

*The Department of Ecology's Supplemental Modeling Report.
A Critical Review
Dr. Dave H. Milne PhD. July 2018*

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12. APPENDIX A.

The "DeMeyer data" used in this Review (see Chapter 7).

SOURCE: John DeMeyer TMDL Report John DeMeyer 1/3

DESCHUTES RIVER @ E-Street CAPITOL LAKE DAM

DESCHUTES RIVER @ E-Street				CAPITOL LAKE DAM			
DATE	FLOW CFS	NO ₂ -NO ₃ mg/L	LOAD kg/day	DATE	FLOW CFS	NO ₂ -NO ₃ mg/L	LOAD kg/day
1/26/04	518	659	837	1/13/04	701	514	883 (+) 46
2/23/04	317	708	551	2/24	335	581	563 (+) 12
3/23/04	252	718	444	3/23	271	485	322 (-) 122
4/20/04	206	688	348	4/20	222	400	218 (-) 130
5/18/04	135	762	252	5/18	136	291	97 (-) 155
6/22/04	40	691	237	-	-	-	-
7/22/04	93	736	169	7/20	88	010	2 (-) 167
8/17/04	70	782	134	-	-	-	-
9/21/04	241	948	265	9/28	117	168	48 (-) 217
10/19/04	498	744	909	-	-	-	-
11/10/04	129	637	202	11/20	223	561	306 (+) 114
12/14/04	616	713	1,077	12/28	222	659	545 (+) 532
Σ = 452				Σ = 358			
1/25/05	436	831	889	-	-	-	-
2/15/05	193	827	391	-	-	-	-
3/29/05	1200	688	2,025	-	-	-	-
4/19/05	660	571	984	-	-	-	-
5/24/05	708	474	474	5/18	394	919	405 (-) 69
6/15/05	161	557	236	6/22	165	119	48 (-) 188
7/18/05	121	781	232	7/20	117	030	9 (-) 223
8/16/05	76	775	144	8/17	82	024	5 (-) 189
9/19/05	59	839	121	9/14	63	005	1 (-) 120
10/17/05	108	817	216	10/18	99	352	85 (-) 131
11/14/05	627	603	927	-	-	-	-
12/12/05	199	908	383	-	-	-	-

NITROGEN LOADING COMPARISONS - NO₂-NO₃
Deschutes River (E-Street) - Capitol Lake outlet (Dam)
2004 - 2008

DATA FROM JOHN DEMEYER USED FOR THIS ANALYSIS

Herbicide application on July 19th and 20th

Appendix I (p. 7) says the number level of nitrate in Deschutes River is 0.404 mg/L

2004

2005

Page 1 of the "DeMeyer data" used in this Review. This is a data set provided to the author by Mr. John DeMeyer in 2013. He obtained it from a Department of Ecology website, which was posted upon his request. The data set consists of his penciled copies of the following: Section 1 Deschutes River data from E-Street bridge (Tumwater) with dates, river flows (cfs), nitrate+nitrite concentrations (mg/L), and load (kg/day). Section 2, Capitol Lake data at the dam; dates, flows (cfs) through the dam, nitrate + nitrite concentrations (mg/L), load (kg/day), and "Reduction (kg/day)" [The "Reduction" entry consists of his own cal-

culations. Red annotations are my own.] The Ecology website showed data from 2004 through 2008. Data for 2004 (used in my Figure 7-1) showed the entire year's nitrogen entry and exit data; data for all other years showed only the summer patterns. (These summer patterns are all similar to that shown in Figure 7-1.)

After two weeks, the data unaccountably disappeared from the Ecology website. Neither he nor I can find it again. His notes include an entry on another page, "See p. 36 South Puget Sound Dissolved Oxygen Study." I find nothing pertaining to these data on that page or elsewhere in the SPSDOS reports.

These are the only data I've seen that report the actual flows of the Deschutes River and water exiting the Lake. All others show concentrations of nitrogen nutrients in the River water and the Lake water at the dam.

(Black bar obscures JDM's telephone number.)

Acknowledgements

My profoundest thanks for assistance, review, and encouragement with this project go to the following persons. Our discussions and their suggestions have guided and steered the reporting that follows. If any positive outcome for the whole Olympia-area community is the result, they helped make it happen.

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Anonymous WDOE Source #2

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