

APPENDIX E

BIOASSAY PROGRAM

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1970 and 1971
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Culture Bioassay Experiments, 1971.

APPENDIX E-1

BIOASSAY PROGRAM

TYPE, STATION, LOCATION AND DURATION OF EXPERIMENTS, 1970 and 1971

1970

Experiment	Station	Lake & Location	Duration
		<u>Osoyoos</u>	
NEB	1	midlake	May 26 - June 10
PCB	1	midlake	July 21 - 30
		<u>Skaha</u>	
NEB	1	Okanagan River	May 20 - June 4
	1	"	Aug. 24 - Sept. 8
PCB	1	"	July 21 - 30
	1	"	Aug. 13 - 21
	2	Okanagan Falls	July 21 - 30
	2	"	Aug. 13 - 21
		<u>Okanagan</u>	
NEB	1	midlake off Summerland	May 22 - June 5
	1	trout hatchery	Aug. 24 - Sept. 8
PCB	1	"	July 21 - 30
	1	"	Aug. 13 - 21
	2	Kelowna Bridge	July 21 - 30
	2	Kelowna Bridge	Aug. 13 - 21
	3	Vernon Arm - midlake	July 21 - 30
			Aug. 13 - 21
		<u>Kalamalka</u>	
NEB	1	midlake off Crystal Waters Resort	June 8 - 22
	1	"	Aug. 17 - Sept. 1
PCB	1	"	July 21 - 30
	1	"	Aug. 13 - 21
		<u>Wood</u>	
NEB	1	midlake 3/4 mile from north shore	June 9 - 23
PCB	1	"	June 21 - 30

1971

Experiment	Station	Lake & Location	Duration
		Osoyoos	
NEB	1	Northern region	June 7 - 16
	2	Southern region	June 7 - 16
PCB	1	Mouth of Okanagan River	Aug. 10 - 16
	2	midlake	Aug. 10 - 16
	3	Southern region	Aug. 10 - 16
SEE	1	midlake	July 20 - 29
TME	1	midlake	Aug. 19 - 28
		Vaseux	
NEB	1	midlake	June 10 - 19
PCB	1	"	Aug. 10 - 16
		Skaha	
NEB	1	Okanagan River	May 19 - 28
	2	Okanagan Falls	May 19 - 28
PCB	1	Okanagan River (north of Penticton STP.)	Aug. 10 - 16
	2	Okanagan River - mouth	Aug. 10 - 16
	3	midlake	Aug. 10 - 16
	4	Okanagan Falls	Aug. 10 - 16
SEE	1	midlake	July 7 - 16
TME	1	midlake	Aug. 25 - Sept. 3
		Okanagan	
NEB	1	Vernon Arm	May 22 - 31
	2	Armstrong Arm	May 22 - 31
	3	Kelowna Bridge	June 10 - 19
	4	Peachland (just off)	June 11 - 20
	5	Summerland (just off)	June 23 - July 2
	6	Penticton	June 14 - 23
PCB	1	Armstrong Arm	Aug. 17 - 23
	2	Vernon Arm	" "
	3	Norther region - midlake	" "
	4	Kelowna Bridge	" "
	5	Mill Creek	" "
	6	Trepanier Creek	" "
	7	Peachland	" "
	8	Midlake - between Peachland & Summerland	" "
	9	Trout Creek	" "
	10	Penticton	" "
SEE	1	midlake	July 7 - 16
TME	1	midlake	Aug. 21 - 30

1971
(Continued)

Experiment	Station	Lake & Location	Duration
		<u>Kalamalka</u>	
NEB	1	Southern region	May 31 - June 9
	2	Northern region	" "
PCB	1	Western Arm	Aug. 10 - 16
	2	Cosens Bay	" "
	3	midlake	" "
	4	Southern region	" "
	5	Channel	" "
SEE	1	midlake	Aug. 9 - 18
TME	1	midlake	Sept. 14 - 23
		<u>Wood</u>	
NEB	1	Northern region	June 1 - 10
	2	Southern region	" "
PCB	1	Northern region	Aug. 10 - 16
	2	midlake	" "
	3	Southern region	" "
SEE	1	midlake	July 23 - Aug. 1
TME	1	midlake	Sept. 15 - 24

NEB - Nutrient Enrichment Bioassay
 PCB - Pure Culture Bioassay
 SEE - Sewage Enrichment Experiments
 TME - Trace Metal Experiments

APPENDIX E-2

RANKING OF OKANAGAN LAKES BASED ON YIELD. PURE CULTURE

BIOASSAY EXPERIMENTS, 1970

PCB No.1, July 21 - 30, 1970

<u>Selenastrum</u>	<u>Anabaena</u>	<u>Microcystis</u>
1. Skaha Lake (mouth of Okanagan R.)	1. Osoyoos Lake (midlake)	1. Woods Lake (midlake) Okanagan Lake (off trout hatchery, Summerland)
2. Okanagan Lake (off trout hatchery, Summerland)	2. Okanagan Lake (Vernon Arm) Woods Lake (midlake) Kalamalka (midlake)	2. Okanagan Lake (Kelowna Bridge)
3. Okanagan Lake (Vernon Arm)	3. Skaha Lake (Okanagan Falls) Okanagan Lake (off trout hatchery, Summerland)	3. Kalamalka (midlake)
4. Osoyoos (midlake) Skaha (Okanagan Falls) Okanagan (Kelowna Bridge)	4. Okanagan Lake (Kelowna Bridge)	4. Okanagan Lake (Vernon Arm)
5. Kalamalka (midlake)	5. Skaha Lake (mouth of Okanagan River)	5. Skaha Lake (off Okanagan River) Skaha Lake (Okanagan Falls) Osoyoos Lake (midlake)
6. Woods (midlake)		

P.C.B. No. 2¹, August 13 - 21, 1970

1. Skaha Lake (mouth of Okanagan River)	1. Skaha Lake (mouth of Okanagan River)	1. Skaha Lake (mouth of Okanagan River)
2. Skaha Lake (Okanagan Falls) Okanagan Lake (off hatchery, Summerland)	2. Okanagan Lake (Vernon Arm) Okanagan Lake (off hatchery, Summerland)	2. Okanagan Lake (off hatchery, Summerland)
3. Okanagan Lake (Vernon Arm)	3. Kalamalka (midlake)	3. Skaha Lake (Okanagan Falls) Kalamalka Lake (midlake)
4. Kalamalka Lake (midlake)	4. Skaha Lake (Okanagan Falls) Okanagan Lake (Kelowna Bridge)	4. Okanagan Lake (Vernon Arm) Okanagan Lake (kelowna Bridge)
5. Okanagan Lake (Kelowna Bridge)		

1. Only Okanagan, Skaha and Kalamalka tested.

APPENDIX E-3

RANKING OF OKANAGAN LAKES BASED ON YIELD, PURE CULTURE BIOASSAY
EXPERIMENTS, 1971

P.C.B. No.1 August 10 - 23, 1971 Ranking by Lake: (station average)

<u>Selenastrum</u>	<u>Anabaena</u>	<u>Microcystis</u>
1. Skaha Lake	1. Skaha Lake	1. Skaha Lake
2. Wood Lake	2. Osoyoos Lake	2. Osoyoos Lake
3. Vaseux Lake	3. Vaseux Lake	3. Wood Lake
4. Osoyoos Lake	4. Kalamalka Lake	4. Kalamalka Lake
5. Kalamalka Lake	5. Wood Lake	5. Vaseux Lake
6. Okanagan Lake	6. Okanagan Lake	6. Okanagan Lake

Ranking by Station

1. Skaha Lake (St. No.2)	1. Skaha Lake (St. No.3)	1. Skaha Lake (St. No.3)
2. Skaha Lake (St. Nos.1&3)	2. Osoyoos Lake (St. No.2)	2. Skaha Lake (St. No.2)
3. Skaha Lake (St. No.4)	3. Skaha Lake (St. No.4)	3. Osoyoos Lake (St. No.2)
4. Wood Lake (St. No.3)	4. Osoyoos Lake (St. No.3)	4. Kalamalka Lake (St. No.2)
5. Wood Lake (St. No.2)	5. Vaseux Lake (St. No.1)	5. Skaha Lake (St. No.1)
6. Vaseux Lake (St. No.1)	6. Kalamalka Lake (St. No.2)	6. Skaha Lake (St. No.4)