

BRENNER 1981

SUMMARY

THIS REPORT SUMMARIZES DATA COLLECTED JULY 14., 1981, BY FISHERIES PERSONNEL OF THE MASSACHUSETTS DIVISION OF FISHERIES AND WILDLIFE TO ASSESS THE FISH POPULATION AND MAKE APPROPRIATE MANAGEMENT RECOMMENDATIONS.

THE FISH SAMPLING OPERATIONS WERE CARRIED OUT BY THE FISHERIES CREW FROM THE CONN. VALLEY WILDLIFE DISTRICT UNDER THE DIRECTION OF PHILLIP BRENNER, DISTRICT FISHERIES MANAGER.

I. LAKE ASSESSMENT: THIS FERTILE , 69. ACRE WARM WATER POND IS LOCATED ONE MILE EAST OF RTE. 63 NORTH OF DEPOT ROAD. ACCESS IS OFF LONG HILL ROAD.

THE POND IS CHARACTERIZED BY CLEAR WATER COLOR, TRANSPARENCY OF 9.FT., PH OF 6.5, TOTAL ALKALINITY: 51.PPM., TOTAL HARDNESS OF 43.PPM AND A SPECIFIC CONDUCTANCE OF , UMHOS/CM. THE MEAN AND MAXIMUM DEPTH ARE 9. FEET AND 20.FT. RESPECTIVELY. THE BOTTOM IS MUCK AND SAND . THE 1.9 MILES OF SHORELINE ARE 40. PERCENT DEVELOPED. THERE ARE 20. RESIDENTIAL DWELLINGS. THE EMERGENT AQUATIC VEGETATION COVERS APPROXIMATELY 40. PERCENT OF THE SURFACE AREA.

THERE IS ONLY AN INFORMAL ACCESS AND PARKING ALONG THE ROAD. A 7/26/50 SURVEY FOUND 5.0% TROUT WATER BY VOLUME, BUT THE 1981 SURVEY FOUND NONE. SUBMERGENT VEGETATION COVERS ALMOST THE ENTIRE BOTTOM. THE POND IS UNUSUAL IN HAVING A VERY HIGH ALKALINITY FOR A VALLEY POND.

II. FISH STOCK ASSESSMENT: THE FISH POPULATION WAS SAMPLED ON JULY 14., 1981. USING GILL NETS AND SHOCKBOAT. THE 9 SPECIES OBSERVED, LISTED IN ORDER OF ABUNDANCE INCLUDED: BLUEGILL, LARGEMOUTH BASS, PUMPKINSEED, CHAIN PICKEREL BROWN BULLHEAD, GOLDEN SHINER AND BLACK CRAPPIE, AMERICAN EELS AND SMALLMOUTH BASS. A TOTAL OF 15. LARGEMOUTH BASS WERE COLLECTED (1.5 TO 18.4 INCHES) REPRESENTING 20.5 PERCENT OF THE TOTAL FISH SAMPLE BY NUMBER AND 42.6 PERCENT BY WEIGHT. ANALYSIS OF GROWTH RATES INDICATED BELOW AVERAGE GROWTH COMPARED TO THE STATE AVERAGE FOR THIS SPECIES. MOST FISH ATTAINED THE LEGAL SIZE OF 12.0 INCHES AT 4+ YEARS OF AGE. MORTALITY WAS ESTIMATED AT .% AT AGE 3 AND .% AT IV. THE P.S.D. IS PROJECTED TO BE 20.0% $\pm$ 19.4% INDICATING AN UNBALANCED BASS POPULATION. CONDITION FACTORS WERE ABOVE AVERAGE .

A TOTAL OF 4. CHAIN PICKEREL WERE COLLECTED (5.0 TO 14.9 INCHES) REPRESENTING 5.5 % OF THE TOTAL FISH SAMPLE BY NUMBER AND 8.8% BY WEIGHT. MOST FISH ATTAINED THE LEGAL SIZE OF 15.0 INCHES AT YEARS OF AGE; A GROWTH RATE WHICH IS AVERAGE COMPARED TO THE STATE AVERAGE FOR THIS SPECIES. CONDITION FACTORS WERE BELOW AVERAGE . THE GAME FISH LISTED IN ORDER OF SAMPLE ABUNDANCE ARE: LARGEMOUTH BASS, CHAIN PICKEREL AND SMALLMOUTH BASS.

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NON-GAME FISH, IN ORDER OF ABUNDANCE
BLUEGILL, PUMPKINSEED, EELS, GOLDEN SHINER,
BROWN BULLHEAD AND BLACK CRAPPIE.

BLUEGILL (33, SAMPLED) RANGED IN SIZE FROM 2.5
TO 6.4 INCHES. GROWTH RATES WERE POOR
COMPARED TO THE STATE AVERAGE. A MEAN SAMPLE CONDITION
FACTOR OF 94, IS ABOVE AVERAGE FOR THIS SPECIES.
THEY REPRESENTED 45.2 PERCENT OF THE TOTAL SAMPLE BY
NUMBER AND 19.8 PERCENT BY WEIGHT.

PUMPKINSEEDS (13, COLLECTED) RANGED IN SIZE FROM
3.5 TO 6.4 INCHES. ANALYSIS OF GROWTH RATES
INDICATED POOR GROWTH COMPARED TO THE STATE
AVERAGE FOR THIS SPECIES. THE MEAN SAMPLE CONDITION
FACTOR OF 99, IS ABOVE AVERAGE. PUMPKINSEEDS REPRE-
SENTED 17.8 PERCENT OF THE TOTAL SAMPLE BY NUMBER AND
10.3 PERCENT BY WEIGHT.

BLACK CRAPPIE (2, COLLECTED) RANGED IN SIZE
FROM 7.0 TO 9.4 INCHES AND ACCOUNTED FOR 2.7 PERCENT
OF THE SAMPLE BY NUMBER AND 5.1 PERCENT BY WEIGHT.
THE GROWTH RATE IS BELOW AVERAGE. CONDITION FACTORS
ARE NEAR AVERAGE FOR THIS SPECIES.

GOLDEN SHINERS (3, COLLECTED) RANGED IN SIZE
FROM 6.5 TO 8.4 INCHES AND ACCOUNTED FOR 4.1 PERCENT
OF THE TOTAL SAMPLE BY NUMBER AND 5.9 PERCENT BY WEIGHT.
THE GROWTH RATES ARE

THE FISH POPULATION IS DOMINATED BY STUNTED
SUNFISH AND THE LARGEMOUTH BASS POPULATION IS OVER
FISHED WITH LOW PSD'S. BASS GROWTH IS BELOW AVERAGE
DUE TO COMPETITION. A FEW YOUNG OF THE YEAR SMALLMOUTH
WERE SAMPLED BUT THIS IS NOT SMALLMOUTH HABITAT, NO
YELLOW PERCH WERE SAMPLED ALTHOUGH THEY WERE STOCKED
HERE IN THE 1940'S.

14.57.15.UCLP, AAT1P3014,

0.157KLNS.

FISH SAMPLE, LENGTH-FREQUENCIES SHEET

Water: LEVERETT POND Town: LEVERETT Date 7/14/81Method of Collection: SHOULDER + GILLNETS Time, Weather, Etc.: PARTLY CLOUDY

Species:

Inches	Milli- meters	B	BB	BC	CP	EELS	GS	LMB	P	SMB
1.5-1.9	38-50							5		
2.0-2.4	51-63							1		F
2.5-2.9	64-75	2				E				E
3.0-3.4	76-88					E				W
3.5-3.9	89-101	7				L		1	3	
4.0-4.4	102-113	5				S		1	3	S
4.5-4.9	114-126	7								O
5.0-5.4	127-139	8			1	P			3	U
5.5-5.9	140-151	3				R			3	N
6.0-6.4	152-164	1				E			1	S
6.5-6.9	165-177					S	1	1		
7.0-7.4	178-189			1		S				X
7.5-7.9	190-202		1		1	U	1	1		E
8.0-8.4	203-215					T	1	1		O
8.5-8.9	216-228		1					1		Y
9.0-9.4	229-240			1	1			1		
9.5-9.9	241-253									
10.0-10.4	254-266		1							
10.5-10.9	267-278							1		
11.0-11.4	279-291									
11.5-11.9	292-304									
12.0-12.4	305-317									
12.5-12.9	318-329									
13.0-13.4	330-342									
13.5-13.9	343-355									
14.0-14.4	356-367									
14.5-14.9	368-380				1					
15.0-15.4	381-393									
15.5-15.9	394-405									
16.0-16.4	406-418									
16.5-16.9	419-431									
17.0-17.4	432-444									
17.5-17.9	445-456									
18.0-18.4	457-469							1		
18.5-18.9	470-482									
19.0-19.4	483-494									
19.5-19.9	495-507									
20.0-20.4	508-520									
20.5-20.9	521-532									
21.0-21.4	533-545									
22.0-22.4	559-571									
23.0-23.4	559-571									
24.0-24.4	610-621									
25.0-25.4	635-647									
25.5-25.9	648-659									
26.0-26.4	660-672									
27.0-27.4	686-698									
28.0-28.4	711-723									
28.5-28.9	724-736									
Total No.		33	3	2	4		3	15	13	-
Weight: kilograms										
(pounds)		12.7	1.0	0.7	1.2	-	0.8	5.85	1.4	-

FISH SAMPLE, LENGTH-FREQUENCIES SHEET

Water: Leversett Pond Town: Leversett Date 7/14/81Method of Collection: Day Shuck bag Time, Weather, Etc.: Partly Cloudy, Windy

Species:

Inches	Milli- meters	B	CP	LMB	P	SMB
1.5-1.9	38-50			5		
2.0-2.4	51-63			1		CA. 24
2.5-2.9	64-75					
3.0-3.4	76-88					35 mm
3.5-3.9	89-101				1	
4.0-4.4	102-113	1			1	
4.5-4.9	114-126	2				
5.0-5.4	127-139	2			1	
5.5-5.9	140-151	1			1	
6.0-6.4	152-164					
6.5-6.9	165-177					
7.0-7.4	178-189					
7.5-7.9	190-202		1			
8.0-8.4	203-215					
8.5-8.9	216-228					
9.0-9.4	229-240					
9.5-9.9	241-253					
10.0-10.4	254-266					
10.5-10.9	267-278					
11.0-11.4	279-291					
11.5-11.9	292-304					
12.0-12.4	305-317					
12.5-12.9	318-329					
13.0-13.4	330-342					
13.5-13.9	343-355					
14.0-14.4	356-367					
14.5-14.9	368-380					
15.0-15.4	381-393					
15.5-15.9	394-405					
16.0-16.4	406-418					
16.5-16.9	419-431					
17.0-17.4	432-444					
17.5-17.9	445-456					
18.0-18.4	457-469					
18.5-18.9	470-482					
19.0-19.4	483-494					
19.5-19.9	495-507					
20.0-20.4	508-520					
20.5-20.9	521-532					
21.0-21.4	533-545					
22.0-22.4	559-571					
23.0-23.4	559-571					
24.0-24.4	610-621					
25.0-25.4	635-647					
25.5-25.9	648-659					
26.0-26.4	660-672					
27.0-27.4	686-698					
28.0-28.4	711-723					
28.5-28.9	724-736					
Total No.		6	1	6	4	
Weight: kilograms						
(pounds)		0.6	0.1	Trace	0.4	

FISH SAMPLE, LENGTH-FREQUENCIES SHEET

Water: Leverett Pond Town: Leverett Date 7/31/81Method of Collection: Shootbag 30min Time, Weather, Etc.: 8:30 - mostly clear
AIR Temp. 80° F

Species:

Inches	Milli- meters	B	CP	EELS	LMB	P
1.5-1.9	38-50					
2.0-2.4	51-63					
2.5-2.9	64-75	2				
3.0-3.4	76-88			P		
3.5-3.9	89-101	5		2	1	2
4.0-4.4	102-113	4		2		2
4.5-4.9	114-126	4		5		
5.0-5.4	127-139	6	1	2		2
5.5-5.9	140-151	2		4		1
6.0-6.4	152-164	1		1		1
6.5-6.9	165-177				1	
7.0-7.4	178-189					
7.5-7.9	190-202					
8.0-8.4	203-215					
8.5-8.9	216-228					
9.0-9.4	229-240					
9.5-9.9	241-253					
10.0-10.4	254-266					
10.5-10.9	267-278					
11.0-11.4	279-291					
11.5-11.9	292-304					
12.0-12.4	305-317					
12.5-12.9	318-329					
13.0-13.4	330-342					
13.5-13.9	343-355					
14.0-14.4	356-367					
14.5-14.9	368-380					
15.0-15.4	381-393				1	
15.5-15.9	394-405					
16.0-16.4	406-418					
16.5-16.9	419-431					
17.0-17.4	432-444					
17.5-17.9	445-456					
18.0-18.4	457-469				1	
18.5-18.9	470-482					
19.0-19.4	483-494					
19.5-19.9	495-507					
20.0-20.4	508-520					
20.5-20.9	521-532					
21.0-21.4	533-545					
22.0-22.4	559-571					
23.0-23.4	559-571					
24.0-24.4	610-621					
25.0-25.4	635-647					
25.5-25.9	648-659					
26.0-26.4	660-672					
27.0-27.4	686-698					
28.0-28.4	711-723					
28.5-28.9	724-736					
Total No.		28	1		3	8
Weight: kilograms						
(pounds)		1.9	0.1		3.5	0.8

FISH SAMPLE, LENGTH-FREQUENCIES SHEET

Water: Leversett Pond Town: Leversett Date 7/14/81Method of Collection: Gill Nets (overnight) Time, Weather, Etc.: Partly Cloudy - Very Windy

Species:		Gill	Net 1		Gill	Net 2	2	Gill	Net 3	
Inches	Milli- meters	BB	LMB	BC	CP	GS	LMB	B	BB	
1.5-1.9	38-50									
2.0-2.4	51-63									
2.5-2.9	64-75									
3.0-3.4	76-88									
3.5-3.9	89-101									
4.0-4.4	102-113									
4.5-4.9	114-126							1		
5.0-5.4	127-139									
5.5-5.9	140-151									
6.0-6.4	152-164									
6.5-6.9	165-177									
7.0-7.4	178-189			1						
7.5-7.9	190-202					1	1		1	
8.0-8.4	203-215					1	1			
8.5-8.9	216-228	1								
9.0-9.4	229-240			1	1					
9.5-9.9	241-253									
10.0-10.4	254-266	1								
10.5-10.9	267-278		1							
11.0-11.4	279-291									
11.5-11.9	292-304									
12.0-12.4	305-317									
12.5-12.9	318-329									
13.0-13.4	330-342									
13.5-13.9	343-355									
14.0-14.4	356-367									
14.5-14.9	368-380				1					
15.0-15.4	381-393									
15.5-15.9	394-405									
16.0-16.4	406-418									
16.5-16.9	419-431									
17.0-17.4	432-444									
17.5-17.9	445-456									
18.0-18.4	457-469									
18.5-18.9	470-482									
19.0-19.4	483-494									
19.5-19.9	495-507									
20.0-20.4	508-520									
20.5-20.9	521-532									
21.0-21.4	533-545									
22.0-22.4	559-571									
23.0-23.4	559-571									
24.0-24.4	610-621									
25.0-25.4	635-647									
25.5-25.9	648-659									
26.0-26.4	660-672									
27.0-27.4	686-698									
28.0-28.4	711-723									
28.5-28.9	724-736									
Total No.		2	1	2	2	2	2	1	1	
Weight: kilograms										
(pounds)		0.8	0.3	0.7	1.0	0.6	0.95	0.1	0.2	

FISH SAMPLE, LENGTH-FREQUENCIES SHEET

Water: Lakeview Pond Town: Lakeview Date 7/14/81Method of Collection: Gill Nets 4+5 Time, Weather, Etc.: 11:00 AM - 1:00 PMPartly Cloudy, Windy
Air Temp 78°

Species:

Inches	Milli- meters	Gill Net # 4	Gill Net # 5				
		LMB	LMB	B	P	GS	
1.5-1.9	38-50						
2.0-2.4	51-63						
2.5-2.9	64-75						
3.0-3.4	76-88						
3.5-3.9	89-101			2			
4.0-4.4	102-113	1					
4.5-4.9	114-126						
5.0-5.4	127-139						
5.5-5.9	140-151				1		
6.0-6.4	152-164						
6.5-6.9	165-177					1	
7.0-7.4	178-189						
7.5-7.9	190-202						
8.0-8.4	203-215						
8.5-8.9	216-228		1				
9.0-9.4	229-240		1				
9.5-9.9	241-253						
10.0-10.4	254-266						
10.5-10.9	267-278						
11.0-11.4	279-291						
11.5-11.9	292-304						
12.0-12.4	305-317						
12.5-12.9	318-329						
13.0-13.4	330-342						
13.5-13.9	343-355						
14.0-14.4	356-367						
14.5-14.9	368-380						
15.0-15.4	381-393						
15.5-15.9	394-405						
16.0-16.4	406-418						
16.5-16.9	419-431						
17.0-17.4	432-444						
17.5-17.9	445-456						
18.0-18.4	457-469						
18.5-18.9	470-482						
19.0-19.4	483-494						
19.5-19.9	495-507						
20.0-20.4	508-520						
20.5-20.9	521-532						
21.0-21.4	533-545						
22.0-22.4	559-571						
23.0-23.4	559-571						
24.0-24.4	610-621						
25.0-25.4	635-647						
25.5-25.9	648-659						
26.0-26.4	660-672						
27.0-27.4	686-698						
28.0-28.4	711-723						
28.5-28.9	724-736						
Total No.		1	2	2	1	1	
Weight: kilograms							
(pounds)		0.1	1.0	0.1	0.2	0.2	