

An Analysis with Conclusions Concerning
The Sylvan Beach Breakwater Pier
at Oneida Lake

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INTRODUCTION

The Fresh Water Institute at Rensselaer Polytechnic Institute has embarked upon an expanded in-depth questionnaire survey of four lakes in New York State. The lakes selected for study are Oneida Lake, Lake George, Schroon Lake, and Saratoga Lake. Each lake selected satisfies the following criteria: 1) a distinct trophic state (refers to the nutrient and productivity condition of the lake), 2) a unique lake size, and 3) a unique character as being primarily a recreational lake. The survey work is oriented toward water quality and environmental quality research on the lakes. From this, information can be obtained for the proper management and utilization of each lake.

Questionnaire data from different types of lake users has been obtained. The information gathering process is via six basic questionnaires, each specifically designed to apply to the following groups: Recreationists (picnickers, swimmers, campers, boaters, sightseers, etc.), Fishermen (both the serious and the casual), Cottage and Homeowners, Hotels, Motels, and Lodges, Non-Lodging Commerce, and Marinas.

Questionnaires were handed out during the summers of 1970 and 1971, and over 6,000 have been completed and returned. Every form that was given out was coded so that it is known where, when, and to which group it was given. The guideline used was that if 10% of the total questionnaires were returned from an area, then that group of data is to be considered as a sample representative of the area. The overall average rate of return for the survey is from 13 to 15% for recreationists and fishermen, and is 20% and above for cottage and homeowners and all the commercial forms.

Selected survey results are listed in the appendix, with emphasis placed on Oneida Lake. Returns from Oneida Lake were received from 810 recreationists, 213 cottage and homeowners, and 135 fishermen and others for a total of 1,158.

One of the basic goals of the questionnaire survey is to provide a source for community feedback by compiling and analyzing the responses from the direct questions, and from the comments offered by the respondents. The questionnaires have provided information to point out the activities, interests, attributes, and annoyances, along with a great deal more valuable communication from the lake users.

ANALYSIS

Oneida Lake is a flat-bottomed, relatively shallow, and highly productive lake. Through natural aging, the lake has become nutrient-rich, with an abundance of algae. The U.S. Geological Survey report by P. Greeson and G. Meyers, "The Limnology of Oneida Lake an Interim Report," 1969, states: "The importance of nutrient-rich bottom sediments as a continual source of dissolved materials within the lake is greatly accentuated. Sixty-five percent of the lake bottom is shallower than 30 feet and can be subjected to mixing with the overlying water."

The high nutrient level yields conditions responsible for the abundance of fish in the lake, bringing about the magnificent fishing opportunities available at Lake Oneida.

Lake George and Schroon Lake have different geological, biological, chemical make-ups, and as a result, these lakes are strikingly different. These unproductive lakes are nutrient-poor, and thus have clearer water and fewer fish among many other differences. Due to these differences, people who come to Oneida Lake will have different primary activities than those who go to Lake George and Schroon Lake. The survey results point this out:

Question: What are the primary activities that you have been doing doing while you or your group are at this site?

Relative Rank for Each Lake

	<u>Cottage and Homeowners</u>		<u>Recreationists</u>		<u>Fishermen</u>	
	<u>Oneida Lake</u>	<u>Lake George</u>	<u>Oneida Lake</u>	<u>Schroon Lake</u>	<u>Oneida Lake</u>	<u>Lake George</u>
Swimming	1	1	1	1	4	1
Fishing	2	6	2		1	3
Boating	3	2	4	4	2	2
Rest and Relaxation	4	4	3	2	3	3

Question: What factors do you consider to be the most important positive attributes of this area?

Relative Rank for Each Lake

	<u>Cottage and Homeowners</u>		<u>Recreationists</u>		<u>Fishermen</u>	
	<u>Oneida Lake</u>	<u>Lake George</u>	<u>Oneida Lake</u>	<u>Schroon Lake</u>	<u>Oneida Lake</u>	<u>Lake George</u>
Good Fishing Sites	1		1		1	11
Away from Crowds	2	5	5	4		5
Boating Facilities	3	3	3		2	
Relaxing Place	4	4		3	4	

These data point out the major importance of fishing to Oneida Lake, and its importance in comparison to two other major recreational lakes. The data also show that at the three lakes compared, swimming is an activity of significance, and yet, at Oneida Lake, poor water quality heads the list of annoying aspects.

Oneida Lake

	<u>Cottage & Homeowners</u>	<u>Recreationists</u>	<u>Fishermen</u>
Poor Water Quality	1	1	1
Not Enough Beach	2	2	

The "Poor Water Quality" that is referred to in the above data as "most annoying aspects" of the area is actually composed of the nutrients and algae that is so important to the abundance of fish. An ideal situation for swimming would be clearer water, but this would bring about an environment that could be detrimental to the maintenance of the present fish population of the lake. This situation could not be tolerated because it would threaten Oneida Lake's greatest asset, sport fishing. Therefore, a balance must be struck so that the nuisance level of nutrients and algae can be held at a level acceptable for swimming, yet still be conducive to the maintenance of large populations of fish. It should be pointed out that the water quality which the survey respondents are objecting to is not sewage pollution, but comes about as a consequence of natural nutrients and algal growth. The U.S. Geological Survey report by P. Greeson and G. Meyers, "The Limnology of Oneida Lake, An Interim Report," 1969, states: "Routine biological and chemical data revealed that the lake has become eutrophic both through the natural processes of lake aging and from the inflow of nutrient-rich water from the fertile drainage basin."

Information gained from the questionnaires has shown that many people would like to have the New York State Department of Transportation breakwater pier at Sylvan Beach opened to fishing. The entrance to the pier is presently fenced off in order to protect people from the dangerous conditions brought about by an absence of railing along the length of the 1/4 mile long pier, which has a slightly curved concrete surface. A 1971 state-conducted engineering test determined that the pier is structurally sound. The results obtained from the survey questionnaires from Oneida Lake, and particularly from the Sylvan

Beach area, substantiate the need for a safe fishing pier and point out which groups of individuals would benefit if such a facility was made available to the public at that site.

The pier itself provides an excellent attachment surface and breeding area for fish. The surrounding pier area has always been an ideal place to fish, any season or any time of the day, as stated on the questionnaires by many long-time fishermen residing in the area.

The pier extends into the lake approximately 1/4 mile and would give non-boating fishermen (especially those who cannot afford to buy or rent a boat) the opportunity to fish in deep water. Fishing along the shore is marginal because the waters are very shallow around the lake's perimeter. The survey questionnaires contain comments from parents who complain about the shore waters being so shallow that their children are able to wade far out from the shoreline where they cannot be properly watched from the beach.

As cited by some participants of a meeting held at Sylvan Beach regarding the pier (April 8, 1972), a study made by Dr. John Forney of the Cornell University Biological Field Station at Shackleton Point has shown that only 10 to 15% of the walleyed pike population (the lake's most fished-after specie) in Oneida Lake is being caught by fishermen. Based on the above study, it was concluded that 25 to 30% of the pike could be fished without depleting the lake. Thus, a considerable increase of fishing could be supported by the lake, and the additional fishermen attracted by a fishing pier would not be harmful to the fish population.

The economic impact a fishing pier would have on the area would be large. The Fresh Water Institute survey data, as listed in the Appendix, shows that the average amount spent per day by fishermen is \$15 to \$19. Considering the size of the pier, and the excellent fishing opportunities it could offer, it would be conservative to estimate that between 500 and 1,000 fishermen would use the pier each weekend.

Therefore, fishermen alone could increase the gross receipts of the area by \$20,000 to \$40,000 per weekend.

Survey results also indicate the following:

<u>Nature of the Visit</u>	<u>% of Total Respondents</u>	
	<u>Fishermen</u>	<u>Recreationists</u>
One Day	14%	29%
Weekend	12	33
Vacation	21	35
Seasonal Residents	16	
Permanent Residents	48	19
<u>With Family or Friends</u>		
Self	20%	21%
Family	50	86
Friends	30	27
<u>The Respondent Resides in</u>		
New York State	97%	94%
Out of State	3	6
<u>Home County</u>		
Onondaga	63%	43%
Oneida	18	38
Other (Broome, Chanago, Madison, Lewis, Oswego, Seneca, Monroe, & Wayne)	19	19

These results show that Oneida Lake is primarily a family recreational area used extensively for all purposes by New York State residents. Therefore, a fishing facility at Oneida Lake would be of benefit to a large portion of New York State residents because it is easily accessible, owing to the lake's central location in the state, and close proximity to the New York State Thruway.

Among the 135 completed questionnaires from Oneida Lake fishermen, 17 were returned from Sylvan Beach, the site of the break-water pier. In the portion of the questionnaires left open for comments, 11 of the 17 specifically requested an opening of the pier to fishing. These people stated that they could not afford to obtain a boat, that

the pier was a necessity because the shore waters were too shallow for fishing, and that they preferred pier fishing to fishing from a boat. Survey data showed that 88% of the Oneida Lake fishermen fished from a boat. Clearly, a portion of the reported percentage of these boat fishermen are forced to fish from a boat because there is presently no other alternative means for fishing.

CONCLUSION

One man stated in his comments at the end of a Fishermen's survey form: "Years ago we used to come to Oneida Lake with 3 or 4 cars full of people and we were able to fish from the pier. This pier is now closed to us fishermen and most of the people I used to fish with are now fishing in other areas (Canada). We used to be able to swim and later lay on the beach, but for the last few years there isn't any more beach at Sylvan Beach and now are trying to find other areas like conditions we used to have at Sylvan Beach. Please give us back our fishing pier and beach."

Many others also indicated feelings similar to this person. These people are being denied access to the lake's outstanding fishing opportunities because, either they cannot afford to own or rent a boat for fishing, or because the present breakwater pier at Sylvan Beach is not open to fishermen.

All New York State residents have a right to gain access to the state's natural resources. Construction of a safe fishing pier at Oneida Lake would be an ideal means of making this great resource available to all New York State.

At Sylvan Beach there presently exists a pier that could be converted into a safe fishing facility by installing a guard railing around the perimeter and improving the surface. A renovation of this type, and the piers subsequent opening to the public, would give many people the chance to enjoy this valuable state asset.

APPENDIX

Selected Questionnaire Results Compiled by K. Jack Kooyoomjian for
the Fresh Water Institute at Rensselaer Polytechnic Institute in Troy,
New York

NOTE: For the reported data, the percentages given represent the proportion of all respondents answering that particular question. In some cases, the summation of percentages in a particular category may total more than 100% because two or more answers could apply to one respondent.

Question: What are the primary activities that you have been doing while you or your group are at this site?

Relative Rank for Each Lake

	<u>Cottage and Homeowners</u>		<u>Recreationists</u>		<u>Fishermen</u>	
	<u>Oneida Lake</u>	<u>Lake George</u>	<u>Oneida Lake</u>	<u>Schroon Lake</u>	<u>Oneida Lake</u>	<u>Lake George</u>
	Swimming	1	1	1	1	4
Fishing	2	6	2		1	3
Boating	5	2	4	4	2	2
Rest and Relaxation	4	4	3	2	3	3

Question: What factors do you consider to be the most important positive attributes of this area?

Relative Rank for Each Lake

	<u>Cottage and Homeowners</u>		<u>Recreationists</u>		<u>Fishermen</u>	
	<u>Oneida Lake</u>	<u>Lake George</u>	<u>Oneida Lake</u>	<u>Schroon Lake</u>	<u>Oneida Lake</u>	<u>Lake George</u>
	Good Fishing Sites	1st	-	1	-	1
Away from Crowds	2nd	5	5	4	-	5
Boating Facilities	3rd	3	3	-	2	-
Relaxing Place	4th	4	-	3	4	-
Nearness to Home	5th	5	2	-	3	-

Question: What do you consider the most annoying aspects of this area?

Relative Rank for Each Lake

	<u>Cottage and Homeowners</u>		<u>Recreationists</u>	<u>Fishermen</u>	
	<u>Oneida Lake</u>	<u>Lake George</u>	<u>Oneida Lake</u>	<u>Oneida Lake</u>	<u>Lake George</u>
	Poor Water Quality	1st	-	1	1
Not Enough Beach	2nd	-	2	3	-
Commercial, too much	-	1	-	-	1

Question: Have you ever been turned away from any of the facilities listed below in this area because of overcrowding?

Percent of Total

	<u>Recreationists</u>		<u>Fishermen</u>	
	<u>Oneida Lake</u>	<u>Schroon Lake</u>	<u>Oneida Lake</u>	<u>Lake George</u>
No.	71.5%	77%	80%	67%

Oneida Lake Fishermen Survey Results

Average number of people in a group	4
	<u>% of Total Respondents</u>
Nature of visit	
One day	14%
Weekend	12
Vacation	21
Seasonal Residents	16
Permanent Residents	48

Oneida Lake Fishermen Survey Results (Continued)

	<u>% of Total Respondents</u>
Fish from	
Boat	88%
Shore	15
Consider Themselves	
Serious Fishermen	59
Casual Fishermen	41
The Respondent	
Intended to Return	84
Did Not Intend to Return	0
Did Not Know	0
No Response	16
The Respondent Resides In	
New York State	97
Out of State	3
Home County	
Onondaga	63
Oneida	18
Other (Broome, Chenango, Madison, Monroe, Oswego, and Wayne)	19
With Family or Friends	
Self	20
Family	50
Friends	30
Your Primary Activities are	
Fishing	91
Boating	69
Rest & Relaxation	47
Swimming	44
The Most Important Positive Attributes of the Area	
Good Fishing Sites	72
Boating Facilities	63
Nearness to Home	62
Individual or Group Spends per day (Average)	\$15 to \$19

Oneida Lake Recreationist's Survey Results

Number of People in a Group (average)	4.5
	<u>% of Total Respondents</u>
Nature of visit	
One day	29%
Week-end	33
Vacation	35
Permanent Residents	19
The Respondent	
Intended to Return	75
Did not Intend to Return	15
Did not Know	20
The Respondent Resides in	
New York State	94
Out of State	6
Home County	
Onondaga	43
Oneida	38
Other (Chenango, Lewis, Madison, Monroe, Oswego, Seneca)	19
With Family	
Self	21
Family	86
Friends	27
Group Outing	8
Your Primary Activities are	
Swimming	75
Fishing	67
Boating	54
The Most Important Positive Attributes of the Area	
Good Fishing Sites	51
Nearness to Home	48
Boating Facilities	43

Oneida Lake Recreationist's Survey Results (Continued)

	<u>% of Total Respondents</u>
Respondents Lodging was	
Cottage	28%
Hotel, Motel, Lodge	40
Friend's House	13
Public Campsite	9
Most Annoying Aspects	
Poor Water Quality	73
Not enough Beach	38
Individual or Group Sepnds per Day (average)	\$25 to 29

Oneida Lake Cottage and Homewoner's Survey Results

Number of Resudents per Household (average)	3.7
	<u>% of Total Respondents</u>
The Residence is	
Owned by the Respondent	96%
Rented	4
Your Primary Activities are	
Swimming	78
Fishing	72
Boating	69
Rest & Relaxation	60
The Most Important Positive Attributes of the Area	
Good Fishing Sites	56
Away From Crowds and City Life	54
Boating Facilities	48
Relaxing Place to be	44
The Most Annoying Aspects	
Poor Water Quality	60
Not Enough Beach Area	31

Oneida Lake Cottage and Homeowner's Survey Results (Continued)

Overall Family Income (modal grouping) \$5,000 to \$10,000

Group (Family) Spends per Week \$75 to 79

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The laboratory facilities of the Rensselaer Fresh Water Institute are located at Smith Bay, Putnam Station, New York.