

Errata to the Big Wood River Watershed Management Plan (TMDL) of 2002



**State of Idaho
Department of Environmental Quality
1410 North Hilton
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November 2011

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Overview

The Idaho Department of Environmental Quality (DEQ) is making corrections to calculation errors in four tables that appear in the final *Big Wood River Watershed Management Plan* (a total maximum daily load, or TMDL), approved by the US Environmental Protection Agency (EPA) on May 15, 2002. The calculation errors were a result of not using the correct design flow capacity for three wastewater treatment plants (WWTPs). The errors did not come to light until a National Pollutant Discharge Elimination System (NPDES) draft permit reissuance for the City of Hailey. The City of Ketchum and the Meadows WWTPs are also affected. DEQ and EPA recognized the errors and DEQ has made the corrections to Tables H, page xviii; Table XX, page 64; Table HHH, page 76; and Table PPP, page 89.

The wasteload allocations for *E. coli* (in colony forming units, or cfu, per day) in Tables H, XX, HHH, and PPP are based on achieving the *E. coli* criteria of 126 cfu/100 milliliters (based on a 30-day geometric mean) at the point of discharge (i.e., “end of pipe”). Both the 10^9 cfu/day load and achieving the *E. coli* criteria as an end-of-pipe concentration limit are part of the wasteload allocation, and both limits should be incorporated when updating NPDES permits for the City of Hailey, City of Ketchum, and Meadows WWTPs. The relevant Assessment Unit that the three facilities reside within is ID17040219SK004_05.

The original TMDL calculated the percent reduction for the Big Wood River reach BWR-2 based on the existing *E. coli* instream concentration, which is 419 cfu/100 milliliters (see Table XX below). Therefore, the TMDL reduction does not change, and the reduction remains the same at 69%.

The new tables contained in this errata are dated November 2011 and are to be utilized for NPDES permitting purposes for *E. coli*.

Errata Tables

Table H. Mainstem Big Wood River *E. coli* L.C. calculations (November 2011)

Unit	Stream and WQLS No.	LC (cfu ⁹)	WLAs (cfu ⁹)	LAs (cfu ⁹)	10% Natural Background (cfu ⁹)	10% MOS (cfu ⁹)
1	BWR – 1	270.2	0.0	216.1	27.0	27.0
2	BWR-2-NPS	819.62	0.0	650.26	84.68	84.68
	BWR-2-Hailey	0.0	7.6	0.0	0.0	0.0
	BWR-2-Ketchum	0.0	19.1	0.0	0.0	0.0
	BWR-2-Meadows	0.0	0.5	0.0	0.0	0.0
	BWR – 2 - TOTAL	846.81	27.19	650.26	84.68	84.68
3	BWR – 3	1,369.4	0.0	1,095.5	136.9	136.9
4	BWR – 4	1,434.7	0.0	1,147.7	143.5	143.5
5	BWR – 5	1,063.5	0.0	850.8	106.3	106.3
6	BWR – 6	112.8	0.0	90.2	11.3	11.3
7	BWR – 7	1,542.5	0.0	1,234.0	154.3	154.3
8	BWR – 8	1,617.7	0.0	1,294.1	161.8	161.8

Note: Prepared by IDEQ-TFRO. TP = Total phosphorus. WQLS = Water quality limited stream. L.C. = Load Capacity = TMDL = WLA + LA + Natural Background + MOS. WLAs = Wasteload allocations for point sources. LAs = Load allocations for nonpoint sources. MOS = Margin of safety. Hwt = Headwaters. Ck = Creek. t/yr = tons/year. The WLAs in Unit 2 represents three (3) point source wastewater treatment facilities – The Meadows, City of Hailey, and City of Ketchum. NPS = Nonpoint source.

Table XX. Mainstem Big Wood River *E. coli* loading capacities per unit (November 2011)

Unit	Segment Boundary	WQLS No.	Annual Mean Flow (cfs)	<i>E. coli</i> (WLA + LA)	
				TARGET (cfu/100 mL)	NEW LC (cfu ⁹)
1	BWR – 1	NA	87.7	126	270.2
2	BWR – 2 – NPS	2483	266.05	126	819.6
	BWR – 2 – Hailey		2.48 ^a	126	7.6
	BWR – 2 – Ketchum		6.19 ^a	126	19.1
	BWR – 2 – Meadows		0.155 ^a	126	0.5
	BWR – 2 - TOTAL		274.875	126	846.8
3	BWR – 3	2482	444.5	126	1,369.4
4	BWR – 4	NA	465.7	126	1,434.7
5	BWR – 5	2478	345.2	126	1,063.5
6	BWR – 6	2477	36.6	126	112.8
7	BWR – 7	2476	500.7	126	1,542.5
8	BWR – 8	NA	525.1	126	1,617.7

Note: Prepared by IDEQ-TFRO. *E. coli* LC (cfu⁹/day) = Flow (cfs) x Target (cfu/100 mL) x 0.02445. cfu⁹ is cfu X 100. BWR = Big Wood River. WQLS = Water quality limited stream. LC = loading capacity.

^a Design flows were converted from million gallon/day (mgd) to cubic feet/second (cfs). Ketchum 4.0 mgd = 6.19 cfs; Hailey 1.6 mgd = 2.48 cfs; Meadows 0.1 mgd = 0.155 cfs.

Table HHH. Mainstem Big Wood River *E. coli* TMDL and allocations (November 2011)

Unit	Segment Boundary	WQLS No.	TMDL (cfu ⁹)	WLAs (cfu ⁹)	LAs (cfu ⁹)	Nat Bk 10% (cfu ⁹)	MOS 10% (cfu ⁹)	% Red
1	BWR – 1	NA	270.2	0.0	216.1	27.0	27.0	0.0
2	BWR – 2	NPS	819.62	-	650.26	84.68	84.68	69
		Hailey	7.63	7.63	-	-	-	
		Ketchum	19.07	19.07	-	-	-	
		Meadows	0.48	0.48	-	-	-	
		2483 - Total	846.80	27.17	650.26	84.68	84.68	
3	BWR – 3	2482	1,369.4	0.0	1,095.5	136.9	136.9	0.0
4	BWR – 4	NA	1,434.7	0.0	1,147.7	143.5	143.5	22.2
5	BWR – 5	2478	1,063.5	0.0	850.8	106.3	106.3	0.0
6	BWR – 6	2477	112.8	0.0	90.2	11.3	11.3	0.0
7	BWR – 7	2476	1,542.5	0.0	1,234.0	154.3	154.3	0.0
8	BWR – 8	NA	1,617.7	0.0	1,294.1	161.8	161.8	0.0

Note: Prepared by IDEQ-TFRO. *E. coli* LC (cfu⁹/day) = Flow (cfs) x Target (cfu/100 mL) x 0.02445. cfu⁹ is cfu X 100. 10% Natural Background and 10% MOS were initially taken from *E. coli* TMDL value. % Reduction based on *E. coli* mean concentration values to reach instream target. WQLS = Water quality limited stream. WLA = Wasteload allocations. LAs = Load allocations. Nat Bk = Natural background. MOS = Margin of safety. Red = Reduction.

Table PPP. Mainstem Big Wood River Detailed *E. coli* TMDL and allocations (November 2011)

Unit	Segment Boundaries	WQLS No.	Source by Land Ownership	% Land Owned	Type	WLA/LAs (cfu ⁹)
1	Headwaters to Trail Creek	NA	USFS	82.7%	LA	178.7
			BLM	5.0%	LA	10.8
			IDL	0.0%	LA	0.0
			Private	12.2%	LA	26.7
			WLAs	-	WLA	0.0
			10% Nat Bk	-	Nat Bk	27.0
			10% MOS	-	MOS	27.0
			TOTAL	-	-	270.2
2	Trail Creek to Glendale Diversion	2483	USFS	0.0%	LA	0.0
			BLM	16.6%	LA	107.9
			IDL	1.9%	LA	12.39
			Private	81.5%	LA	529.96
			Hailey	-	WLA	7.64
			Ketchum	-	WLA	19.1
			The Meadows	-	WLA	0.48
			10% Nat Bk	-	Nat Bk	84.68
			10% MOS	-	MOS	84.68
			TOTAL	-	-	846.81
3	Glendale Diversion to Base Line	2482	USFS	0.0%	LA	0.0
			BLM	4.5%	LA	49.4
			IDL	0.0%	LA	0.0
			Private	95.5%	LA	1,046.2
			WLAs	-	WLA	0.0
			10% Nat Bk	-	Nat Bk	136.9
			10% MOS	-	MOS	136.9
			TOTAL	-	-	1,369.4
4	Base Line to Magic Reservoir	NA	USFS	0.0%	LA	0.0
			BLM	27.3%	LA	313.3
			IDL	5.4%	LA	62.0
			Private + Water	67.3%	LA	772.4
			WLAs	-	WLA	0.0
			10% Nat Bk	-	Nat Bk	143.5
			10% MOS	-	MOS	143.5
			TOTAL	-	-	1,434.7

Unit	Segment Boundaries	WQLS No.	Source by Land Ownership	% Land Owned	Type	WLA/LAs (cfu ⁹)
5	Magic Reservoir to Highway 75	2478	USFS	0.0%	LA	0.0
			BLM	83.9%	LA	713.9
			IDL	0.6%	LA	5.1
			Private + Water	15.4%	LA	131.9
			WLAs	-	WLA	0.0
			10% Nat Bk	-	Nat Bk	106.3
			10% MOS	-	MOS	106.3
			TOTAL	-	-	1,063.5
6	Highway 75 to Little Wood River	2477	USFS	0.0%	LA	0.0
			BLM	44.9%	LA	40.5
			IDL	4.3%	LA	3.9
			Private + Water	50.8%	LA	45.8
			WLAs	-	WLA	0.0
			10% Nat Bk	-	Nat Bk	11.3
			10% MOS	-	MOS	11.3
			TOTAL	-	-	112.8
7	Little Wood River to Interstate 84	2476	USFS	0.0%	LA	0.0
			BLM	20.4%	LA	251.7
			IDL	0.0%	LA	0.0
			Private	79.6%	LA	982.2
			WLAs	-	WLA	0.0
			10% Nat Bk	-	Nat Bk	154.3
			10% MOS	-	MOS	154.3
			TOTAL	-	-	1,542.5
8	Interstate 84 to Snake River	NA	USFS	0.0%	LA	0.0
			BLM	7.0%	LA	90.6
			IDL	6.3%	LA	81.5
			Private + Water	86.7%	LA	1,122.0
			WLAs	-	WLA	0.0
			10% Nat Bk	-	Nat Bk	161.8
			10% MOS	-	MOS	161.8
			TOTAL	-	-	1,617.7

Note: Prepared by IDEQ-TFRO. Type refers to the type of allocation: LA = Load allocation for nonpoint sources; WLA = wasteload allocation for point sources; Nat Bk = natural background, and MOS = margin of safety.

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Appendix A. Response to Comment

The Idaho Department of Environmental Quality (DEQ) held a public comment period on the draft *Errata to the Big Wood River Watershed Management Plan (TMDL) of 2002* from September 21 to October 21, 2011.

Only one comment letter was received from the City of Hailey.

The City agreed with DEQ that changing the *E. coli* target to 126 colony forming units per 100 milliliters (cfu/100 mL) was appropriate to be consistent with Idaho's water quality standard. The City of Hailey pointed out a reference error in the table and indicated the mean flow was 2.48 cubic feet per second (cfs). The relevant tables have been changed to reflect these corrections.

The City also made additional comments on the original *Big Wood River Watershed Management Plan*, which was not open to or subject to public comment. Specifically, the City noted that previous comments by the US Environmental Protection Agency (EPA) on the original total maximum daily load (TMDL) had not been resolved. The EPA approved the TMDL in 2002; therefore, it is an approved TMDL under the Clean Water Act. The comment period addressed *only* the issue of *E. coli* in the approved TMDL, not total suspended solids (TSS) or total phosphorus (TP). Therefore, TP and TSS may be addressed at a future time should the TMDL be revised for those pollutants.

The City of Hailey references a draft post-TMDL assessment in their comments that includes only three years of data. The draft was not reviewed internally by DEQ State Office staff. The draft post-TMDL assessment remains a draft due to the lack of implementation in the watershed and the desire for more robust data. The purpose of the draft post-TMDL assessment was to help DEQ determine if nonpoint source inputs had been addressed appropriately. The DEQ Twin Falls Regional Office concluded nonpoint sources were addressed appropriately in the EPA-approved TMDL of 2002.

The City of Hailey also references a technical memorandum prepared by HDR Engineering for the City of Hailey, dated March 10, 2010, regarding TSS and TP. DEQ Twin Falls Regional Office staff met with HDR Engineering and City staff to discuss the technical memorandum. TSS and TP are not a subject of this *E. coli* public comment errata.

The City of Hailey also cites a letter from DEQ to EPA dated April 25, 2011, with regard to DEQ's interpretation as to the wasteload allocations subject to EPA TMDL approval. While it is true that DEQ asserted the "informational TMDLs" in the original TMDL were not approved by EPA, EPA differs in that view and has stated the TMDLs do apply under antidegradation policy. The TSS limits are being implemented as technology-based effluent limits (TBELs) in the draft and future permits, consistent with federal regulations, regardless of whether a TMDL is in place. The TP limits that EPA will implement in permits are to reduce source loading downstream of point source dischargers and to meet beneficial uses. These reductions are needed as part of the reasonable assurance that the overall TMDL load reductions and water quality standards are achieved.

DEQ has noted the City of Hailey's interest in revising wasteload allocations to the City. However, DEQ notes that the starting point for a TMDL is not the existing permitted loads but rather the loading capacity of the affected stream reach and downstream loading. Load capacity drives all TMDLs first; then existing loads are evaluated and subsequent allocations are parsed out for nonpoint sources, wasteload allocations for point sources, natural background, a margin of safety, and sometimes a reserve for growth. At the time of TMDL development, the watershed advisory group chose not to provide a reserve for growth. There does not appear to be any room to increase point source discharges for any facilities at this time.