be found at <http://www.fws.gov/pacific/bulltrout/>. The State of Idaho provided comments on the 5-year status review of bull trout, suggesting that the fish should be de-listed from the ESA (see <http://species.idaho.gov/list/bulltrout.html>). In 1996, the State of Idaho developed Governor Phillip E. Batt's Bull Trout Conservation Plan which remains the basis for Idaho's water quality protections for bull trout in state water quality standards. Additionally, there are federal temperature criteria promulgated for bull trout protection by the U.S. Environmental Protection Agency (EPA). Compliance with the federal criteria is evaluated in this report.

EPA Temperature Criteria for Bull Trout

The U.S. Environmental Protection Agency (EPA) has promulgated temperature criteria for bull trout protection (Title 40, Part 131, Subpart D, Section 131.33). These criteria apply to three streams in the North Fork Coeur d' Alene Subbasin listed in the excerpt below:

- a) *Temperature criteria for bull trout.* (1) Except for those streams or portions of streams located in Indian country, or as may be modified by the Regional Administrator, EPA Region X, pursuant to paragraph (a)(3) of this section, a temperature criterion of 10°C expressed as an average of daily maximum temperatures over a seven day period, applies to the waterbodies identified in paragraph (a)(2) of this section during the months of June, July, August and September.

(xxxii) UPPER COUER D'ALENE BASIN: Brown Creek, Falls Creek, Graham Creek

Water Quality Status

Three streams within the North Fork Coeur d' Alene River Subbasin are included in EPA's temperature criteria (Table 1, Figure 1). In the 2002 Integrated Report, only one of these streams, Graham Creek, had been assessed for temperature status and it was considered impaired. Upper Graham Creek, Brown Creek and Falls Creek were not assessed. In the 2008 draft Integrated Report, these assessments for temperature were unchanged from 2002.

Table 1. Assessment status of the North Fork Coeur d' Alene River Subbasin streams included in EPA's temperature criteria for bull trout.

Stream	Assessment Unit(s)	2002 Status (Pollutant)	2008 Status (Pollutant)
Brown Creek	ID17010301PN026_02	Not Assessed	Not Assessed
Falls Creek	ID17010301PN011_02	Impaired (Sediment)/ Temperature Not Assessed	Impaired (Sediment)/ Temperature Not Assessed
Graham Creek	ID17010301PN002_02	Not Assessed	Not Assessed
	ID17010301PN002_03	Impaired (Temperature)	Impaired (Temperature)

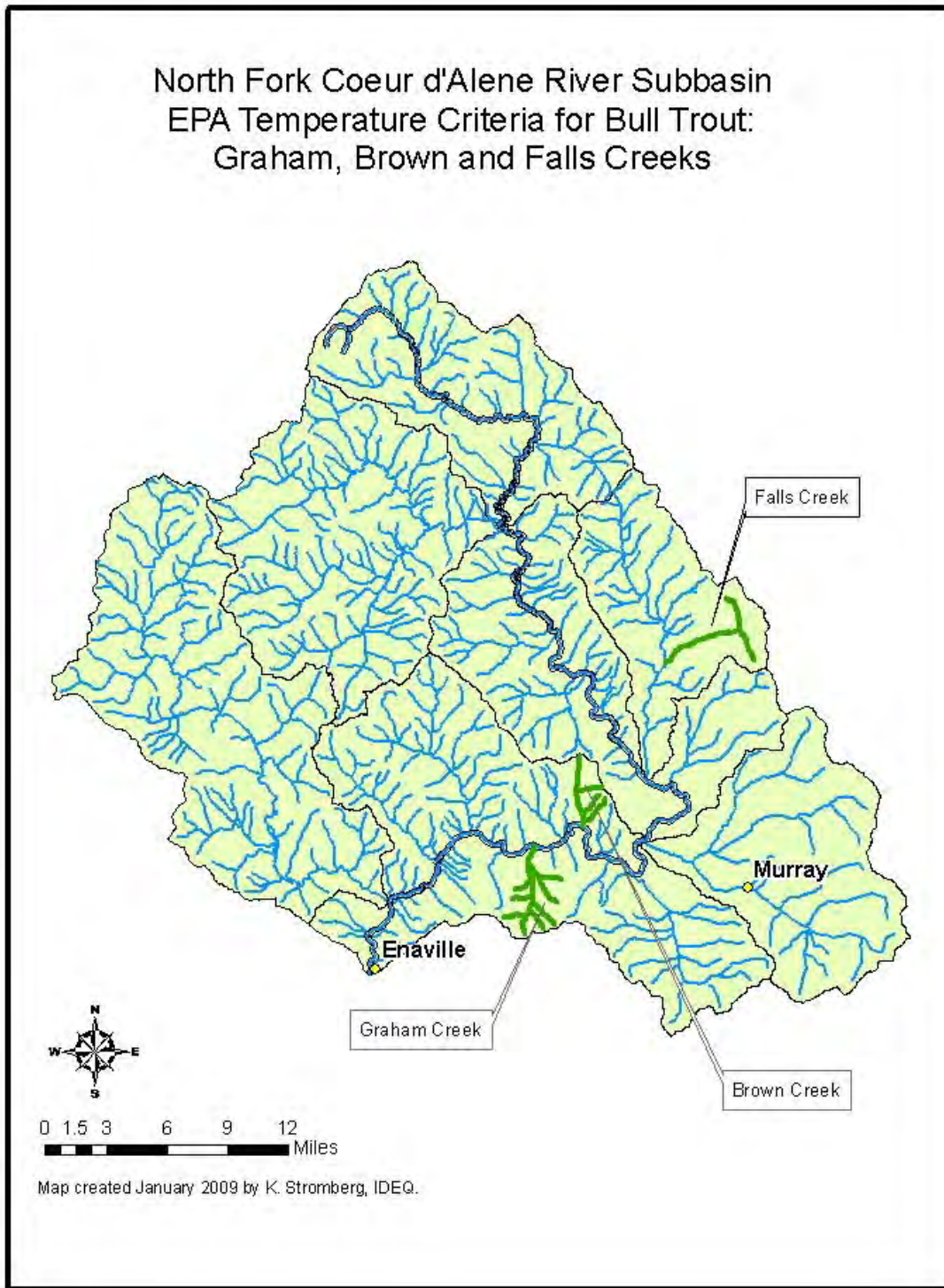


Figure 1. EPA temperature criteria for bull trout apply in Graham Creek, Brown Creek, and Falls Creek within the North Fork Coeur d'Alene Subbasin.

EPA Bull Trout Criteria Evaluation

The U.S. Forest Service (USFS) Idaho Panhandle National Forest, Coeur d'Alene River Ranger District provided DEQ with a substantial temperature dataset covering the years of 1998 to 2008. DEQ collected water temperature data on Graham Creek in 1999. These data were evaluated relevant to the EPA bull trout temperature criteria in November 2008. See Appendix A for the detailed evaluation of these locations, and Appendix B for specific locations.

Brown Creek (ID17010301PN026 02)

Brown Creek was evaluated for EPA bull trout temperature criteria using USFS data from three sites over four years (four loggers total) during the criteria evaluation period of June through September (Table 2). Rookie Creek, a tributary to Brown Creek, was also evaluated. Results of the evaluation showed exceedances of the 10°C weekly maximum temperature criteria approximately 81% of the evaluation time period. The highest maximum weekly maximum temperature (MWMT) was 13°C. All sites exceeded criteria in every year evaluated.

Table 2. Brown Creek temperature evaluation.

Site	Year(s)	Date Range Evaluated
Brown Creek, Upper	2000, 2001	July 18- Sept 4, 2000
		May 30-Sept 17, 2001
Brown Creek	2007	June 7-Sept 30, 2007
Rookie Creek	2005	May 24-Sept 20, 2005

Falls Creek (ID17010301PN011 02)

Falls Creek was evaluated for EPA bull trout temperature criteria using USFS data from two sites over two years (two loggers total) during the criteria evaluation period of June through September (Table 3). Results of the evaluation showed exceedances of the 10°C weekly maximum temperature criteria approximately 83% of the evaluation time period. The highest MWMT was 14°C. Both sites exceeded criteria in each year evaluated.

Table 3. Falls Creek temperature evaluation.

Site	Year(s)	Date Range Evaluated
Falls Creek	2001, 2002	Aug 1-Sept 30, 2001
		Jun 8- Sept 30, 2002

Graham Creek (ID17010301PN002 03)

Graham Creek was evaluated for EPA bull trout temperature criteria using DEQ data from one site in 1999 during the criteria evaluation period (Table 4). Results from the evaluation showed exceedances of the 10°C weekly maximum temperature criteria approximately 81% of the evaluation time period up to 14°C MWMT. The site exceeded criteria in the year evaluated.

Table 4. Graham Creek temperature evaluation.

Site	Year(s)	Date Range
Graham Creek	1999	July 2 –Sept 30, 1999

Conclusions

In every year evaluated, all of the sites at Graham Creek, Brown Creek, and Falls Creek exceeded the EPA bull trout temperature criteria. Exceedances were not isolated events, and occurred during most of the spawning time period evaluated (June through September). Exceedances of the 10°C weekly maximum temperature criteria were not small and were up to 4°C above criteria.

A subbasin-wide assessment of compliance with Idaho temperature criteria will be completed soon to complement this assessment. In our preliminary analyses, the three streams evaluated did not exceed Idaho water quality standards for cold water aquatic life, but all three did exceed Idaho water quality standards for salmonid spawning (Appendix A).

Due to the identified exceedances of EPA bull trout criteria, it is recommended that Brown Creek (ID17010301PN026_02), Falls Creek (ID17010301PN011_02), and Graham Creek (ID17010301PN002_03) be added to the next Integrated Report as impaired by temperature for cold water aquatic life and salmonid spawning.

Table 5. Summary of EPA bull trout temperature criteria exceedances. Italics indicate proposed status changes in the next Integrated Report.

Stream	Assessment Unit(s)	Exceedance of EPA Criteria	Status in Draft 2008 Integrated Report	Recommended Status in Next Integrated Report
Brown Creek	ID17010301PN026_02	Exceeds	Not Assessed	<i>Impaired (Temperature)</i>
Falls Creek	ID17010301PN011_02	Exceeds	Impaired (Sediment)/ Temperature Not Assessed	<i>Impaired (Sediment and Temperature)</i>
Graham Creek	ID17010301PN002_02	Not Assessed	Not Assessed	Not Assessed
	ID17010301PN002_03	Exceeds	Impaired (Temperature)	Impaired (Temperature)