

**IMPACT OF WATER QUALITY  
ON RECREATIONISTS' USE OF  
EAST SIDNEY LAKE, NEW YORK**

by

**Nancy A. Connelly and Tommy L. Brown**



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TABLE OF CONTENTS

	<u>Page</u>
LIST OF TABLES . . . . .	ii
LIST OF FIGURES . . . . .	iii
INTRODUCTION . . . . .	1
METHODS . . . . .	2
RESULTS AND DISCUSSION . . . . .	3
Survey Response . . . . .	3
Estimated Recreational Use of East Sidney Lake . . . . .	4
Characteristics of East Sidney Lake Recreationists . . . . .	4
Recreationists' Perceptions of Water Quality . . . . .	7
Reduction in Benefits due to Poor Water Quality . . . . .	10
Recreationists' Willingness to Pay for Improved Water Quality . . . . .	13
Additional Services, Facilities, or Activities Desired by Recreationists . . . . .	15
CONCLUSIONS AND IMPLICATIONS . . . . .	16
LITERATURE CITED . . . . .	17
APPENDIX A: Mail Questionnaire . . . . .	18

LIST OF TABLES

Table	Title	Page
1	Mean days and estimated total days spent at East Sidney Lake for various activities and in total by type of permit purchased, 1990 . . . . .	6
2	Reasons for visiting East Sidney Lake . . . . .	8
3	One-way distance traveled to East Sidney Lake or alternative site if East Sidney Lake had not been available, by type of permit purchased . . . . .	9
4	Importance of water quality factors to visitors' enjoyment of recreational activities at East Sidney Lake . . . . .	9
5	Water quality rating of East Sidney Lake by type of activity .	11
6	Estimated use if specific activity had not been available at East Sidney Lake last summer, and percent reduction from current total use by type of activity . . . . .	11
7	Estimated total use and additional use expected if water quality had not been impaired (as defined by respondents), by type of activity . . . . .	12
8	Estimated expenditures made at East Sidney Lake or in Franklin related to visiting East Sidney Lake . . . . .	13
9	Degree to which various groups should pay to keep East Sidney Lake clean . . . . .	14
10	Additional services, facilities, or activities suggested most frequently by respondents . . . . .	15

LIST OF FIGURES

Figure	Title	Page
1	Number of camping and day-use permits sold at East Sidney Lake, 1987-1990 . . . . .	5

## Introduction

East Sidney Lake, in Delaware County, New York, is a small reservoir constructed for flood control by the U.S. Army Corps of Engineers. It is also used by recreationists for swimming, fishing, and boating. Water quality problems have been largely related to turbid water and algae, which interfere with swimming and fishing. The Corps has studied the lake and concluded that the release of phosphorus from the bottom sediments is the chief cause of water quality problems (Walker and Esser 1990). To identify and reduce the sources of phosphorus and nitrogen coming from the watershed into East Sidney Lake, an East Sidney Lake watershed nonpoint source management demonstration project is being undertaken (Cornell Cooperative Extension and Soil Conservation Service 1990). The U.S. Department of Agriculture, through its state and county agencies, is supporting this project in cooperation with the N.Y.S. Department of Environmental Conservation, the N.Y.S. Soil and Water Conservation Committee, and the regional office of the N.Y.S. Department of Health. The East Sidney Lake watershed is serving as a demonstration site for designing, carrying out and evaluating a cooperative, locally-based, nonpoint source management program.

During the first phase of the project, recreationists' perceptions of and expectations for water quality were examined. A study conducted by the Corps in 1988 indicated that user perceptions of water quality were generally favorable and that recreational experiences were not impaired by water quality (Ashby and Kennedy 1990). The study further concluded that most users were local residents who may accept existing conditions as favorable due to limited understanding of water quality. This study by the Corps involved a small number of personal interviews (48) conducted in mid-July before turbidity and

algae blooms were noticeable. Therefore, the study may not represent the opinions of all recreationists who use East Sidney Lake.

To augment data collected from the Corps survey, the Human Dimensions Research Unit (HDRU), Department of Natural Resources, Cornell University designed a mail survey to be sent to a larger sample of users who visited East Sidney Lake at some point during the summer months. The objectives of the survey were to:

- 1) Estimate the recreational use of East Sidney Lake by different types of use;
- 2) Determine if recreationists perceive a water quality problem and if so, what they believe is the source of the problem;
- 3) Estimate the reduction in recreational benefits due to reduced water quality;
- 4) Estimate the economic impact to the local community of reduced recreational use caused by reduced water quality; and
- 5) Determine the amount of money recreationists would be willing to pay for improved water quality.

Progress on questionnaire design and implementation of the survey were reported in the East Sidney Lake Hydrologic Unit Area, Delaware County, New York, Progress Report (Walker and Esser 1990). Since then, the data have been analyzed and the results are reported herein. Thus, this report serves as the final report for this aspect of the project.

#### Methods

A mail questionnaire was developed by HDRU staff to assess recreationists' use of East Sidney Lake, their perceptions about water

quality, their willingness-to-pay for improved water quality, and the recreational benefits lost due to reduced water quality. Some questions are similar to those in the Corps study (Ashby and Kennedy 1990) and in a study of Keuka Lake watershed landowners (Powell and Herring 1988). For exact wording of each question in the East Sidney Lake questionnaire, see Appendix A. A pretest of the questionnaire was conducted with 5 seasonal campers at East Sidney Lake.

A permit is required to use the East Sidney Lake Recreation Area. Four basic types of permits are sold (seasonal camping, seasonal day use, overnight camping, and day use). A census of all seasonal users and samples of other users who went to East Sidney Lake between Memorial Day and Labor Day weekend, 1990, were taken by HDRU staff.

Questionnaires were sent to the final sample of 394 permit holders on September 14, 1990. Up to 3 follow-up mailings were sent to nonrespondents during the end of September and October. HDRU staff coded and analyzed the data using the SPSS-X computer package (SPSS Inc. 1986).

Nonseasonal permit holders who responded were weighted based on the number of permits sold in each category during the summer divided by the estimated days of use. Expansion factors were calculated for all types of permit holders to enable estimates of total use of East Sidney Lake.

### Results and Discussion

#### Survey Response

Of the 394 questionnaires mailed, 24 were returned undeliverable and 236 were returned with codeable information, resulting in a 64% response rate

(adjusted for undeliverables). Because of the relatively high response rate, nonresponse bias was not investigated.

#### Estimated Recreational Use of East Sidney Lake

Four types of permits have been sold at East Sidney Lake over the past four years. The number of permits sold have remained relatively constant for the two seasonal permit types (camping and day-use) and for overnight camping. The number of day-use permits sold peaked in 1988 and has declined for the past two years (Figure 1). The summer of 1988 was very hot and many day-users may have been attracted to the lake for water-related activities. For the past two years an algae bloom in mid-August resulted in the closure of the swimming area for the remainder of the summer. The lack of swimming facilities may have caused the decline in the number of day-use permits sold. Information from the questionnaire discussed later in this report may shed more light on the reasons for declining day-use.

Estimates of total recreational use of East Sidney Lake in 1990 were derived from respondents' estimates of the number of days they spent at the lake multiplied by party size and by an expansion factor for each type of permit. The total recreational use at East Sidney Lake was estimated at 43,436 days. Forty percent of days was attributable to campers, the remainder to day-users. Approximately 10% of total days was attributable to residents of the East Sidney Lake watershed. The most popular activities were swimming, motor boating, and picnicking (Table 1).

#### Characteristics of East Sidney Lake Recreationists

The average party size was four people, with almost 70% of parties having children under 18 years of age. Few groups (12%) had members over age 55. Most people had visited East Sidney Lake prior to 1990 and were familiar

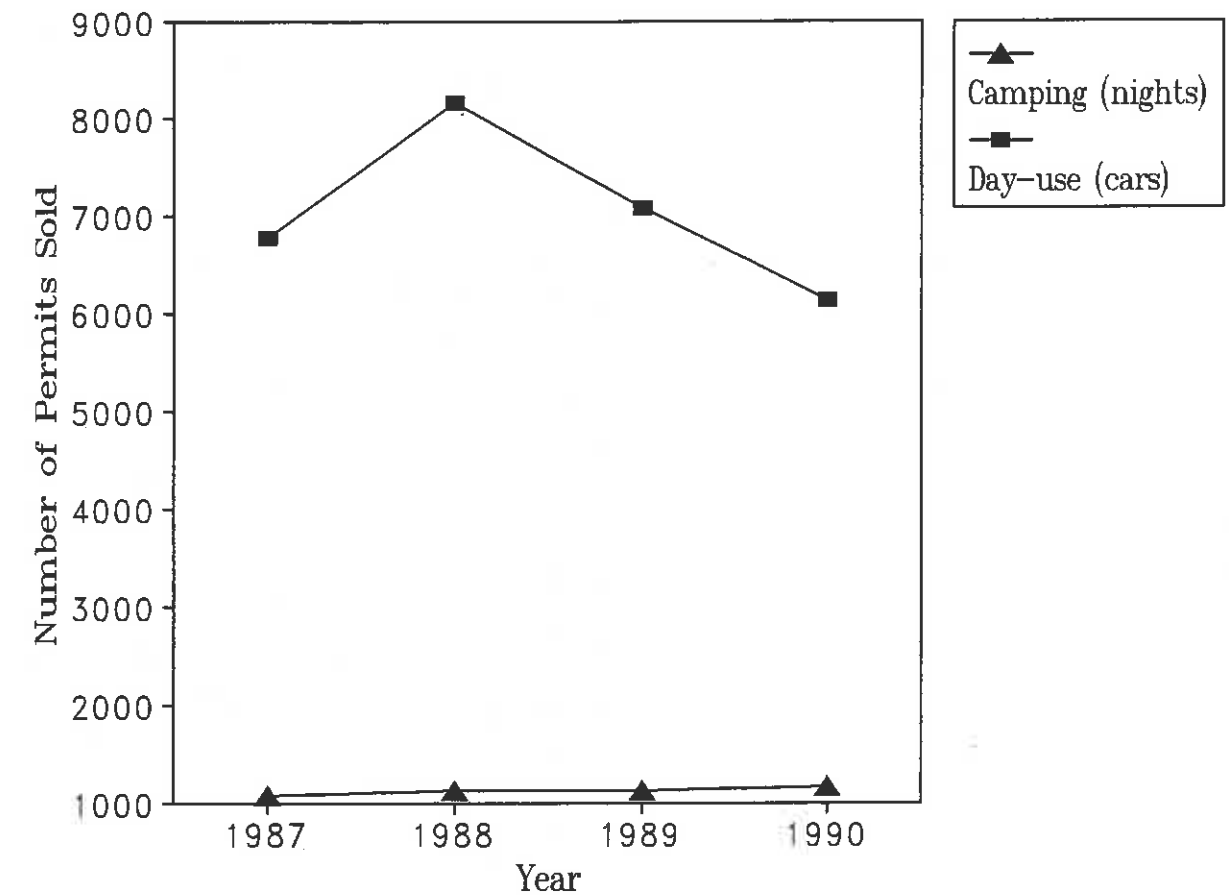


Figure 1. Number of camping and day-use permits sold at East Sidney Lake, 1987-1990.

with conditions there. Seasonal permit holders had visited East Sidney Lake an average of four of the past five years. Overnight campers and day-users had visited in three of the past five years.

Most respondents (92%) had graduated from high school, but far fewer (22%) had graduated from college. The average household income of respondents was approximately \$33,000. Most respondents were employed in one of the following four occupation types: professional/technical (28%), managerial (16%), operatives (13%), and craftsmen (12%).

Table 1. Mean days and estimated total days spent at East Sidney Lake for various activities and in total by type of permit purchased, 1990.

Type of permit purchased	Mean days spent at East Sidney Lake							Other Activities	Total
	Camping	Swimming	Boating w/o a motor	Boating w/a motor	Fishing	Picnicking	Other Activities		
Seasonal camping	48	17	2	9	2	6	<1	51	
Seasonal day use	2	5	1	5	2	4	1	12	
Overnight camping	7	5	<1	4	2	4	1	12	
Day use	2	3	<1	4	1	4	4	10	

Type of permit purchased	Expanded estimate of days spent at East Sidney Lake							Other Activities	Total*
	Camping	Swimming	Boating w/o a motor	Boating w/a motor	Fishing	Picnicking	Other Activities		
Seasonal camping	8,640	3,060	360	1,620	360	1,080	90	9,180	
Seasonal day use	672	1,680	336	1,680	672	1,344	336	4,032	
Overnight camping	3,332	2,380	238	1,904	952	1,904	476	5,712	
Day use	4,902	7,353	1,225	9,804	2,451	9,804	9,804	24,512	
TOTAL	17,546	14,473	2,159	15,008	4,435	14,132	10,706	43,436	

\*The sum of activity days does not add to the total because more than one activity could be engaged in each day.

Seasonal permit holders were more likely than nonseasonal permit holders to consider easy travel distance from home as the most important reason for deciding to visit East Sidney Lake in 1990 (Table 2). The availability of water-based recreation activities was an important reason for both groups.

Most users traveled a relatively short distance to reach East Sidney Lake, but a few overnight campers traveled much farther distances (Table 3). Respondents listed a variety of sites they would have visited if East Sidney Lake were not available, including Delaware County KOA, Gilbert Lake State Park, Oquaga Creek State Park, Cayuga Lake, and Otsego Lake. On average, all would have traveled additional miles to reach these sites except for overnight campers who would have traveled fewer miles (Table 3). Thus, if East Sidney Lake were not available, most visitors would pay more to travel elsewhere.

Recreationists' Perceptions of Water Quality

Factors associated with good water quality were rated as to their importance for recreational enjoyment of East Sidney Lake (Table 4). Factors such as "lack of debris," "no obnoxious odors," "no scum or algae in the water," and "clear water" were rated as being very important by a majority of respondents. Less important were factors such as "warm water," "high lake levels," and "absence of aquatic plants".

Eighty percent of seasonal permit holders and 50% of nonseasonal permit holders perceived a water quality problem in the lake this past summer (1990). Primary sources of poor water quality as identified by respondents were boats and algae/bacteria. The percent of people who perceived a problem is much larger than was found in the Corps study (Ashby and Kennedy 1990), which surveyed people earlier in the summer, probably before turbidity and algae blooms were noticeable. The lower percentage for nonseasonal versus seasonal



Table 2. Reasons for visiting East Sidney Lake.

Reason for decision to visit East Sidney Lake	Seasonal permit holders		Nonseasonal permit holders	
	Reason* Percent	Most important reason	Reason* Percent	Most important reason
Within easy travel distance of home	86.2	32.9	65.1	5.7
Availability of water-based recreation activities	60.9	24.4	60.1	39.7
Traditional recreation spot	66.7	17.1	40.4	9.1
Social gathering of friends or family	69.0	9.8	60.0	28.5
Convenient stop-over spot	3.4	2.4	9.6	4.9
Other	13.8	<u>13.4</u>	13.2	<u>12.1</u>
		100.0		100.0

\*Percents add to more than 100% because respondents could give more than 1 reason.

Table 3. One-way distance traveled to East Sidney Lake or alternative site if East Sidney Lake had not been available, by type of permit purchased.

Type of permit purchased	One-way distance traveled		
	To East Sidney Lake	To alternate site, if East Sidney Lake were not available Mean miles	Additional miles
Seasonal camping	19	43	17
Seasonal day use	9	27	17
Overnight camping	145	124	-20
Day use	28	41	12

Table 4. Importance of water quality factors to visitors' enjoyment of recreational activities at East Sidney Lake.

Water quality factors	Mean importance*	Percent rating factor as "very important"
No obnoxious odors	3.6	69.0
Lack of debris	3.5	72.3
No scum in the water	3.5	64.8
No algae in the water	3.3	58.7
Clear water	3.3	57.9
Warm water	2.6	22.1
High lake level	2.5	31.7
Absence of aquatic plants	2.5	23.7

\*Importance was rated on a 5-point scale ranging from 0=of no concern at all to 4=very important.

permit holders is probably because many nonseasonals were not there during the later part of the summer. (We drew our sample of overnight campers throughout the summer and day-users from the second half of the summer.)

Different types of water-based recreational activities have different water quality requirements, with swimming being the most strict and boating being the least strict (Smith et al. 1986). Respondents generally perceived this difference in requirements and rated the water quality of East Sidney Lake higher for boating than for swimming (Table 5). Fewer respondents had experience with fishing at East Sidney Lake, but those who did rated the water quality lower for fishing than for swimming.

#### Reduction in Benefits due to Poor Water Quality

Benefits lost due to poor water quality were measured by days lost to recreationists and dollar receipts lost to the park and local community. Respondents were asked to compare their current use of East Sidney Lake with their estimated use if certain activities were not available. If swimming were not available, estimated use of East Sidney Lake would drop by almost 60% (Table 6). Similarly, if boating were not available, use would drop by an estimated 53%. These figures attest to the importance of water-based recreation to peoples' enjoyment of East Sidney Lake.

Those who believed there was a water quality problem in East Sidney Lake in 1990 were asked how many additional days they would have gone to the lake if water quality had not been impaired. Respondents estimated they would have gone to East Sidney Lake an additional 13,205 days or an increase in total use of 30% (Table 7). Use of the lake for fishing would have doubled and swimming would have increased by three-quarters if water quality had not been impaired. Relatively small increases were projected for boating or camping. These

Table 5. Water quality rating of East Sidney Lake by type of activity.

Activity	Water quality rating of East Sidney Lake					Mean for those giving a rating other than "don't know"
	Excellent	Good	Fair Percent	Poor	Don't know	
Swimming	9.8	47.6	23.8	16.8	2.0	2.5
Boating	17.7	45.3	18.0	5.6	13.4	2.9
Fishing	6.6	20.8	23.9	13.6	35.1	2.3

Water quality was rated on a 4-point scale ranging from 1=poor to 4=excellent.

Table 6. Estimated use if specific activity had not been available at East Sidney Lake last summer, and percent reduction from current total use by type of activity.

Activity	Estimated total use of E. Sidney Lake if activity were not available	Days	Percent reduction in use
Swimming	17,736		59.2
Boating	20,282		53.3
Fishing	28,560		34.2

Table 7. Estimated total use and additional use expected if water quality had not been impaired (as defined by respondents), by type of activity.

Activity	Estimated total use	Additional use if water quality had not been impaired Days	Percent increase in use
Swimming	14,473	11,049	76
Boating	17,167	3,779	22
Camping	17,546	2,261	13
Fishing	4,435	5,894	133
Total*	43,436	13,205	30

\*Sum of activity days does not add to the total because respondents could participate in more than 1 activity each day.

estimates are for users who currently go to East Sidney Lake even though they perceive a water quality problem. The estimates do not take into account recreationists who do not currently go to the lake because of poor water quality. We have no information on the existence or size of this group, but we do know that day-use permit sales have declined in the past two years.

Expenditures made at the lake and in nearby communities can also be affected by poor water quality. If water quality were improved, recreationists would come more often to East Sidney Lake, thus generating additional local expenditures. Currently, recreationists spend about \$3.00 per day at East Sidney Lake and in the village of Franklin (Table 8). These expenditures add up to an estimated \$135,000 over the course of the summer. An additional \$41,000 in local expenditures could be generated by current

Table 8. Estimated expenditures made at East Sidney Lake or in Franklin related to visiting East Sidney Lake.

Expenditure category	Mean expenditures per person per day	Expanded total expenditures	Estimated additional expenditures if water quality had not been impaired
Recreation area entrance fee	1.54	66,767	20,336
Groceries	0.63	27,478	8,319
Automobile fuel and repairs	0.49	21,277	6,470
Restaurant and bar	0.19	8,193	2,509
Miscellaneous merchandise	0.26	11,446	3,433
Total	3.11	135,161	41,067

users if water quality were improved. Again, these figures do not take into account other recreationists who may visit East Sidney Lake if water quality is improved.

#### Recreationists' Willingness to Pay for Improved Water Quality

According to recreationists, the government (federal, state, or local) should pay a large share of the costs of keeping the lake clean (Table 9). As could be expected, respondents said individuals such as lake users should pay little or no cost.

Respondents also said that those who cause the pollution should pay most of the costs for keeping the lake clean (Table 9). Most researchers on the watershed project believe that watershed residents are the primary "cause of pollution." Watershed residents' lower rating implies that recreationists do not recognize who "causes the pollution."

Table 9. Degree to which various groups should pay to keep East Sidney Lake clean.

Who should pay for keeping lake water clean	Seasonal permit holders	Nonseasonal permit holders
	Mean Rating	
Those who cause the pollution	3.5	3.8
Federal government	3.3	3.0
State government	3.0	3.1
Local government	2.7	2.9
Lake users	2.6	2.2
Everyone in the watershed	2.0	2.1
Farmers in the watershed	2.0	2.0
Homeowners in the watershed	1.7	1.9

\*Mean was calculated on a 5-point scale, which ranged from 1=should pay none to 5=should pay all.

A slight majority of recreationists (65% of seasonal and 55% of nonseasonal permit holders) would be willing to pay some additional fee to help keep the lake clean. The mean willingness-to-pay was calculated on a seasonal or daily basis from categories of costs marked by respondents. The mean willingness-to-pay was \$1.13 per visit for nonseasonal users, \$11.17 for seasonal day-users, and \$11.57 for seasonal campers. By multiplying the means by total use in 1990, an estimated \$9,700 could be generated to improve water quality at East Sidney Lake. It should be emphasized that this is a rough estimate because the means were derived from categories.

### Additional Services, Facilities, or Activities Desired by Recreationists

Respondents listed a variety of additions they would like to see at East Sidney Lake. Those suggested most frequently are detailed in Table 10. Upgrading the restroom facilities and adding a playground were the most popular.

Table 10. Additional services, facilities, or activities suggested most frequently by respondents.

Types of additional services, facilities, or activities	Seasonal permit holders	Nonseasonal permit holders
	Most important addition (for those listing an addition) Mentioned* Percent	Most important addition (for those listing an addition) Mentioned* Percent
Upgrade restroom facilities	26.1	40.2
Playground	22.7	9.1
Additional docks	10.2	6.8
Upgrade snack bar/store	8.0	5.1
Direct hookups	10.2	4.4
Additional sports facilities	6.8	6.9
Upgrade campsites	1.1	6.5
Provide more campsites	0.0	3.7
Other	<u>28.5</u>	<u>16.9</u>
	100.0	100.0

\*Percents add to more than 100% because respondents could list more than 1 type of addition.

### Conclusions and Implications

The trend in use of East Sidney Lake appears constant for campers and seasonal day-users, but has declined in the past two years for day-users. Some of this decline may be associated with poor water quality. Most users of the lake perceive a water quality problem. This finding differs from that of the earlier Army Corps study. The difference in results probably can be attributed to the time frame of each study, with the current study covering the entire summer season. It appears that recreationists are not aware of the source of the water quality problem. Increasing their knowledge level probably will not improve their enjoyment of East Sidney Lake, but may contribute to their willingness to support projects to improve water quality. As extension education options are discussed in the context of the larger watershed project, information needs of lake users such as this should be considered.

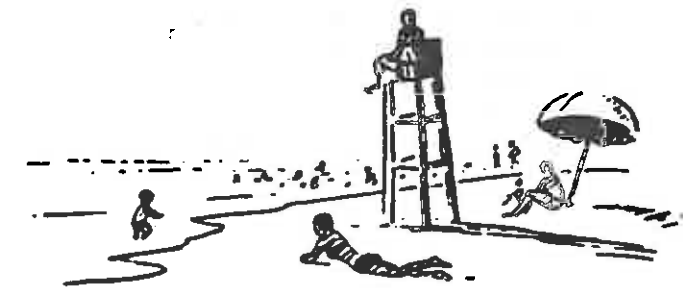
Respondents said they would visit more often (and spend more) if water quality were improved, so expenditures to improve water quality might have recreational benefits and financial benefits to East Sidney Lake and Franklin. Some recreationists are willing to pay increased permit fees for improved water quality. Since most recreationists do not live in the watershed, increasing fees would be one way for users to contribute to water quality improvements and not overburden watershed residents. This option could be pursued as the larger watershed project moves forward and plans are developed to improve water quality.

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**APPENDIX A:**  
**Mail Questionnaire**

**EAST SIDNEY LAKE**  
**RECREATIONAL USE SURVEY**



### East Sidney Lake Recreational Use Survey

Conducted by the  
Department of Natural Resources  
in the New York State College of  
Agriculture and Life Sciences  
Cornell University

This survey seeks to learn more about people's recreational experiences while visiting East Sidney Lake in Delaware County, New York. The results will be used by managers and planners to improve the East Sidney Lake recreational experience. Your name was selected in a scientific sample of those who visited East Sidney Lake between May 26 and Sept. 3. Your response is essential to the success of the survey in representing visitors to East Sidney Lake.

We would like the addressee to complete this survey at his or her earliest possible convenience, seal it, and return it to us; postage has been provided. Your responses will remain confidential.

**Thank You For Your Cooperation.**

1. **How many days did you spend at East Sidney Lake during the summer of 1990 (May 26, 1990 - Sept. 3, 1990)? (Count any part of a day as a whole day.)**

\_\_\_\_ days

2. **On how many days did you engage in each of the following recreational activities at East Sidney Lake?**

<u># of Days</u>	<u># of Days</u>
____ Camping	____ Fishing
____ Swimming	____ Picnicking
____ Boating without a motor	____ Other (please specify: _____)
____ Boating with a motor	

3. **Please indicate below the usual number of individuals in each age group that were in your party when you visited East Sidney Lake:**

Number

\_\_\_\_ Children under 18 years of age

\_\_\_\_ Adults 18-35 years of age

\_\_\_\_ Adults 36-55 years of age

\_\_\_\_ Adults 56 years of age and older

4. **In how many of the past 5 years have you visited East Sidney Lake?**

\_\_\_\_ Years

5. **Approximately how many miles one-way is East Sidney Lake from your home?**

\_\_\_\_ Miles

6a. Please indicate below which of the following were reasons for your decision to visit East Sidney Lake this past summer? (Check all that apply.)

- Traditionally a recreation spot for myself or my family
- Within easy travel distance of home
- Convenient stop-over spot while on vacation
- Availability of water-based recreation activities
- Social gathering of friends or family
- Other (please specify: \_\_\_\_\_)

6b. Now, please circle the 1 reason above that was most important to your decision to visit East Sidney Lake.

7a. If the East Sidney Lake Recreation Area had not been open this past summer, where would you have gone for a similar recreational experience?

\_\_\_\_\_

If you are unaware of a suitable alternative please check here: \_\_\_\_\_

7b. If you listed a site in Question 7a, approximately how many miles one-way is that site from your home?

\_\_\_\_\_ Miles

7c. Please estimate how many days you would have gone to East Sidney Lake this past summer if each of the following activities were not available: (For each activity below assume the other two activities would be available.)

No Swimming: \_\_\_\_\_ days

No Fishing: \_\_\_\_\_ days

No Boating: \_\_\_\_\_ days

8. When you visited East Sidney Lake this past summer, what type of use permit did you usually purchase? (Check one.)

- Seasonal camping       Overnight camping
- Seasonal day use       Day use
- Seasonal day use with boat       Day use with boat

9. How important are the following water quality factors to your enjoyment of recreational activities at East Sidney Lake? (Circle 1 number for each item.)

- 0 = Of no concern at all
- 1 = Not very important
- 2 = Somewhat important
- 3 = Moderately important
- 4 = Very important

	No Concern		Very Important		
High lake level	0	1	2	3	4
Clear water	0	1	2	3	4
Warm water	0	1	2	3	4
Lack of debris	0	1	2	3	4
Absence of aquatic plants	0	1	2	3	4
No obnoxious odors	0	1	2	3	4
No scum in the water	0	1	2	3	4
No algae in the water	0	1	2	3	4



10. How would you rate the water quality in East Sidney Lake for:

	<u>Excellent</u>	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	<u>Don't Know</u>
Swimming	___	___	___	___	___
Boating	___	___	___	___	___
Fishing	___	___	___	___	___

11. Do you believe there was a problem with poor water quality in the lake this past summer?

- \_\_\_ Yes  
 \_\_\_ No (If no, please skip to Question 14.)

12a. What do you think is the probable source or sources of this poor water quality?

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

12b. If you listed more than 1 source in Q12a, please circle the one you believe is the primary source of poor water quality.

13a. If water quality had not been impaired, how many more days would you have participated in the following activities this past summer?

- \_\_\_ Swimming                      \_\_\_ Camping  
 \_\_\_ Boating                        \_\_\_ Fishing

13b. What is the total number of additional days you would have gone to East Sidney Lake if water quality had not been impaired?

\_\_\_ Days

14. Who do you feel should pay for the cost of keeping the lake water clean? (Circle 1 number for each item.)

	Should Pay None	Should Pay Some	Should Pay All		
Federal Government	1	2	3	4	5
State Government	1	2	3	4	5
Local Government	1	2	3	4	5
Lake Users	1	2	3	4	5
Everyone in the Watershed	1	2	3	4	5
Those Who Cause the Pollution	1	2	3	4	5
Farmers in the Watershed	1	2	3	4	5
Homeowners in the Watershed	1	2	3	4	5

15. If you were asked to pay for keeping the lake clean, how much would you be willing to pay above current user permit costs?

<u>Per Visit</u>	<u>OR</u>	<u>Seasonally</u>
___ Nothing		___ Nothing
___ \$1		___ \$1 - 25
___ \$2 - 5		___ \$26 - 50
___ \$6 - 10		___ \$51 - 100
___ Over \$10		___ Over \$100

16a. What type of additional services, facilities, or activities would you like to see provided at East Sidney Lake?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

16b. If you wrote down more than 1, please circle the addition that you feel is most important.

17. Please estimate the expenditures you made this past summer at East Sidney Lake or in the community of Franklin, related to your visit(s) to East Sidney Lake. (Do NOT include expenditures made in Unadilla or other places.)

- \$ \_\_\_\_\_ Recreation area entrance fee
- \$ \_\_\_\_\_ Automobile fuel and repairs
- \$ \_\_\_\_\_ Restaurant and bar
- \$ \_\_\_\_\_ Groceries
- \$ \_\_\_\_\_ Miscellaneous merchandise

**BACKGROUND INFORMATION**

The following information you provide will be kept strictly confidential and will never be associated with your name.

18. Please indicate the highest grade or year in school you have completed. (Please circle one number.)

- Elementary School            1 2 3 4 5 6 7
- High School                    9 10 11 12
- College/Vocational School   13 14 15 16
- Graduate School              17 18 19 20 21 22

19. What is your primary occupation?

\_\_\_\_\_

20. Please circle your approximate TOTAL HOUSEHOLD INCOME before taxes, in thousands of dollars:

- 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
- 20 22 24 26 28 30 32 34 36 38 40 45 50
- 55 60 65 70 75 80 More than 80