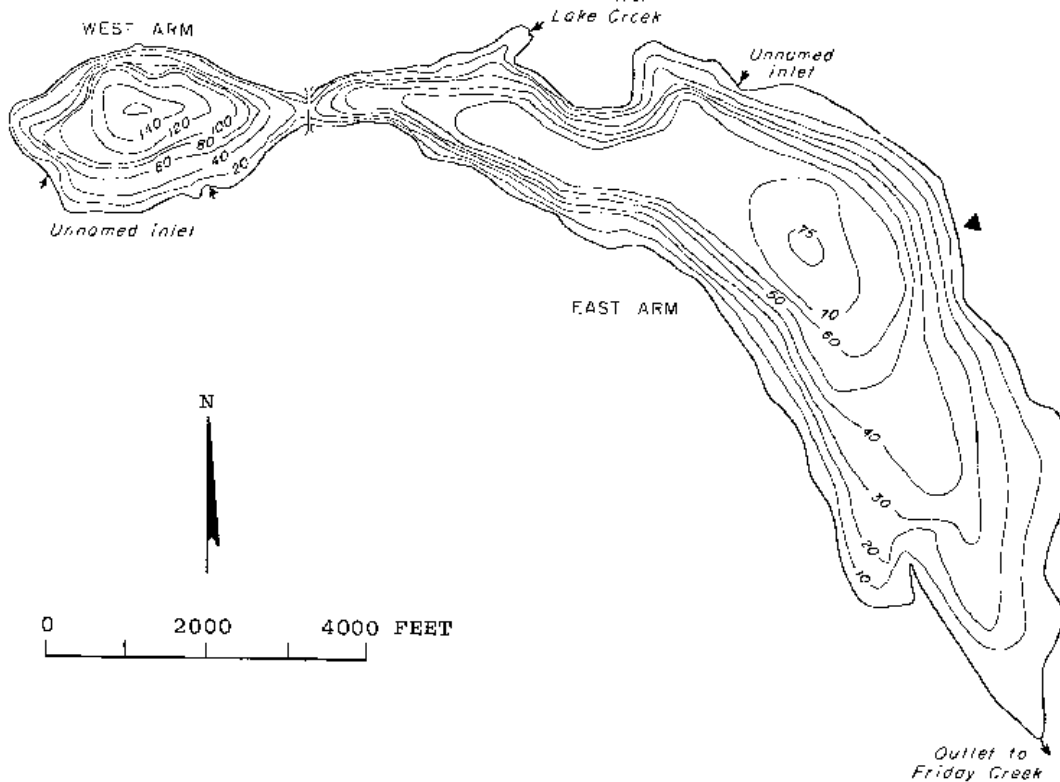




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**SAMISH (EAST ARM) LAKE -- WHATCOM COUNTY: 1997**

Size (acres) 680  
 Maximum Depth (feet) 75  
 Mean Depth (feet) 31  
 Lake Volume (acre-feet) 21080  
 Drainage Area (square miles) 9.20  
 Altitude (feet) 273  
 Shoreline Length (miles) 6.3



Source of morphometric data: Water Supply Bulletins 42, 43, and 57.

**VOLUNTEER-COLLECTED SECCHI DATA**

Date (Y/M/D)	Temperature (C)	Temperature (F)	pH	Water Color	%Cloud Cover	Recent Rain	Wind	Secchi Lake (ft)	Ht (in)	Abbrev.	Comments
STATION 1											
97/06/18	20.0	68.0	7.0	Lt Green	10	Light	Light	24.0	268.5		
97/07/02	-6.9	19.6	6.5	Lt Green	0	Trace	Calm	18.6	0.0		WATER LEVEL AT 268 FEET THREE INCHES.
97/07/16	20.0	68.0	6.0	Lt Green	0	None	Calm	16.2	0.0		WATER LEVEL WAS 268.5 FEET ABOVE SEA LEVEL.
97/07/29	22.0	71.6	6.0	Lt Green	0	None	Breezy	18.0	0.0		WATER LEVEL WAS 268.23 FEET ABOVE SEA LEVEL.
97/08/28	23.0	73.4	6.0	Lt Green	100	Light	Breezy	11.0	0.0		WATER LEVEL WAS 267 FEET 10 INCHES.
97/09/04				Undefined	25	None	Light	12.0	0.0		WATER WAS MODERATE GREEN.
97/09/24	-6.4	20.5	6.5	Pea-green	0	None	Calm	9.8	0.0		WATER LEVEL WAS 268.08 FEET

**LABORATORY RESULTS**

Date	Strata	Total Phosphorus (ug/L)	Total Nitrogen (mg/L)	Chlorophyll (ug/L)	Fecal Col. (colonies/100 mL) Site 1	Bacteria (colony forming units) Site 2	Turbidity (NTU)	Suspended Solids Total (mg/L)	Non-Volatile (mg/L)	Color (Pt-Co)
STATION 1										
97/06/04	E	4								
97/09/04	E	8	0.19	6.1						

97/09/04	H	9	0.49	
	STATION 3			
97/09/04	E	8	0.23	5.2
	STATION 3			
97/09/04	E			4.8

E=epilimnion composite, H=hypolimnion composite. Remarks codes: U = Below detection limits; J = Estimate.

#### SUMMARY OF VOLUNTEER SURVEY

There was no survey response for 1997.

#### FIELD OBSERVATIONS OF ECOLOGY STAFF

6-4-97 Blue-green algae rare.

9-4-97 Blue-green algae--moderate amount

#### TROPHIC STATUS

Estimated Trophic State:	Oligo-mesotrophic
Mean Trophic State Index (Secchi):	39 (Oligo-mesotrophic)
Mean Trophic State Index (Total Phosphorus):	34 (Oligotrophic)
Mean Trophic State Index (Chlorophyll a):	47 (Mesotrophic)

#### SUMMARY AND EXPLANATION OF TROPHIC STATE ASSESSMENT

Lake Samish exhibits properties of both an oligotrophic and a mesotrophic lake. Secchi and phosphorus data suggest an oligotrophic lake yet chlorophyll concentrations and summertime hypolimnion DO concentrations typify a mesotrophic lake, therefore, an oligo-mesotrophic assessment is justified.

#### COMMENTS FROM 97/06/30 AQUATIC PLANT SURVEY

partly cloudy, breeze. Circumnavigated shoreline. Not many plants in steeper sided areas. shallows with Vallisneria / Elodea meadows. Popular recreation lake. Many water intake lines along shore. Substrate mostly sandy or rocky. Maximum depth of plant growth: 4.5M.

#### AQUATIC PLANT LIST (This list may be from multiple years and sources.)

*Brasenia schreberi* (watershield) *Ceratophyllum demersum* (Coontail; hornwort) *Chara sp.* (muskwort) *Elatine sp.* (waterwort) *Eleocharis sp.* (spike-rush) *Elodea canadensis* (common elodea) *Elodea sp.* (waterweed) *Iris pseudacorus* (yellow flag) *Najas flexilis* (common naiad) *Nitella sp.* (stonewort) *Nuphar lutea* (yellow water-lily) *Nuphar polysepala* (spatter-dock, yellow water-lily) *Nymphaea odorata* (fragrant waterlily) *Potamogeton gramineus* (grass-leaved pondweed) *Potamogeton pectinatus* (sago pondweed) *Potamogeton sp (thin leaved)* (thin leaved pondweed) *Potamogeton sp.* (pondweed) *Potentilla palustris* (purple (marsh) cinquefoil) *Scirpus sp.* (bulrush) *Typha latifolia* (common cat-tail) *Vallisneria americana* (water celery)

Data collected and provided by Washington Department of Ecology's Lake Monitoring Program ([Maggie Bell-McKinnon](#), phone 360- 407-6124).

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