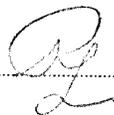


MEMORANDUM
Department of Ecology
P. O. Box 829
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TO: Tom Haggarty - Warren Myers

DATE: April 6, 1971

FROM: Ron Lee 

SUBJECT: Barn lot waste discharge to
a tributary of Omak Lake.

Wilbur Van Leuven sent us two water samples from a tributary to Omak Lake, and a sample of a barn lot discharge to the tributary. Leo J. Wolfe collected the samples on March 18, 1971. Enclosed are the analytical results which for the most part are self explanatory (Table 1). Sample No. 2 was a very high strength waste with little dilution. The high ammonia to total nitrogen ratio (310/373 or 83%) in sample No. 2 results from storage of an unpreserved sample under anaerobic conditions and does not represent actual field conditions.

Nitrate and phosphate levels obtained one-half mile downstream (station 3), however, indicate the presence of excessive nutrients which would adversely effect the oligotrophic status of Omak Lake. I would, therefore, recommend that this nutrient input be terminated due to its impact on Omak Lake eutrophication.

Table 1. BOD and nutrient data for samples collected from a tributary to Omak Lake March 18, 1971. All values are expressed in ppm.

Sample	BOD	NO ₃ -N	NO ₃ -N	Kjeldahl-N	NH ₃ -N	Total-N	Total-P	Ortho-P
1	less than 1	3.55	.01	.02	.01	3.59	.03	.10
2	2390	26.50	.45	36.0	310	373	86.9	45.8
3	less than 1	6.50	.02	.08	.02	6.62	.45	.23

Sample #1: Creek upstream from barn lot.

Sample #2: Barn lot effluent mixed with spring water flowing into creek.

Sample #3: One-half mile downstream.

RL:jae

