ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF SPORT FISH
LAKE SURVEY SUMMARY

LAKE Harding Lake

MAP REF. Big Delta B-6 T 6S, 5S R 5E, 4E S 12,13 FBM LAT. 64°26'N LONG. 146°51'W

LOC. 322 Richardson Hwy. SURF. ELEV. 715

1. SURF. ACRES 2,633 (2,508) MAX. DEPTH 170 ft. AVG. DEPTH ACRE FT. 185,000
SHOAL AREA WATER COLOR clear SECCHI READING 22 ft., 14 Aug 59
AQUATIC VEGETATION N.E. shore

2. FISH SPECIES: NATIVE NP, cisco, BB, WF INTRODUCED LT, RT, SS

3. FISHING HISTORY Good burbot fishing in winter, otherwise poor.

4. INVERTEBRATES annelid, mollusca and platyhelminths, mid and caddis fly larvae

5. INLETS three inlets, two small and one medium DISCHARGE one 4 ft. X 6 in. cfs
DISCHARGE cfs
DISCHARGE cfs
BARRIERS unknown

6. OUTLETS none DISCHARGE cfs
DISCHARGE cfs
BARRIERS

7. SPAWNING AREAS very limited except for high waters inundating grass land for NP to spawn

8. WATERSHED TYPE rolling hills, spruce - birch DRAINAGE AREA 4,000 ACRES

9. ACCESSIBILITY 2 mi. gravel road at mi. 322 Rich Hwy., east to camping area

10. ACCESS STATUS 3,281 ft. of state owned frontage

11. USE SITE on N.W. shore FACILITIES picnic tables, fire places, parking area, and loading ramp

12. OTHER USE private homes, power boating

13. POLLUTION sewage drainage, high BOD

14. REMARKS

Need intensive study to determine the best management program and species to introduce.

BY Metsker, Bandirola, Alt DATE

FG-206 2/69

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
CENTRAL LABORATORY, SALT LAKE CITY, UTAH

WATER QUALITY ANALYSIS
LAB ID # 192037 RECORD # 27543

PROVISIONAL RECORDS
SUBJECT TO REVISION

SAMPLE LOCATION: HARDING LK NR FAIRBANKS AK
STATION ID: 642520146511000 LAT.LONG.SEQ.: 642520 1465110 00
DATE OF COLLECTION: BEGIN--759999 END-- TIME--
COUNTY CODE: 090 PROJECT IDENTIFICATION: 78
DATA TYPE: 2 SOURCE: LAKE OR RESERVOIR GEOLOGIC UNIT:
COMMENTS:
NO DATE BOTTLES F-1

ALK,TOT (AS CACO3)	MG/L	30	NITROGEN TOT ORG N	MG/L	0.26
ALUMINUM TOTAL	UG/L	50	NITROGEN TOTKJD AS N	MG/L	0.30
BICARBONATE	MG/L	36	NO2 + NO3 AS N TOT	MG/L	0.05
BORON TOTAL	UG/L	40	NO2+NO3 AS N DISS	MG/L	0.05
CALCIUM DISS	MG/L	6.9	PHOS ORTHO DIS AS P	MG/L	0.01
CARBON TOT ORGANIC	MG/L	3.7	PHOSPHATE DIS ORTHO	MG/L	0.03
CHLORIDE DISS	MG/L	0.7	PHOSPHORUS TOT AS P	MG/L	0.01
COBALT TOTAL	UG/L <	50	POTASSIUM DISS	MG/L	0.9
COLOR		7	RESIDUE DIS CALC SUM	MG/L	34
COPPER TOTAL	UG/L	30	RESIDUE DIS TON/AFT		0.05
FLUORIDE DISS	MG/L	0.1	RESIDUE DIS TON/DAY		1080
HARDNESS NONCARB	MG/L	0	RESIDUE DIS 180C	MG/L	40
HARDNESS TOTAL	MG/L	27	SAR		0.1
IRON DISSOLVED	UG/L	10	SILICA DISSOLVED	MG/L	0.3
MAGNESIUM DISS	MG/L	2.3	SODIUM DISS	MG/L	1.5
MANGANESE DISSOLVED	UG/L	0	SODIUM PERCENT		11
MOLYBDENUM TOTAL	UG/L	0	SP. CONDUCTANCE LAB		70
NITROGEN NH4 ASN TOT	MG/L	0.04	STREAMFLOW(CFS)-INST		9999
NITROGEN TOT AS N	MG/L	0.35	SULFATE DISS	MG/L	3.1
NITROGEN TOT AS NO3	MG/L	1.6	WATER TEMP (DEG C)		12.0
			ZINC TOTAL	UG/L	0

CATIONS			ANIONS		
	(MG/L)	(MEQ/L)		(MG/L)	(MEQ/L)
CALCIUM DISS	6.9	0.345	BICARBONATE	36	0.591
MAGNESIUM DISS	2.3	0.190	CHLORIDE DISS	0.7	0.020
POTASSIUM DISS	0.9	0.024	FLUORIDE DISS	0.1	0.006
SODIUM DISS	1.5	0.066	SULFATE DISS	3.1	0.065
			NO2+NO3 AS N D	0.05	0.004
TOTAL		0.622	TOTAL		0.683

PERCENT DIFFERENCE = -4.70

Harding lake

MEI = 1.3

Average Depth = 53

Conductivity = 90 — micromhos conductivity at 20°C = 65

Acre ft. =

Surface acres = 2440

Max depth = 142'

Late winter D.O.s
no problems

→ Volume = 129,000 acre feet

$$MEI = \sqrt{\frac{4\,TDS}{\text{mean depth}}} = 1.3$$

$$\sqrt{\frac{x}{1.3}}$$