State of Oregon
Department of Environmental Quality Memorandum

To: Snake River/Hells Canyon TMDL File **Date:** June 1, 2004

From: Holly Schroeder, WQ Administrator

Subject: Addendum to Snake River/Hells Canyon TMDL Order

The Snake River/Hells Canyon TMDL issued on July 15, 2003, is modified as follows:

(A) Table 4.0.7. is replaced in its entirety with the following Table 4.0.7:

Table 4.0.7. Total phosphorus allocable load for segments in the Snake River - Hells Canyon TMDL reach based on the water column target concentration of 0.07 mg/L and calculated average flows (May through September).

Segment	Location	Load (kg/day)
Total Upstream Snake River segment	RM 409 to 335	2,735
Total Brownlee Reservoir segment *	RM 335 to 285	2,829
Total Oxbow Reservoir segment **	RM 285 to 272.5	2,839

*equal to the measured inputs of the upstream Snake River plus the Powder and Burnt Rivers, plus the estimated inputs of unmeasured tributaries (such as Brownlee Creek). Loads from unmeasured tributaries were estimated at 80 kg/day (approximately 2x the loading assessed for the Weiser Flat tributaries that discharge into the Snake immediately upstream of Brownlee Reservoir, most is projected to be delivered in the spring and summer seasons).
** equal to the measured inputs of Brownlee Reservoir, plus the estimated inputs of unmeasured tributaries (such as Wild Horse River). Loads from unmeasured tributaries were estimated at 20 kg/day (approximately 50% the loading assessed for the Weiser Flat tributaries that discharge into the Snake immediately upstream of Brownlee Reservoir, most is projected to be delivered in the spring and summer seasons). Load allocations to unmeasured tributaries were calculated at 50% reduction from estimated loads due to high probability for high natural loading.

(B) Table 4.0.9. is replaced in its entirety with the following Table 4.0.9:

Table 4.0.9. Calculated total phosphorus load allocations for tributary, point and nonpoint sources to the Snake River - Hells Canyon TMDL reach based on calculated average flows (May through September).

Segment	Load Allocation[a,b] (kg/day)	Percent Reduction
Snake River Inflow	1,379	28
Owyhee River	71	73
Boise River	242	78
Malheur River	58	88
Payette River	469	34
Weiser River	136	65
Drains	91	86
Ungaged flows	137	64
Total Upstream Snake River Load Allocations	2582	54
Total Upstream Snake River Waste Load Allocations	153	
Total Upstream Snake River Segment Load and Waste Load Allocations	2,735[c]	
Burnt River	21	60
Powder River	33	74
Unmeasured Tributaries to Brownlee	40	50
Total Brownlee Reservoir Segment	2,829[d]	
Unmeasured Tributaries to Oxbow	10	50
Total Oxbow Reservoir Segment	2,839	

[a] The SR-HC TMDL target for total phosphorus for each tributary is a concentration of less than or equal to 0.07 mg/L total phosphorus as measured at the mouth of the tributary and applies from May through September. Because the total phosphorus target is concentration-based, actual allowable tributary load allocations under the TMDL are dependant on actual tributary flow and will fluctuate year to year. The total phosphorus load allocations listed in this table are based on averaged tributary flows measured in 1979, 1995 and 2000, which were average Snake River flow years, not necessarily average tributary flow years. Therefore they do not necessarily represent the calculated load allocations for any specific year or different series of years.

[b] Future data collection and analyses may determine that, due to natural conditions or other factors, the target concentrations for the mouths of the tributaries cannot be practicably achieved. This, in most cases, will occur when TMDLs are conducted on the tributaries. If subsequent tributary TMDLs indicate that the target concentration is not achievable, the Snake River/Hells Canyon TMDLs for total phosphorus will be reopened and appropriately revised.

[c] Total allocable load for this segment is 2,735 kg/day (2,582 kg/day from nonpoint sources and 153 kg/day from point sources)

[d] Total allocable load, includes point source wasteload allocation from upstream sources. A dissolved oxygen load allocation has also been established for this segment.

(C) Table 4.0.15b. is replaced in its entirety with the following Table 4.0.15b:

Table 4.0.15 b. Total suspended solids (TSS) load allocations (shown in bold type), sediment thresholds and percent reductions required for nonpoint sources within the Snake River - Hells Canyon TMDL reach (RM 409 to 188).

Source	Location (RM)	Calculated Load (kg/day)	Load Allocations [a] (kg/day)	Loading Capacity (kg/day)	% Reduction Required
Snake River Inflow	RM 409: Upstream Snake River Segment	677,785	677,785		0%
Owyhee River	RM 396.7: Upstream Snake River Segment	66,152	**48,007**		27%
Boise River	RM 396.4: Upstream Snake River Segment	130,466	130,466		0%
Malheur River	RM 368.5: Upstream Snake River Segment	92,870	**42,062**		55%
Payette River	RM 365.6: Upstream Snake River Segment	137,887	137,887		0%
Weiser River	RM 351.6: Upstream Snake River Segment	53,617	53,617		0%
Drains	Upstream Snake River segment (RM 409 to 335)	143,430	**57,628**		60%
Ungaged flows	Upstream Snake River segment (RM 409 to 335)	181,484	**118,178**		35%
Total Upstream Snake River Segment	RM 409 to 335	1,483,691		1,265,630	15% [c]
Burnt River	RM 296: Brownlee Reservoir Segment	13,274	**9,713**		27%
Powder River	RM 327.5: Brownlee Reservoir Segment	14,857	14,857		0%
Total Brownlee Reservoir Segment	RM 335 to 285	n/a [b]		1,290,200	
Total Oxbow Reservoir Segment	RM 285 to 272.5	n/a [b]		1,305,682	

a Load allocations (shown in bold type) are based on calculated load capacities, less a 10% margin of safety. In those cases where measured sediment concentrations were not observed to exceed the target values, no reductions are required. However, in an effort to prevent further degradation within the SR-HC TMDL reach, threshold values have been established at the current sediment loads. These thresholds will be recognized in considering future management options, and will act to direct future decisions to those options that will not result in an increase in sediment loading from these tributaries to the SR-HC TMDL reach.

b The sediment loading to these reaches cannot be accurately calculated due to the sink effect of the reservoirs. Thresholds have been determined using load capacity determinations and upstream loading calculations.

c The % reduction listed is representative of the reduction in total loading to the identified segment as a result of required reductions in loading realized upstream.

This memo shall be attached to and become part of the Snake River/Hells Canyon TMDL.

Issued by:

Holly Schroeder
Water Quality Administrator

Date:_____