

APPENDIX I.

Temperature Monitoring Data and Evaluation of Relevant Criteria for the Long Creek, Camp Creek, and Blue Mountain Allotments

Table 1. Available Temperature Data and Relevant Criteria for Steelhead Critical Habitat Streams in the Long Creek Allotment

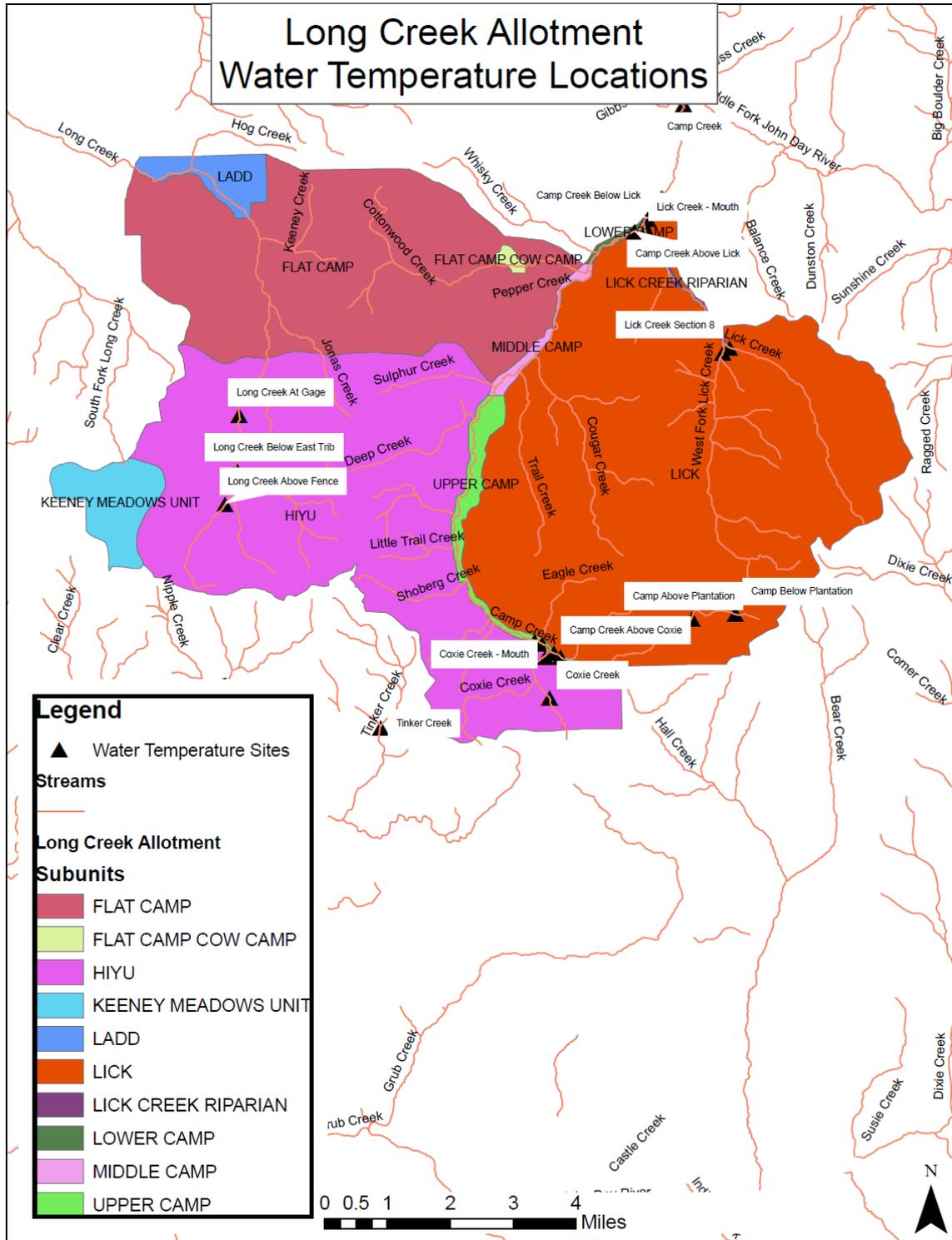
Stream Name and Map Reference Number	Pasture	Years Analyzed	Mean Yearly Max of 7 Day Rolling Means of Daily Max (°F) (7 Day Mean Max)	Daily Max Over 64°F (Mean Days Per Year)	State Water Quality Standards (Meet/ (Apparently) Not Meeting)	303(d) Listed (Y/N)	Amendment 29 DFC (Meet/Fail)	PACFISH RMO (Meet/Fail)	MPI (FA, FAR, FAUR)
Camp Creek below Lick	Lower Camp	2001	78.3	87	Not Meeting 2	Y	Fail 2, 3	Fail 2, 3	FAUR S
Camp Creek above Lick	Lower Camp	2005	79.7	69	Not Meeting 2	Y	Fail 2, 3	Fail 2, 3	FAUR S
Camp Creek at Big Culvert	Upper Camp	2005	78.5	79	Not Meeting 2	Y	Fail 2, 3	Fail 2, 3	FAUR S
Camp Creek Below Coxie	Upper Camp	2005	70.2	52	Not Meeting 2	Y	Fail 2, 3	Fail 2, 3	FAUR S
Camp Creek Above Coxie	Upper Camp	2005	69.0	47	Not Meeting 2	Y	Fail 2, 3	Fail 2, 3	FAUR S
Camp – Fish Pasture	Fish Pasture (extension of Upper Camp)	2001	72.0	55	Not Meeting 2	Y	Fail 2, 3	Fail 2, 3	FAUR S
Camp below Eagle Creek(NF Camp)	Upper Camp	2005	69.8	47	Not Meeting 2	Y	Fail 2, 3	Fail 2, 3	FAUR S
Camp Below Plantation	Lick	2000	72.3	58	Not Meeting 2	N ¹	Fail 2, 3	Fail 2, 3	---
Camp Above Plantation	Lick	2007	53.1	0	Meet 2	N	Meet 2, 3	Meet 2, 3	---
Lick Creek - mouth	Lower Camp	2005	72.6	54	Not Meeting 2	N ¹	Fail 2, 3	Fail 2, 3	FAUR S
Lick Creek Section 8	Lick	2000	63.7	2	Meet 2	N	Fail 2 Meet 3	Meet 2 Fail 3	FAUR S
West Fork Lick Creek	Lick	2001	74.9	75	Not Meeting 2	N ¹	Fail 2, 3	Fail 2, 3	FAUR ² S

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Stream Name and Map Reference Number	Pasture	Years Analyzed	Mean Yearly Max of 7 Day Rolling Means of Daily Max (°F) (7 Day Mean Max)	Daily Max Over 64°F (Mean Days Per Year)	State Water Quality Standards (Meet/ (Apparently) Not Meeting)	303(d) Listed (Y/N)	Amendment 29 DFC (Meet/Fail)	PACFISH RMO (Meet/Fail)	MPI (FA, FAR, FAUR)
Coxie Creek -- mouth	Camp Creek	2005	73.0	63	Not Meeting 2	N ¹	Fail 2, 3	Fail 2, 3	FAUR S
Coxie Creek	Hiyu	2001	64.8	10	Not Meeting 2	N ¹	Fail 2, 3	Fail 2, 3	—
Long Creek at gage	Hiyu	2005	76.1	74	Not Meeting 1, 2	Y	Fail 2, 3	Fail 2, 3	FAUR S
Long Creek below east trib	Hiyu	2005	69.3	66	Not Meeting 1, 2	Y	Fail 2, 3	Fail 2, 3	FAUR S
Long Creek above east trib	Hiyu	2005	70.3	65	Not Meeting 1, 2	Y	Fail 2, 3	Fail 2, 3	—
Long Creek Above Fence	Hiyu	2005	66.5	39	Not Meeting 1, 2	Y	Fail 2, 3	Fail 2, 3	—

Notes: 1) MNF data indicates State Water Quality Standards are apparently not being met, but Oregon DEQ determined the data were insufficient to include the stream on Oregon's 2004/2006 Integrated Report as 303d listed or that data quality standards were not met. 2) MPI Steelhead – Meets FAR for Migration and rearing habitat; does not Meet FAR for Spawning Habitat

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Map I-1. Temperature Monitoring Sites within the Long Creek Allotment

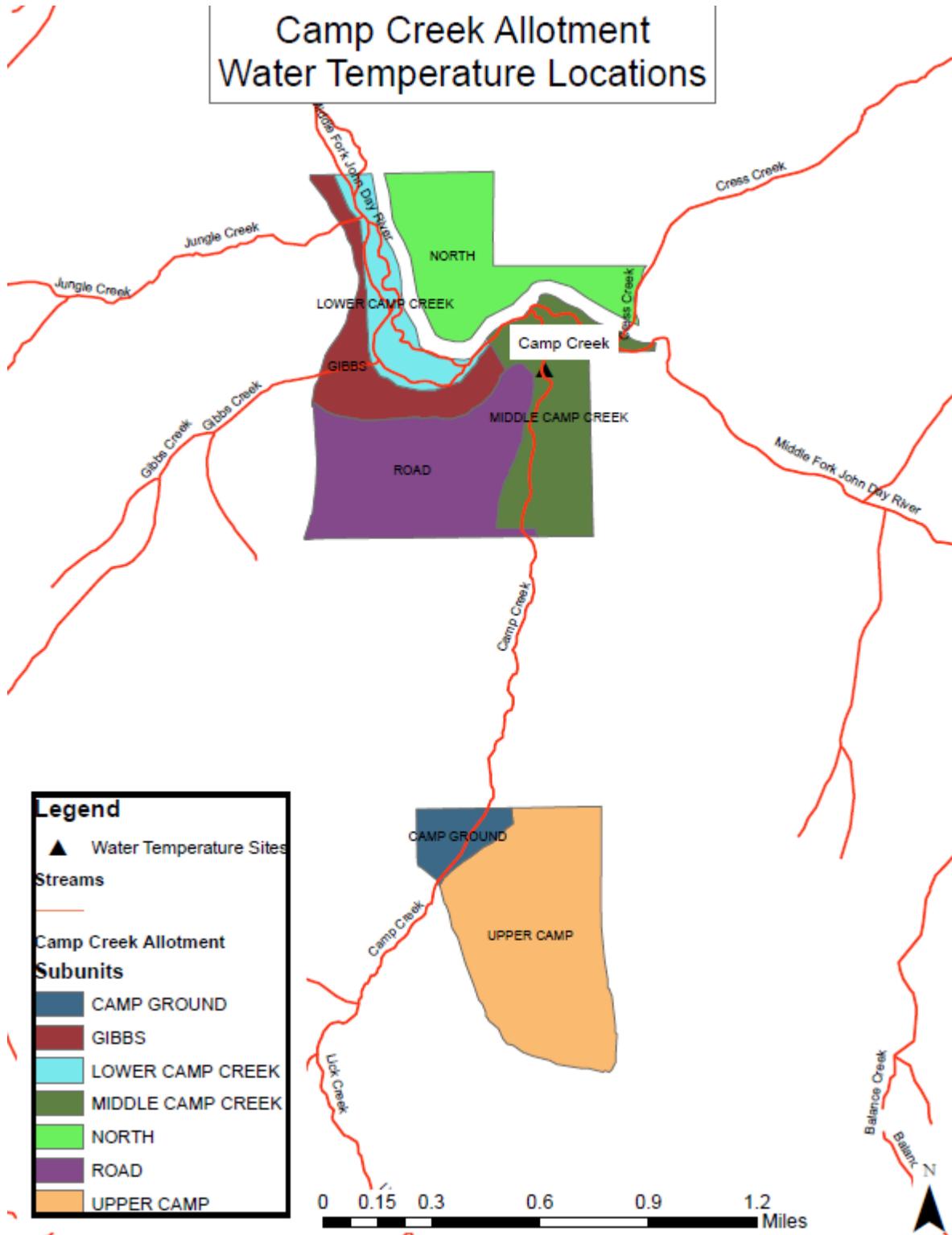
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Table 2. Available Temperature Data and Relevant Criteria for Steelhead Critical Habitat Streams in the Camp Creek Allotment

Stream Name and Map Reference Number	Pasture	Years Analyzed	Mean Yearly Max of 7 Day Rolling Means of Daily Max (°F) (7 Day Mean Max)	Daily Max Over 64°F (Mean Days Per Year)	State Water Quality Standards (Meet/ (Apparently) Not Meeting))	303(d) Listed (Y/N)	Amendment 29 DFC (Meet/Fail)	PACFISH RMO (Meet/Fail)	MPI (FA, FAR, FAUR)
Camp Creek	Middle Camp Creek	2001-2005	84.8	96	Not Meeting 1	Y	Fail 2, 3	Fail 2, 3	FAUR S

Notes: 1) MNF data indicates State Water Quality Standards are apparently not being met, but Oregon DEQ determined the available data were insufficient to include the stream on Oregon's 2004/2006 Integrated Report as 303(d) listed or did not meet data quality standards.

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Map I-2. Temperature Monitoring Sites within the Camp Creek Allotment

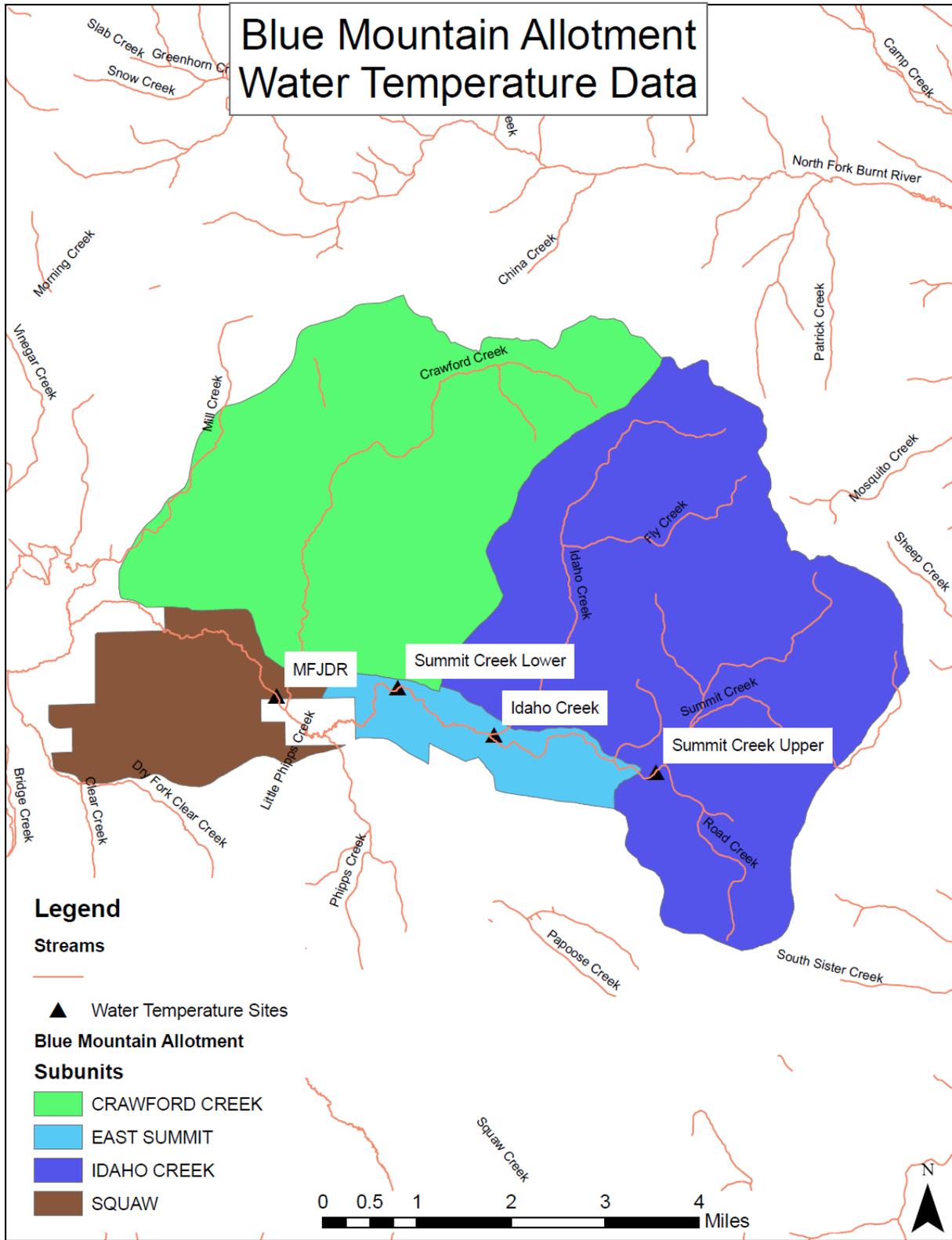
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Table 3. Available Temperature Data and Relevant Criteria for Steelhead Critical Habitat Streams in the Blue Mountain Allotment

Stream Name and Map Reference Number	Pasture	Years Analyzed	Mean Yearly Max of 7 Day Rolling Means of Daily Max (°F) (7 Day Mean Max)	Daily Max Over 64°F (Mean Days Per Year)	State Water Quality Standards (Meet/(Apparently) Not Meeting)	303d Listed (Y/N)	Amendment 29 DFC (Meet/Fail)	PACFISH RMO (Meet/Fail)	MPI (FA, FAR, FAUR)
Summit Creek Upper	Idaho Creek	2000-2005	67.9	33	Not Meeting 1, 2	Y	Fail 2, 3	Fail 2, 3	FAUR S
Summit Creek Lower	East Summit	2000-2005	75.5	32	Not Meeting 1, 2	Y	Fail 2, 3	Fail 2, 3	FAUR S
Idaho Creek	East Summit	2000-2001	72.6	62	Not Meeting 2	N ¹	Fail 2, 3	Fail 2, 3	FAUR S
MFJDR	Squaw	2002-2005	72.4	93	Not Meeting 1, 2	Y	Fail 1, 2, 3	Fail 2, 3	FAUR S, B

Notes: 1) MNF data indicates State Water Quality Standards are apparently not being met, but Oregon DEQ determined the data were insufficient to include the stream on Oregon's 2004/2006 Integrated Report as 303(d) listed or data quality standards were not met.

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Map I-3. Temperature Monitoring Sites within the Blue Mountain Allotment

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State Water Quality Standards:

1. Long Creek – (River Mile 25.6-36.7) -- identified as having Salmon and trout rearing and migration habitat for Designated Beneficial Use purposes (Year around (non-spawning) habitat). 7 Day Mean Max 64.4°F (18°C)
2. All streams identified as having anadromous fish passage and salmonid rearing use for Designated Beneficial Use purposes. 7 Day Mean Max 64°F (17.8°C)

Amendment 29 DFC:

1. Bull trout spawning & rearing habitat – 7 Day Mean Max 53.6°F (12°C) – *Amendment 29 specifies DFCs for temperature to result in compliance with Oregon State Water Quality Standards, including 7 Day Mean Max 55°F (12.8°C) in all bull trout spawning and rearing habitat. This water quality standard has been revised since Amendment 29 was issued, thus the standard has been revised.*
2. Chinook and/or Westslope cutthroat trout spawning & rearing habitat - 7 Day Mean Max 55°F (12.8°C)
3. All other John Day Basin streams – 7 Day Mean Max 64°F (17.8°C) - *Amendment 29 specifies DFCs for temperature to result in compliance with Oregon State Water Quality Standards, including instantaneous reading at any time of less than 68°F (20°C) in all anadromous streams without Chinook, bull trout, or Westslope cutthroat trout spawning and rearing habitat. This water quality standard has been revised since Amendment 29 was issued, thus the revised standard is applied.*

PACFISH RMO

1. No measurable increase in 7 Day Mean Max – *MNF data insufficient to determine whether this RMO is being met.*
2. Migration & rearing habitat - 7 Day Mean Max Below 64°F (17.8°C)
3. Spawning habitat - 7 day Mean Max Below 60°F (15.6°C)

Matrix of Pathways and Indicators:

STEELHEAD (S)

1. Functioning Appropriately (FA): 7 Day Mean Max 50-57°F (10-13.9°C)
2. Functioning At Risk (FAR): 7 Day Mean Max - Spawning habitat 57-61°F (13.9-16.1°C), Migration & rearing habitat 57-64°F (13.9-17.8)
3. Functioning At Unacceptable Risk (FAUR): 7 Day Mean Max - Spawning habitat >61°F (16.1°C), Migration & rearing habitat >64°F (17.8°C)

BULL TROUT (B)

4. Functioning Appropriately (FA): 7 Day Mean Max for the following life history stages – Incubation 35.6-41°F (2-5°C), Rearing 39.2-53.6°F (4-12°C), Spawning 39.2-48.2°F (4-9°C), Migration <59°F (15°C).
5. Functioning At Risk (FAR): 7 Day Mean Max for the following life history stages – Incubation <35.6 or at 42.8°F (<2 or at 6°C), Rearing <39.2 or 55.4-59°F (<4 or 13-15°C), Spawning <39.2 or at 50°F (<4 or at 10°C), Migration sometimes >59°F (15°C).
6. Functioning At Unacceptable Risk (FAUR): 7 Day Mean Max for the following life history stages – Incubation <33.8 or >42.8°F (<1 or >6°C), Rearing >59°F (>15°C), Spawning <39.2 or >50°F (<4 or >10°C), Migration regularly >59°F (15°C).