



MEMORANDUM

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 BRIAN NICKEL, EPA REGION 10  
 BILL HOESMAN, CLEARWATER PAPER CORPORATION

DATE: MARCH 23, 2010

CC: KEVIN BEATON, STOEL RIVES

RE: ADDITIONAL SNAKE RIVER RBM10 MODEL RUNS

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FILE: CWPC.001.000

**1.0 INTRODUCTION**

In a previous submittal (HydroQual, 2009), HydroQual presented a revision of the RBM10 modeling analysis performed by EPA (EPA, 2002) to develop BOD5 permit limits for the Clearwater Paper Corporation wastewater discharge to the Snake River. HydroQual’s revised modeling analysis was based on new data derived from Snake River field studies performed in 2005, 2006, and 2008. This revised model was employed to perform three model scenarios and their results were presented in this previous submittal. EPA region 10 has requested two additional model scenarios to be performed. This memorandum presents the results for these two additional modeling scenarios.

**2.0 MODEL SCENARIOS**

**2.1 Scenario 1**

This scenario represents a Clearwater effluent BOD5 load of 8,400 lb/d. No additional BOD5 loads are present. Figure 1a depicts a probability plot of the set of delta DO values resultant from this scenario loading conditions. The 95th delta DO is approximately 0.106 mg/L.

**2.2 Scenario 2**

This scenario included the addition of BOD loads from three nearby municipalities. Table 1 presents these additional loadings.

Table 1. Additional Point Sources	
Name	Monthly BOD5 Limit (lb/d)
City of Lewiston Wastewater Facility	1430
City of Clarkston Wastewater Facility	459
City of Asotin Wastewater Facility	41

As described in the model revision report (HydroQual, 2009), the BOD5 loadings for these 3 facilities were input at the Clearwater effluent location. A BODu to BOD5 ratio of 3.2 was used. For this scenario, the Clearwater effluent BOD5 load is kept at 8,400 lb/d, the same loading specified for scenario 1. Figure 1b depicts a probability plot of the set of delta DO values resultant from this scenario loading conditions. The 95th delta DO is approximately 0.121 mg/L.

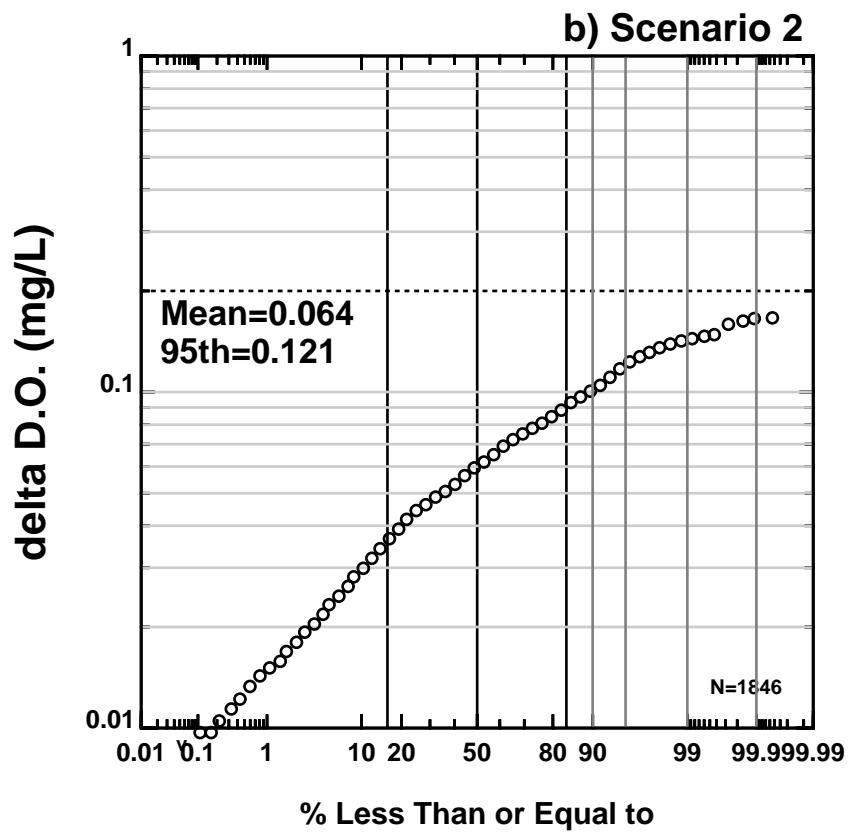
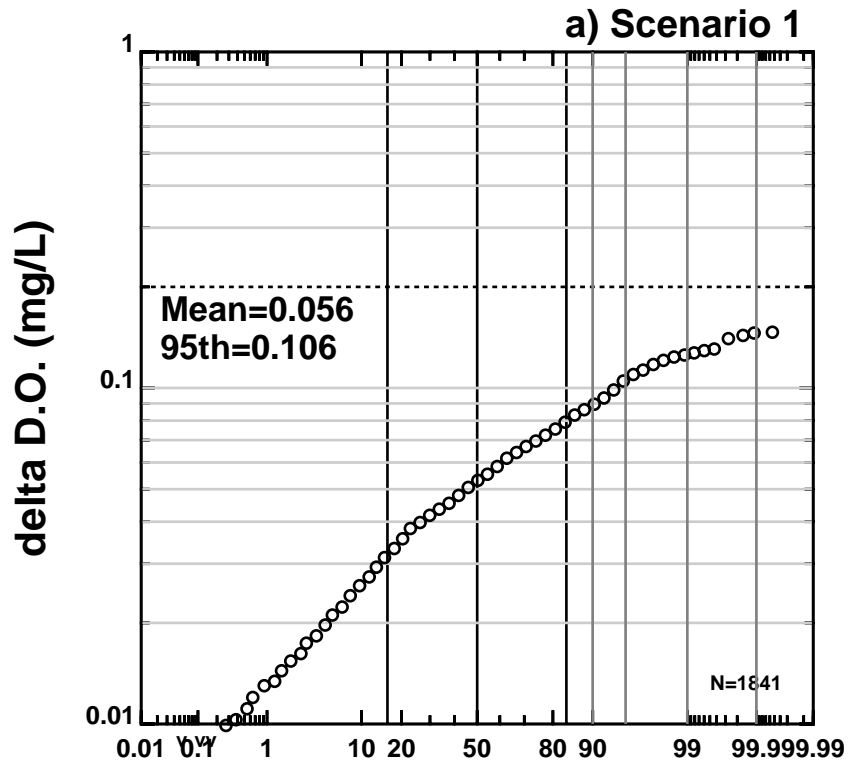
### 3.0 REFERENCES

HydroQual, 2009. "Revised Snake River RBM10 Model Application for BOD for Clearwater Paper Corporation's Discharge (NPDES Permit No. ID0001163)", Prepared for the Clearwater Paper Corporation, Mahwah, NJ.

EPA, 2002. "Analysis of the Impact of Potlatch Corporation Discharges on Dissolved Oxygen Concentrations in the Snake River". Memo from Ben Cope to Kristine Koch, NPDES Permit Writer (November, 2002).

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**Figure 1. Snake River RBM10 Model: Scenario Results.**