482642093011901 KABETOGAMA LAKE, near GAPPAS LANDING, near RAY, MN

Rainy Basin
Rainy Lake Subbasin

LOCATION.--Lat 48°26′42″, long 93°01′19″ referenced to North American Datum of 1927, St. Louis County, MN, Hydrologic Unit 09030003.

WATER-QUALITY RECORDS

REMARKS.--This site is part of a nutrient cycling study in Kabetogama Lake, Voyageurs National Park. Objectives of this study are to determine if the changes in Kabetogama Lake water levels since a change in rules governing dam operation (2000 rule curves) are affecting algal production (chlorophyll-a) and nutrient enrichment (total phosphorus) in the lake. Another objective is to assess nutrient loading to the lake from inflow sources and the potential contribution of nutrients from lake bottom sediment.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 1 of 2
[Remark codes: M, presence verified but not quantified.]

Date	Time	Medium name	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif-ic conduc-tance, wat unf µS/cm @ 25 degC (00095)	Temper-ature, water, deg C (00010)	Sam-pling depth, feet (00003)	Alka-linity, wat flt inf tit field, mg/L as CaCO3 (39086)	Bicar-bonate, wat flt infl pt titr., field, mg/L (00453)	Ortho-phos-phate, solids, recover-able, µg/g (63715)
May										
11...	0940	Surface water	11.7	8.9	87	7.6	--	35.4	43.1	--
11...	0950	Surface water	11.8	8.4	87	7.5	--	33.4	40.6	--
11...	0951	Surface water	11.7	8.9	87	7.6	.50	--	--	--
11...	0952	Surface water	11.8	8.8	87	7.5	3.00	--	--	--
11...	0953	Surface water	11.8	8.8	87	7.5	6.00	--	--	--
11...	0954	Surface water	11.8	8.7	87	7.5	9.00	--	--	--
11...	0955	Surface water	11.8	8.7	87	7.5	12.0	--	--	--
11...	0956	Surface water	11.8	8.6	87	7.5	15.0	--	--	--
11...	0957	Surface water	11.8	8.6	87	7.5	18.0	--	--	--
11...	0958	Surface water	11.8	8.5	87	7.5	21.0	--	--	--
11...	0959	Surface water	11.8	8.5	87	7.5	24.0	--	--	--
11...	1000	Surface water	11.8	8.4	87	7.5	27.0	--	--	--
13...	0950	Bottom material	--	--	--	--	--	--	--	1.0
Aug										
04...	1300	Surface water	9.0	8.0	92	18.3	.50	38.4	46.7	--
04...	1310	Surface water	8.4	7.8	93	18.1	31.0	38.4	46.8	--
05...	0930	Bottom material	--	--	--	--	--	--	--	1.9

482642093011901 KABETOGAMA LAKE, near GAPPAS LANDING, near RAY, MN—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
Part 2 of 2
[Remark codes: M, presence verified but not quantified.]

Date	Ammonia + org-N, bed sed total, mg/kg as N (00626)	Ammonia bed sedimnt total, mg/kg as N (00611)	Nitrate + nitrite bed sed total, mg/kg as N (00633)	Phosphorus, bed sedimnt total, mg/kg as P (00668)	Ammonia water, unfltrd mg/L (71845)	Nitrate + nitrite water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L as P (00666)	Phosphorus, water, unfltrd mg/L as P (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Chlorophyll a phytoplankton, acid m, µg/L (32211)
May											
11...	--	--	--	--	M	.005	.001	.005	.016	.42	3.80
11...	--	--	--	--	M	.007	.002	.009	.019	.43	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
13...	2,300	3.9	3	550	--	--	--	--	--	--	--
Aug											
04...	--	--	--	--	.02	.006	.001	.006	.017	.43	1.80
04...	--	--	--	--	.02	.002	.001	.005	.015	.44	--
05...	5,600	33	4	230	--	--	--	--	--	--	--