

ROUTING SLIP — MEMO

To: *Ren Perie -*

Subject:

Publication No. 73-e30

WA-09-9260

From: *Scott Leone -*

Date: *9-74*

Message: *File copy of Geneva lake Request and Lab Data.
for Report see Tech. Report # 74-3*

For: Inf. Action Approval Comment Reply

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Ron Pine, ~~Pete~~ Hildebrandt & Files

January 16, 1973

Bill Burwell

REQUEST FOR SURVEY, GENEVA LAKE, KING COUNTY

OBJECTIVE

1. To determine the current state of eutrophication of the lake.
2. To compare winter to summer conditions (later).

BACKGROUND

This office has received numerous complaints as to algae blooms and rapid eutrophication of Lake Geneva. There appears to be significant contributions of untreated domestic sewage to the lake caused by poor percolation and failing septic tanks in the basin. Due to percolation problems, FHA, VA, and bank loans on housing are difficult to obtain on existing housing, and no new housing is permitted within the area. The housing problem and data on the lake should assist the local service organizations in pursuing sewerage of the region.

ENTITY TO CONTACT

None

EXPECTED RESULTS

1. The current state of lake eutrophication.
2. The current level of pollution by pollution indicators.

SAMPLE LOCATIONS

You determine the locations in the lake. Sample the storm drain along the northwest shore if flowing. (Power boats are not allowed on the lake.)

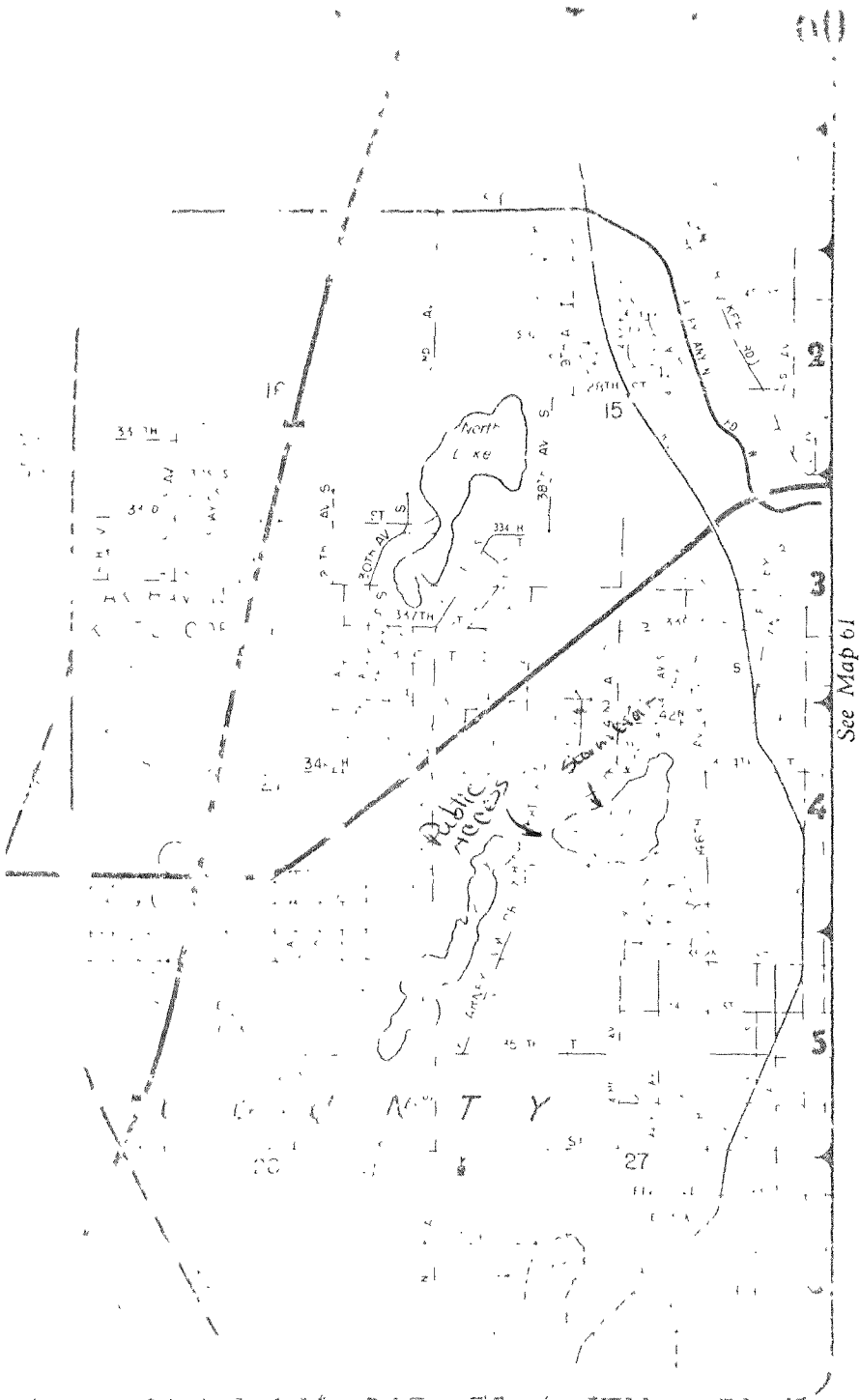
SAMPLE TESTING

Test for DO, temperature, total & fecal coliform, chlorophyll, organic, ammonia and nitrate nitrogen, ortho, poly (total), and organic phosphate, and BOD₅. Modify the sampling and testing as needed.

COMPLETION DATE

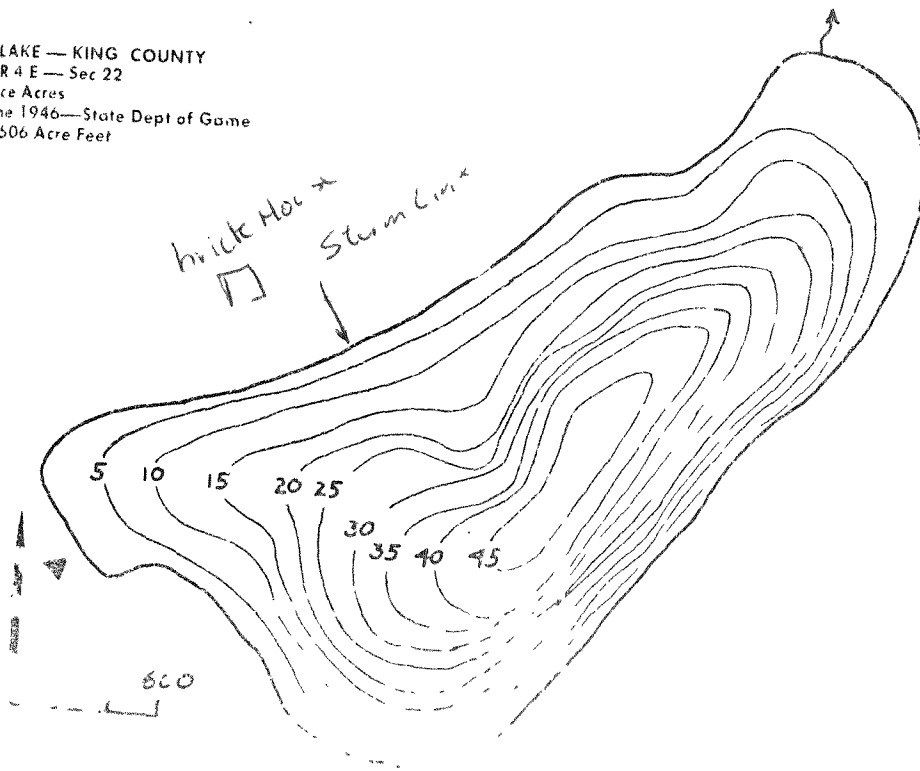
Run a survey this winter and again in the summer.

BB:11
1-16-73
1-16-73



NAME	ACRES	CLASSIFICATION	REMARKS
SIDEC LK	110-a 4.0-e	R Q41-G	1 mi N of Fivemile Lk & 1600 W of Auburn
KILLARNEY LK	385-a 31.3-e 15-s	R Q41-G	3/4 mi SW in Auburn, adjacent to Commencement Bay di
FIVEMILE LK	400-a 38.4-e 32-s	R Q41-G	4 mi SW in Auburn, di to Trout Lk & Steek Rv
MUD LK	225-a 2.8-e sh	R Q41-G	1 mi W in Fivemile Lk, Hylebos di to Commencement Bay di

NAVA LAKE — KING COUNTY
 N — R 4 E — Sec 22
 Surface Acres
 4 June 1946 — State Dept of Game
 e — 506 Acre Feet



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

WATER QUALITY LABORATORY

ORIGINAL TO:
G.S. Jettre
COPIES TO:
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LAB FILES

DATA SUMMARY

Source GENEVA LAKE

Collected By G.S.T

Date Collected 2-13-73

Goal, Pro./Obj. _____

Log Number:	73	685	686	687	688	689	690	691	692	693	44	45	STORET
Station:	1	2	3	4	5	6	7	8	9	10	11		
pH													00403
Turbidity (JTU)													00070
Conductivity (umhos/cm)@25°C													00095
COD													00340
BOD (5 day)													00310
Total Coliform (Col./100ml)	<40	74			<40	<40			<40				31504
Fecal Coliform (Col./100ml)	<20	<20			<20	<20			<20				31616
NO3-N (Filtered)	.35	.34	.34	.34	.34	.34	.34	.35	.35	.35	.35	.35	00620
NO2-N (Filtered)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	00615
NH3-N (Unfiltered)	.02	.01	.01	.01	.01	<.01	0	.01	.02	.01	.01	.01	00610
T. Kjeldahl-N (Unfiltered)	.02	.01	.02	.02	.01	*	*	*	*	*	*	.01	00625
O-PO4-P (Filtered)	.02	ND	ND	ND	ND	ND	ND	.01	ND	ND	ND	ND	00671
Total Phos.-P (Unfiltered)	.04	.03	.04	.03	.02	.03	.05	.03	.03	.03	.05	.05	00665
Total Solids													00500
Total Non Vol. Solids													
Total Suspended Solids													00530
Total Sus. Non Vol. Solids													
<u>T. Dis Solids</u>	<u>30</u>			<u>25</u>	<u>46</u>								

Note: All results are in PPM unless otherwise specified. ND is "None Detected"
Convert those marked with a * to PPB (PPM X 10³) prior to entry into STORET

* Not Rep'd & i
LAT REAGENTS PROVIDED

Summary By Stephen D. Hall Date 3-1-73



STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

WATER QUALITY LABORATORY

DATA SUMMARY

ORIGINAL TO:
D. Anderson
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LAB FILES

Source LAKE Geneva

Collected By D.A. J.R.P.

Date Collected 4-11-73

Goal, Pro./Obj. _____

Log No.	Station	Colonies/100 ml		FILL O-P ₄ -P	FILL NO ₂ -N	FILL NO ₃ -N	JWFILL T-Phos	NH ₂	E-K ₂ H ₄ -N		
		TOTAL Colif	FECAL Colif								
73-1409	A-5	< 40	< 40								
10	A#1	< 40	< 40					at cultured			
11	A#2	< 40	< 40	.01	.01	.07	.24	(Palm)	Snake	Bank	Bl. House
12	A#3	< 40	< 40								
13	B-5	< 40	< 40								
14	C-5	< 40	< 40								
15	A-10			.01	.01	.21	.36				
16	A-30			.01	.01	.01	.40				
17	B-5			.01	.01	.05	.40				
18	B-3			.01	.01	.19	.28	.01	.03		
19	B-10			.01	.01	.19	.16	.02	.02		
20	B-20			.01	.01	.01	.12				
21	B-40			.01	.01	.01	.10				
22	C-5			.01	.01	.05	.20				
23	C-2			.01	.01	.17	.14				
24	C-10			.01	.01	1.23	.08				
25	C-18			.01	.01	1.33	.08				

Note: All results are in PPM unless otherwise specified. ND is "None Detected"

Not ALL NH₂-N Run due to time limit exceeded

Summary by J. Taylor D. Nill Date 4-28-73

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

WATER QUALITY LABORATORY

ORIGINAL TO: G.S. [unclear].....
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LAB FILES:

DATA SUMMARY PAGE 1 of 2

Source CENOLA LAKE

Collected By GSJ-DA

Date Collected 6-21-23

Goal, Pro./Obj. _____

Log Number:	23	2332	34	35	36	37	38	39	40	41	42	STORET
Station:	A S	A S	A 15	A 20	B-5	B 4	B 18	B-26	C 5	C 7		
Pl.	71				9 [*]			67	47			00413
Turbidity (JTU)	35				22			2	10			00070
Conductivity (umhos/cm)@25°C												00095
COD												00340
BOD (5 day)												00310
Total Coliform (Col./100ml)	40				<40				<40			31504
Fecal Coliform (Col./100ml)	<40				<40				<40			31616
NO3-N (Filtered)	.02	.02	.08	.20	.02	.02	ND	ND				00620
NO2-N (Filtered)	ND	ND	ND	ND	ND	ND	ND	ND				00615
NH3-N (Unfiltered)	.12	.16	.16	.10	.02	.02	.18	.34	.06	.12		00610
T. Kjeldahl-N (Unfiltered)	156	32	36	20	.96	.48	.26	.52	.48	.18		00625
O-PO4 P (Filtered)	.07	.05	.04	.04	.02	.02	.02	.05				00671
Total Phos.-P (Unfiltered)	.12	.07	.06	.06	.07	.04	.04	.11				00665
Total Solids	108				80			63	65			00500
Total Non Vol. Solids	30				24			25	25			
Total Suspended Solids	23				21			-*	11			00530
Total Sus. Non Vol. Solids	0				1			-*	0			
Fecal Spher (col/100ml)	>400				<40				<40			

Note: All results are in PPM unless otherwise specified. ND is "None Detected"
Convert those marked with a * to PPB (PPM X 10³) prior to entry into STORET

* IN SUFFICIENT SAMPLE

Summary By J. [unclear] Date 2-5-23

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

WATER QUALITY LABORATORY

ORIGINAL TO:
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DATA SUMMARY Page 2 of 2

Source GENOVA LAKE

Collected By _____

Date Collected _____

Goal, Pro./Obj. _____

Log Number:	73- 2393	44	45	46	47						STORET
Station:	C-10	C-15	A-A	A-B	A-C						
pH											00403
Turbidity (JTU)											0070
Conductivity (umhos/cm) @ 25°C											00095
COD											00340
BOD (5 day)											00310
Total Coliform (Col./100ml)			>1,000	250	200						31504
Fecal Coliform (Col./100ml)			90	<40	<40						31616
NO3-N (Filtered)	.08	.06									00620
NO2-N (Filtered)	ND	ND									00615
NH3-N (Unfiltered)	ND	.18									00610
T. Kjeldahl-N (Unfiltered)	.08	.22									00625
O-PO4-P (Filtered)	ND	ND									00671
Total Phos.-P (Unfiltered)	.07	.02									00665
Total Solids											00500
Total Non Vol. Solids											
Total Suspended Solids											00530
Total Sus. Non Vol. Solids											
FECAL STREP (col/100ml)			165	<40	80						

Note: All results are in PPM unless otherwise specified. ND is "None Detected"
Convert those marked with a * to PPB (PPM X 10³) prior to entry into STORET

Summary By J. Epler G. Hall Date 7-5-73

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

ORIGINAL TO:
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LAB FILES



WATER QUALITY LABORATORY

DATA SUMMARY

Source LAKE Geneva

Collected By D. Anderson

Date Collected 10-16-73

Goal, Pro./Obj. _____

Log No.	Station	COLIFORM (col/100ml)			NO ₂ -N	NO ₃ -N	NH ₃ -N	O-P _{av}	T-P _{av}	T-KN
		TOTAL	FECAL	FECAL ST.						
73-3750	A-2'				.05	<.01	.02	.01	.12	.32
51	A-10'				.04	<.01	.06	.01	.11	-
52	A-25'				.02	<.01	.32	.01	.08	.40
53	A-SUR	150	<40	<40	-	-	-	-	-	-
54	B-SUR	150	<40	<40	.02	<.01	.02	.01	.07	-
55	B-10'				.02	<.01	.02	.01	.07	-
56	B-20'				.02	<.01	ND	.02	.07	.20
57	B-40'				.01	<.01	1.42	.01	.06	-
58	C-SUR	800	<40	48	.01	<.01	.04	.01	.06	-
59	C-2'				.01	<.01	.02	.01	.06	.02
60	C-10'				.01	<.01	.02	.01	.06	-
61	C-18'				.01	<.01	.02	.01	.06	.18

Note: All results are in PPM unless otherwise specified. ND is "None Detected"

Summary by Stephen D. Roll Date 11-2-73