

SAN DIEGO COUNTY
WATER QUALITY
CONTROL BOARD

2001 JUL 26 P 1:38

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Letter of Transmittal
(U.S. Mail)

Date: July 19, 2001

To: Kyle Olewnick
SDRWQCB
9771 Claremont Mesa Suite A
San Diego, CA 99124

From: Don Thomson
Water Quality Superintendent

Subject: SWEETWATER LAKE LIMNOLOGY WORKSHEET
PHOSPHATE AND NITRATE LEVELS OF SWEETWATER RESERVOIR

Enclosed you will find a copy of the Sweetwater Lake Limnology Phosphate and Nitrate Levels of Sweetwater Reservoir. If you have any questions please feel free to contact me at (619) 475-9047 x101.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Thomson", written over a horizontal line.

Don Thomson
Water Quality Superintendent

Enclosure: as cited

2001 data (?)

Sweetwater Reservoir Spring Valley, CA			
Date Sampled	Phosphate (ppb P)	Date Sampled	Nitrate (ppb N)
26-Jan	48.2	25-Jan	0.14
02-Mar	34.7	01-Mar	ND
30-Mar	29.6	29-Mar	ND
27-Apr	32.4	30-Jun	ND
03-May	23.0		
29-Jun	11.0		

ppm - N

↑

A. D. Home 07/19/01

SWEETWATER LAKE LIMNOLOGY WORKSHEET

Date: 01/20/01

Time: 0909

Visibility: 8' 0"

Lake Level: _____

Bacti Collected: YES NO

Aeration: ON OFF

Plankton Collected: YES NO

T & O Samples Collected: YES NO

LOG BOOM

INTAKE TOWER

Depth	ppm O ₂	Temp (C)	Comments
0'	7.2	24	
5'	17.8	24.25	
10'	7.0	24.25	
15'	5.7	23	
20'	1.7	19.5	
25'	1.3	18.75	
30'	1.3	16	
35'	1.4	15.5	
40'	1.3	15.5	
45'	1.4	15.25	
50'	1.7	15.5	
55'	1.8	15.5	
60'	1.8	15.5	

Lake Level	Depth	ppm O ₂	Temp (C)	Comments
	0'	7.5	24.5	
	5'	7.6	24.5	
	10'	7.3	24.5	
	15'	6.0	23	
	20'	1.5	19.5	
	25'	1.2	18.5	
	30'	1.2	16	
	35'	1.4	15.5	
	40'	1.3	15.5	
	45'	1.4	15.5	
	50'	1.6	14.75	
	55'	1.6	15.75	
	60'	1.7	15.75	

MIGUEL ANAREZ

Sampler

*Water intake cups are 40', 50', 60' and 75' from the bottom of the lake. Collect T & O sample at each intake depth.

Comments:

Plankton:	1	2	3	4	5	6	7	8	9	10	Tot #	Fac	Tot ASU
fragilaria	4	6	4	4	4	4	3	4	5	7	45		
Anabaena -Spicules	1	0	1	0	1	0	0	0	2	1	6		
Anabaenopsis	0	0	0	0	0	0	1	0	0	0	1		
Ceratium	1	1	1	0	0	1	1	0	0	1	6		

Raw Water Analyses				
pH	Turb	Alk	Visible algae growth	OTN

Taste & Odor Analysis				
Circle depth of intake	40'	50'	60'	75'
Rate 0 - 4				

M. Hux
Analyst

SWEETWATER LAKE LIMNOLOGY WORKSHEET

Date: 4/18/01
 Visibility: 5'10"
 Bacti Collected: YES NO
 Plankton Collected: YES NO

Time: 0745
 Lake Level: 75.88
 Aeration: ON OFF
 T & O Samples Collected: YES NO

← yes?

LOG BOOM

INTAKE TOWER

Depth	ppm O ₂	Temp (C)	Comments
0'	9.50	18	
5'	9.50	18.25	
10'	9.70	18.25	
15'	7.00 7.00	16.75 16.00	
20'	6.60	16.00	
25'	6.50	15.75	
30'	5.00	15.25	
35'	3.20	14.75	
40'	2.50	14.75	
45'	2.00	14.75	
50'	1.40	14.75	
55'	0.90	14.75	
60'	.80	14.50	

Lake Level	Depth	ppm O ₂	Temp (C)	Comments
	0'	9.8	18.25	
	5'	10.0	18.25	
	10'	9.50	18.25	
	15'	7.70	16.50	
	20'	6.80	16.00	
	25'	6.20	15.75	
	30'	5.00	15.50	
	35'	3.00	15.00	
	40'	2.20	14.75	
	45'	1.70	14.75	
	50'	1.40	14.75	
	55'	1.00	14.75	
	60'	0.80	14.75	

*Water intake cups are 40', 50', 60' and 75' from the bottom of the lake. Collect T & O sample at each intake depth.

Alvarez
 Sampler *Anabaena*
Spirogyra

Comments: *Asterionella* - Filter clogging
 T & O: *Asterionella* causes fishy smell if abundant
Spirogyra " grassy " " "
Anabaena " grassy or musty smell in moderate amounts.

Plankton:	1	2	3	4	5	6	7	8	9	10	Tot #	Fac	Tot ASU
<i>Asterionella</i>	36	24	24	28	20	28	20	20	24	20	244		
<i>Spirogyra</i>	24	24	32	24	28	24	32	32	24	24	268		
<i>Anabaena</i>	6	5	9	12	4	5	7	5	2	6	61		
-Fls Aquae													
<i>Euglena</i>	2	0	0	1	0	0	0	0	1	0			
<i>Volvox</i>	1	1	1	0	1	0	1	0	1	0			
<i>Fragilaria</i>	0	0	0	0	0	1	1	1	0	0			

Raw Water Analyses				
pH	Turb	Alk	Visible algae growth	OTN

Taste & Odor Analysis			
Circle depth of intake	40'	50'	60'
Rate 0 - 4			

M. King
 Analyst

SWEETWATER LAKE LIMNOLOGY WORKSHEET

Date: 11/5/2001

Time: 09:00

Visibility: 2'

Lake Level: 55' 0

Bacti Collected: YES NO

Aeration: ON OFF

Plankton Collected: YES NO

T & O Samples Collected: YES NO

LOG BOOM

INTAKE TOWER

Depth	ppm O ₂	Temp (C)	Comments
0'	10.4	12.25	
5'	10.5	12	
10'	9.6	12	
15'	9.2	12	
20'	8.5	12	
25'	6.3	12	
30'	4.8	12	
35'	4.6	12	
40'	4.3	12	
45'	4.1	12	
50'	4.1	12	
55'	4.1	12	
60'	4.1	12	

Lake Level	Depth	ppm O ₂	Temp (C)	Comments
	0'	10.2	12	
	5'	9.4	12	
	10'	9.2	12	
	15'	8.9	12	
	20'	8.9	12	
	25'	1.3	12	
	30'	1.4	12	
	35'	1.3	12	
	40'	1.3	12	
	45'			
	50'			
	55'			
	60'			

Miguel Alvarez
Sampler

*Water intake cups are 40', 50', 60' and 75' from the bottom of the lake. Collect T & O sample at each intake depth.

Comments: Euglena Bloom

Plankton:	1	2	3	4	5	6	7	8	9	10	Tot #	Fac	Tot ASU
Euglena	16	16	12	12	8	12	8	12	10	16	122		

Raw Water Analyses				
pH	Turb	Alk	Visible algae growth	OTN

Taste & Odor Analysis				
Circle depth of intake	40'	50'	60'	75'
Rate 0 - 4				

M. Klotz
Analyst

SWEETWATER LAKE LIMNOLOGY WORKSHEET

Date: 12/27/00
 Visibility: 1.8"
 Bacti Collected: YES NO
 Plankton Collected: YES NO

Time: 12:20
 Lake Level: 5494
 Aeration: ON OFF
 T & O Samples Collected: YES NO

LOG BOOM

INTAKE TOWER

Depth	ppm O ₂	Temp (C)	Comments
0'	13.5	15	
5'	11.1	14	
10'	10.6	13	
15'	10.5	12.5	
20'	10.3	12.5	
25'	9.5	12.5	
30'	6.3	12.5	
35'	4.0	12.5	
40'	3.9	12.5	
45'			
50'			
55'			
60'			

Lake Level	Depth	ppm O ₂	Temp (C)	Comments
	0'	10.3	15	
	5'	10.3	13.75	
	10'	10.1	12.5	
	15'	9.4	12.5	
	20'	9.2	12.5	
	25'	9.0	12.25	
	30'	7.3	12.5	
	35'	6.9	12.5	
	40'	6.9	12.5	
	45'			
	50'			
	55'			
	60'			

Miguel Alvarez
 Sampler

*Water intake cups are 40', 50', 60' and 75' from the bottom of the lake. Collect T & O sample at each intake depth.

Comments: Euglena Bloom

Plankton:	1	2	3	4	5	6	7	8	9	10	Tot #	Fac	Tot ASU
Euglena	20	20	24	24	24	24	28	28	28	16	236		

Raw Water Analyses				
pH	Turb	Alk	Visible algae growth	OTN

Taste & Odor Analysis				
Circle depth of intake	40'	50'	60'	75'
Rate 0 - 4				

M. Alvarez
 Analyst

SWEETWATER LAKE LIMNOLOGY WORKSHEET

Date: 10/18/00

Time: 0840

Visibility: 1' 2"

Lake Level: 56.18

Bacti Collected: YES NO

Aeration: ON OFF

Plankton Collected: YES NO

T & O Samples Collected: YES NO

LOG BOOM

INTAKE TOWER

Depth	ppm O ₂	Temp (C)	Comments
0'	7.0	20.5	
5'	6.8	20.5	
10'	6.7	20.5	
15'	6.4	20.25	
20'	6.4	20.25	
25'	4.9	20.25	
30'	3.0	20.25	
35'	.8	20.25	
40'	.4	20.25	
45'	.3	20.25	
50'	.3	20.25	
55'	.3	20.25	
60'	.3	20.25	

Lake Level	Depth	ppm O ₂	Temp (C)	Comments
	0'	7.1	20.5	
	5'	6.6	20.5	
	10'	6.5	20.5	
	15'	6.4	20.25	
	20'	6.3	20.25	
	25'	6.5	20.25	
	30'	.6	20.25	
	35'	.3	20.25	
	40'	.3	20.25	
	45'	.3	20.25	
	50'	.3	20.25	
	55'	.2	20.25	
	60'	.2	20.25	

Michael Alvarez
Sampler

*Water intake cups are 40', 50', 60' and 75' from the bottom of the lake. Collect T & O sample at each intake depth.

Comments:

Plankton:	1	2	3	4	5	6	7	8	9	10	Tot #	Fac	Tot ASU
Euglena	1	1	0	0	2	0	0	3	0	2	9		
Trachelomonas	1	2	2	1	1	0	2	1	1	3	14		
Chlamydomonas	40	40	82	40	40	32	32	32	40	40	368		

Raw Water Analyses				
pH	Turb	Alk	Visible algae growth	OTN

Taste & Odor Analysis				
Circle depth of intake	40'	50'	60'	75'
Rate 0 - 4				

M. Alvarez
Analyst

SWEETWATER LAKE LIMNOLOGY WORKSHEET

Date: 7/18/00

Time: 0820

Visibility: 2' 6"

Lake Level: ~~110~~ 69.75

Bacti Collected: YES NO

Aeration: ON OFF

Plankton Collected: YES NO

T & O Samples Collected: YES NO

LOG BOOM

Depth	ppm O ₂	Temp (C)	Comments
0'	8.6	25.25	
5'	8.5	25.25	
10'	7.7 7.7	25	
15'	8.0	25	
20'	.8	22.5	
25'	.6	21.5	
30'	.6	19	
35'	.5	18.25	
40'	.5	18	
45'	.5	18	
50'	.4	18	
55'	.4	18	
60'	.4	18	

INTAKE TOWER

Lake Level	Depth	ppm O ₂	Temp (C)	Comments
	0'	8.7	25.25	
	5'	8.4	25.25	
	10'	7.6 7.6	25	
	15'	8.7	25	
	20'	1.2	23	
	25'	.6	22	
	30'	.4	19	
	35'	.4	18.25	
	40'	.4	18.25	
	45'	.4	18.5	
	50'	.3	18.5	
	55'	.3	18.5	
	60'	.3	18.5	

Miguel Alvarez
Sampler

*Water intake cups are 40', 50', 60' and 75' from the bottom of the lake. Collect T & O sample at each intake depth.

Comments:

Plankton:	1	2	3	4	5	6	7	8	9	10	Tot #	Fac	Tot ASU
Anabaena	2	0	2	1	0	2	0	0	0	2	9		
Anabaena Plas Aquae	20	20	20	24	24	15	32	18	24	24	221		
Euglena	2	2	2	0	0	0	0	0	0	0	6		

Raw Water Analyses				
pH	Turb	Alk	Visible algae-growth	OTN

Taste & Odor Analysis				
Circle depth of intake	40'	50'	60'	75'
Rate 0 - 4				

M. Alvarez
Analyst