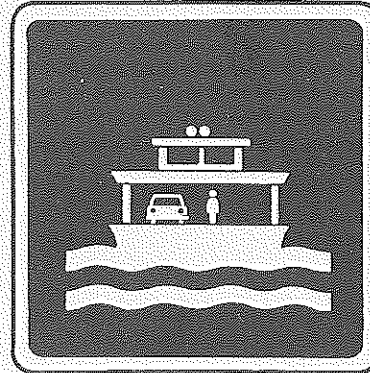
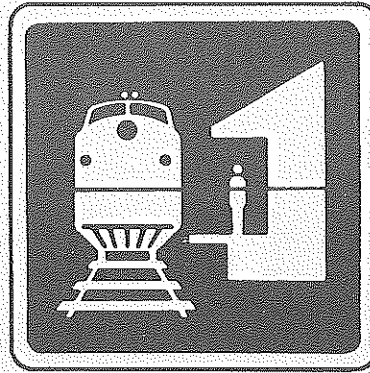
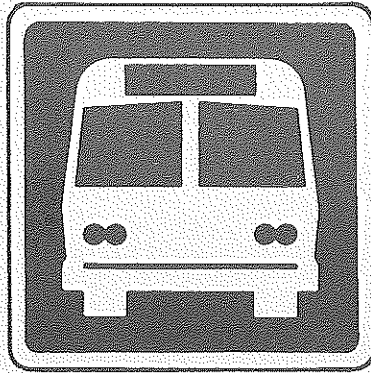


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PUBLIC TRANSPORTATION IN MICHIGAN

ST. MARY'S RIVER FERRY STUDY

September 1984



**PASSENGER TRANSPORTATION PLANNING SECTION
MICHIGAN DEPARTMENT OF TRANSPORTATION**

MICHIGAN DEPARTMENT
OF
TRANSPORTATION

Report 6

ST. MARY'S RIVER FERRY STUDY

September 1984

Bureau of Transportation Planning
Modal Transportation Planning Division
Passenger Transportation Planning Section

This report represents the findings and/or professional opinions of the Michigan Department of Transportation staff. Its publication does not represent an official opinion of the State Transportation Commission.

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EXECUTIVE SUMMARY

The St. Mary's River Ferry Study was initiated in the summer of 1983. The primary objectives of the study were to assess the costs and benefits of the three ferry services to the users, the local area, and the state; analyze these services as to their user, operational, and financial characteristics; and determine whether state funding of water transportation services is consistent with state goals and responsibilities.

During the six day period of July 7-12, 1983, origin-destination and mail-back surveys were conducted at the Drummond, Neebish and Sugar island ferry sites. The response rate for the personal interview survey was 93.1 percent; for the mail-back survey it was 71.5 percent.

Data obtained from the survey revealed the following user travel characteristics for the three services combined. The most common permanent residence location of ferry users was Chippewa County (39.8%). Ferry users whose permanent residence was outside Michigan constituted 13.2 percent of the ridership. One-third of the respondents (32.4%) stayed on the islands one day or less and were traveling on Saturday (21.3%). Four of every ten respondents (39.3%) indicated their accommodations were a permanent home and the most common trip purpose (36.4%) was social/recreational.

The information obtained from the survey identified the following user characteristics for the three services. The majority were between the ages of 25 and 54 (54.5%). Most were employed full-time (53.5%) and

had a family income in the \$10,000-\$19,999 range (28.6%). The most common household size was two persons (40.2%) and more than half of the respondents (50.1%) had two vehicles at home.

The ferry services were rated by the users regarding the following categories: operating hours, frequency of service, availability of information, announcement of schedule changes, ease of getting on/off the ferry, condition of the vessel, parking/waiting area, courtesy of employees, and fare structure. Each of the nine service characteristics was rated "good" or "very good" by the majority of respondents. Of the 1,292 mail back surveys returned, 569 (44%) included written comments regarding various service characteristics. Sugar Island received the greatest number of positive comments indicating overall user satisfaction with the service provided.

Deficiencies in the three ferry services were identified by users and field inspections. Deficiencies at the Drummond Island service include: lack of restrooms on the DeTour side, occasional lack of courtesy toward passengers by the ferry crew, and the lack of a good method of disseminating information about changes in the operating schedule when problems arise.

Deficiencies identified at the Neebish Island service include: dissatisfaction with the level of service provided, lack of a set operating schedule, and the need for dock repairs on the island side. Deficiencies identified at Sugar Island include: poor access road to the ferry dock on the island, and the lack of readily available schedule information and announcement of schedule changes.

Recommendations were made relating to various aspects of the three ferry services. These consist of the following:

Level of Service

- . Continue service at its present level. A reduction in the hours of operation and/or number of crossings should be considered when user revenues are less than 60 percent of operating costs.
- . Reduce the Drummond Island service hours of operation by eliminating the least productive service hours if a significant cost savings will result.
- . Use the Drummond Islander II when necessary to prevent users waiting longer than approximately one-half hour.

Vessels

- . Improve the vessels as recommended by EUPTA as available funding permits.
- . Critically review preventative maintenance program for all vessels to minimize down-time and schedule delays.
- . Increase efforts to maintain all vessels in a clean, well-painted condition.

Facilities

- . Improve the facilities on a priority basis (1) as available funding permits and (2) as supported by an engineering analysis.
- . Study the necessity of providing clean, adequate restroom facilities at the DeTour side of the Drummond Island service.
- . Improve the access road to the ferry dock on Sugar Island.

State Involvement

- . Continue state investment in capital improvements at a reasonable level.
- . Continue state investment in operating costs at a cost effective level.

Finances

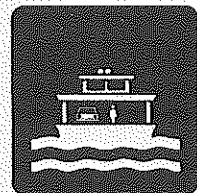
- . Modify service levels, fares, local funding, and costs to cover at least 50 percent of the operating costs from local sources.
- . Consider increasing Sugar Island fares so they are more consistent with those charged for Drummond and Neebish island services.
- . Consider reducing the Drummond Island service discount rate so it is more comparable to discount rates used by public transportation systems throughout Michigan.

Courtesy of Employees

- . Strongly encourage employees on Drummond and Neebish Island ferry services to be more courteous toward the people they serve.

These recommendations were based on the survey results and field inspections and are supported by one or more of the study findings.

PART I
INTRODUCTION



I. INTRODUCTION

A. Need for Study

The St. Mary's River passenger ferry services are three of 20 such operations serving Michigan's residents and its visitors (see Appendix A). These three services, used by some 400,000 persons annually, connect the mainland with Drummond, Neebish and Sugar islands.

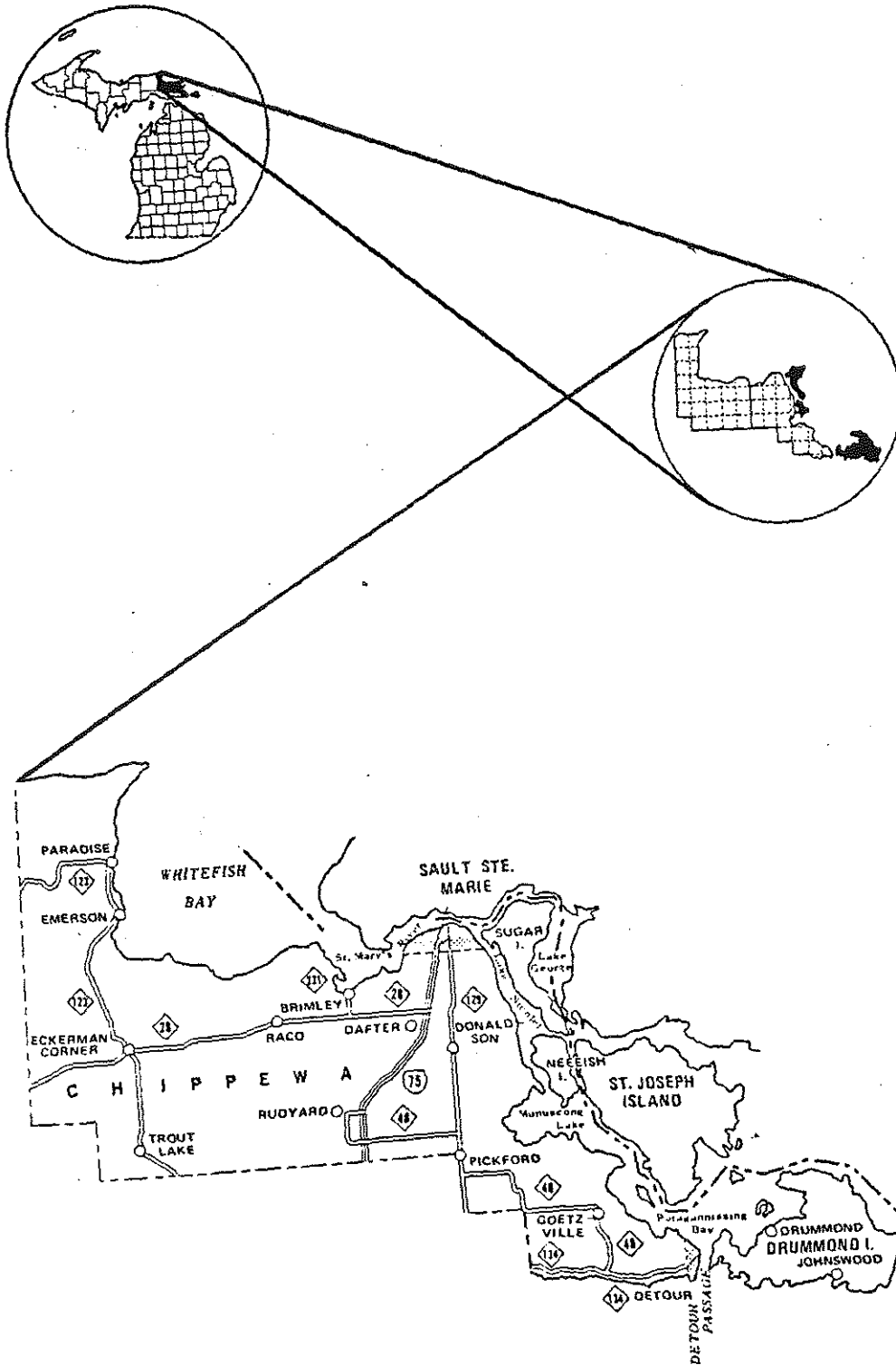
The purpose of this study is fourfold.

1. Better comprehend the needs of Michigan's ferry operations and their use.
2. Analyze these three water transportation services in terms of their user, operational, and financial characteristics.
3. Assess the costs and benefits of these water transportation services to the user, local governmental units, the state, and the private sector.
4. Determine whether state funding of water transportation services is consistent with State goals and responsibilities.

B. Location of Study Area

The St. Mary's River is a 70 mile waterway connecting Lake Superior and Lake Huron, which forms part of the boundary between the United States and Canada. Large islands divide the river into a series of lakes and channels. Three of these islands are Drummond, Neebish and Sugar. This study deals with the ferry services connecting Michigan's Upper Peninsula with these islands (see Figure 1).

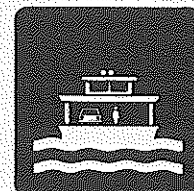
FIGURE 1
LOCATION OF STUDY AREA



C. Report Content

The existing service, use, and financial characteristics of the three operations are described within this report. The results of a user survey, conducted in July 1983, are presented, along with a set of analyses pertaining to demand estimation, service impacts, and service deficiencies. Finally, several recommendations are made regarding the services themselves and the State's involvement in these services.

PART II
SOCIO-ECONOMIC
CHARACTERISTICS OF THE AREA



II. SOCIAL AND ECONOMIC CHARACTERISTICS OF THE ISLANDS

A. Population Size and Composition

The three islands served by the ferry service are sparsely settled. The characteristics of their populations are similar to the rest of the eastern Upper Peninsula area. Table 1 shows the demographic characteristics of the islands, all of Chippewa County, and neighboring Mackinac County.

TABLE 1
DEMOGRAPHIC CHARACTERISTICS

Population	Mackinac County	Chippewa County	Drummond Island	Sugar Island	Neebish Island
1960	10,853	32,665	501	300	NA
1970	9,660	32,412	479	237	NA
1980	10,178	29,029	746	400	48
<u>Persons Under</u>					
Age 18	3,042	8,026	204	106	NA
% of pop.	30	28	27	27	
<u>Persons Over</u>					
Age 65	1,528	3,605	119	69	NA
% of pop.	15	12	16	17	
<u>Median Age</u>	32.3	29.1	36.8	40.7	NA

Source: 1980 Census of Population and Housing, Enumeration District Statistics.

Because of their small size, there is not much published information available about the islands. However, some observations can be made about conditions on the islands based on these data. The islands are experiencing slow, steady population growth, probably attributable to people working in the Sault Ste. Marie area and

commuting from the islands, and to retirees moving in. The median age of people on the islands is higher than in the rest of Chippewa County, although the percentage of elderly people is not. This possibly indicates the presence of retirees in their fifties or early sixties.

The percentage of school age children on the islands is about the same as in the rest of the area, about one quarter of the population.

The only minority group on the islands are native Americans, who account for about a third of the 400 residents of Sugar Island, which is part of the Bay Mills Indian Reservation.

B. Housing and Households

The number of housing units is about four times the number of households counted on the islands on the April census date (see Table 2).

TABLE 2
HOUSING AND HOUSEHOLDS

	Mackinac County	Chippewa County	Drummond Island	Sugar Island	Neebish Island
Housing Units	7,624	16,411	1,014	633	189
Total Year-Round	4,374	12,511	NA	NA	NA
Households	3,426	9,243	275	113	NA

Elsewhere in the eastern Upper Peninsula, about half the dwelling units were occupied on that date. This includes some of the

heatable, year-round units, which indicates that some of the permanent residents do not stay in the area all year. The large number of seasonal dwellings on the islands indicates the importance of tourism, and suggests that their summer population might be three or four times their year-round population. The people occupying these dwelling units have household incomes well-distributed across the income range. While the Bureau of the Census does not report income for the island residents because of the small population, some income data was obtained from the ferry users. A portion of these are island residents. These users have incomes in the following ranges:

Under \$10,000	18.8%
\$10,000 - \$19,999	28.6%
\$20,000 - \$29,999	20.5%
\$30,000 - \$39,999	14.3%
\$40,000 - \$49,999	7.7%
\$50,000 or more	10.1%

This places the median household income of those using ferry service at less than the state or national average, as is the case with the rest of the Upper Peninsula. This is probably accounted for by the 22.3 percent of ferry users who are retired, the 5.1 percent who are unemployed, and slightly lower wages prevalent in the Upper Peninsula.

Despite the slightly lower incomes on the islands, most ferry users have an auto in their household. Less than one percent of the users during the July survey did not have a car in their household; the percentage of resident island households without cars is probably not much higher. Almost three-quarters of ferry users had two or more cars per household. These figures are

typical of rural areas, where no alternative transit is available, and auto availability is a prerequisite for residing in the area.

C. Labor Force and Employment

The islands are part of the eastern Upper Peninsula labor market. Residents of rural areas in northern Michigan are typically willing to travel long distances to work, so Chippewa, Mackinac and Luce counties are best considered as one labor market. Most of the region's jobs are located in Sault Ste. Marie, with an additional, smaller number at St. Ignace. Drummond, Neebish and Sugar islands are each within commuting distance of these employment centers. This labor market included approximately 24,000 workers in 1983, but provided only about 19,000 jobs, leaving 20 to 22 percent of the workers unemployed. Detailed figures are presented in Appendix E. Island residents probably experience a similar unemployment rate.

Some of the region's employment is in retail, tourism, and other businesses on the islands. Employment figures are not published due to the small size of the area.

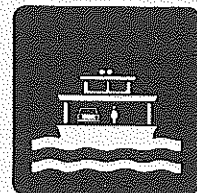
D. Island Land Use and Development

The three St. Mary's River islands are mostly in forest (second growth following nineteenth-century logging) with farms, some of which are abandoned, and development in isolated locations. There are many groups of homes and cabins along the shores of the islands. Some of these form small settlements at central locations or at desirable

harbors. The most extensive development on the three islands is on Drummond Island, along the shores of Sturgeon Bay. At the unincorporated village of Drummond there are homes, stores, a school, marinas, cottages, an airstrip and floatplane facilities. The only industry on the islands is the large quarry on the west side of Drummond Island, which connects with the port just south of the ferry landing by means of a private road. The northeastern half of Drummond Island is sparsely developed.

Residences and cabins are located at sites in all parts of Sugar and Neebish islands. Those on Sugar Island are connected with the ferry landing by a network of paved and gravel roads. The roads on Neebish Island are all gravel.

PART III
EXISTING SERVICE



III. EXISTING SERVICE

A. Historical Perspective

The three services which make up the St. Mary's Ferry System operated individually for many years before being combined under the Eastern Upper Peninsula Transportation Authority (EUPTA).

The service between DeTour Village and Drummond Island was started in 1915; the service between Sault Ste. Marie and Sugar Island was started in 1928; and service between Barbeau and Neebish Island was initiated in 1933. In November of 1975, EUPTA took over the services to Drummond Island. Services to Sugar Island were assumed by EUPTA in October of 1979. The EUPTA board contracted to provide operating assistance for the Neebish Island service in June of 1981. In March of 1982 the three ferry services were combined to form the St. Mary's Ferry System. The Drummond and Sugar island ferries are owned and operated by EUPTA, while the Neebish Island ferry is privately owned and leased by EUPTA.

B. Drummond Island Service

The Drummond Island ferry service operates year-round between the village of DeTour at the eastern most tip of the Upper Peninsula and Drummond Island. Between April 1 and January 1, the ferry is scheduled to make 22 round trips each day, including three trips between midnight and 6:00 a.m. The winter schedule (January 2 - March 31) consists of 13 daily round trips with no service provided between 11:00 p.m. and 6:00 a.m. Extra trips are made when warranted by demand (see Appendix F).

There are two ferries available for use at Drummond Island. Both vessels are capable of carrying 12 average size vehicles, as well as pedestrians. The larger of the two ferries is used primarily during peak periods and as a backup vessel because structural characteristics make it difficult to load all types of vehicles.

Between October 1, 1982 and September 30, 1983, the Drummond Island ferry carried a total of 212,882 passengers (see Figure 2) and 80,918 vehicles. A total of 9,216 round trips were provided.

Fares are based on the type of vehicle and include the driver. Additional passengers are charged a separate fare.

C. Neebish Island Service

The Neebish Island ferry operates for approximately nine and one-half months every year between Barbeau on the mainland and Neebish Island. Because of ice problems, the ferry usually discontinues service during the months of January, February and part of March. During the summer months, the ferry is scheduled to make between 10 and 12 round trips per day, except on Sunday when only five round trips are scheduled. Extra trips may be made if necessary (see Appendix F).

There is one ferry used at Neebish Island. It carries approximately five average size vehicles, plus pedestrians. Between October 1, 1982 and September 30, 1983, the Neebish Island ferry carried 17,368 passengers (see Figure 3) and 8,334 vehicles. A total of 2,566 round trips were made.

D. Sugar Island Service

The Sugar Island ferry service operates year-round between Sault Ste. Marie, Michigan and Sugar Island. The ferry is scheduled to make 27 round trips per day between 6:00 a.m. and midnight, with late ferries provided on Friday and Saturday nights until 2:00 a.m. Extra trips may be made if warranted by demand (see Appendix F).

There is one vessel used at Sugar Island. It is capable of carrying 12 vehicles, as well as pedestrians. Between October 1, 1982 and September 30, 1983, the Sugar Island ferry carried 218,633 passengers (see Figure 4) and 110,118 vehicles. There were 14,423 round trips provided.

The total ridership for the St. Mary's River Ferry System during fiscal year 1982-83 was 448,883 (see Figure 5). During the same time period, the total number of vehicles carried and round trips provided were 199,370 and 26,205, respectively.

E. Basic Ridership

Approximately 54 percent of the users of the three island ferry services constitute the basic ridership element. That is, over half the users depend on the ferry system year-round to accommodate their basic needs such as employment, school, medical-dental services, and financial matters. Most of these users are island residents.

The percentage that this group comprises of the total ridership varies from virtually 100 percent in the winter months to 18 percent in the summer, and from island to island (see Appendix E). Drummond and Neebish islands are similar, but Sugar Island

FIGURE 2

THOUSANDS

DRUMMOND ISLAND FERRY
RIDERSHIP-FISCAL YEAR 1982-1983

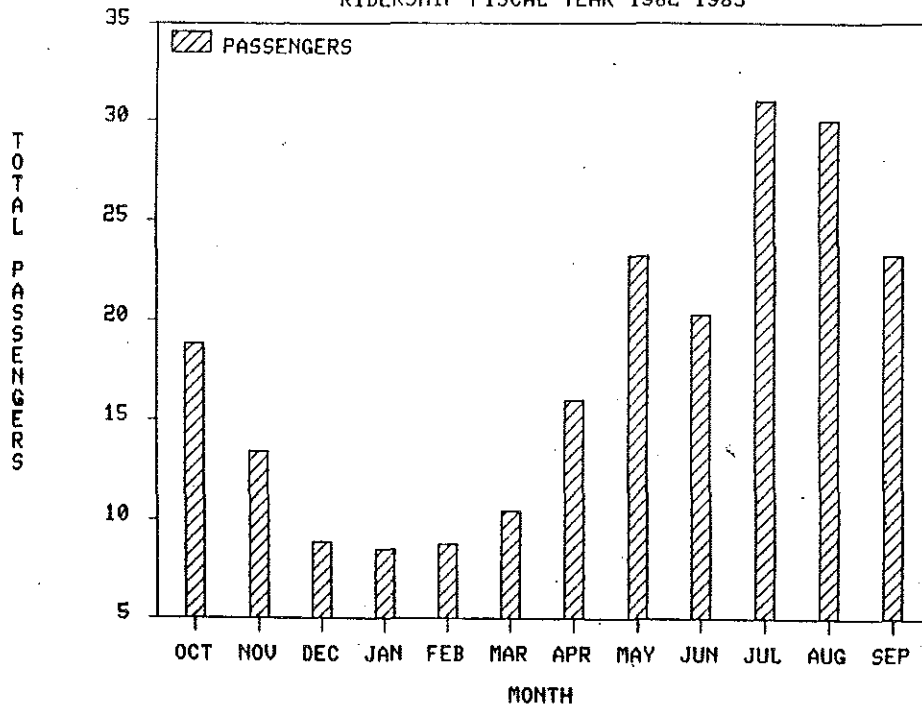


FIGURE 3

NEEBISH ISLAND FERRY
RIDERSHIP-FISCAL YEAR 1982-1983

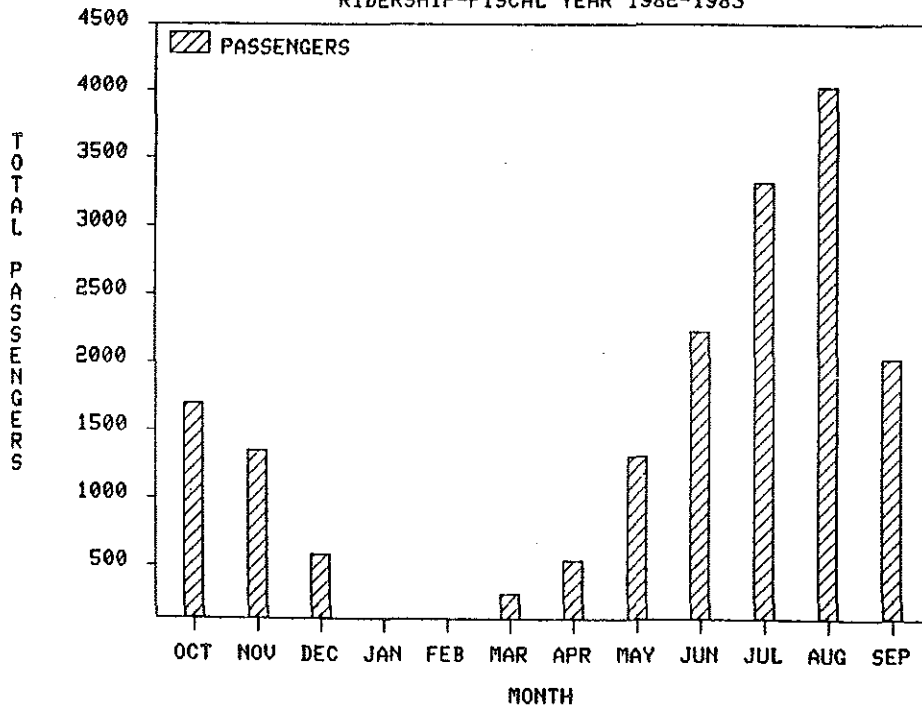


FIGURE 4

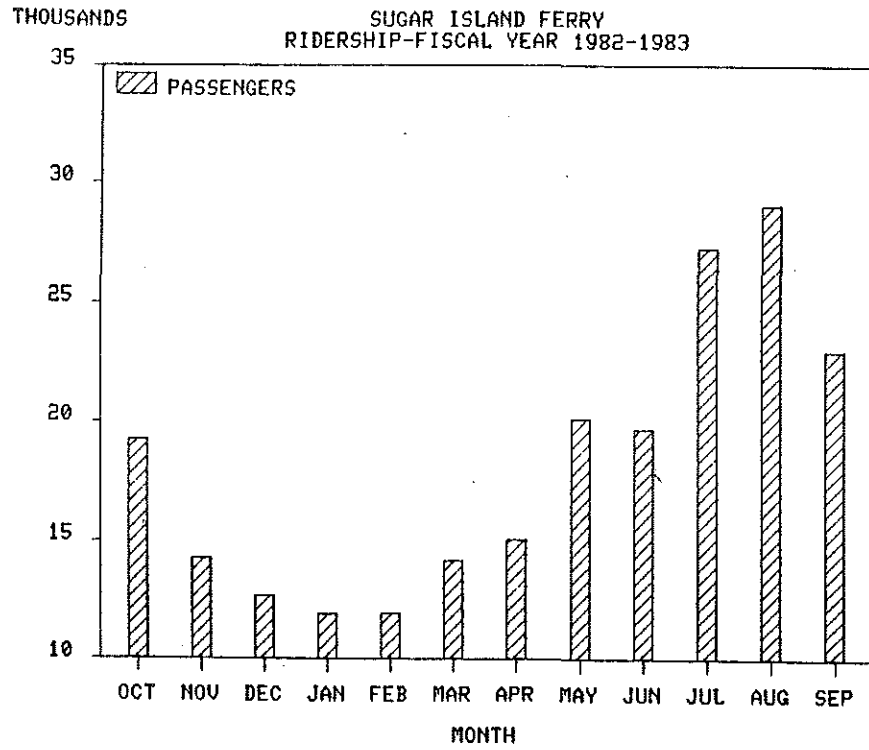
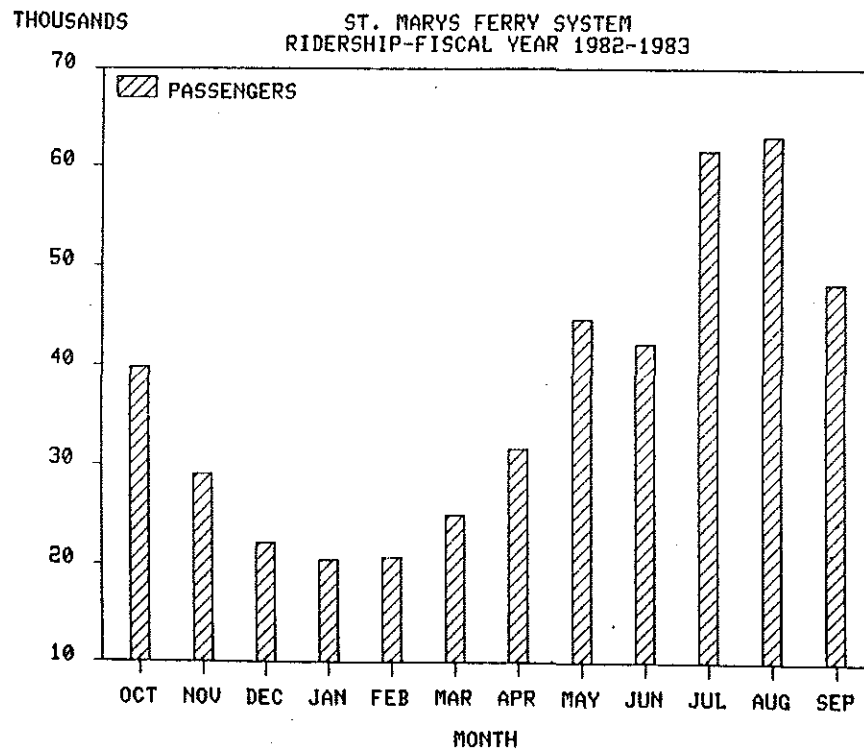


FIGURE 5



has a summer rate approximately twice that of the other two. The percent basic ridership constitutes of winter and summer ridership follows:

<u>Island</u>	<u>December</u>	<u>July</u>	<u>Average Monthly</u>
Drummond	95.6%	18.7%	44.1%
Neebish	100.0%	18.1%	32.3%
Sugar	99.1%	37.0%	65.1%
All Islands	97.7%	26.8%	53.9%

One significant aspect of basic ridership is its impact on service and fares. Generally, it is desirable to satisfy the regular ferry users, as they are the base of the system's ridership. Many systems offer fare reductions to this group to lessen their financial burden resulting from repetitious transportation costs and to encourage use of the services. This is the case with the St. Mary's River Ferry System as pass books are available to the user. These offer fare reductions up to 60 percent.

F. Cost/Revenue

During fiscal year 1982-83, the total cost of operating the St. Mary's Ferry System was \$869,262.87. Total revenues for the same period were \$438,413.57, which results in an operating ratio of 198.3 percent (See Table 3).

EUPTA was eligible for \$425,000 in state operating funds during fiscal year 1982-83. The state agreed to cover 50 percent of EUPTA's total eligible operating costs for the year. If local funds, plus revenue, exceed 50 percent of the total costs, the state's obligation is reduced accordingly. State monies, in accordance with Section 7 of Contract 81-1144, as amended, were reduced by \$3,584.85 for FY 1982-83. A history of state funds allocated to the St. Mary's ferry services is shown in Table 4.

TABLE 3

ST. MARY'S FERRY SYSTEM, FY 1982-83 1/

Annual Vessel Miles	26,926
Cost Per Vessel Mile	\$32.28
Revenue Per Vessel Mile	\$16.28
Annual Passengers	448,883
Cost Per Passenger	\$1.94
Revenue Per Passenger	\$0.98
Annual Passenger Miles	271,882
Cost Per Passenger Mile	\$3.20
Revenue Per Passenger Mile	\$1.61
Operating Ratio	198.3%

Note: 1/ Based on EUPTA figures.

Source: MDOT, Passenger Transportation Planning Section.

TABLE 4

STATE FUNDS ALLOCATED TO ST. MARY'S RIVER
FERRY SERVICES, FY 1975-85 1/

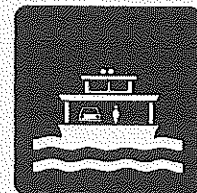
Fiscal Year	Capital	Operating	Total
1975-1976	\$202,000 <u>2/</u>	0	\$ 202,000
1976-1977	0	0	0
1977-1978	\$166,345	0	\$ 166,345
1978-1979	0	0	0
1979-1980	\$ 500,000	0	\$ 500,000
1980-1981	\$1,000,000	0	\$1,000,000
1981-1982	0	\$556,600	\$ 556,600
1982-1983	0	\$425,000	\$ 425,000
1983-1984	\$ 150,000	\$450,000	\$ 600,000
1984-1985	\$ 150,000	\$450,000	\$ 600,000

Notes: 1/ Funds allocated do not represent expenditures.

2/ The State \$202,000 plus the local contribution of \$280,000 was necessary to obtain a federal grant of \$1,482,000.

Source: Michigan Department of Transportation, Public Transportation Program books, 1973-74 through 1984-85.

PART IV
SURVEY METHODOLOGY



IV. SURVEY METHODOLOGY

The St. Mary's River Ferry User Survey was conducted at the Drummond, Neebish and Sugar island locations during the six day period of July 7-12, 1983. The survey consisted of three separate types of data collection: the personal interviewing of drivers; a one page mail-back survey form; and vehicle, pedestrian and bicycle classifications (counts). These surveys were coordinated and conducted by the Origin and Destination Surveys Unit of the Michigan Department of Transportation.

Survey crews were on duty during all hours of operation for each ferry. An exception to this occurred at Drummond Island, where on Saturday, July 9, two ferries were operated. There was not a sufficient number of MDOT personnel available to survey the second ferry, but the captain of the vessel counted 107 vehicles and 68 pedestrians during the seven hour period the ferry operated. Because no interviews or formal classifications took place, these figures have not been included in the total vehicle and pedestrian figures shown in this report.

A. Personal Interview Survey

The personal interview surveys were administered at each ferry by the survey crews. Observations were made regarding the type of vehicle and number of occupants. Pedestrians were also counted and interviewed, and bicycles being used as the major mode of transportation were noted.

The drivers of as many vehicles as possible were asked a series of questions concerning the origin or destination of their trip; their permanent residence; length of their stay on the island; their accommodations on the islands; the number of days per week they used the ferry; and the purpose of their trip. A sample of the survey form is included in Appendix B.

A total of 4,871 trips were recorded by survey crews. Of these, 4,534 personal interviews of drivers and pedestrians were conducted for a response rate of 93.1 percent.

B. Mail-Back Survey

The mail-back survey was administered at the same time the personal interviews were being conducted. A short questionnaire was handed out to the driver of each vehicle, as well as to all pedestrians. The questionnaire was in the form of a 5 1/2 x 8 1/2 inch post card with the questions on one side and MDOT's address and prepaid postage stamp on the other. A sample of the survey form is included in Appendix B. Respondents simply answered the questions and either handed it back to one of the MDOT survey crew members or dropped it in a mail box.

Questions were asked regarding sex, age and employment status of the respondent, as well as the number of persons in their household. Respondents were also asked to rate the ferry service from poor to very good with respect to nine categories concerning the ferry and its operation. The information obtained from the mail-back survey supplemented, but was not combined with, the data obtained from the personal interview survey.

TABLE 5

ORIGIN-DESTINATION AND MAIL-BACK SURVEY TOTALS

	Vehicles Classified	Drivers Interviewed	% Int/Class	Total Pedestrians ^{1/}	Pedestrians Interviewed	% Int/Ped	Surveys Distributed	Surveys Returned	Response Rate
Drummond Island 2/	1,667	1,565	93.8%	473	285	60.2%	1,003	717	71.5%
Neebish Island	333	328	98.5%	3	3	100.0%	135	97	71.9%
Sugar Island	2,210	2,171	98.2%	185	182	98.4%	669	478	71.4%
TOTAL	4,210	4,064	96.5%	661	470	71.1%	1,807	1,292	71.5%

NOTES:

1/ Includes bicycles.

2/ An additional ferry was operated on Saturday between 11 a.m. and 6 p.m. MDOT staff were not able to survey users, however, the captain of the ferry counted 107 vehicles and 68 pedestrians during the seven hour period.

FIGURE 6
TOTAL VEHICLE COUNTS

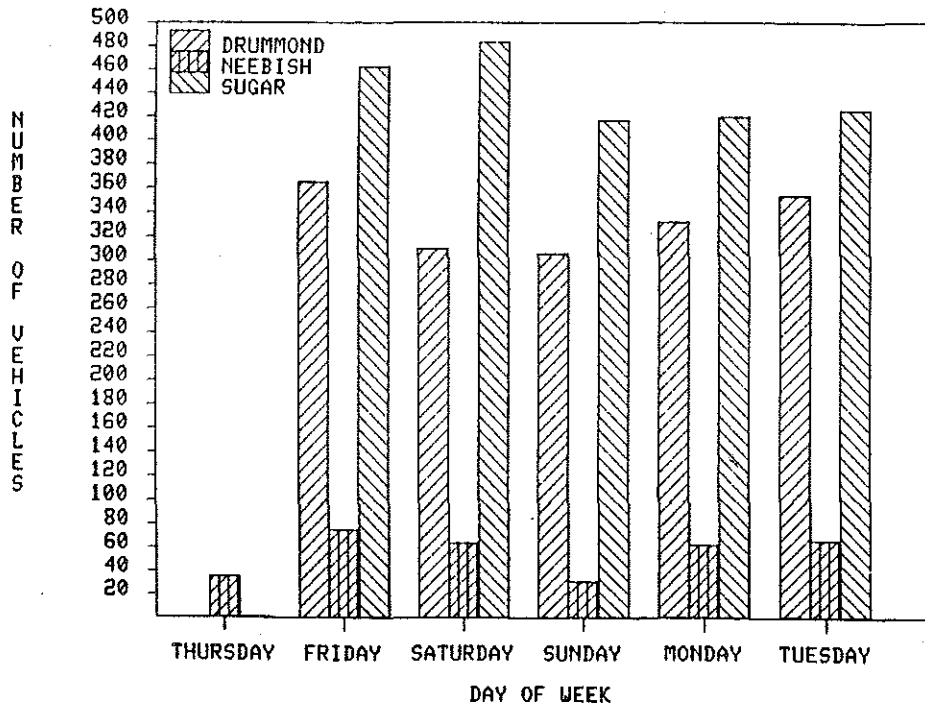
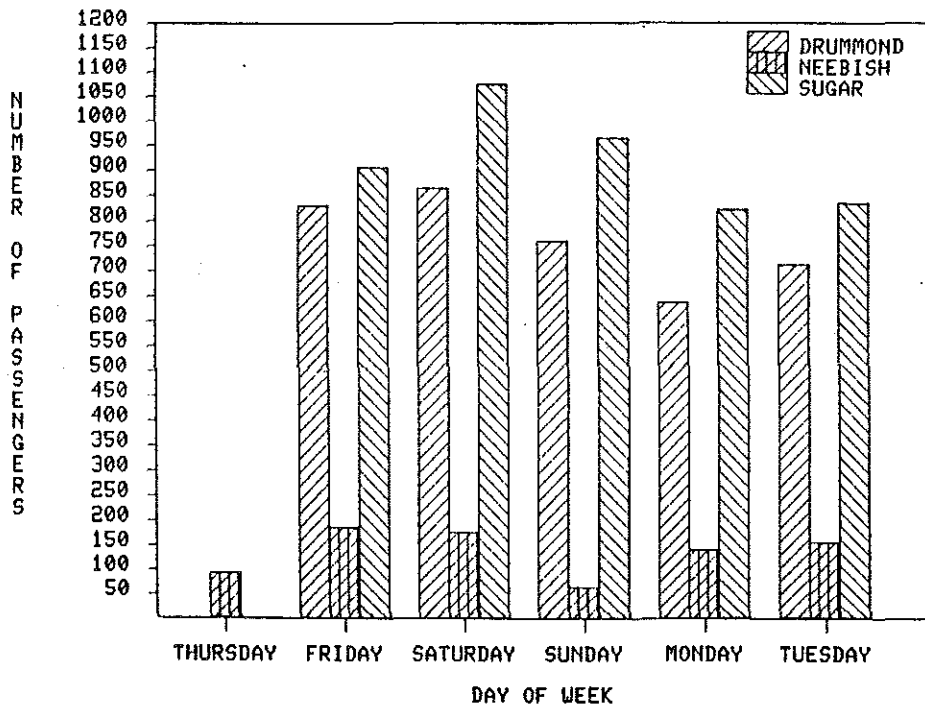


FIGURE 7

TOTAL PASSENGERS IN CLASSIFIED VEHICLES



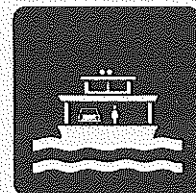
During the six day survey period, 1,807 mail-back questionnaires were distributed. Of these, 1,292 were returned for a response rate of 71.5 percent. The number of survey forms distributed (1,807) is much lower than the total number of vehicles and pedestrians (4,871) because many daily riders did not fill out a survey form each time they rode the ferry. Since they were included in the classification counts on each trip, this resulted in the characteristics of the frequent users being understated.

C. Classification Counts

Classification counts were done in conjunction with the personal interview and mail-back surveys. Vehicles, pedestrians and bicycles were counted on every crossing of the ferry and vehicle type, as well as number of occupants, was noted. The total number of vehicles classified for all three services was 4,210 (see Appendix C), total pedestrians including bicycles was 661, and total passengers was 9,218. This resulted in an average of 2.2 occupants per vehicle. A second ferry was operated at Drummond Island on Saturday, July 9, from 11 a.m. to 6 p.m. There were no MDOT survey personnel available to survey the second ferry, but the captain of the ferry counted 107 vehicles and 68 pedestrians during the seven hour period. These figures have not been included in the classification totals presented in this report.

The daily totals of "Vehicle Counts" and "Passengers in Classified Vehicles" are represented in Figures 6 and 7.

PART V
SURVEY RESULTS



V. SURVEY RESULTS

Results of the origin-destination and the mail-back surveys are presented in this section. These results are representative of the traffic during July and August. It is much different from the base ridership. Overall results are presented for travel characteristics and user characteristics. Brief summaries of the most frequent responses are presented for travel and user characteristics. User ratings of the services are also summarized. Cross tabulations of selected survey results are included in Appendix D.

A. Travel Characteristics

Travel characteristics of ferry users were obtained from the origin-destination survey. Information was gathered regarding users' permanent residence, length of stay on island, accommodations on island, how often they used the ferry, and purpose of their trip. Overall results for each island service are shown in Table 6. A brief summary for each response is presented as well.

1. Permanent Residence: Approximately six out of every 10 users interviewed were from Chippewa County.

	<u>Chippewa Co.</u>		<u>Rest of Michigan</u>		<u>Outside Michigan</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	775	42.5%	841	46.0%	210	11.5%
Neebish	125	37.8%	125	37.7%	81	24.5%
Sugar	1,589	69.0%	418	18.1%	298	12.9%
Total	2,489	55.7%	1,384	31.1%	589	13.2%

2. Length of Stay: Three out of 10 users interviewed were permanent island residents; six out of 10 were staying for two weeks or less.

	<u>Permanent Resident</u>		<u>Seasonal</u>		<u>2 Weeks or Less</u>		<u>Other</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	361	19.7%	87	4.8%	1,355	74.1%	25	1.4%
Neebish	53	16.0%	42	12.7%	216	65.3%	20	6.0%
Sugar	967	41.8%	167	7.2%	1,164	50.2%	16	0.7%
Total	1,381	30.9%	296	6.6%	2,735	61.1%	61	1.4%

TABLE 6
TRAVEL CHARACTERISTICS

Data Item	Island Service						Total	
	Drummond		Neebish		Sugar		No.	%
<u>Permanent Residence</u>	No.	%	No.	%	No.	%	No.	%
Sault Ste. Marie	102	5.6%	36	10.9%	573	24.9%	711	15.9%
Chippewa County	673	36.9%	89	26.9%	1,016	44.1%	1,778	39.8%
Upper Peninsula	79	4.3%	9	2.7%	44	1.9%	132	3.0%
Rest of Michigan	762	41.7%	116	35.0%	374	16.2%	1,252	28.1%
Outside Michigan	210	11.5%	81	24.5%	298	12.9%	589	13.2%
<u>Length of Stay</u>								
One day or less	654	35.8%	87	26.3%	710	30.7%	1,451	32.4%
2 days to 1 week	612	33.4%	100	30.2%	323	13.9%	1,035	23.1%
1-2 weeks	89	4.9%	29	8.8%	131	5.7%	249	5.6%
Seasonal	87	4.8%	42	12.7%	167	7.2%	296	6.7%
Permanent Resident	361	19.7%	53	16.0%	967	41.8%	1,381	30.9%
Other	25	1.4%	20	6.0%	16	0.7%	61	1.3%
<u>Accommodations</u>								
Not Given	30	1.6%	1	0.4%	55	2.4%	86	1.9%
Rent-Motel or Cottage	356	19.5	51	15.4%	144	6.2%	551	12.3%
Family Summer Home	261	14.3%	149	45.0%	522	22.6%	932	20.8%
Permanent Home	497	27.2%	56	16.9%	1,203	52.0%	1,756	39.3%
Motor Home or Trailer	217	11.9%	10	3.0%	31	1.3%	258	5.8%
Other	467	25.5%	64	19.3%	359	15.5%	890	19.9%
<u>Trip Purpose</u>								
Work	277	15.2%	42	12.7%	423	18.3%	742	16.6%
Personal Business	213	11.7%	18	5.4%	225	9.7%	456	10.2%
Shopping	35	1.9%	55	16.6%	290	12.6%	380	8.5%
Vacation	637	34.8%	124	37.5%	317	13.7%	1,078	24.1%
Other-Soc./Rec.	559	30.6%	82	24.8%	986	42.7%	1,627	36.4%
All Other	62	3.3%	6	1.8%	19	0.9%	87	2.0%
School	5	0.3%	0	0.0%	5	0.2%	10	0.2%
Medical/Dental	40	2.2%	4	1.2%	44	1.9%	88	2.0%
<u>Day of Week</u>								
Thursday	---	-----	35	10.6%	---	-----	35	0.8%
Friday	403	22.0%	70	21.2%	404	17.5%	877	19.6%
Saturday	356	19.5%	68	20.5%	525	22.7%	949	21.3%
Sunday	342	18.7%	27	8.2%	463	20.1%	832	18.6%
Monday	349	19.1%	62	18.7%	448	19.4%	859	19.2%
Tuesday	378	20.7%	69	20.8%	470	20.3%	917	20.5%

Source: MDOT, Passenger Transportation Planning Section, St. Mary's River Ferry Study, July 1983.

3. Accommodations. Approximately 4 out of 10 users were staying in permanent homes on the islands. Two out of 10 were staying in a family summer home, and 1 out of 10 was renting a motel room or cottage.

	<u>Permanent Home</u>		<u>Summer Home</u>		<u>Motel/Cottage</u>		<u>Other</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	497	27.2%	261	14.3%	356	19.5%	714	39.0%
Neebish	56	16.9%	149	45.0%	51	15.4%	75	22.7%
Sugar	1,203	52.0%	522	22.6%	144	6.2%	445	19.2%
Total	1,756	39.3%	932	20.8%	551	12.3%	1,234	27.6%

4. Trip Purpose. Almost 4 out of every 10 users stated their trip purpose to be social/recreational; 2 out of 10 were on vacation and 2 of every 10 responded work trip. Sugar Island had a significant percentage of commute (regularly made-local trips). This indicates a greater amount of local interaction between Sault Ste. Marie and Sugar Island. This is reflected by the fact that the percentage of respondents indicating they were a permanent island resident of Sugar Island was over twice that of respondents who were permanent residents of the other two islands. For Drummond Island in particular, this indicates a more long distance, tourist travel type of use.

	<u>Social/Recreational</u>		<u>Vacation</u>		<u>Work</u>		<u>Other</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	559	30.6%	637	34.8%	277	15.2%	355	19.4%
Neebish	82	24.8%	124	37.5%	42	12.7%	83	25.0%
Sugar	986	42.7%	317	13.7%	423	18.3%	583	25.3%
Total	1,627	36.4%	1,078	24.1%	742	16.6%	1,201	22.9%

5. Day of Week. Six out of every 10 users made use of the ferry service on a Friday, Saturday or Sunday. The Neebish Island figures include interviews conducted between 3 and 11 p.m. on Thursday.

	<u>Friday-Sunday</u>		<u>Monday & Tuesday</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	1,101	60.2%	727	39.8%
Neebish	165	49.9%	166	50.1%
Sugar	1,392	60.3%	918	39.7%
Total	2,658	59.5%	1,811	40.5%

B. User Characteristics

User characteristics were obtained from the mail-back questionnaires. Information regarding users' sex, age, employment status, household size, family income, and number of vehicles per household was requested. Overall results for each island service is shown in Table 7. A brief summary for each response is also presented.

1. Sex: Seven of every 10 respondents were male. This high percentage of male respondents reflects the fact that only the drivers of each vehicle were interviewed, most of which were male.

<u>Island Service</u>	<u>Male</u>		<u>Female</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	526	74.6%	179	25.4%
Neebish	69	72.6%	26	27.4%
Sugar	330	70.5%	138	29.5%
Total	925	72.9%	343	27.1%

2. Age: Five of every 10 respondents were in the 25 to 54 age group. Two of every 10 were senior citizens (see Figure 8).

<u>Island Service</u>	<u>25-54</u>		<u>65 or older</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	399	56.6%	118	16.7%
Neebish	43	45.2%	20	21.1%
Sugar	249	53.2%	95	20.3%
Total	691	54.5%	233	18.4%

3. Employment Status: Six of every 10 respondents were employed full or part-time. Two of every 10 were retired (see Figures 10-13).

<u>Island Service</u>	<u>Full or Part-Time</u>		<u>Retired</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	414	65.3%	133	21.0%
Neebish	46	56.2%	27	32.9%
Sugar	246	59.5%	92	22.2%
Total	706	62.5%	252	22.3%

TABLE 7
USER CHARACTERISTICS

Data Item	Island Service							
	Drummond		Neebish		Sugar		Total	
	No.	%	No.	%	No.	%	No.	%
<u>Sex</u>								
Male	526	74.6%	69	72.6%	330	70.5%	925	72.9%
Female	179	25.4%	26	27.4%	138	29.5%	343	27.1%
<u>Age</u>								
17 or under	14	2.0%	1	1.1%	10	2.1%	25	2.0%
18-24	46	6.5%	5	5.3%	43	9.2%	94	7.4%
25-54	399	56.6%	43	45.2%	249	53.2%	691	54.5%
55-64	128	18.2%	26	27.3%	71	15.2%	225	17.7%
65 or Over	118	16.7%	20	21.1%	95	20.3%	233	18.4%
<u>Employment Status</u>								
Employed Full-Time	371	58.5%	38	46.4%	196	47.4%	605	53.5%
Employed Part-Time	43	6.8%	8	9.8%	50	12.1%	101	8.9%
Unemployed	27	4.3%	1	1.2%	30	7.2%	58	5.1%
Homemaker	46	7.3%	6	7.3%	29	7.0%	81	7.2%
College Student	5	0.8%	1	1.2%	4	1.0%	10	0.9%
Other Student	3	0.5%	1	1.2%	1	0.2%	5	0.4%
Retired	133	21.0%	27	32.9%	92	22.2%	252	22.3%
Other	6	0.8%	0	0.0%	12	2.9%	18	1.7%
<u>Household Size</u>								
One	64	9.7%	4	4.5%	58	13.7%	126	10.7%
Two	270	40.8%	52	57.8%	150	35.5%	472	40.2%
Three	104	15.7%	12	13.3%	91	21.6%	207	17.7%
Four	124	18.8%	11	12.2%	79	18.7%	214	18.3%
Five or More	99	15.0%	11	12.2%	44	10.5%	154	13.1%
<u>Family Income Range</u>								
Under \$10,000	92	14.5%	14	17.1%	107	25.8%	213	18.8%
\$10,000-\$19,999	182	28.7%	20	24.4%	121	29.2%	323	28.6%
\$20,000-\$29,999	126	19.9%	19	23.2%	86	20.8%	231	20.5%
\$30,000-\$39,999	103	16.2%	13	15.9%	46	11.2%	162	14.3%
\$40,000-\$49,999	57	9.0%	8	9.7%	22	5.3%	87	7.7%
\$50,000 or More	74	11.7%	8	9.7%	32	7.7%	114	10.1%
<u>Operating Vehicles Per Household</u>								
None	1	0.2%	0	0.0%	6	1.4%	7	0.6%
One	152	23.0%	17	18.9%	136	32.2%	305	26.0%
Two	335	50.7%	59	65.6%	194	46.0%	588	50.1%
Three or more	173	26.1%	14	15.5%	86	20.4%	273	23.3%

Note: Average numbers have been adjusted slightly, if necessary, to compensate for blank responses.

Source: MDOT, Passenger Transportation Planning Section, St. Mary's River Ferry Study, July 1983.

4. Household Size: Five of every 10 users were from households of one or two persons. The largest household was nine, with each island service having one such respondent.

<u>Island Service</u>	<u>One</u>		<u>Two</u>		<u>Three or More</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	64	9.7%	270	40.8%	327	49.5%
Neebish	4	4.5%	52	57.8%	34	37.7%
Sugar	58	13.7%	150	35.5%	214	50.8%
Total	126	10.7%	472	40.2%	575	49.1%

5. Income Range: Five of every 10 users were from households with an annual income under \$20,000. One of 10 was from a household making \$50,000 or more (see Figure 9).

<u>Island Service</u>	<u>Under \$20,000</u>		<u>\$50,00 or more</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	274	43.2%	74	11.7%
Neebish	34	41.5%	8	9.7%
Sugar	228	55.0%	32	7.7%
Total	536	47.4%	114	10.1%

6. Operating Vehicles: Eight of every 10 users were from households having two or less operating vehicles. Three out of 10 were from households having one or no cars.

<u>Island Service</u>	<u>Two or less</u>		<u>One or none</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	488	73.9%	153	23.2%
Neebish	76	84.5%	17	18.9%
Sugar	336	79.6%	142	33.6%
Total	900	76.7%	312	26.6%

FIGURE 8

AGE OF SURVEY RESPONDENTS
ALL ISLANDS-JULY 1983

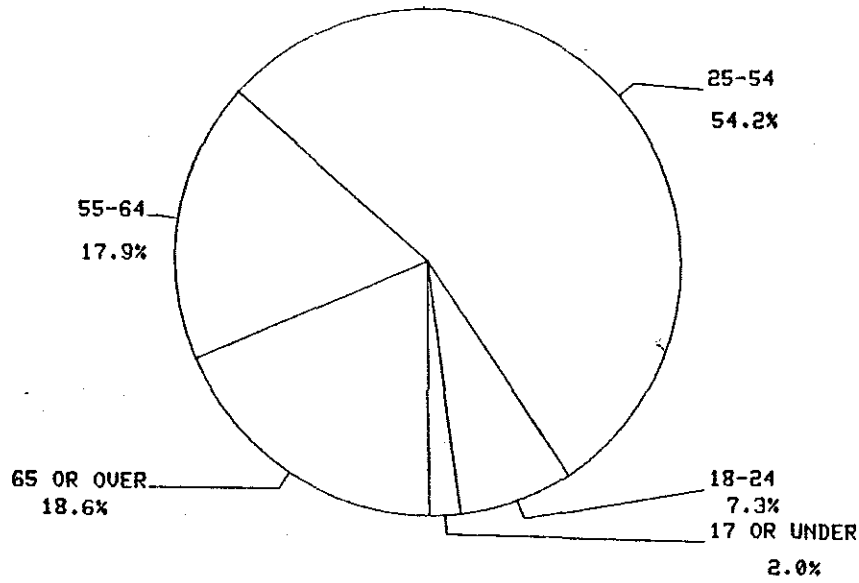


FIGURE 9

ANNUAL HOUSEHOLD INCOME
OF SURVEY RESPONDENTS

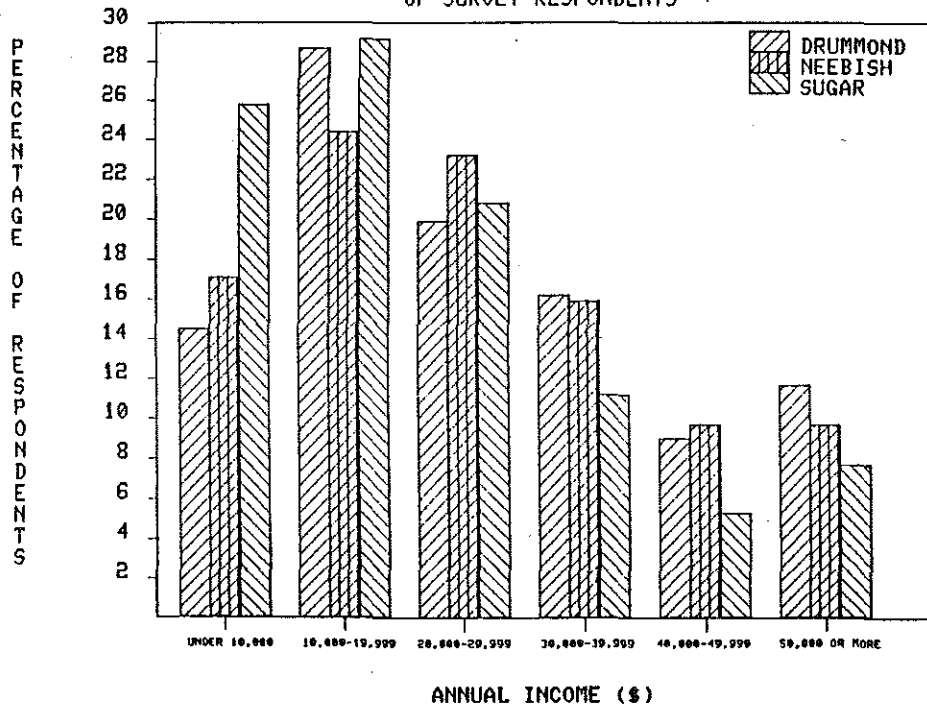


FIGURE 10

EMPLOYMENT STATUS OF SURVEY RESPONDENTS
DRUMMOND ISLAND-JULY 1983

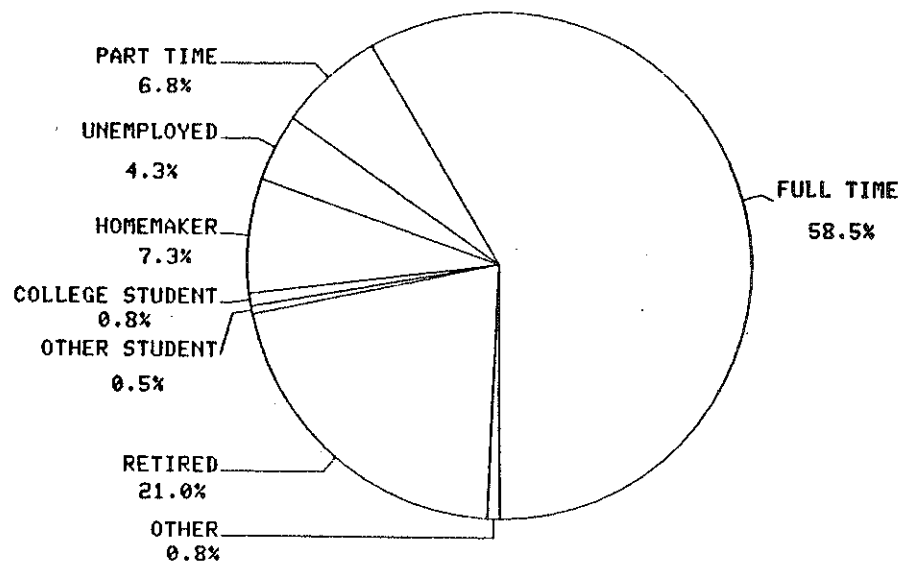


FIGURE 11

EMPLOYMENT STATUS OF SURVEY RESPONDENTS
NEEBISH ISLAND-JULY 1983

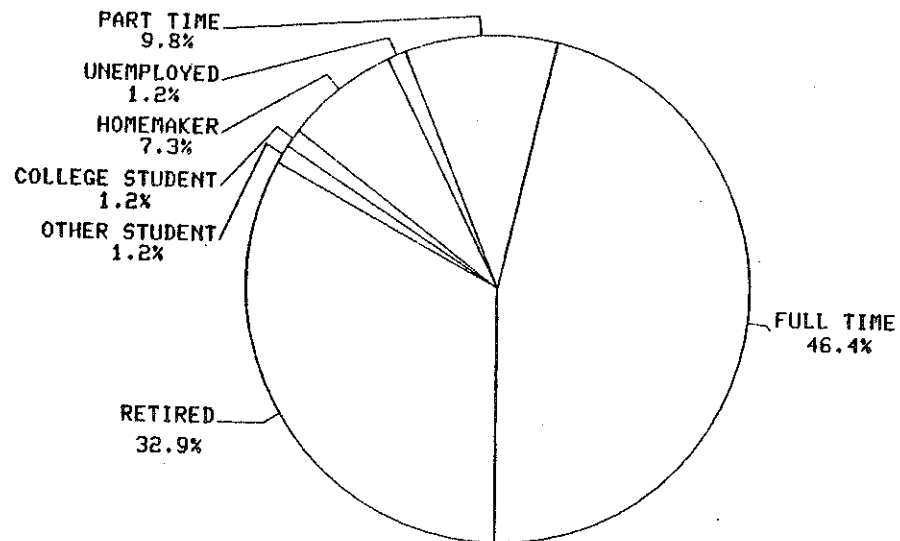


FIGURE 12

EMPLOYMENT STATUS OF SURVEY RESPONDENTS
SUGAR ISLAND-JULY 1983

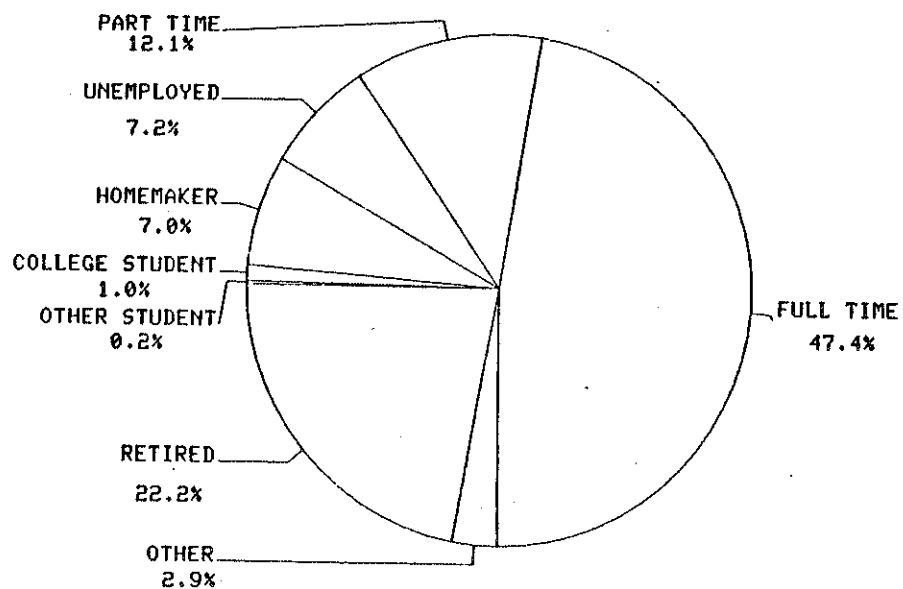
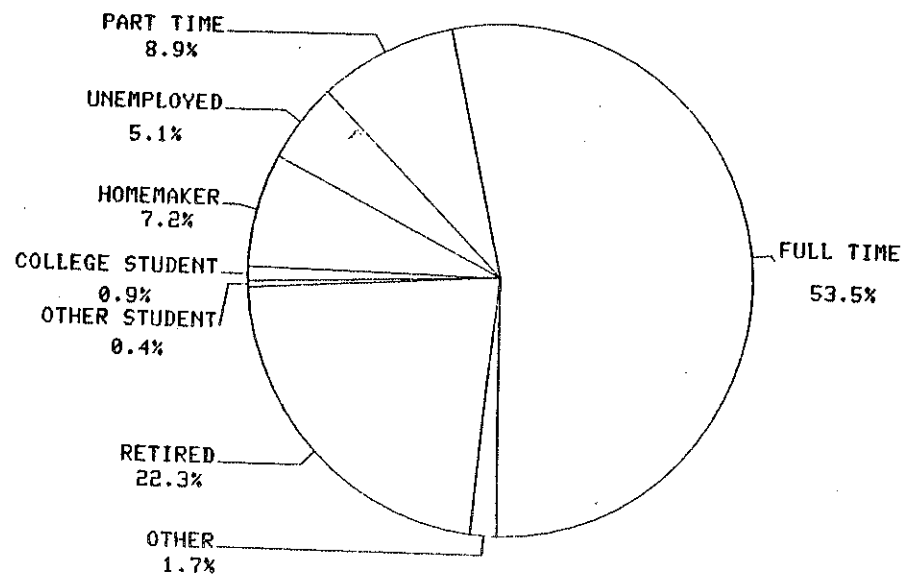


FIGURE 13

EMPLOYMENT STATUS OF SURVEY RESPONDENTS
ALL ISLANDS-JULY 1983



C. Rating of Services by Users

The last question of the mail-back questionnaire asked respondents to rate the ferry service regarding the following: operating hours, frequency of service, availability of information, announcement of schedule changes, ease of getting on/off the ferry, condition of vessel, parking/waiting area, courtesy of ferry employees, and fare structure. Following is a brief summary of the most frequent responses for each of the nine categories.

1. Operating Hours: Eight of every 10 respondents considered the operating hours to be good or very good at Drummond and Sugar Islands. At Neebish Island the ratio was only five of 10.

<u>Island Service</u>	<u>Good</u>		<u>Very Good</u>		<u>Both</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	344	48.7%	251	35.5%	595	84.2%
Neebish	29	30.2%	24	25.0%	53	55.2%
Sugar	216	46.0%	182	38.7%	398	84.7%
Total	589	46.3%	457	35.9%	1,046	82.2%

2. Frequency of Service: Eight of every 10 respondents considered the frequency of service to be good or very good. Sugar Island rated highest (9 of 10) and Neebish Island lowest (6 of 10).

<u>Island Service</u>	<u>Good</u>		<u>Very Good</u>		<u>Both</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	340	48.9%	209	30.1%	549	79.0%
Neebish	29	31.2%	25	26.9%	54	58.1%
Sugar	217	47.1%	189	41.0%	406	88.1%
Total	586	46.9%	423	33.9%	1,009	80.8%

TABLE 8
RATING OF SERVICES BY USERS

Data Item	Island Service							
	Drummond		Neebish		Sugar		Total	
	No.	%	No.	%	No.	%	No.	%
<u>Operating Hours</u>								
Poor	20	2.8%	17	17.7%	15	3.2%	52	4.1%
Fair	71	10.0%	25	26.0%	44	9.4%	140	11.0%
Good	344	48.7%	29	30.2%	216	46.0%	589	46.3%
Very Good	251	35.5%	24	25.0%	182	38.7%	457	35.9%
Don't Know	21	3.0%	1	1.1%	13	2.7%	35	2.7%
<u>Frequency of Service</u>								
Poor	37	5.3%	14	15.1%	8	1.7%	59	4.7%
Fair	91	13.1%	23	24.7%	38	8.2%	152	12.2%
Good	340	48.9%	29	31.2%	217	47.1%	586	46.9%
Very Good	209	30.1%	25	26.9%	189	41.0%	423	33.9%
Don't Know	18	2.6%	2	2.1%	9	2.0%	29	2.3%
<u>Availability of Information</u>								
Poor	65	9.4%	20	21.5%	30	6.8%	115	9.4%
Fair	107	15.5%	21	22.6%	68	15.4%	196	16.0%
Good	266	38.6%	29	31.2%	179	40.6%	474	38.7%
Very Good	173	25.1%	20	21.5%	120	27.2%	313	25.6%
Don't Know	79	11.4%	3	3.2%	44	10.0%	126	10.3%
<u>Announcement of Schedule Changes</u>								
Poor	49	7.3%	26	29.2%	46	10.4%	121	10.0%
Fair	67	10.0%	20	22.5%	61	13.8%	148	12.3%
Good	209	31.1%	17	19.1%	147	33.2%	373	31.0%
Very Good	114	16.9%	16	18.0%	85	19.2%	215	17.8%
Don't Know	234	34.7%	10	11.2%	104	23.4%	348	28.9%
<u>Ease of Getting On/Off Ferry</u>								
Poor	40	5.7%	4	4.3%	17	3.6%	61	4.8%
Fair	131	18.6%	11	11.7%	49	10.4%	191	15.1%
Good	299	42.5%	43	45.7%	191	40.7%	533	42.1%
Very Good	230	32.7%	36	38.3%	207	44.1%	473	37.3%
Don't Know	4	0.5%	0	0.0%	5	1.2%	9	0.7%
<u>Condition of Vessel</u>								
Poor	60	8.6%	2	2.1%	5	1.1%	67	5.3%
Fair	132	18.9%	7	7.4%	33	7.0%	172	13.6%
Good	335	48.1%	43	45.7%	245	52.6%	623	49.6%
Very Good	131	18.8%	34	36.2%	155	33.3%	320	25.5%
Don't Know	39	5.6%	8	8.6%	28	6.0%	75	6.0%
<u>Parking/Waiting Area</u>								
Poor	52	7.4%	6	6.3%	45	9.6%	103	8.2%
Fair	157	22.4%	15	15.8%	104	22.3%	276	21.8%
Good	348	49.6%	43	45.3%	197	42.2%	588	46.6%
Very Good	140	20.0%	31	32.6%	118	25.3%	289	22.9%
Don't Know	4	0.6%	0	0.0%	3	0.6%	7	0.5%
<u>Courtesy of Ferry Employees</u>								
Poor	33	4.7%	12	12.6%	12	2.6%	57	4.5%
Fair	68	9.6%	19	20.0%	43	9.2%	130	10.2%
Good	226	31.9%	22	23.2%	182	38.9%	430	33.8%
Very Good	373	52.7%	42	44.2%	225	48.1%	640	50.4%
Don't Know	8	1.1%	0	0.0%	6	1.2%	14	1.1%
<u>Fare Structure</u>								
Poor	93	13.8%	13	14.4%	55	12.1%	161	13.2%
Fair	172	25.6%	27	30.0%	115	25.4%	314	25.8%
Good	273	40.6%	28	31.1%	179	39.4%	480	39.4%
Very Good	100	14.9%	18	20.0%	78	17.2%	196	16.1%
Don't Know	35	5.1%	4	4.5%	27	5.9%	66	5.5%

Source: MDOT, Passenger Transportation Planning Section, St. Mary's River Ferry Study, July 1983.

3. Availability of Information: Six of every 10 respondents considered the availability of information to be good or very good. This means 35.7 percent rated this feature as fair, poor, or don't know with Neebish Island having the highest percentage (47.3 percent in these categories).

<u>Island Service</u>	<u>Good</u>		<u>Very Good</u>		<u>Both</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	266	38.6%	173	25.1%	439	63.7%
Neebish	29	31.2%	20	21.5%	49	52.7%
Sugar	179	40.6%	120	27.2%	299	67.8%
Total	474	38.7%	313	25.6%	787	64.3%

4. Announcement of Schedule Changes: Five of every 10 respondents considered the announcement of schedule changes good or very good. The other half rated this fair, poor, or don't know with Neebish Island being the highest at 62.9 percent.

<u>Island Service</u>	<u>Good</u>		<u>Very Good</u>		<u>Both</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	209	31.1%	114	16.9%	323	48.0%
Neebish	17	19.1%	16	18.0%	33	37.1%
Sugar	147	33.2%	85	19.2%	232	52.4%
Total	373	31.0%	215	17.8%	588	48.8%

5. Ease of Getting On/Off Ferry: Eight of every 10 respondents considered the ease of getting on or off the ferry good or very good. Drummond Island had the lowest rating, as three of 10 rated this feature fair, poor, or don't know.

<u>Island Service</u>	<u>Good</u>		<u>Very Good</u>		<u>Both</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	299	42.5%	230	32.7%	529	73.2%
Neebish	43	45.7%	36	38.3%	79	84.0%
Sugar	191	40.7%	207	44.1%	398	84.8%
Total	533	42.1%	473	37.3%	1,006	79.4%

6. Condition of Vessel: Eight out of every 10 respondents considered the condition of the vessels used to be good or very good. Drummond Island had the lowest rating, as three of 10 rated this feature fair, poor, or don't know.

<u>Island Service</u>	<u>Good</u>		<u>Very Good</u>		<u>Both</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	335	48.1%	131	18.8%	466	66.9%
Neebish	43	45.7%	34	36.2%	77	81.9%
Sugar	245	52.6%	155	33.3%	400	85.9%
Total	623	49.6%	320	25.5%	943	75.1%

7. Parking/Waiting Area: Seven of every 10 respondents considered the parking and waiting areas to be good or very good. All three island services were rated about the same by their users.

<u>Island Service</u>	<u>Good</u>		<u>Very Good</u>		<u>Both</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	348	49.6%	140	20.0%	488	69.6%
Neebish	43	45.3%	31	32.6%	74	77.9%
Sugar	197	42.2%	118	25.3%	315	67.5%
Total	588	46.6%	289	22.9%	877	69.5%

8. Courtesy of Ferry Employees: Eight of every 10 respondents considered the courtesy of ferry employees to be good or very good. Neebish Island received the lowest rating as three of 10 rated this feature fair or poor.

<u>Island Service</u>	<u>Good</u>		<u>Very Good</u>		<u>Both</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	226	31.9%	373	52.7%	599	84.6%
Neebish	22	23.2%	42	44.2%	64	67.4%
Sugar	182	38.9%	225	48.1%	407	87.0%
Total	430	33.8%	640	50.4%	1,070	84.2%

9. Fare Structure: Five of every 10 respondents considered the fare structure good or very good. An additional 2.5 of every 10 respondents rated this item fair, which raises the ratio to eight of every 10. This may be a better grouping of categories for this particular item as fare structure is a difficult item to rate good or very good.

Only 13 percent of the respondents rated this item poor. This seems to indicate a significant level of acceptance of the fare structure as reasonable.

<u>Island Service</u>	<u>Good</u>		<u>Very Good</u>		<u>Both</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Drummond	273	40.6%	100	14.9%	373	55.5%
Neebish	28	31.1%	18	20.0%	46	51.1%
Sugar	179	39.4%	78	17.2%	257	56.6%
Total	480	39.4%	196	16.1%	676	55.5%

D. User Comment Summary

There were 1,292 mail-back user surveys returned, 569 (44%) included written comments. The total number of written comments received regarding each ferry service follow: Drummond Island, 309 comments; Neebish Island, 54 comments; and Sugar Island, 206 comments. These figures represent 54.3 percent, 9.5 percent and 36.2 percent, respectively, of all comments received. The opinions expressed in the written comments do not always correspond to the information received in the service ratings. This may be because the frequent users were more likely to write comments, often to express a complaint.

1. Comment Frequency Analysis

The quantity of the written comments made by the user survey respondents suggest several things (see Table 9).

- Frequency of service/schedules is the number one concern.

One out of every four comments touch on this item. This was the top concern for Drummond and Neebish island ferry service users, and ranks second for the Sugar Island service.

TABLE 9

NUMBER OF COMMENTS BY TYPE AND ISLAND SERVICE

Comment Type	Drummond Island			Neebish Island			Sugar Island			Total		
	No.	%	Rank	No.	%	Rank	No.	%	Rank	No.	%	Rank
General/Positive	27	8.7	5	9	16.7	2	27	13.1	4	63	11.1	4
Frequency of Service/Schedules	98	31.7	1	22	40.7	1	25	12.1	5	145	25.5	1
Facilities	37	12.0	4	9	16.7	3	35	17.0	2	81	14.2	5
Condition of Vessels	19	6.1	7	0	0.0	8	0	0.0	8	19	3.3	7
Cost and Fare Structure	57	18.5	2	7	12.9	4	74	35.9	1	138	24.3	2
Safety	3	1.0	8	2	3.7	6	1	0.5	7	6	1.1	8
Employees	27	8.7	6	1	1.9	7	16	7.8	6	44	7.7	6
Miscellaneous	41	13.3	3	4	7.4	5	28	13.6	3	73	12.8	3
Total	309	100.0		54	100.0		206	100.0		569	100.0	

Source: MDOT, Passenger Transportation Planning Section, 1983 St. Mary's River Ferry User Survey conducted in July 1983.

- Cost and fare structure is the number two concern at Drummond and Neebish islands. It is the primary concern for the Sugar Island service. One out of every four comments address cost and fare structure.
- All other aspects of these ferry services are dwarfed by these top two concerns although facilities is clearly the number three concern. One out of every seven comments address this item.

2. Comment Content Analysis

This section highlights selected patterns in the user comments. These patterns are discussed according to, and in the order of, the comment types presented in Table 9. This analysis concerns the written comments only and does not correspond to the rating of service factors previously discussed.

a. General/Positive

(1) Drummond Island

- (a) Comment Pattern. Ferry service is good and employees are polite. This pattern is based on 27 responses received from frequent and long-term users.

(2) Neebish Island

- (a) Comment Pattern. Based on nine responses, users felt service was very satisfactory, friendly, operated in a business-like manner, and above-average.

(3) Sugar Island

(a) Comment Pattern. In the 27 responses received, superlatives were used describing this service: satisfied, best service, very polite, enjoyed using. Several responses indicate significant improvements have been made in recent years.

b. Frequency of Service/Schedules

(1) Drummond Island

(a) Comment Pattern. There were 98 responses regarding frequency of service and schedules, the majority of which concerned the use of only one ferry and long waits. Of the 98 responses, 50 expressed the need for operating two ferries, especially during busy times. Many of these, along with the other 48 respondents, commented on the need for more frequent service and complained of long waits.

(2) Neebish Island

(a) Comment Pattern. Based on 22 responses, many users feel the need exists for extended operating hours and more frequent service.

(3) Sugar Island

(a) Comment Pattern. Many comments expressed the need for extending operating hours beyond midnight. This pattern is based on 25 responses.

c. Facilities

(1) Drummond Island

(a) Comment Pattern. Thirty-seven written comments were received concerning facilities. The majority of responses expressed the need for restroom facilities, especially on the DeTour side of the river. Several complained that there were not enough signs directing traffic to the ferry.

(2) Neebish Island

(a) Comment Pattern. Nine responses were received with comments concerning the need for repair on the Neebish Island dock.

(3) Sugar Island

(a) Comment Pattern. The majority of comments on the facilities were concerned with poor road conditions on Sugar Island, including the poor access road to the ferry dock. This pattern is based on 35 responses.

d. Condition of Vessels

(1) Drummond Island

(a) Comment Pattern. Comments primarily concerned maintenance of vessels, that which is currently needed, as well as preventative maintenance. This pattern is based on 19 responses.

(2) Neebish Island

No comments regarding the condition of vessels.

(3) Sugar Island

No comments regarding the condition of vessels.

e. Cost and Fare Structure

(1) Drummond Island

(a) Comment Pattern. Fifty-seven responses were received concerning cost and fare structure. Several comments were made regarding the time limit on books of tickets, all felt the time period should be extended. The majority of respondents felt fares were too high.

(2) Neebish Island

(a) Comment Pattern. Seven responses were received from users who felt rates were too high.

(3) Sugar Island

(a) Comment Pattern. In the 74 responses received, the primary concerns were charging for passengers, rather than just for the vehicle, and also charging for children. The majority of the respondents felt that the rates were too high.

f. Safety

(1) Drummond Island

(a) Comment Pattern. Respondents to the issue of safety were concerned about the vehicles being parked so close together, which would prevent the doors from being opened in case of an emergency. This pattern is based on three responses.

(2) Neebish Island

(a) Comment Pattern. Two responses were received. Comments concerned the location of life jackets and vehicles being parked so close together that doors could not be opened in an emergency.

(3) Sugar Island

(a) Comment Pattern. The only response here concerned the location of life jackets and vehicles being parked too close together.

g. Employees

(1) Drummond Island

(a) Comment Pattern. There were 27 written responses received regarding employees. While there were several favorable comments made about ferry crews, roughly twice as many unfavorable responses were received concerning courtesy of employees.

(2) Neebish Island

(a) Comment Pattern. The only response received concerning courtesy of employees was extremely negative.

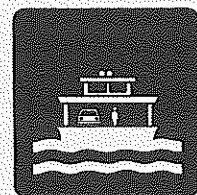
(3) Sugar Island

(a) Comment Pattern. The majority of responses felt courtesy of all employees was very poor. This pattern is based on 16 responses.

h. Miscellaneous

There were 73 miscellaneous comments received which addressed various positive and negative aspects of the three ferry services. Because there was no distinguishable pattern, these comments are not discussed in this report.

PART VI
ANALYSIS



VI. ANALYSIS

A. Existing and Future Demand

Several factors can be analyzed to estimate the demand for St. Mary's River ferry services. These include (1) population and the economy in Michigan and the local area served, (2) vehicle miles of travel in Michigan, and (3) the level of service offered by the three St. Mary's River ferry operations. To a lesser extent, these same factors in neighboring states and Canada can also influence service demand.

1. Population and the Economy

Michigan's population is presently declining. While the State's population increased from 8,881,826 to 9,258,344 between 1970 and 1980, a 4.2 percent increase, the reverse has occurred since then. The U.S. Bureau of Census estimates Michigan's 1983 population to be 9,068,800 with the intervening years showing a steady drop since 1980. At the same time, the population of the eastern Upper Peninsula (Chippewa, Luce, and Mackinac counties) has decreased from 45,866 to 45,099. Population forecasts, prepared by the Michigan Department of Management and Budget, indicate a growth in the next five to 10 years exceeding that experienced in the seventies. Considering the significant decrease experienced since 1980, it is questionable whether Michigan and the eastern Upper Peninsula will attain the figures projected. Historical and projected population characteristics are presented in Appendix E.

The labor force is rebounding from losses experienced in the early 1980's and should achieve decade highs in 1986. However, the unemployment rate, after showing some improvement in the early-eighties, will worsen somewhat in the mid-eighties. Consequently, employment growth for the State of Michigan is projected to be 6.4 percent by 1986, while employment growth for the eastern Upper Peninsula should be 5.8%. Historical and projected employment characteristics are presented in Appendix E.

2. Vehicle Miles of Travel

Vehicle miles of travel has decreased steadily beginning in the late seventies. This has resulted primarily from high unemployment, increasing fuel prices, and a Michigan population exodus. It is anticipated that this trend will reverse in the mid-eighties and increase to about 77 billion annual vehicle miles of travel by 1995. This would be a new high for the State, exceeding the previous high achieved in 1978. It constitutes an approximately 20 percent increase during the 12 year period, from the 1983 level of 64.3 billion.

3. Service Level

The level of service has been stable through recent years with 1981 being the highest. Sugar Island has the highest number of crossings and excess capacity. While Drummond Island has a significantly lower level of service than Sugar Island, it has the highest vessel productivity (see Table 10).

TABLE 10
VESSEL PRODUCTIVITY

Island Service	Passengers/ Vessel Crossing	Vehicles/ Vessel Crossing	Vessel Size (Vehicles)
Drummond	11.5	4.4	12
Neebish	3.4	1.6	5
Sugar	7.6	3.8	12

Historically, the level of service has remained relatively constant even in the latter half of the seventies when vehicle miles of travel, employment and population were higher than they are today. Historical service characteristics are presented in Appendix E.

These factors suggest a conservative future for patronage of the St. Mary's River ferry services. Ridership levels can be expected to remain relatively constant recognizing that modest increases may occur. Any such increases, however, will not be sufficient to warrant changes in the service level.

B. Impact of Services and Subsidy

Subsidy paid to the St. Mary's River ferries lowers the price of transportation to the islands. This constitutes a transfer of funds to the ferry users, or the operating agency, at the expense of auto users. The principal contributors to the Comprehensive Transportation Fund are auto users through payment of fuel and auto-related taxes.

1. Function of the Service

The ferries provide the only access to the islands. Without them there could be no automotive travel to the islands, and no substantial settlement there. Abandonment of the service isn't reasonable, nor will building bridges across the shipping channel ever be justified. While there is no practical service alternative with which to compare the impacts of the current operation, it is possible to describe the utility of the service and identify the people who pay for and benefit from it.

a. Utility to Islanders

The ferries provide access to everything that residents and vacationers can't get on the islands: employment, shopping, schools, services and recreation. The ferries perform the same function as the rest of the county road system, and are probably best evaluated as if they were links in that road system having tolls and very unusual operating costs. The ferries are the link between the road system on the islands and the rest of the county system, and ultimately with the state trunkline system for long-distance trips. Functionally, they are identical to county roads that provide access to communities of 746, 400 or 48 residents, and carry summer tourist volumes roughly four times their winter, or year-round base volumes.

The primary use of the ferries to island residents is for work, school and shopping trips. Some commuter traffic to Sault Ste. Marie originates on Sugar Island. There are some

work trips to the quarry, stores and other businesses on Drummond Island. Only minimal goods and services are available on the islands, so a ferry trip is necessary before residents or vacationers can go elsewhere for shopping or various services. The other major trip made by island residents is to schools. School district consolidation has resulted in some island students going to school on the mainland. Buses carry 60 to 70 children a day from each of Sugar and Drummond islands; others travel by car. The ferries also connect the islands with health services, including emergency services.

The auto ferry service permits island residents to live geographically close to the Sault Ste. Marie area, in an environment made effectively more distant by a travel, time and cost barrier. The inconvenience and cost of the ferry trip makes the islands slightly less accessible, relative to other Chippewa County locations. This separation may affect land prices on the islands.

b. Utility to Non-Residents

During the warmer months, roughly between May and October, non-residents (or part-time residents) outnumber island residents. Ferry ridership in August is three times what it is in February. During the MDOT July survey, only 31 percent of the respondents stated they were permanent residents of the islands.

This means that a significant percentage of the yearly users aren't residents of the islands (see Figures 3-5). Many of the non-residents are from outside the region or even the state.

The ferries, while not a tourist attraction in themselves, are a unique link in the highway system that carries many tourist trips.

In addition to serving as part of a long-distance vacation trip, the ferries serve tourists for many of the same purposes as island residents. During the survey, a third of the ferry users planned to stay one day or less. For these recreational users who may be making a short trip within the region, the ferries are a crucial link in their trips. Time and price may be important in their decision to visit the islands.

2. Distribution of Subsidy Benefits and Costs

The St. Mary's River ferries are the only auto and passenger ferries in the state that are subsidized by the Michigan Department of Transportation. The subsidy became necessary for two reasons. First, the private operators of the Neebish and Sugar Island ferries threatened to halt operations if they were not allowed to raise fares to a level sufficient to remain in business. Second, the Chippewa County Road Commission refused to further subsidize the Drummond Island service. Rather than raise fares to cover operating losses and capital needs, local decision makers applied for a subsidy from the state Comprehensive Transportation Fund. Because the transportation authority in the eastern Upper Peninsula was operating the three ferries, the services qualified for state assistance. Roughly, half the costs of their operation are paid by motorists statewide from tax revenues on fuel through the Comprehensive Transportation

Fund. Because the economic activity on the islands requires continued ferry service, it's not useful to study the impacts of abandonment or other alternatives. But the merits of continued subsidy can be evaluated, by listing the costs and benefits that accrue to different groups. The fare for a vehicle and driver at Drummond, Neebish and Sugar islands is \$3.25, \$2.50 and \$1.25 respectively; adult passenger fares are 80¢, 60¢, and 50¢, respectively. Senior citizens, students and children pay a reduced rate of approximately half the full fare.

This fare structure is presented in Appendix G. It reflects the different operating cost structure of each part of the service as dictated by vessel capacity, operating hours, frequency, and demand.

The total operating costs, revenues and subsidy for fiscal 1983 are as follows:

Expenses

crew costs	\$484,282
fuel	79,674
vessel maintenance	107,780
administration	94,829
insurance	27,095
other	<u>75,602</u>
Total expenses	\$ 869,263
Revenues	\$ 438,216
Deficit	-431,047
MDOT contribution	\$ 423,639 ^{1/}
Ridership	448,883 passengers

Note: ^{1/} Pending State Transportation Commission audit.

The state contribution is limited to 50 percent of the costs. The costs and benefits of this subsidy are divided among the following groups.

a. Ferry Users and Island Landowners

Ferry users are the obvious beneficiaries of the subsidy. Their cost for ferry transportation is held to about half of what it would be without subsidy. The present subsidy rate is the equivalent of (1) \$0.94 per rider, (2) \$1.89 per vehicle, (3) approximately \$236 per dwelling unit on the islands per year, or (4) approximately \$1,050 per permanent household per year.

For daily users of the ferries, this is a substantial subsidy, reducing the cost of commuting by \$3.78 per round trip, or over \$800 per year. For a person using the ferries as part of a vacation trip, the subsidy is an insignificant part of the expense of a long trip.

This subsidy has the effect of making activities, land, residences and businesses on the islands accessible. This means that not only commuters or travelers receive the benefits of the subsidy, but that some benefits are passed on to island landowners, and/or businesses on the islands. For example, a landowner selling or renting property on the island may be able to command a slightly higher price. In this case, the subsidy benefits are transferred from the traveling public to property owners. This effect on property values (called land rent in economic terms) is too small to detect, but is a real effect of the subsidy.

Unlike other programs funded by the Comprehensive Transportation Fund (CTF), the users of the ferry service are also predominantly auto-users. Less than one percent of the users during the July 1983 survey were from households without a car, and the average user's household had two or more cars. (These figures might be different for year-round island residents.) This means that the subsidy not only funds an essential public transportation service that otherwise would be unavailable, but also lowers the cost of automobile trips to a favored location.

b. Ferry Operating Agency

The state subsidy and user fares allow EUPTA to provide the ferry service at the present level. No other funding sources are currently available. Consequently, the subsidy probably allows a higher level of service than would otherwise be affordable, such as longer operating hours or more peak-period capacity. Of course, it could result in operating inefficiencies by reducing the need to at least break even.

c. The Region and the State

The subsidy transfers part of the cost of ferry transportation from ferry users to motorists and truckers statewide. Whether these groups or the state at large receive any benefit from the subsidy helps determine whether to continue it.

Benefits to the region or the state come primarily from the tourist traffic that makes heavy use of the ferries during the summer. This traffic is important to the state economy, and is a basic source of income in the Upper Peninsula. For example, during July and August 1983, approximately \$5 million was expended through-out the entire state of Michigan by an estimated 16,200 non-Michigan residents using the ferry services. This assumes that the average stay in the state was five nights and the expenditure per person night was \$66.00 (obtained from the Michigan Travel Bureau).

The ferry subsidy subsidizes tourist travel to the islands by making trips to the islands slightly cheaper. Information obtained from the survey results indicate 81.3 percent of the respondents rated the fare structure as fair to very good. This suggests that current prices are viewed as acceptable or perhaps low, by users. However, several written comments received from users indicate that fares are too high.

A detailed study of the island tourist market would be required to determine how sensitive the island's tourist trade is to changes in the cost of the ferry ride. Even if this information could be obtained through research, it would not be of value without a policy decision. No such policy has ever been set regarding how much free transportation to give away per dollar of tourist expenditure.

In any case, to the extent that these remote, populated islands are significant tourist attractors, it is justifiable to continue good service in support of the tourist industry.

Without knowing how sensitive the island tourist trade is to ferry prices, some conclusions can still be drawn about continuing the ferry subsidy to aid regional and state tourist trade. A change in ferry prices will affect trip decisions depending on the ferry's proportion of total vacation cost. A long-distance trip from outside the region, or especially from outside the state, is unlikely to be affected by a reasonable change in price, because the ferry cost is a minimal portion of the total trip. Such long-distance trips are the most important to the region's and the state's economy. During the July 1983 survey, ferry users from the Lower Peninsula accounted for 28 percent of the trips, and non-Michigan residents for 13 percent.

Recreational trips most likely to be affected by a change in fares are those originating near the islands, where there is competition with other nearby attractions. For these trips, the ferry tolls might be the most expensive part of the trip. These are typically one-day trips, which account for about a third of all crossings during the summer. Many of these originate in Sault Ste. Marie or the rest of Chippewa County. Although some of these are work trips, many are recreational trips by area residents. These trips

are the ones most likely to be encouraged by the ferry subsidy, but they do not contribute to the regional or state economies, since no new money is introduced from outside.

The only ferry users that benefit the state's economy are vacationers from outside Michigan. They are least likely to be attracted by the ferry subsidy or to be discouraged by a higher fare if there were no subsidy. This is because the ferry trips are only one short link, and consequently a small portion of the total trip cost, in long vacation auto trips.

C. Service Deficiencies

The following deficiencies have been determined on the basis of written user comments, service characteristics ratings obtained from the mail-back survey, and field visits to each of the three island ferry services.

1. Level of Service

- a. Drummond Island: Results of the user survey indicate that users feel headways are too long during peak periods. This is based on 98 written responses concerning the category of "frequency of service/schedules." The majority of these complained of long waits and the need for more frequent service. Fifty respondents specifically suggested the use of two ferries during busy periods. The frequency of service was rated poor

by 5.3 percent of the respondents and fair by 13.1 percent. It should be noted that, due to the crossing distance, there will always be a wait during busy periods even when both ferries are running.

- b. Neebish Island: Results indicate that users feel headways are too long. There were 22 written responses concerning the need for more frequent service and also for extending the operating hours. The frequency of service was rated poor by 15.1 percent of respondents and fair by 24.7 percent. Operating hours were rated poor by 17.7 percent of the respondents and fair by 26.0 percent. These figures suggest that many users are dissatisfied with the level of service provided.
- c. Sugar Island: Results indicate users are satisfied with the level of service.

2. Vessels

- a. Drummond Island: Several respondents perceive the vessels to be in inadequate condition. Nineteen respondents commented on the condition of the vessels. They felt they were poorly maintained and needed preventative maintenance. The condition of vessels was rated poor by 8.6 percent of respondents and fair by 18.9 percent. It should be noted that these vessels have passed an inspection by the U.S. Coast Guard.
- b. Neebish Island: Results indicate users are satisfied with the condition of the vessel.

- c. Sugar Island: Results indicate users are satisfied with the condition of the vessel.

3. Facilities

- a. Drummond Island: Based on 37 user responses a major deficiency is the lack of restroom facilities on the mainland side. Also mentioned by several of the 37 respondents was an insufficient number of signs directing traffic to the ferry. There were no written comments received concerning the parking/waiting area. However, this category was rated poor by 7.4 percent of the respondents and fair by 22.4 percent.
- b. Neebish Island: Results of the survey, as well as field inspections support the need for dock repairs on the island side. Nine written comments were received and the majority concerned the island dock. There were no written comments regarding the parking/waiting area, but 6.3 percent of the respondents rated this category poor and 15.8 percent rated it fair.
- c. Sugar Island: Results obtained from 35 written comments indicate improvements are needed on the island access road to the ferry. The parking/waiting area was rated poor by 9.6 percent of the respondents and fair by 22.3 percent.

4. Operation Effectiveness and Efficiency

Items included in this category are courtesy of employees, availability of information, and announcement of schedule changes.

- a. Drummond Island: Results obtained from 27 written comments indicate that some users feel the employees are discourteous. However, courtesy of employees was rated poor by only 4.7 percent of respondents and fair by 9.6 percent. It was rated very good by 52.7 percent of the respondents.

The availability of information was rated poor by 9.4 percent of the respondents and fair by 15.5 percent. Announcement of schedule changes was rated poor by 7.3 percent of the respondents and fair by 10.0 percent. Apparently, many users feel the need for some method of disseminating information regarding the ferry service, especially during periods of service disruption.

- b. Neebish Island: A large number of users feel the employees are discourteous. This item was ranked poor by 12.6 percent of the respondents and fair by 20.0 percent. The only written comment was extremely negative and supports the results of the ratings.

Availability of information was rated poor by 21.5 percent of the respondents and fair by 22.6 percent. This indicates a large number of users are not satisfied with the amount of information readily available. Announcement of schedule changes also received low ratings which indicates user dissatisfaction. It was rated poor by 29.2 percent of the respondents and fair by 22.5 percent. It should be noted that because weather conditions are so variable, a published spring starting and fall ending schedule would probably be inaccurate.

c. Sugar Island: Results obtained from 16 written comments indicate discourteous personnel. However, service ratings for employee courtesy show only 2.6 percent rated it poor and 9.2 percent rated it fair. This item was rated very good by 48.1 percent of the respondents.

Availability of information was rated poor by 6.8 percent and fair by 15.4 percent of the respondents. Announcement of schedule changes was rated poor by 13.8 percent, indicating some user dissatisfaction with these two aspects of the service.

D. Some Perceptions and Related Facts

Perception 1: The service is primarily used by higher income families who could afford to pay for the services if there were no subsidy.

Fact: Based on the mail-back user survey, 18.8 percent of the users have a family income under \$10,000, and nearly half of those making use of the ferry services have a family income under \$20,000. For each ferry service the number of families in the under \$20,000 group is greater than those in the \$20,000-\$40,000 range, and is over twice the number of families with incomes over \$40,000 (see Table 11). It should be noted that this data was obtained during July 1983 and is not representative of the family incomes of those using the ferry services during the winter months.

TABLE 11
FAMILY INCOME RANGES

	Under \$10,000		\$10,000-\$20,000		\$20,000-\$40,000		Over \$40,000	
	No.	%	No.	%	No.	%	No.	%
Drummond	92	14.5	184	28.7	229	36.1	131	20.7
Neebish	14	17.1	20	24.4	32	39.1	16	19.4
Sugar	107	25.8	121	29.2	132	32.0	54	13.0
Total	213	18.8	323	28.6	393	34.8	201	17.8

Source: MDOT, Passenger Transportation Planning Section, St. Mary's River Ferry User Survey, July 1983.

The three ferry services also carry school children between the months of September and June. Between January and December of 1983, 24,936 school children rode the ferry at Drummond Island. At Sugar Island the total number of school children carried was 22,838 (see Table 12). Information was not available for Neebish Island.

TABLE 12

NUMBER OF SCHOOL CHILDREN PERSON TRIPS, 1983

	Drummond	Sugar	Total
January	2,856	2,662	5,518
February	2,820	2,432	5,252
March	4,000	2,974	6,974
April	2,380	1,980	4,360
May	3,080	2,726	5,806
June	280	906	1,186
September	2,660	2,466	5,126
October	2,660	2,294	4,954
November	2,380	2,458	4,838
December	1,820	1,940	3,760
1983 Total	24,936	22,838	47,774

Source: Eastern Upper Peninsula Transportation Authority.

Perception 2: The ferry services benefit the island residents and perhaps the eastern part of the Upper Peninsula, but not the state as a whole.

Fact: Of the people surveyed during the six day period in July 1983, 55.7 percent were from Chippewa County, including Sault Ste. Marie, and 3.0 percent were from the remainder of the Upper Peninsula. Respondents living outside the State of Michigan made up 13.2 percent of the total (see Table 13).

Approximately 30 percent of the survey respondents were permanent island residents. The ferry services are a definite benefit to these people, making it possible for them to travel to the mainland

TABLE 13
PERMANENT RESIDENCES OF SURVEY RESPONDENTS

Place of Residence	Drummond		Neebish		Sugar		Total	
	No.	%	No.	%	No.	%	No.	%
Chippewa Co. (Including Sault Ste. Marie)	775	42.5	125	37.8	1589	69.0	2489	55.7
Remainder of Upper Peninsula	79	4.3	9	2.7	44	1.9	132	3.0
Rest of Michigan	762	41.7	116	35.0	374	16.2	1252	28.1
Outside Michigan	210	11.5	81	24.5	298	12.9	589	13.2
Total	1826	100.0	331	100.0	2305	100.0	4462	100.0

Source: MDOT, Passenger Transportation Planning Section, St. Mary's River Ferry User Survey, July 1983.

for work, school, shopping, etc. Residents of the eastern Upper Peninsula make use of the ferry services for recreational trips, as well as work trips. Mainland residents make use of the ferry at Drummond Island to go to work at the island limestone quarry. The state as a whole benefits because the ferries provide an access to recreation for residents of Michigan, as well as non-state residents. Vacationers traveling through the state spend money during their visit which benefits the state's economy.

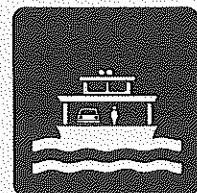
Perception 3: If the state provides capital and operating assistance to the St. Mary's River ferry services, then the state may be obligated to finance other ferry services in a similar manner.

Fact: There are 20 ferry services in the State of Michigan, five of which are publically operated. These are the services between Houghton and Isle Royale operated by the National Park Service; the Ironton ferry run by the Charlevoix County Road Commission; and the three St. Mary's River services operated by EUPTA.

There has been some indication that some of the private ferry services are not meeting all of their operating costs. Applications have been received for capital assistance and interest has been shown in obtaining public assistance to meet operating deficits.

EUPTA was eligible for state assistance due to the fact that it was an established public transportation authority.

**PART VII
RECOMMENDATIONS**



VII. RECOMMENDATIONS

The recommendations focus on six aspects of the St. Mary's River ferry services. These consist of (1) level of service, (2) vessels, (3) facilities, (4) State involvement, (5) finances, and (6) courtesy of employees. Most of the recommendations are addressed to the Eastern Upper Peninsula Transportation Authority, while a few pertain to the Michigan Department of Transportation. Each recommendation is supported by one or more of the study findings.

A. Level of Service

1. Findings

- a. The number of annual crossings have not changed appreciably in recent years. This is based primarily on the Drummond Island service where nine years of data is available (see Appendix E).
- b. Each of the three ferry services have an average use of one-third of capacity (see Table 10). Use of the service has varied over the years, but has generally remained at about the same level (see Appendix E).
- c. During peak periods, extended waiting lines have formed. This is particularly true regarding the Drummond Island ferry service where two or three hour's wait are fairly frequent on some summer weekends.

2. Recommendations

- a. Continue service at its present level. A reduction in the hours of operation and/or number of crossings should be considered when user revenues are less than 50 percent of operating costs.
- b. Reduce the Drummond Island service hours of operation by eliminating the least productive service hours if a significant cost savings will result. The cost of the service needed during non-operating hours should be borne entirely by those needing the service, using an "on call" crew.
- c. Use the Drummond Islander II when necessary to prevent users waiting longer than approximately one-half hour.

B. Vessels

1. Findings

- a. EUPTA's contract with MDOT includes \$150,000 in capital funding of which a portion will be used for upgrading vessels. The remainder will be used for various dock and facility improvements or repairs. Vessel improvements identified by EUPTA include the following:
 - (1) Drummond Islander #1: Replace radar unit and install V.H.F. radio.
 - (2) Drummond Islander #2: Repower two engines, remove passenger cabin, replace two propellers, add 20 foot section to increase capacity and correct stability, and install V.H.F. radio.
 - (3) Neebish Island/Barbeau: Purchase vessel, install radar unit, and install V.H.F. radio.
 - (4) Sugar Island/Sault Ste. Marie: Replace two engines, install radar unit, and install V.H.F. radio.
- b. User survey responses indicate general satisfaction with the condition of the vessels excepting those used for the Drummond Island service. Some 27.5 percent considered the Drummond Island service vessels to be in fair or poor condition (see Table 8). Written comments indicate the vessels are too small, too much "down-time" reflecting lack of preventative maintenance, vessels need painting and should be kept clean (see Chapter V).

2. Recommendations

- a. Improve the vessels as indicated above on a priority basis as available funding permits.
- b. Critically review preventative maintenance program for all vessels to minimize down-time and schedule delays.
- c. Increase efforts to maintain all vessels in a clean, well-painted condition. This pertains particularly to the Drummond Island service vessels.

C. Facilities

1. Findings

- a. EUPTA's contract with MDOT includes \$150,000 (same \$150,000 as referenced in B.1.a.) in capital funding of which a portion will be used to improve port facilities. This includes the following as identified by EUPTA:

- (1) Drummond Island/DeTour: Build northside Drummond Island dock, repair washout problems on the mainland and the island, replace light plant and replace pile clusters.
- (2) Neebish Island/Barbeau: Build a new island dock and replace pile clusters on the mainland and the island.
- (3) Sugar Island/Sault Ste. Marie: Remodel docks (cut beams and plate to prevent ice problems) and move compressor building to other side of the dock (provide better visibility and eliminate unneeded trips).

On-site visits to each port substantiated the need for these improvements.

- b. User survey respondents indicate a need for improvements in the waiting and parking areas for all three services (see Table 8). Those rating this as fair or poor were as follows: Drummond (29.8 percent), Neebish (22.1 percent), and Sugar (31.9 percent). The need for restrooms on the DeTour side was often cited in written comments, and better signing directing people to the DeTour side port is needed. Improving the Neebish Island dock was also a common request.

2. Recommendations

- a. Improve the facilities as described by EUPTA on a priority basis (1) as available funding permits and (2) as supported by an engineering analysis.
- b. Study the necessity of providing clean, adequate restroom facilities at the DeTour side of the Drummond Island service.
- c. Improve the access road to the ferry dock on Sugar Island.

D. State Involvement

1. Findings

- a. Michigan funds 50 percent of EUPTA's eligible operating costs. In FY 1982-83, the maximum amount of state funds committed was \$425,000. The commitment for FY 1983-84 is a maximum of \$450,000.
- b. In FY 1983-84, Michigan has committed to granting EUPTA \$150,000 for capital improvements associated with the three island ferry services.

- c. Over 13 percent of the users reside outside of Michigan. Assuming the survey period was representative of July and August in general, the three ferry services carried some 16,200 non-Michigan residents during the two month period in 1983. Excluding the amount paid for using the ferry service, they spent some \$5.0 million during their stay in Michigan.

2. Recommendations

- a. Continue state investment in capital improvements at a reasonable level. This could be a 50 percent state/50 percent local match with a cap on the total state amount per year. Possible sources of the local 50 percent include a special property tax, a redistribution of the general fund, a higher fare structure, reduced fare discounts, or a combination of these.
- b. Continue state investment in operating costs at a cost effective level. Some alternatives to the present 50 percent level are: (1) higher fares, (2) increased local funding other than through user revenues, (3) increased use of the service, or (4) a service reduction retaining only the more productive portions of the service schedule.

E. Finances

1. Findings

- a. Several cost containment measures are in effect regarding the Neebish Island service. These include: (1) a minimum schedule is being maintained, (2) the fare structure is higher than for comparable services, and (3) unit costs are lower than for comparable services.
- b. Discount rates for regular users are abnormally high for the Drummond Island service. Regular users pay approximately 40 percent of the full fare. This contrasts with Sugar Island where regular users pay 70-80 percent of full fare. As a further contrast, local transit systems throughout Michigan offer rates to regular users that are 80-90 percent of full fare.
- c. No local funds, other than fares, help support any of the three services.
- d. A contract negotiation for the Neebish Island service will occur in 1985. This could result in an increase in unit costs.
- e. Retirees pay half fare regardless of what time of day they use the service. Some 18.6 percent of all users during the survey period were 65 or older.

- f. Fare structure revenues recover approximately 50 percent of the operating costs at the present time.

2. Recommendations

- a. Modify service levels, fares, local funding, and costs to cover at least 50 percent of the operating costs from local sources. The three ferry services should be considered as one entity in meeting this 50 percent criteria.
- b. Consider increasing Sugar Island service fares so they are more consistent with those charged for Drummond and Neebish island services.
- c. Consider reducing the Drummond Island service discount rate so it is more comparable to discount rates used by public transportation systems throughout Michigan.

F. Courtesy of Employees

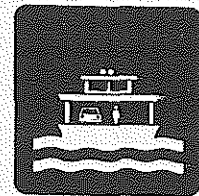
1. Findings

- a. Courtesy of ferry employees was rated as fair or poor by 14.3 percent of Drummond Island service users, 32.6 percent of Neebish Island service users, and 11.8 percent of Sugar Island service users. At Neebish Island, 12.6 percent rated courtesy poor and 20.0 percent rated it fair.
- b. Survey respondents making written comments often spoke of Sugar Island service using superlatives. Terms used include very pleased, extremely satisfied, best service, very polite, and enjoyed using. This high degree of satisfaction was not evident in the remarks of the Drummond and Neebish island service users.
- c. Drummond Island service received roughly twice as many written negative comments as positive comments regarding the courtesy of their employees. The other two island services had the opposite occur; that is, written positive comments far outnumbered the negative.

2. Recommendations

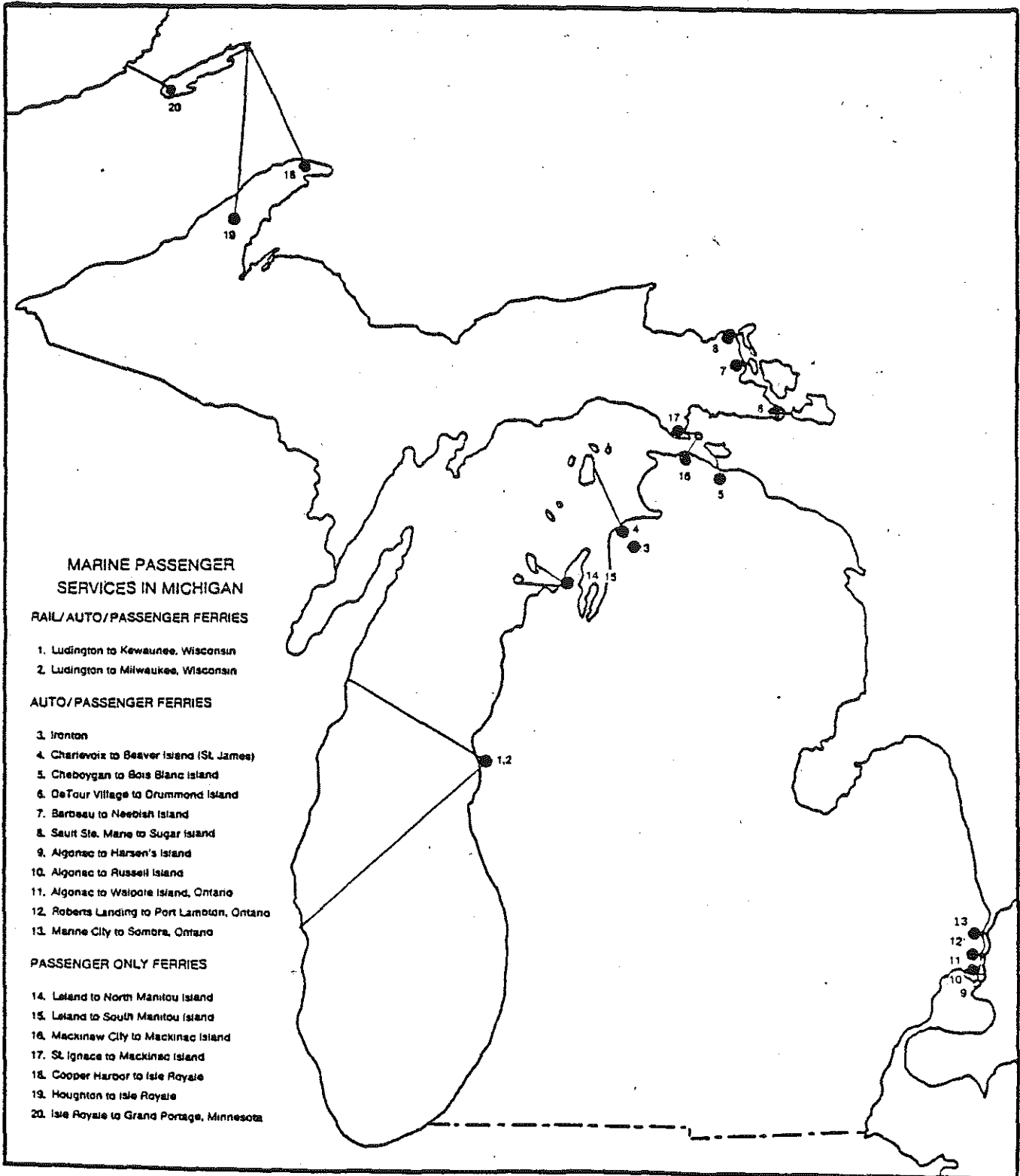
- a. Strongly encourage employees on Drummond and Neebish Island ferry services to be more courteous toward the people they serve. Politeness and thoughtful concern for their users can make a big difference in how the service is perceived.

APPENDICES



APPENDIX A

Marine Passenger Services in Michigan



MARINE PASSENGER SERVICES IN MICHIGAN

RAIL/AUTO/PASSENGER FERRIES

- 1. Ludington to Kewaunee, Wisconsin
- 2. Ludington to Milwaukee, Wisconsin

AUTO/PASSENGER FERRIES

- 3. Ironton
- 4. Charlevoix to Beaver Island (St. James)
- 5. Cheboygan to Bois Blanc Island
- 6. Oshtemo Village to Drummond Island
- 7. Barbeau to Neebish Island
- 8. Sault Ste. Marie to Sugar Island
- 9. Algonac to Harsen's Island
- 10. Algonac to Russell Island
- 11. Algonac to Walpole Island, Ontario
- 12. Roberts Landing to Port Lambton, Ontario
- 13. Marine City to Sombra, Ontario

PASSENGER ONLY FERRIES

- 14. Leland to North Manitou Island
- 15. Leland to South Manitou Island
- 16. Mackinaw City to Mackinac Island
- 17. St. Ignace to Mackinac Island
- 18. Cooper Harbor to Isle Royale
- 19. Houghton to Isle Royale
- 20. Isle Royale to Grand Portage, Minnesota

SUMMARY OF SELECTED MARINE PASSENGER OPERATING CHARACTERISTICS
IN MICHIGAN, 1982

Origin	Destination	Waterway	Scheduled Operating Period	Annual Number of Operating Days 1/	Daily Round Trips	Annual Crossings 2/	Annual Passengers 3/	Annual Vehicles 4/	Trip Length Minutes - Miles	Annual Passenger Miles Per Vessel Mile	Number of Vessels	Vessel Capacity	Ownership
Rail/Auto/Passenger Ferries													
* Ludington	Kewaunee, Wisconsin	Lake Michigan	Year Round	300	2	1,040	187,000	21,000	240 - 61	179.8	1	500 passengers; 25-30 vehicles; 23 railroad cars	C and O Railroad
Auto/Passenger Ferries													
Ironton	Ironton	Lake Charlevoix	Seasonal-No Winter Service	275	On demand	22,000	135,500	45,185	5 - 1/8 5/	6.1	1	4 vehicles	Charlevoix Co. Road Commission
Charlevoix	Beaver Island (St. James)	Lake Michigan	Apr-Dec	197	1	430	18,050	2,940	135 - 32	41.9	2	120 passengers; 6 vehicles 200 passengers; 12 vehicles	Private
Cheboygan	Bals Blanc Island	Lake Huron	Apr-Dec	275	On demand	1,500	10,500	1,300	35 - 6	7.0	1	3 vehicles	Private
DeTour Village	Drummond Island	St. Mary's River	Year Round	365	Hourly	18,720	218,010	118,410	10 - 1	11.7	2	12 vehicles each	EUPITA
Barbeau	Neebish Island	St. Mary's River	Year Round	365	6	6,100	20,100	11,000	5 - 1/4	3.3	1	5 vehicles	EUPITA
Swill Ste. Marie	Sugar Island	St. Mary's River	Year Round	365	Hourly (On demand)	25,220	191,030	95,140	5 - 1/4	7.6	1	12 vehicles	EUPITA
Algonac	Hershen's Island	St. Clair River	Year Round	365	Every 20 Min. (On demand)	77,340	1,462,000	594,000	5 - 1/4	18.9	4	12 vehicles	Private
Algonac	Russell Island	St. Clair River	Year Round	365	On demand	18,000	162,000	54,000	5 - 1/2	9.0	1	6 vehicles	Private
Algonac	Walpole Island, Ontario 14/	St. Clair River	Year Round	365	On demand	9,000	225,000	27,000	10 - 3/4	25.0	1	6 vehicles; 50 passengers	Private
Marine City	Sombra, Ontario	St. Clair River	Year Round	365	On demand	18,000	162,000	108,000	5 - 1/2	9.0	1	12 vehicles	Private
Roberts Landing	Port Lambton, Ontario	St. Clair River	Year Round	365	On demand	18,000	324,000	108,000	5 - 1/2	18.0	1	12 vehicles	Private
Passenger Only Ferries													
Leland	Manitou Islands	Lake Michigan	May-Oct	156	1; 5 days per week 1; 7 days per week 6/	320	8,000	0	105 - 17	25.2	2	136 passengers 66 passengers	Private
Mackinaw City	Mackinac Island	Straits of Mackinac	May-Nov Apr-Dec 7/	214 275	16 23 8/	9,160	450,000	0	30 - 8	50.0	9-12 9/	100 passengers 10/	Private
St. Ignace	Mackinac Island	Straits of Mackinac	Apr-Dec May-Oct 11/	184 275	16 18 12/	8,062	403,000	0	20 - 7	50.3	8-11 9/	100 passengers 10/	Private
Copper Harbor	Ile Royale	Lake Superior	May-Sept	153	1	220	6,600	0	240 - 60	30.0	1	60 passengers	Private
Houghton	Ile Royale	Lake Superior	June 7 to Sept 10	96	2 per week	60	4,500	0	360 - 70	75.0	1	123 passengers	National Park Service
Ile Royale	Grand Portage, Minnesota	Lake Superior	May to Sept	153	3 per week 1 daily 13/	360	18,000	0	120 - 25	50.0	2	49 passengers 150 passengers	Private

* This table does not include information for the Ludington to Milwaukee, Wisconsin service.

Notes:

- 1/ The estimated number of operating days based on scheduled operating period or on published schedules when available.
- 2/ Estimated annual one way crossing figures. Figures for Drummond, Neebish and Sugar Islands are actual figures for 1981.
- 3/ Estimated number of passengers carried annually. Figures for Drummond and Sugar Islands are actual figures for 1980.
- 4/ Estimated number of vehicles carried annually. Figures for Drummond and Sugar Islands are actual 1980 figures, the figure for Ironton is the actual number of vehicles carried in 1982.
- 5/ Actual distance is 700 ft.
- 6/ During the months of May, September and October the service operates five days per week, providing one round trip per day. During June, July and August the service operates seven days per week and provides one round trip daily.
- 7/ Two companies provide service between Mackinaw City and Mackinac Island. One operates from April to December, the other from May to November.
- 8/ During the peak season, one company provides 16 round trips per day, the other provides 23 round trips per day.
- 9/ A total of 20 vessels are used to provide service between Mackinaw City and Mackinac Island, and St. Ignace and Mackinac Island.
- 10/ Capacities of the 20 vessels range from 70 to 125 passengers, the average being 100 passengers.
- 11/ Two companies provide service between St. Ignace and Mackinac Island. One operates from April to December, the other from May to October.
- 12/ During the peak season, one company provides 16 round trips per day, the other provides 18 round trips per day.
- 13/ Two vessels provide service between Isle Royale and Grand Portage, Minnesota. One provides one round trip per day, the other provides three round trips per week.
- 14/ Walpole Island is connected to the Canadian mainland by a bridge.

Source: MDOT, Passenger Transportation Planning Section, Surface Systems Unit

APPENDIX B

Survey Forms

Revisions to Origin & Destination Survey Form

- Column 19: Vehicle Type - pedestrian was added.
- Columns 21-39: Origin - when going to the island.
Destination - when going to the mainland.
- Columns 42-60: Permanent residence.
- Column 61: Length of stay on island
(1) a day or less
(2) a day to 1 week
(3) 1 week to 2 weeks
(4) season
(5) permanent resident
- Column 62: Accomodations on island
(1) rental motel/cottage
(2) family summer home/cottage
(3) permanent home
(4) motor home or trailer
(5) other
- Column 63: How many days per week do you use ferry?
- Column 65: Trip purpose - school and medical/dental were added.

ST. MARY'S RIVER FERRY USER SURVEY

The Michigan Department of Transportation, in cooperation with the Eastern Upper Peninsula Transportation Authority, is conducting this survey to help determine what changes, if any, might be needed in the operation of this ferry service. Please take a few minutes to fill out this questionnaire. If you finish before the end of your ferry ride, please give it to the interviewer. If you cannot finish it now, please drop it in a mailbox at your earliest convenience. All information you give us will be treated as confidential and used only in combination with the other questionnaires received. This information will supplement that obtained from the driver/pedestrian survey. Thank you for your assistance.

Larry K. Britton, Manager
 Passenger Transportation Planning Section
 Michigan Department of Transportation

1. SEX: (1) MALE (2) FEMALE

2. AGE: (1) 17 OR UNDER (2) 18-24 (3) 25-54 (4) 55-64
 (5) 65 OR OVER

3. EMPLOYMENT STATUS: (1) EMPLOYED FULL TIME (5) COLLEGE STUDENT
 (2) EMPLOYED PART TIME (6) OTHER STUDENT
 (3) UNEMPLOYED (7) RETIRED
 (4) HOMEMAKER (8) OTHER

4. HOW MANY PERSONS ARE IN YOUR HOUSEHOLD?

5. WHAT IS YOUR FAMILY INCOME RANGE (BEFORE TAXES)?
 (1) UNDER \$10,000 (4) \$30,000 - 39,000
 (2) \$10,000 - 19,999 (5) \$40,000 - 49,999
 (3) \$20,000 - 29,999 (6) \$50,000 OR MORE

6. HOW MANY OPERATING CARS OR LIGHT TRUCKS ARE IN YOUR HOUSEHOLD?

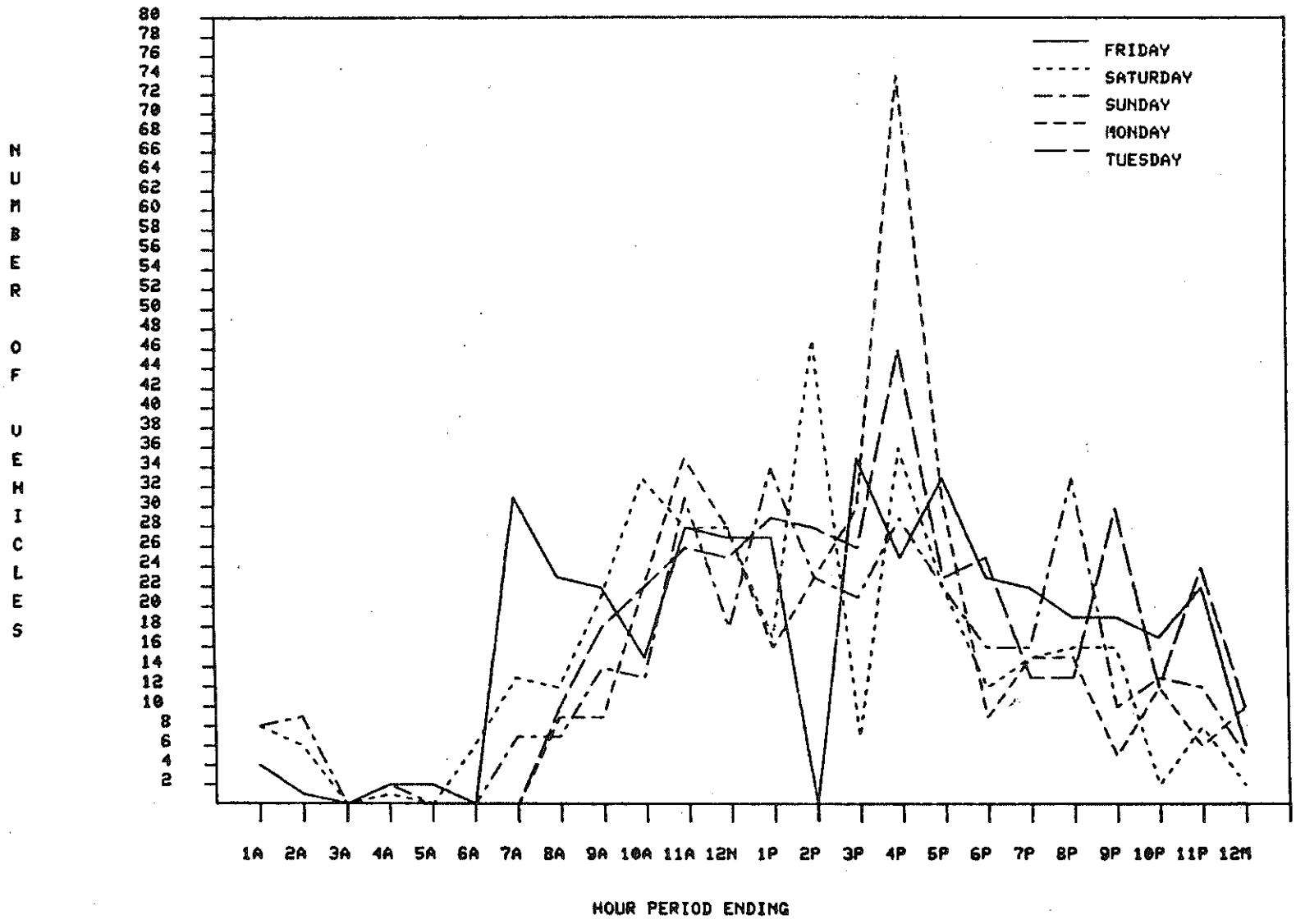
7. PLEASE RATE THIS FERRY SERVICE REGARDING THE FOLLOWING:

	1 POOR	2 FAIR	3 GOOD	4 VERY GOOD	5 DON'T KNOW
(1) OPERATING HOURS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(2) FREQUENCY OF SERVICE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(3) AVAILABILITY OF INFORMATION	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(4) ANNOUNCEMENT OF SCHEDULE CHANGES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(5) EASE OF GETTING ON/OFF FERRY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(6) CONDITION OF VESSEL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(7) PARKING/WAITING AREA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(8) COURTESY OF FERRY EMPLOYEES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(9) FARE STRUCTURE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

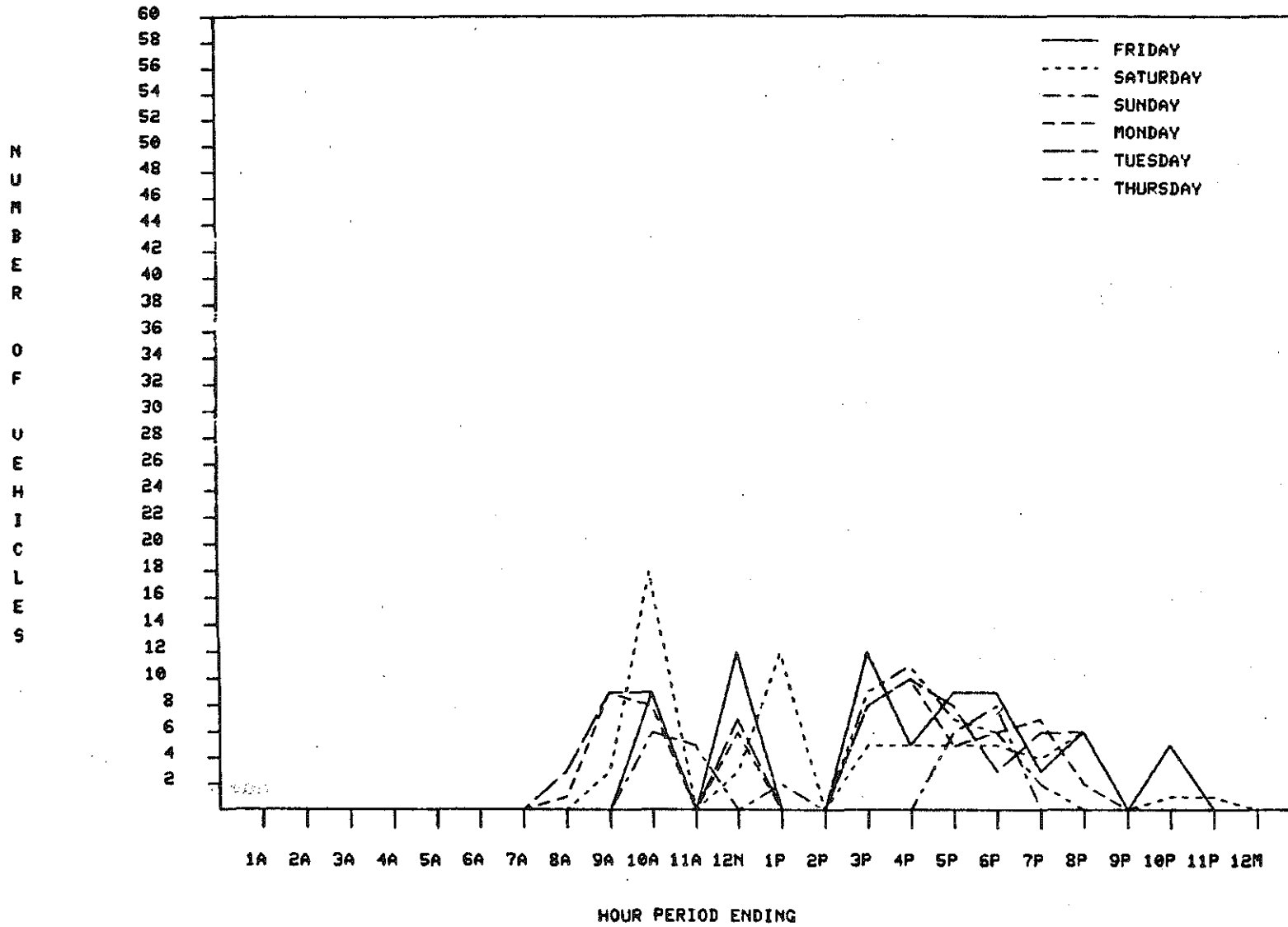
8. COMMENTS: _____

APPENDIX C
Vehicle Count Curves

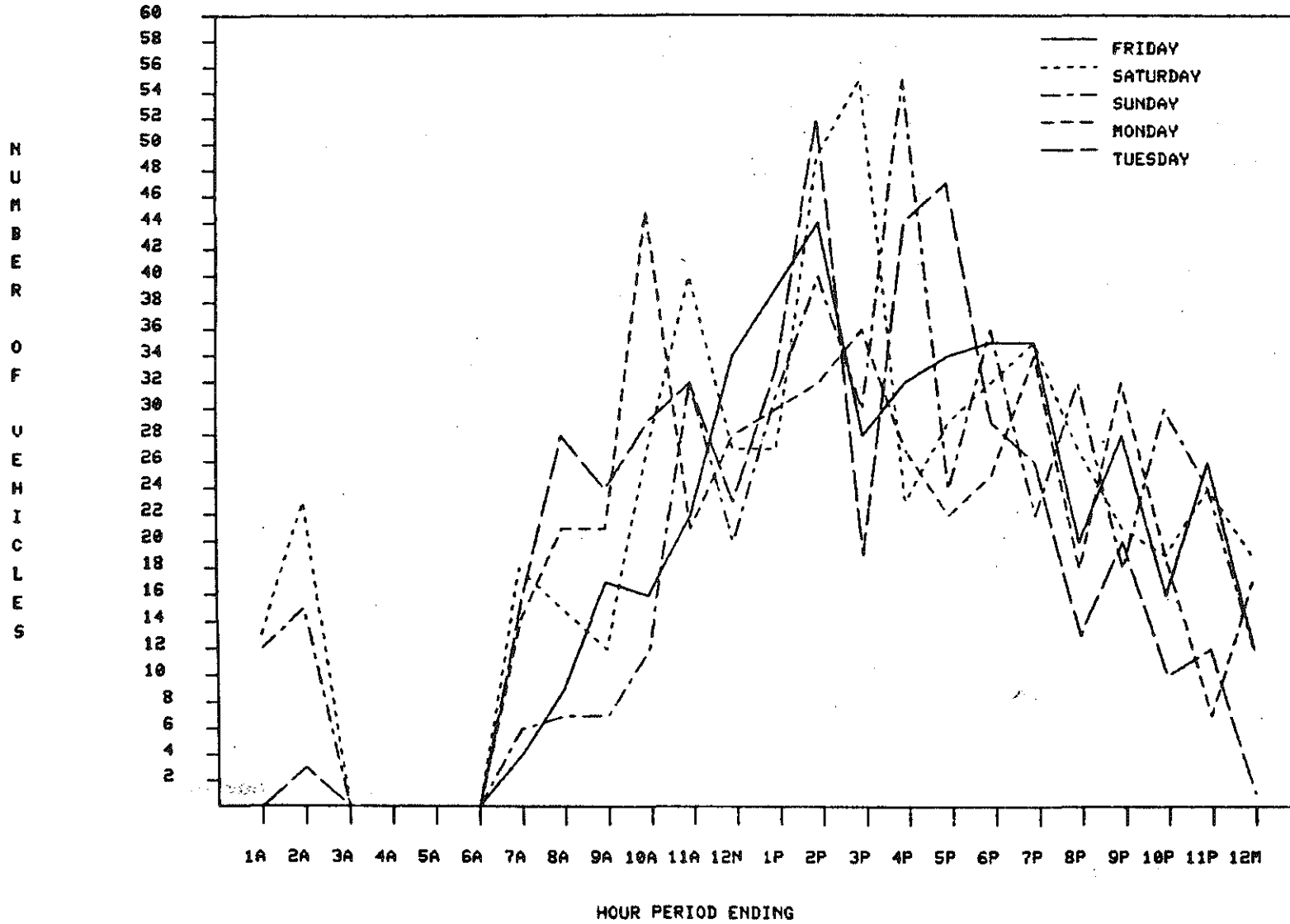
VEHICLE COUNTS BY HOUR
 DRUMMOND ISLAND-JULY 1983



VEHICLE COUNTS BY HOUR
NEEBISH ISLAND-JULY 1983



VEHICLE COUNTS BY HOUR
SUGAR ISLAND-JULY 1983



APPENDIX D

Survey Results - Cross Tabulations

FERRY SERVICE SURVEY - ORIGIN / DESTINATION SURVEY
 DURATION OF STAY
 FILE WITH (CREATION DATE = 09/28/83) ORGIN/DESTINATION/SURVEY

***** C R O S S T A B U L A T I O N O F * * * * *
 * H L N G L E N G T H O F S T A Y B Y F S E R V I S L A N D S E R V I C E * * * * *

HLNG	FSERV				ROW TOTAL
	COUNT	ISUGAR	NEEBISH	DRUMMOND	
	PCT ISLAND	PCT ISLAND	PCT ISLAND	PCT ISLAND	
	TOT PCT I	1.I	2.I	3.I	
OTHER	0.	16	20	25	61
	I	26.2	I 32.8	I 41.0	I 1.4
	I	0.7	I 6.0	I 1.4	I
	I	0.4	I 0.4	I 0.6	I
ONE DAY OR LESS	1.	710	87	654	1451
	I	48.9	I 6.0	I 45.1	I 32.4
	I	30.7	I 26.3	I 35.8	I
	I	15.9	I 1.9	I 14.6	I
2 DAYS - 1 WEEK	2.	324	100	612	1036
	I	31.3	I 9.7	I 59.1	I 23.1
	I	14.0	I 30.2	I 33.5	I
	I	7.2	I 2.2	I 13.7	I
1 WEEK - 2.WEEKS	3.	131	29	89	249
	I	52.6	I 11.6	I 35.7	I 5.6
	I	5.7	I 8.8	I 4.9	I
	I	2.9	I 0.6	I 2.0	I
SEASON	4.	168	42	88	298
	I	56.4	I 14.1	I 29.5	I 6.7
	I	7.3	I 12.7	I 4.8	I
	I	3.8	I 0.9	I 2.0	I
PERM RESIDENT	5.	967	53	361	1381
	I	70.0	I 3.8	I 26.1	I 30.9
	I	41.8	I 16.0	I 19.7	I
	I	21.6	I 1.2	I 8.1	I
COLUMN TOTAL		2316	331	1829	4476
		51.7	7.4	40.9	100.0

NUMBER OF MISSING OBSERVATIONS = 58

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 DURATION OF STAY BY PERMANENT RESIDENCE - DRUMMOND ISLAND
 FILE Q42801T1 (CREATION DATE = 10/04/83) REEL #8583

***** C R O S S T A B U L A T I O N O F *****
 HLNG LENGTH OF STAY BY HOME PERMANENT RESIDENCE

HLNG	HOME										ROW TOTAL		
	COUNT	ISAULT		CHIPPEWA COUNTY		UPPER PENINSUL MICHIGAN		REST OF MICHIGAN		OUTSIDE MICHIGAN			
	ROW PCT	COL PCT	IST	MARIE	2.I	3.I	4.I	5.I	ROW				
	TOT PCT	I	1.I	I	2.I	I	3.I	I	4.I	I		5.I	
OTHER	0.	I	0	I	10	I	0	I	10	I	5	I	25
		I	0.0	I	40.0	I	0.0	I	40.0	I	20.0	I	1.4
		I	0.0	I	1.5	I	0.0	I	1.3	I	2.4	I	
		I	0.0	I	0.5	I	0.0	I	0.5	I	0.3	I	
ONE DAY OR LESS	1.	I	51	I	290	I	48	I	199	I	65	I	653
		I	7.8	I	44.4	I	7.4	I	30.5	I	10.0	I	35.8
		I	50.0	I	43.1	I	60.8	I	26.1	I	31.0	I	
		I	2.8	I	15.9	I	2.6	I	10.9	I	3.6	I	
2 DAYS - 1 WEEK	2.	I	40	I	24	I	18	I	438	I	90	I	610
		I	6.6	I	3.9	I	3.0	I	71.8	I	14.8	I	33.4
		I	39.2	I	3.6	I	22.8	I	57.5	I	42.9	I	
		I	2.2	I	1.3	I	1.0	I	24.0	I	4.9	I	
1 WEEK - 2 WEEKS	3.	I	0	I	0	I	2	I	65	I	22	I	89
		I	0.0	I	0.0	I	2.2	I	73.0	I	24.7	I	4.9
		I	0.0	I	0.0	I	2.5	I	8.5	I	10.5	I	
		I	0.0	I	0.0	I	0.1	I	3.6	I	1.2	I	
SEASON	4.	I	5	I	11	I	4	I	43	I	25	I	88
		I	5.7	I	12.5	I	4.5	I	48.9	I	28.4	I	4.8
		I	4.9	I	1.6	I	5.1	I	5.6	I	11.9	I	
		I	0.3	I	0.6	I	0.2	I	2.4	I	1.4	I	
PERM RESIDENT	5.	I	6	I	338	I	7	I	7	I	3	I	361
		I	1.7	I	93.6	I	1.9	I	1.9	I	0.8	I	19.8
		I	5.9	I	50.2	I	8.9	I	0.9	I	1.4	I	
		I	0.3	I	18.5	I	0.4	I	0.4	I	0.2	I	
COLUMN TOTAL				102		673		79	762		210		1826
				5.6		36.9		4.3	41.7		11.5		100.0

NUMBER OF MISSING OBSERVATIONS = 5

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 DURATION OF STAY BY PERMANENT RESIDENCE - NEEBISH ISLAND
 FILE Q42801T1 (CREATION DATE = 10/04/83) REEL #8583

***** CROSSTABULATION OF *****
 HLNG LENGTH OF STAY BY HOME PERMANENT RESIDENCE

HLNG	HOME					ROW TOTAL	
	COUNT	IS SAULT	CHIPPEWA	UPPER	REST OF		OUTSIDE
	PCT	IST MARIE	COUNTY	PENINSUL	MICHIGAN		MICHIGAN
	TOT PCT	1.I	2.I	3.I	4.I	5.I	
	0.	9	8	0	3	0	20
OTHER	I	45.0	40.0	0.0	15.0	0.0	6.0
	I	25.0	9.0	0.0	2.6	0.0	
	I	2.7	2.4	0.0	0.9	0.0	
	1.	20	27	8	21	11	87
ONE DAY OR LESS	I	23.0	31.0	9.2	24.1	12.6	26.3
	I	55.6	30.3	88.9	18.1	13.6	
	I	6.0	8.2	2.4	6.3	3.3	
	2.	6	1	0	62	31	100
2 DAYS - 1 WEEK	I	6.0	1.0	0.0	62.0	31.0	30.2
	I	16.7	1.1	0.0	53.4	38.3	
	I	1.8	0.3	0.0	18.7	9.4	
	3.	0	1	1	14	13	29
1 WEEK - 2 WEEKS	I	0.0	3.4	3.4	48.3	44.8	8.8
	I	0.0	1.1	11.1	12.1	16.0	
	I	0.0	0.3	0.3	4.2	3.9	
	4.	0	1	0	15	26	42
SEASON	I	0.0	2.4	0.0	35.7	61.9	12.7
	I	0.0	1.1	0.0	12.9	32.1	
	I	0.0	0.3	0.0	4.5	7.9	
	5.	1	51	0	1	0	53
PERM RESIDENT	I	1.9	96.2	0.0	1.9	0.0	16.0
	I	2.8	57.3	0.0	0.9	0.0	
	I	0.3	15.4	0.0	0.3	0.0	
	COLUMN	36	89	9	116	81	331
	TOTAL	10.9	26.9	2.7	35.0	24.5	100.0

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 DURATION OF STAY BY PERMANENT RESIDENCE - SUGAR ISLAND
 FILE Q42801T1 (CREATION DATE = 10/04/83) REEL #8583

***** CROSSTABULATION OF *****
 HLNG LENGTH OF STAY BY HOME PERMANENT RESIDENCE

HLNG	HOME					ROW COL TOT	ROW PCT PCT		
	COUNT	ISLAULT		CHIPPEWA	UPPER			REST OF	OUTSIDE
	I	IST	MARIE	COUNTY	PENINSUL			MICHIGAN	MICHIGAN
	I	1.I	2.I	3.I	4.I			5.I	
OTHER	0.	1	2	1	6	6	16		
	I	6.3	12.5	6.3	37.5	37.5	0.7		
	I	0.2	0.2	2.3	1.6	2.0			
	I	0.0	0.1	0.0	0.3	0.3			
ONE DAY OR LESS	1.	442	45	33	112	76	708		
	I	62.4	6.4	4.7	15.8	10.7	30.7		
	I	77.1	4.4	75.0	29.9	25.5			
	I	19.2	2.0	1.4	4.9	3.3			
2 DAYS - 1 WEEK	2.	66	8	6	148	89	317		
	I	20.8	2.5	1.9	46.7	28.1	13.8		
	I	11.5	0.8	13.6	39.6	29.9			
	I	2.9	0.3	0.3	6.4	3.9			
1 WEEK - 2 WEEKS	3.	5	0	1	65	60	131		
	I	3.8	0.0	0.8	49.6	45.8	5.7		
	I	0.9	0.0	2.3	17.4	20.1			
	I	0.2	0.0	0.0	2.8	2.6			
SEASON	4.	47	13	3	38	66	167		
	I	28.1	7.8	1.8	22.8	39.5	7.2		
	I	8.2	1.3	6.8	10.2	22.1			
	I	2.0	0.6	0.1	1.6	2.9			
PERM RESIDENT	5.	12	948	0	5	1	966		
	I	1.2	98.1	0.0	0.5	0.1	41.9		
	I	2.1	93.3	0.0	1.3	0.3			
	I	0.5	41.1	0.0	0.2	0.0			
COLUMN TOTAL		573	1016	44	374	298	2305		
		24.9	44.1	1.9	16.2	12.9	100.0		

NUMBER OF MISSING OBSERVATIONS = 67

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 DURATION OF STAY BY PERMANENT RESIDENCE - ALL ISLANDS
 FILE Q42801T1 (CREATION DATE = 10/04/83) REEL #8583

***** C R O S S T A B U L A T I O N O F *****
 HLNG LENGTH OF STAY BY HOME PERMANENT RESIDENCE

HLNG	HOME					ROW TOTAL	
	COUNT	COUNT					
	PCT	ISALT	CHIPPEWA	UPPER	REST OF		OUTSIDE
	TOT	IST	COUNTY	PENINSUL	MICHIGAN		MICHIGAN
	0.	10	20	1	19	11	61
OTHER	16.4	32.8	1.6	31.1	18.0	1.4	
	1.4	1.1	0.8	1.5	1.9		
	0.2	0.4	0.0	0.4	0.2		
	1.	513	362	89	332	152	1448
ONE DAY OR LESS	35.4	25.0	6.1	22.9	10.5	32.5	
	72.2	20.4	67.4	26.5	25.8		
	11.5	8.1	2.0	7.4	3.4		
	2.	112	33	24	648	210	1027
2 DAYS - 1 WEEK	10.9	3.2	2.3	63.1	20.4	23.0	
	15.8	1.9	18.2	51.8	35.7		
	2.5	0.7	0.5	14.5	4.7		
	3.	5	1	4	144	95	249
1 WEEK - 2 WEEKS	2.0	0.4	1.6	57.8	38.2	5.6	
	0.7	0.1	3.0	11.5	16.1		
	0.1	0.0	0.1	3.2	2.1		
	4.	52	25	7	96	117	297
SEASON	17.5	8.4	2.4	32.3	39.4	6.7	
	7.3	1.4	5.3	7.7	19.9		
	1.2	0.6	0.2	2.2	2.6		
	5.	19	1337	7	13	4	1380
PERM RESIDENT	1.4	96.9	0.5	0.9	0.3	30.9	
	2.7	75.2	5.3	1.0	0.7		
	0.4	30.0	0.2	0.3	0.1		
COLUMN TOTAL	711	1778	132	1252	589	4462	
	15.9	39.8	3.0	28.1	13.2	100.0	

NUMBER OF MISSING OBSERVATIONS = 72

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 DURATION OF STAY BY TRIP PURPOSE - DRUMMOND ISLAND
 FILE Q42801T1 (CREATION DATE = 10/04/83) REEL #8583

***** CROSSTABULATION OF *****
 HLNG LENGTH OF STAY BY PURP PURPOSE OF TRIP

HLNG	COUNT ROW COL PCT PCT TOT	PURP								ROW TOTAL		
		IWORK	PERSONAL BUSINESS			SHOPPING VACATION		OTH SOC	ALL OTHER		SCHOOL	MEDICAL DENTAL
		1.I	2.I	3.I	4.I	5.I	6.I	7.I	8.I			
		I	I	I	I	I	I	I	I			
OTHER	0.	4	1	1	10	3	1	0	5	25		
	I	16.0	4.0	4.0	40.0	12.0	4.0	0.0	20.0	1.4		
	I	1.4	0.5	2.9	1.6	0.5	1.6	0.0	12.5			
	I	0.2	0.1	0.1	0.5	0.2	0.1	0.0	0.3			
ONE DAY OR LESS	1.	217	36	2	131	253	14	0	0	653		
	I	33.2	5.5	0.3	20.1	38.7	2.1	0.0	0.0	35.7		
	I	78.3	16.9	5.7	20.6	45.3	22.6	0.0	0.0			
	I	11.9	2.0	0.1	7.2	13.8	0.8	0.0	0.0			
2 DAYS - 1 WEEK	2.	6	17	5	386	182	15	0	1	612		
	I	1.0	2.8	0.8	63.1	29.7	2.5	0.0	0.2	33.5		
	I	2.2	8.0	14.3	60.6	32.6	24.2	0.0	2.5			
	I	0.3	0.9	0.3	21.1	10.0	0.8	0.0	0.1			
1 WEEK - 2 WEEKS	3.	0	4	0	69	14	1	0	1	89		
	I	0.0	4.5	0.0	77.5	15.7	1.1	0.0	1.1	4.9		
	I	0.0	1.9	0.0	10.8	2.5	1.6	0.0	2.5			
	I	0.0	0.2	0.0	3.8	0.8	0.1	0.0	0.1			
SEASON	4.	3	20	4	33	17	6	0	5	88		
	I	3.4	22.7	4.5	37.5	19.3	6.8	0.0	5.7	4.8		
	I	1.1	9.4	11.4	5.2	3.0	9.7	0.0	12.5			
	I	0.2	1.1	0.2	1.8	0.9	0.3	0.0	0.3			
PERM RESIDENT	5.	47	135	23	8	90	25	5	28	361		
	I	13.0	37.4	6.4	2.2	24.9	6.9	1.4	7.8	19.7		
	I	17.0	63.4	65.7	1.3	16.1	40.3	100.0	70.0			
	I	2.6	7.4	1.3	0.4	4.9	1.4	0.3	1.5			
COLUMN TOTAL		277	213	35	637	559	62	5	40	1828		
TOTAL		15.2	11.7	1.9	34.8	30.6	3.4	0.3	2.2	100.0		

NUMBER OF MISSING OBSERVATIONS = 3

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 DURATION OF STAY BY TRIP PURPOSE - NEEBISH ISLAND
 FILE Q42801T1 (CREATION DATE = 10/04/83) REEL #8583

***** CROSSTABULATION OF *****
 HLNG LENGTH OF STAY BY PURP PURPOSE OF TRIP

HLNG	PURP COUNT ROW PCT COL PCT TOT PCT	PURP								ROW TOTAL	
		IWORK	PERSONAL BUSINESS			SHOPPING	VACATION	OTH SOC OR REC	ALL OTHER		MEDICAL DENTAL
		1.I	2.I	3.I	4.I	5.I	6.I	8.I			
OTHER	0.	I 12 I	I 4 I	I 1 I	I 0 I	I 2 I	I 1 I	I 0 I	I 20		
		I 60.0 I	I 20.0 I	I 5.0 I	I 0.0 I	I 10.0 I	I 5.0 I	I 0.0 I	I 6.0 I		
		I 28.6 I	I 22.2 I	I 1.8 I	I 0.0 I	I 2.4 I	I 16.7 I	I 0.0 I			
		I 3.6 I	I 1.2 I	I 0.3 I	I 0.0 I	I 0.6 I	I 0.3 I	I 0.0 I			
ONE DAY OR LESS	1.	I 19 I	I 6 I	I 3 I	I 19 I	I 38 I	I 2 I	I 0 I	I 87		
		I 21.8 I	I 6.9 I	I 3.4 I	I 21.8 I	I 43.7 I	I 2.3 I	I 0.0 I	I 26.3 I		
		I 45.2 I	I 33.3 I	I 5.5 I	I 15.3 I	I 46.3 I	I 33.3 I	I 0.0 I			
		I 5.7 I	I 1.8 I	I 0.9 I	I 5.7 I	I 11.5 I	I 0.6 I	I 0.0 I			
2 DAYS - 1 WEEK	2.	I 1 I	I 1 I	I 11 I	I 64 I	I 22 I	I 0 I	I 1 I	I 100		
		I 1.0 I	I 1.0 I	I 11.0 I	I 64.0 I	I 22.0 I	I 0.0 I	I 1.0 I	I 30.2 I		
		I 2.4 I	I 5.6 I	I 20.0 I	I 51.6 I	I 26.8 I	I 0.0 I	I 25.0 I			
		I 0.3 I	I 0.3 I	I 3.3 I	I 19.3 I	I 6.6 I	I 0.0 I	I 0.3 I			
1 WEEK - 2 WEEKS	3.	I 1 I	I 0 I	I 3 I	I 17 I	I 8 I	I 0 I	I 0 I	I 29		
		I 3.4 I	I 0.0 I	I 10.3 I	I 58.6 I	I 27.6 I	I 0.0 I	I 0.0 I	I 8.8 I		
		I 2.4 I	I 0.0 I	I 5.5 I	I 13.7 I	I 9.8 I	I 0.0 I	I 0.0 I			
		I 0.3 I	I 0.0 I	I 0.9 I	I 5.1 I	I 2.4 I	I 0.0 I	I 0.0 I			
SEASON	4.	I 1 I	I 3 I	I 10 I	I 23 I	I 4 I	I 0 I	I 1 I	I 42		
		I 2.4 I	I 7.1 I	I 23.8 I	I 54.8 I	I 9.5 I	I 0.0 I	I 2.4 I	I 12.7 I		
		I 2.4 I	I 16.7 I	I 18.2 I	I 18.5 I	I 4.9 I	I 0.0 I	I 25.0 I			
		I 0.3 I	I 0.9 I	I 3.0 I	I 6.9 I	I 1.2 I	I 0.0 I	I 0.3 I			
PERM RESIDENT	5.	I 8 I	I 4 I	I 27 I	I 1 I	I 8 I	I 3 I	I 2 I	I 53		
		I 15.1 I	I 7.5 I	I 50.9 I	I 1.9 I	I 15.1 I	I 5.7 I	I 3.8 I	I 16.0 I		
		I 19.0 I	I 22.2 I	I 49.1 I	I 0.8 I	I 9.8 I	I 50.0 I	I 50.0 I			
		I 2.4 I	I 1.2 I	I 8.2 I	I 0.3 I	I 2.4 I	I 0.9 I	I 0.6 I			
COLUMN TOTAL		42	18	55	124	82	6	4	331		
		12.7	5.4	16.6	37.5	24.8	1.8	1.2	100.0		

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 DURATION OF STAY BY TRIP PURPOSE - SUGAR ISLAND
 FILE Q42801T1 (CREATION DATE = 10/04/83) REEL #8583

***** CROSSTABULATION OF *****
 HLNG LENGTH OF STAY BY PURP PURPOSE OF TRIP

HLNG	COUNT ROW PCT COL PCT TOT PCT	PURP								ROW TOTAL			
		IWORK	PERSONAL BUSINESS				SHOPPING VACATION		OTH SOC		ALL	SCHOOL	MEDICAL
			1.I	2.I	3.I	4.I	5.I	OR REC	OTHER		6.I	7.I	8.I
OTHER	0.	I 1 I	I 2 I	I 2 I	I 3 I	I 6 I	I 0 I	I 0 I	I 2 I			16	
		I 6.3 I	I 12.5 I	I 12.5 I	I 18.8 I	I 37.5 I	I 0.0 I	I 0.0 I	I 12.5 I			0.7	
		I 0.2 I	I 0.9 I	I 0.7 I	I 0.9 I	I 0.6 I	I 0.0 I	I 0.0 I	I 4.5 I				
		I 0.0 I	I 0.1 I	I 0.1 I	I 0.1 I	I 0.3 I	I 0.0 I	I 0.0 I	I 0.1 I				
ONE DAY OR LESS	1.	I 97 I	I 58 I	I 4 I	I 61 I	I 480 I	I 4 I	I 0 I	I 2 I			706	
		I 13.7 I	I 8.2 I	I 0.6 I	I 8.6 I	I 68.0 I	I 0.6 I	I 0.0 I	I 0.3 I			30.6	
		I 22.9 I	I 25.8 I	I 1.4 I	I 19.2 I	I 48.7 I	I 21.1 I	I 0.0 I	I 4.5 I				
		I 4.2 I	I 2.5 I	I 0.2 I	I 2.6 I	I 20.8 I	I 0.2 I	I 0.0 I	I 0.1 I				
2 DAYS - 1 WEEK	2.	I 7 I	I 15 I	I 30 I	I 157 I	I 110 I	I 3 I	I 0 I	I 2 I			324	
		I 2.2 I	I 4.6 I	I 9.3 I	I 48.5 I	I 34.0 I	I 0.9 I	I 0.0 I	I 0.6 I			14.0	
		I 1.7 I	I 6.7 I	I 10.3 I	I 49.5 I	I 11.2 I	I 15.8 I	I 0.0 I	I 4.5 I				
		I 0.3 I	I 0.6 I	I 1.3 I	I 6.8 I	I 4.8 I	I 0.1 I	I 0.0 I	I 0.1 I				
1 WEEK - 2 WEEKS	3.	I 1 I	I 5 I	I 22 I	I 71 I	I 30 I	I 0 I	I 0 I	I 2 I			131	
		I 0.8 I	I 3.8 I	I 16.8 I	I 54.2 I	I 22.9 I	I 0.0 I	I 0.0 I	I 1.5 I			5.7	
		I 0.2 I	I 2.2 I	I 7.6 I	I 22.4 I	I 3.0 I	I 0.0 I	I 0.0 I	I 4.5 I				
		I 0.0 I	I 0.2 I	I 1.0 I	I 3.1 I	I 1.3 I	I 0.0 I	I 0.0 I	I 0.1 I				
SEASON	4.	I 12 I	I 19 I	I 52 I	I 18 I	I 61 I	I 3 I	I 0 I	I 3 I			168	
		I 7.1 I	I 11.3 I	I 31.0 I	I 10.7 I	I 36.3 I	I 1.8 I	I 0.0 I	I 1.8 I			7.3	
		I 2.8 I	I 8.4 I	I 17.9 I	I 5.7 I	I 6.2 I	I 15.8 I	I 0.0 I	I 6.8 I				
		I 0.5 I	I 0.8 I	I 2.3 I	I 0.8 I	I 2.6 I	I 0.1 I	I 0.0 I	I 0.1 I				
PERM RESIDENT	5.	I 305 I	I 126 I	I 180 I	I 7 I	I 299 I	I 9 I	I 5 I	I 33 I			964	
		I 31.6 I	I 13.1 I	I 18.7 I	I 0.7 I	I 31.0 I	I 0.9 I	I 0.5 I	I 3.4 I			41.7	
		I 72.1 I	I 56.0 I	I 62.1 I	I 2.2 I	I 30.3 I	I 47.4 I	I 100.0 I	I 75.0 I				
		I 13.2 I	I 5.5 I	I 7.8 I	I 0.3 I	I 12.9 I	I 0.4 I	I 0.2 I	I 1.4 I				
COLUMN TOTAL		423	225	290	317	986	19	5	44			2309	
		18.3	9.7	12.6	13.7	42.7	0.8	0.2	1.9			100.0	

NUMBER OF MISSING OBSERVATIONS = 63

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 DURATION OF STAY BY TRIP PURPOSE - ALL ISLANDS
 FILE Q42801T1 (CREATION DATE = 10/04/83) REEL #8583

***** CROSSTABULATION OF *****
 HLNG LENGTH OF STAY BY PURP PURPOSE OF TRIP

HLNG	COUNT ROW PCT COL PCT TOT PCT	PURP								ROW TOTAL	
		IWORK	PERSONAL BUSINESS		SHOPPING	VACATION	OTH SOC OR REC	ALL OTHER	SCHOOL		MEDICAL DENTAL
		1.I	2.I	3.I	4.I	5.I	6.I	7.I	8.I		
		I	I	I	I	I	I	I	I		
OTHER	0.	17	7	4	13	11	2	0	7	61	
	I	27.9	11.5	6.6	21.3	18.0	3.3	0.0	11.5	1.4	
	I	2.3	1.5	1.1	1.2	0.7	2.3	0.0	8.0		
	I	0.4	0.2	0.1	0.3	0.2	0.0	0.0	0.2		
ONE DAY OR LESS	1.	333	100	9	211	771	20	0	2	1446	
	I	23.0	6.9	0.6	14.6	53.3	1.4	0.0	0.1	32.4	
	I	44.9	21.9	2.4	19.6	47.4	23.0	0.0	2.3		
	I	7.5	2.2	0.2	4.7	17.3	0.4	0.0	0.0		
2 DAYS - 1 WEEK	2.	14	33	46	607	314	18	0	4	1036	
	I	1.4	3.2	4.4	58.6	30.3	1.7	0.0	0.4	23.2	
	I	1.9	7.2	12.1	56.3	19.3	20.7	0.0	4.5		
	I	0.3	0.7	1.0	13.6	7.0	0.4	0.0	0.1		
1 WEEK - 2 WEEKS	3.	2	9	25	157	52	1	0	3	249	
	I	0.8	3.6	10.0	63.1	20.9	0.4	0.0	1.2	5.6	
	I	0.3	2.0	6.6	14.6	3.2	1.1	0.0	3.4		
	I	0.0	0.2	0.6	3.5	1.2	0.0	0.0	0.1		
SEASON	4.	16	42	66	74	82	9	0	9	298	
	I	5.4	14.1	22.1	24.8	27.5	3.0	0.0	3.0	6.7	
	I	2.2	9.2	17.4	6.9	5.0	10.3	0.0	10.2		
	I	0.4	0.9	1.5	1.7	1.8	0.2	0.0	0.2		
PERM RESIDENT	5.	360	265	230	16	397	37	10	63	1378	
	I	26.1	19.2	16.7	1.2	28.8	2.7	0.7	4.6	30.8	
	I	48.5	58.1	60.5	1.5	24.4	42.5	100.0	71.6		
	I	8.1	5.9	5.1	0.4	8.9	0.8	0.2	1.4		
COLUMN TOTAL		742	456	380	1078	1627	87	10	88	4468	
TOTAL		16.6	10.2	8.5	24.1	36.4	1.9	0.2	2.0	100.0	

NUMBER OF MISSING OBSERVATIONS = 66

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 DURATION OF STAY BY TYPE OF ACCOMMODATION - DRUMMOND ISLA
 FILE Q42801T1 (CREATION DATE = 10/04/83) REEL #8583

***** CROSSTABULATION OF *****
 HLNG LENGTH OF STAY BY WHSTAY ACCOMMODATIONS

HLNG	WHSTAY										ROW TOTAL	
	COUNT	I					MOT HOME OTHER					ROW TOTAL
	ROW PCT	INOT	RENT	MOT	FAM	SUM	PERM	MOT	HOME	OTHER		
	COL PCT	IGIVEN	OR	COT	HOME	HOME	TRAILER					
TOT PCT	0.I	1.I	2.I	3.I	4.I	5.I						
OTHER	0.	1	0	8	11	2	3					25
	I	4.0	0.0	32.0	44.0	8.0	12.0					1.4
	I	3.3	0.0	3.1	2.2	0.9	0.6					
	I	0.1	0.0	0.4	0.6	0.1	0.2					
ONE DAY OR LESS	1.	24	151	42	7	21	409					654
	I	3.7	23.1	6.4	1.1	3.2	62.5					35.8
	I	80.0	42.4	16.1	1.4	9.7	87.6					
	I	1.3	8.3	2.3	0.4	1.1	22.4					
2 DAYS - 1 WEEK	2.	3	172	143	86	167	41					612
	I	0.5	28.1	23.4	14.1	27.3	6.7					33.5
	I	10.0	48.3	54.8	17.3	77.0	8.8					
	I	0.2	9.4	7.8	4.7	9.1	2.2					
1 WEEK - 2 WEEKS	3.	0	22	26	22	15	4					89
	I	0.0	24.7	29.2	24.7	16.9	4.5					4.9
	I	0.0	6.2	10.0	4.4	6.9	0.9					
	I	0.0	1.2	1.4	1.2	0.8	0.2					
SEASON	4.	0	10	38	20	12	7					87
	I	0.0	11.5	43.7	23.0	13.8	8.0					4.8
	I	0.0	2.8	14.6	4.0	5.5	1.5					
	I	0.0	0.5	2.1	1.1	0.7	0.4					
PERM RESIDENT	5.	2	1	4	351	0	3					361
	I	0.6	0.3	1.1	97.2	0.0	0.8					19.7
	I	6.7	0.3	1.5	70.6	0.0	0.6					
	I	0.1	0.1	0.2	19.2	0.0	0.2					
COLUMN TOTAL		30	356	261	497	217	467					1828
		1.6	19.5	14.3	27.2	11.9	25.5					100.0

NUMBER OF MISSING OBSERVATIONS = 3

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 DURATION OF STAY BY TYPE OF ACCOMMODATION - NEEBISH ISLAN
 FILE Q42B01T1 (CREATION DATE = 10/04/83) REEL #8583

***** CROSSTABULATION OF *****
 HLNG LENGTH OF STAY BY WHSTAY ACCOMMODATIONS

HLNG	WHSTAY										ROW TOTAL				
	COUNT	RENT MOT FAM SUM					MOT HOME OTHER								
	ROW PCT	INDT	OR	COT	HOME	HOME	TRAILER								
	COL PCT	IGIVEN	O.I	1.I	2.I	3.I	4.I	5.I							
TOT PCT	I	I	I	I	I	I	I	I	I	I					
OTHER	0.	I	0	I	0	I	3	I	2	I	0	I	15	I	20
		I	0.0	I	0.0	I	15.0	I	10.0	I	0.0	I	75.0	I	6.0
		I	0.0	I	0.0	I	2.0	I	3.6	I	0.0	I	23.4	I	
		I	0.0	I	0.0	I	0.9	I	0.6	I	0.0	I	4.5	I	
ONE DAY OR LESS	1.	I	1	I	0	I	41	I	1	I	0	I	44	I	87
		I	1.1	I	0.0	I	47.1	I	1.1	I	0.0	I	50.6	I	26.3
		I	100.0	I	0.0	I	27.5	I	1.8	I	0.0	I	68.8	I	
		I	0.3	I	0.0	I	12.4	I	0.3	I	0.0	I	13.3	I	
2 DAYS - 1 WEEK	2.	I	0	I	41	I	52	I	0	I	6	I	1	I	100
		I	0.0	I	41.0	I	52.0	I	0.0	I	6.0	I	1.0	I	30.2
		I	0.0	I	80.4	I	34.9	I	0.0	I	60.0	I	1.6	I	
		I	0.0	I	12.4	I	15.7	I	0.0	I	1.8	I	0.3	I	
1 WEEK - 2 WEEKS	3.	I	0	I	7	I	18	I	0	I	2	I	2	I	29
		I	0.0	I	24.1	I	62.1	I	0.0	I	6.9	I	6.9	I	8.8
		I	0.0	I	13.7	I	12.1	I	0.0	I	20.0	I	3.1	I	
		I	0.0	I	2.1	I	5.4	I	0.0	I	0.6	I	0.6	I	
SEASON	4.	I	0	I	3	I	34	I	3	I	0	I	2	I	42
		I	0.0	I	7.1	I	81.0	I	7.1	I	0.0	I	4.8	I	12.7
		I	0.0	I	5.9	I	22.8	I	5.4	I	0.0	I	3.1	I	
		I	0.0	I	0.9	I	10.3	I	0.9	I	0.0	I	0.6	I	
PERM RESIDENT	5.	I	0	I	0	I	1	I	50	I	2	I	0	I	53
		I	0.0	I	0.0	I	1.9	I	94.3	I	3.8	I	0.0	I	16.0
		I	0.0	I	0.0	I	0.7	I	89.3	I	20.0	I	0.0	I	
		I	0.0	I	0.0	I	0.3	I	15.1	I	0.6	I	0.0	I	
COLUMN TOTAL		1		51		149		56		10		64		331	
		0.3		15.4		45.0		16.9		3.0		19.3		100.0	

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 DURATION OF STAY BY TYPE OF ACCOMMODATION - SUGAR ISLAND
 FILE Q42801T1 (CREATION DATE = 10/04/83) REEL #8583

***** CROSSTABULATION OF *****
 HLNG LENGTH OF STAY BY WHSTAY ACCOMMODATIONS

HLNG	COUNT ROW PCT COL PCT TOT PCT	WHSTAY					ROW TOTAL	
		INDT	RENT OR	MOT COT	FAM HOME	SUM HOME		
		IGIVEN	O.I	1.I	2.I	3.I		
		I	I	I	I	I		
OTHER	0.	0	3	7	4	0	2	16
	I	0.0	18.8	43.8	25.0	0.0	12.5	0.7
	I	0.0	2.1	1.3	0.3	0.0	0.6	
	I	0.0	0.1	0.3	0.2	0.0	0.1	
ONE DAY OR LESS	1.	54	11	173	112	11	349	710
	I	7.6	1.5	24.4	15.8	1.5	49.2	30.7
	I	98.2	7.6	33.1	9.3	35.5	97.2	
	I	2.3	0.5	7.5	4.8	0.5	15.1	
2 DAYS - 1 WEEK	2.	1	80	139	86	16	1	323
	I	0.3	24.8	43.0	26.6	5.0	0.3	14.0
	I	1.8	55.6	26.6	7.1	51.6	0.3	
	I	0.0	3.5	6.0	3.7	0.7	0.0	
1 WEEK - 2 WEEKS	3.	0	45	58	23	2	3	131
	I	0.0	34.4	44.3	17.6	1.5	2.3	5.7
	I	0.0	31.3	11.1	1.9	6.5	0.8	
	I	0.0	1.9	2.5	1.0	0.1	0.1	
SEASON	4.	0	5	140	18	2	2	167
	I	0.0	3.0	83.8	10.8	1.2	1.2	7.2
	I	0.0	3.5	26.8	1.5	6.5	0.6	
	I	0.0	0.2	6.1	0.8	0.1	0.1	
PERM RESIDENT	5.	0	0	5	960	0	2	967
	I	0.0	0.0	0.5	99.3	0.0	0.2	41.8
	I	0.0	0.0	1.0	79.8	0.0	0.6	
	I	0.0	0.0	0.2	41.5	0.0	0.1	
COLUMN TOTAL		55	144	522	1203	31	359	2314
TOTAL		2.4	6.2	22.6	52.0	1.3	15.5	100.0

NUMBER OF MISSING OBSERVATIONS = 58

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 DURATION OF STAY BY TYPE OF ACCOMMODATION - ALL ISLANDS
 FILE Q42801T1 (CREATION DATE = 10/04/83) REEL #8583

***** C R O S S T A B U L A T I O N O F * * * * *
 H L N G L E N G T H O F S T A Y B Y W H S T A Y A C C O M M O D A T I O N S
 * * * * *

HLNG	WHSTAY										ROW TOTAL	
	COUNT	I					OTHER					
	ROW PCT	INOT	RENT	MOT	FAM	SUM	PERM	MOT	HOME	OTHER		
	COL PCT	IGIVEN	OR	COT	HOME	HOME	TRAILER					
TOT PCT	I	0.I	1.I	2.I	3.I	4.I	5.I					
OTHER	0.	1	3	18	17	2	20				61	
	I	1.6	4.9	29.5	27.9	3.3	32.8				1.4	
	I	1.2	0.5	1.9	1.0	0.8	2.2					
	I	0.0	0.1	0.4	0.4	0.0	0.4					
ONE DAY OR LESS	1.	79	162	256	120	32	802				1451	
	I	5.4	11.2	17.6	8.3	2.2	55.3				32.4	
	I	91.9	29.4	27.5	6.8	12.4	90.1					
	I	1.8	3.6	5.7	2.7	0.7	17.9					
2 DAYS - 1 WEEK	2.	4	293	334	172	189	43				1035	
	I	0.4	28.3	32.3	16.6	18.3	4.2				23.1	
	I	4.7	53.2	35.8	9.8	73.3	4.8					
	I	0.1	6.6	7.5	3.8	4.2	1.0					
1 WEEK - 2 WEEKS	3.	0	74	102	45	19	9				249	
	I	0.0	29.7	41.0	18.1	7.6	3.6				5.6	
	I	0.0	13.4	10.9	2.6	7.4	1.0					
	I	0.0	1.7	2.3	1.0	0.4	0.2					
SEASON	4.	0	18	212	41	14	11				296	
	I	0.0	6.1	71.6	13.9	4.7	3.7				6.6	
	I	0.0	3.3	22.7	2.3	5.4	1.2					
	I	0.0	0.4	4.7	0.9	0.3	0.2					
PERM RESIDENT	5.	2	1	10	1361	2	5				1381	
	I	0.1	0.1	0.7	98.6	0.1	0.4				30.9	
	I	2.3	0.2	1.1	77.5	0.8	0.6					
	I	0.0	0.0	0.2	30.4	0.0	0.1					
COLUMN TOTAL		86	551	932	1756	258	890				4473	
TOTAL		1.9	12.3	20.8	39.3	5.8	19.9				100.0	

NUMBER OF MISSING OBSERVATIONS = 61

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 FREQUENCY OF USE BY TRIP PURPOSE - DRUMMOND ISLAND
 FILE Q42801T1 (CREATION DATE = 10/04/83) REEL #8583

***** C R O S S T A B U L A T I O N O F *****
 WKDY DAY OF WEEK BY PURP PURPOSE OF TRIP

WKDY	COUNT ROW PCT COL PCT TOT PCT	PURP								ROW TOTAL
		IWORK 1.I	PERSONAL BUSINESS 2.I	SHOPPING 3.I	VACATION 4.I	OTH SOC OR REC 5.I	ALL OTHER 6.I	SCHOOL 7.I	MEDICAL DENTAL 8.I	
FRIDAY	2.	89	48	14	122	102	8	1	19	403
		22.1	11.9	3.5	30.3	25.3	2.0	0.2	4.7	22.0
		32.1	22.5	40.0	19.2	18.2	12.9	20.0	47.5	
		4.9	2.6	0.8	6.7	5.6	0.4	0.1	1.0	
SATURDAY	3.	28	30	5	172	103	14	0	4	356
		7.9	8.4	1.4	48.3	28.9	3.9	0.0	1.1	19.5
		10.1	14.1	14.3	27.0	18.4	22.6	0.0	10.0	
		1.5	1.6	0.3	9.4	5.6	0.8	0.0	0.2	
SUNDAY	4.	6	20	0	127	170	17	1	1	342
		1.8	5.8	0.0	37.1	49.7	5.0	0.3	0.3	18.7
		2.2	9.4	0.0	19.9	30.4	27.4	20.0	2.5	
		0.3	1.1	0.0	6.9	9.3	0.9	0.1	0.1	
MONDAY	5.	80	58	4	122	74	6	1	4	349
		22.9	16.6	1.1	35.0	21.2	1.7	0.3	1.1	19.1
		28.9	27.2	11.4	19.2	13.2	9.7	20.0	10.0	
		4.4	3.2	0.2	6.7	4.0	0.3	0.1	0.2	
TUESDAY	6.	74	57	12	94	110	17	2	12	378
		19.6	15.1	3.2	24.9	29.1	4.5	0.5	3.2	20.7
		26.7	26.8	34.3	14.8	19.7	27.4	40.0	30.0	
		4.0	3.1	0.7	5.1	6.0	0.9	0.1	0.7	
COLUMN TOTAL		277	213	35	637	559	62	5	40	1828
		15.2	11.7	1.9	34.8	30.6	3.4	0.3	2.2	100.0

NUMBER OF MISSING OBSERVATIONS = 3

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 FREQUENCY OF USE BY TRIP PURPOSE - NEEBISH ISLAND
 FILE Q42801T1 (CREATION DATE = 10/04/83) REEL #8583

***** CROSSTABULATION OF *****
 WKDY DAY OF WEEK BY PURP PURPOSE OF TRIP

WKDY	COUNT ROW PCT COL PCT TOT PCT	PURP								ROW TOTAL	
		IWORK I	PERSONAL BUSINESS				VACATION I	OTH SOC OR REC I	ALL OTHER I		MEDICAL DENTAL I
			1.I	2.I	3.I	4.I					
			5.I	6.I	8.I						
1.	7	2	4	20	2	0	0	35			
THURSDAY	20.0	5.7	11.4	57.1	5.7	0.0	0.0	10.6			
	16.7	11.1	7.3	16.1	2.4	0.0	0.0				
	2.1	0.6	1.2	6.0	0.6	0.0	0.0				
2.	9	4	15	26	16	0	0	70			
FRIDAY	12.9	5.7	21.4	37.1	22.9	0.0	0.0	21.1			
	21.4	22.2	27.3	21.0	19.5	0.0	0.0				
	2.7	1.2	4.5	7.9	4.8	0.0	0.0				
3.	2	1	10	32	20	3	0	68			
SATURDAY	2.9	1.5	14.7	47.1	29.4	4.4	0.0	20.5			
	4.8	5.6	18.2	25.8	24.4	50.0	0.0				
	0.6	0.3	3.0	9.7	6.0	0.9	0.0				
4.	1	2	2	11	10	1	0	27			
SUNDAY	3.7	7.4	7.4	40.7	37.0	3.7	0.0	8.2			
	2.4	11.1	3.6	8.9	12.2	16.7	0.0				
	0.3	0.6	0.6	3.3	3.0	0.3	0.0				
5.	12	6	5	24	12	1	2	62			
MONDAY	19.4	9.7	8.1	38.7	19.4	1.6	3.2	18.7			
	28.6	33.3	9.1	19.4	14.6	16.7	50.0				
	3.6	1.8	1.5	7.3	3.6	0.3	0.6				
6.	11	3	19	11	22	1	2	69			
TUESDAY	15.9	4.3	27.5	15.9	31.9	1.4	2.9	20.8			
	26.2	16.7	34.5	8.9	26.8	16.7	50.0				
	3.3	0.9	5.7	3.3	6.6	0.3	0.6				
COLUMN TOTAL	42 12.7	18 5.4	55 16.6	124 37.5	82 24.8	6 1.8	4 1.2	331 100.0			

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 FREQUENCY OF USE BY TRIP PURPOSE - SUGAR ISLAND
 FILE Q42801T1 (CREATION DATE = 10/04/83) REEL #8583

***** CROSSTABULATION OF *****
 WKDY DAY OF WEEK BY PURP PURPOSE OF TRIP

WKDY	COUNT	ROW PCT	IWORK	PURP								ROW TOTAL							
				COL PCT	1.I	2.I	3.I	4.I	5.I	6.I	7.I		8.I						
														PERSONAL BUSINESS	SHOPPING	VACATION	OTH OR	SOC REC	ALL OTHER
FRIDAY	2.	I	71	I	60	I	82	I	59	I	115	I	4	I	0	I	13	I	404
		I	17.6	I	14.9	I	20.3	I	14.6	I	28.5	I	1.0	I	0.0	I	3.2	I	17.5
		I	16.8	I	26.7	I	28.3	I	18.6	I	11.7	I	21.1	I	0.0	I	29.5	I	
		I	3.1	I	2.6	I	3.5	I	2.6	I	5.0	I	0.2	I	0.0	I	0.6	I	
SATURDAY	3.	I	61	I	40	I	51	I	118	I	246	I	2	I	1	I	6	I	525
		I	11.6	I	7.6	I	9.7	I	22.5	I	46.9	I	0.4	I	0.2	I	1.1	I	22.7
		I	14.4	I	17.8	I	17.6	I	37.2	I	24.9	I	10.5	I	20.0	I	13.6	I	
		I	2.6	I	1.7	I	2.2	I	5.1	I	10.6	I	0.1	I	0.0	I	0.3	I	
SUNDAY	4.	I	38	I	27	I	11	I	49	I	331	I	6	I	1	I	0	I	463
		I	8.2	I	5.8	I	2.4	I	10.6	I	71.5	I	1.3	I	0.2	I	0.0	I	20.0
		I	9.0	I	12.0	I	3.8	I	15.5	I	33.5	I	31.6	I	20.0	I	0.0	I	
		I	1.6	I	1.2	I	0.5	I	2.1	I	14.3	I	0.3	I	0.0	I	0.0	I	
MONDAY	5.	I	122	I	66	I	57	I	41	I	149	I	3	I	0	I	10	I	448
		I	27.2	I	14.7	I	12.7	I	9.2	I	33.9	I	0.7	I	0.0	I	2.2	I	19.4
		I	28.8	I	29.3	I	19.7	I	12.9	I	15.1	I	15.8	I	0.0	I	22.7	I	
		I	5.3	I	2.9	I	2.5	I	1.8	I	6.5	I	0.1	I	0.0	I	0.4	I	
TUESDAY	6.	I	131	I	32	I	89	I	50	I	146	I	4	I	3	I	15	I	470
		I	27.9	I	6.8	I	18.9	I	10.6	I	31.1	I	0.9	I	0.6	I	3.2	I	20.3
		I	31.0	I	14.2	I	30.7	I	15.8	I	14.8	I	21.1	I	60.0	I	34.1	I	
		I	5.7	I	1.4	I	3.9	I	2.2	I	6.3	I	0.2	I	0.1	I	0.6	I	
COLUMN TOTAL			423		225		290		317		987		19		5		44		2310
TOTAL			18.3		9.7		12.6		13.7		42.7		0.8		0.2		1.9		100.0

NUMBER OF MISSING OBSERVATIONS = 62

ST MARY'S RIVER FERRY USERS SURVEY - JULY 1983
 FREQUENCY OF USE BY TRIP PURPOSE - ALL ISLANDS
 FILE Q42801T1 (CREATION DATE = 10/04/83) REEL #8583

***** CROSSTABULATION OF *****
 WKDY DAY OF WEEK BY PURP PURPOSE OF TRIP

WKDY	DAY OF WEEK	COUNT ROW PCT COL PCT TOT PCT	PURP								ROW TOTAL
			IWORK	PERSONAL BUSINESS	SHOPPING	VACATION	OTH SOC OR REC	ALL OTHER	SCHOOL	MEDICAL DENTAL	
			1.I	2.I	3.I	4.I	5.I	6.I	7.I	8.I	
THURSDAY	1.	I	7	2	4	20	2	0	0	0	35
		I	20.0	5.7	11.4	57.1	5.7	0.0	0.0	0.0	0.8
		I	0.9	0.4	1.1	1.9	0.1	0.0	0.0	0.0	
		I	0.2	0.0	0.1	0.4	0.0	0.0	0.0	0.0	
FRIDAY	2.	I	169	112	111	207	233	12	1	32	877
		I	19.3	12.8	12.7	23.6	26.6	1.4	0.1	3.6	19.6
		I	22.8	24.6	29.2	19.2	14.3	13.8	10.0	36.4	
		I	3.8	2.5	2.5	4.6	5.2	0.3	0.0	0.7	
SATURDAY	3.	I	91	71	66	322	369	19	1	10	949
		I	9.6	7.5	7.0	33.9	38.9	2.0	0.1	1.1	21.2
		I	12.3	15.6	17.4	29.9	22.7	21.8	10.0	11.4	
		I	2.0	1.6	1.5	7.2	8.3	0.4	0.0	0.2	
SUNDAY	4.	I	45	49	13	187	511	24	2	1	832
		I	5.4	5.9	1.6	22.5	61.4	2.9	0.2	0.1	18.6
		I	6.1	10.7	3.4	17.3	31.4	27.6	20.0	1.1	
		I	1.0	1.1	0.3	4.2	11.4	0.5	0.0	0.0	
MONDAY	5.	I	214	130	66	187	235	10	1	16	859
		I	24.9	15.1	7.7	21.8	27.4	1.2	0.1	1.9	19.2
		I	28.8	28.5	17.4	17.3	14.4	11.5	10.0	18.2	
		I	4.8	2.9	1.5	4.2	5.3	0.2	0.0	0.4	
TUESDAY	6.	I	216	92	120	155	278	22	5	29	917
		I	23.6	10.0	13.1	16.9	30.3	2.4	0.5	3.2	20.5
		I	29.1	20.2	31.6	14.4	17.1	25.3	50.0	33.0	
		I	4.8	2.1	2.7	3.5	6.2	0.5	0.1	0.6	
COLUMN TOTAL			742	456	380	1078	1628	87	10	88	4469
			16.6	10.2	8.5	24.1	36.4	1.9	0.2	2.0	100.0

NUMBER OF MISSING OBSERVATIONS = 65

ST MARY'S RIVER FERRY USER SURVEY - JULY 1983
 NUMBER OF USERS BY SEX AND ISLAND SERVICE
 FILE NONAME (CREATION DATE = 09/28/83)

***** CROSSTABULATION OF *****
 SEX BY FSERV ISLAND SERVICE

SEX	COUNT	FSERV			ROW TOTAL
		SUGAR ISLAND	NEEBISH ISLAND	DRUMMOND ISLAND	
	1.	332	70	528	930
MALE		35.7	7.5	56.8	72.9
		70.5	72.9	74.5	
		26.0	5.5	41.4	
	2.	139	26	181	346
FEMALE		40.2	7.5	52.3	27.1
		29.5	27.1	25.5	
		10.9	2.0	14.2	
	COLUMN	471	96	709	1276
	TOTAL	36.9	7.5	55.6	100.0

NUMBER OF MISSING OBSERVATIONS = 14

ST MARY'S RIVER FERRY USER SURVEY - JULY 1983
 NUMBER OF USERS BY AGE AND ISLAND SERVICE
 FILE NONAME (CREATION DATE = 09/28/83)

***** C R O S S T A B U L A T I O N O F *****
 AGE AGE GROUP BY FSERV ISLAND SERVICE

AGE	COUNT	FSERV			ROW TOTAL
		ISUGAR	NEEBISH	DRUMMOND	
		ISLAND	ISLAND	ISLAND	
17 OR UNDER	1.	10	1	15	26
		38.5	3.8	57.7	2.0
		2.1	1.0	2.1	
		0.8	0.1	1.2	
18 TO 24	2.	43	5	46	94
		45.7	5.3	48.9	7.3
		9.1	5.2	6.5	
		3.4	0.4	3.6	
25 TO 54	3.	251	43	400	694
		36.2	6.2	57.6	54.2
		53.2	44.8	56.1	
		19.6	3.4	31.2	
55 TO 64	4.	72	26	131	229
		31.4	11.4	57.2	17.9
		15.3	27.1	18.4	
		5.6	2.0	10.2	
65 OR OLDER	5.	96	21	121	238
		40.3	8.8	50.8	18.6
		20.3	21.9	17.0	
		7.5	1.6	9.4	
		472	96	713	1281
		36.8	7.5	55.7	100.0

NUMBER OF MISSING OBSERVATIONS = 9

ST MARY'S RIVER FERRY USER SURVEY - JULY 1983
 NUMBER OF USERS BY AGE AND SEX
 FILE NONAME (CREATION DATE = 09/28/83)

***** CROSSTABULATION OF *****
 AGE AGE GROUP BY SEX
 CONTROLLING FOR..
 FSERV ISLAND SERVICE VALUE = 3. DRUMMOND ISLAND

AGE	COUNT	SEX		ROW TOTAL
		MALE	FEMALE	
	ROW PCT	1. I	2. I	
	COL PCT			
	TOT PCT			
17 OR UNDER	1.	8	6	14
		57.1	42.9	2.0
		1.5	3.4	
		1.1	0.9	
18 TO 24	2.	32	14	46
		69.6	30.4	6.5
		6.1	7.8	
		4.5	2.0	
25 TO 54	3.	295	104	399
		73.9	26.1	56.6
		56.1	58.1	
		41.8	14.8	
55 TO 64	4.	97	31	128
		75.8	24.2	18.2
		18.4	17.3	
		13.8	4.4	
65 OR OLDER	5.	94	24	118
		79.7	20.3	16.7
		17.9	13.4	
		13.3	3.4	
	COLUMN TOTAL	526	179	705
		74.6	25.4	100.0

NUMBER OF MISSING OBSERVATIONS = 22

ST MARY'S RIVER FERRY USER SURVEY - JULY 1983
 NUMBER OF USERS BY AGE AND SEX
 FILE NONAME (CREATION DATE = 09/28/83)

***** CROSSTABULATION OF *****
 AGE AGE GROUP BY SEX
 CONTROLLING FOR..
 FSERV ISLAND SERVICE VALUE = 2. NEEBISH ISLAND

AGE	COUNT ROW PCT COL PCT TOT PCT	SEX		ROW TOTAL
		MALE	FEMALE	
		1.I	2.I	
		I		
17 OR UNDER	1.	0	1	1
		0.0	100.0	1.1
		0.0	3.8	
		0.0	1.1	
18 TO 24	2.	3	2	5
		60.0	40.0	5.3
		4.3	7.7	
		3.2	2.1	
25 TO 54	3.	33	10	43
		76.7	23.3	45.3
		47.8	38.5	
		34.7	10.5	
55 TO 64	4.	18	8	26
		69.2	30.8	27.4
		26.1	30.8	
		18.9	8.4	
65 OR OLDER	5.	15	5	20
		75.0	25.0	21.1
		21.7	19.2	
		15.8	5.3	
COLUMN TOTAL		69	26	95
		72.6	27.4	100.0

ST MARY'S RIVER FERRY USER SURVEY - JULY 1983
 NUMBER OF USERS BY AGE AND SEX
 FILE NONAME (CREATION DATE = 09/28/83)

***** C R O S S T A B U L A T I O N O F * * * * *
 AGE AGE GROUP BY SEX
 CONTROLLING FOR..
 FSERV ISLAND SERVICE VALUE = 1. SUGAR ISLAND

AGE	COUNT	SEX		ROW TOTAL
		MALE	FEMALE	
	1.	8	2	10
17 OR UNDER		80.0	20.0	2.1
		2.4	1.4	
		1.7	0.4	
	2.	24	19	43
18 TO 24		55.8	44.2	9.2
		7.3	13.8	
		5.1	4.1	
	3.	175	74	249
25 TO 54		70.3	29.7	53.2
		53.0	53.6	
		37.4	15.8	
	4.	55	16	71
55 TO 64		77.5	22.5	15.2
		16.7	11.6	
		11.8	3.4	
	5.	68	27	95
65 OR OLDER		71.6	28.4	20.3
		20.6	19.6	
		14.5	5.8	
		330	138	468
COLUMN TOTAL		70.5	29.5	100.0

ST MARY'S RIVER FERRY USER SURVEY - JULY 1983
 RATING FOR SELECTED SERVICE CHARACTERISTICS
 FILE NONAME (CREATION DATE = 09/28/83)

***** CROSSTABULATION OF *****
 HOURS OPERATING HOURS BY FSERV ISLAND SERVICE

		FSERV				
		COUNT	I			ROW
RDW	PCT	ISUGAR	NEEBISH	DRUMMOND		TOTAL
COL	PCT	IISLAND	ISLAND	ISLAND		
TOT	PCT	I	1.I	2.I	3.I	
HOURS		-----I-----I-----I-----I-----I				
	1.	I 15	I 17	I 20	I	52
POOR		I 28.8	I 32.7	I 38.5	I	4.1
		I 3.2	I 17.7	I 2.8	I	
		I 1.2	I 1.3	I 1.6	I	
		-----I-----I-----I-----I-----I				
	2.	I 44	I 25	I 71	I	140
FAIR		I 31.4	I 17.9	I 50.7	I	11.0
		I 9.4	I 26.0	I 10.0	I	
		I 3.5	I 2.0	I 5.6	I	
		-----I-----I-----I-----I-----I				
	3.	I 216	I 29	I 344	I	589
GOOD		I 36.7	I 4.9	I 58.4	I	46.3
		I 46.0	I 30.2	I 48.7	I	
		I 17.0	I 2.3	I 27.0	I	
		-----I-----I-----I-----I-----I				
	4.	I 182	I 24	I 251	I	457
VERY GOOD		I 39.8	I 5.3	I 54.9	I	35.9
		I 38.7	I 25.0	I 35.5	I	
		I 14.3	I 1.9	I 19.7	I	
		-----I-----I-----I-----I-----I				
	5.	I 13	I 1	I 21	I	35
DON'T KNOW		I 37.1	I 2.9	I 60.0	I	2.7
		I 2.8	I 1.0	I 3.0	I	
		I 1.0	I 0.1	I 1.6	I	
		-----I-----I-----I-----I-----I				
	COLUMN	470	96	707		1273
	TOTAL	36.9	7.5	55.5		100.0

NUMBER OF MISSING OBSERVATIONS = 17

ST MARY'S RIVER FERRY USER SURVEY - JULY 1983
 RATING FOR SELECTED SERVICE CHARACTERISTICS
 FILE NONAME (CREATION DATE = 09/28/83)

***** C R O S S T A B U L A T I O N O F *****
 FREQ FREQUENCY OF SERVICE BY FSERV ISLAND SERVICE

FREQ	COUNT	FSERV			ROW TOTAL
		ISUGAR	NEEBISH ISLAND	DRUMMOND ISLAND	
		1.I	2.I	3.I	
POOR	1.	8	14	37	59
		13.6	23.7	62.7	4.7
		1.7	15.1	5.3	
		0.6	1.1	3.0	
FAIR	2.	38	23	91	152
		25.0	15.1	59.9	12.2
		8.2	24.7	13.1	
		3.0	1.8	7.3	
GOOD	3.	217	29	340	586
		37.0	4.9	58.0	46.9
		47.1	31.2	48.9	
		17.4	2.3	27.2	
VERY GOOD	4.	189	25	209	429
		44.7	5.9	49.4	33.9
		41.0	26.9	30.1	
		15.1	2.0	16.7	
DON'T KNOW	5.	9	2	18	29
		31.0	6.9	62.1	2.3
		2.0	2.2	2.6	
		0.7	0.2	1.4	
	COLUMN TOTAL	461	93	695	1249
		36.9	7.4	55.6	100.0

NUMBER OF MISSING OBSERVATIONS = 41

ST MARY'S RIVER FERRY USER SURVEY - JULY 1983
 RATING FOR SELECTED SERVICE CHARACTERISTICS
 FILE NONAME (CREATION DATE = 09/28/83)

***** C R O S S T A B U L A T I O N O F * * * * *
 INFO AVAILABILITY OF INFORMATION BY FSERV ISLAND SERVICE

		FSERV							
		COUNT				ROW			
INFO		I	ISUGAR	NEEBISH	DRUMMOND	TOTAL			
	ROW PCT	I	ISLAND	ISLAND	ISLAND				
	COL PCT	I	1.I	2.I	3.I				
	TOT PCT	I							
	1.	I	30	I	20	I	65	I	115
POOR		I	26.1	I	17.4	I	56.5	I	9.4
		I	6.8	I	21.5	I	9.4	I	
		I	2.5	I	1.6	I	5.3	I	
	2.	I	68	I	21	I	107	I	196
FAIR		I	34.7	I	10.7	I	54.6	I	16.0
		I	15.4	I	22.6	I	15.5	I	
		I	5.6	I	1.7	I	8.7	I	
	3.	I	179	I	29	I	266	I	474
GOOD		I	37.8	I	6.1	I	56.1	I	38.7
		I	40.6	I	31.2	I	38.6	I	
		I	14.6	I	2.4	I	21.7	I	
	4.	I	120	I	20	I	173	I	313
VERY GOOD		I	38.3	I	6.4	I	55.3	I	25.6
		I	27.2	I	21.5	I	25.1	I	
		I	9.8	I	1.6	I	14.1	I	
	5.	I	44	I	3	I	79	I	126
DON'T KNOW		I	34.9	I	2.4	I	62.7	I	10.3
		I	10.0	I	3.2	I	11.4	I	
		I	3.6	I	0.2	I	6.5	I	
		COLUMN	441	93	690		1224		
		TOTAL	36.0	7.6	56.4		100.0		

NUMBER OF MISSING OBSERVATIONS = 66

ST MARY'S RIVER FERRY USER SURVEY - JULY 1983
 RATING FOR SELECTED SERVICE CHARACTERISTICS
 FILE NONAME (CREATION DATE = 09/28/83)

***** C R O S S T A B U L A T I O N O F * * * * *
 SCHED ANNOUNCEMENT OF SCHEDULE CHANGES BY FSERV ISLAND SERVICE

		FSERV					
		COUNT	I			ROW	
ROW	PCT	ISUGAR	NEEBISH	DRUMMOND	TOTAL		
COL	PCT	IISLAND	ISLAND	ISLAND			
TOT	PCT	1.I	2.I	3.I			
SCHED		I-----I	I-----I	I-----I			
	1.	I 46 I	I 26 I	I 49 I	121		
POOR		I 38.0 I	I 21.5 I	I 40.5 I	10.0		
		I 10.4 I	I 29.2 I	I 7.3 I			
		I 3.8 I	I 2.2 I	I 4.1 I			
	2.	I 61 I	I 20 I	I 67 I	148		
FAIR		I 41.2 I	I 13.5 I	I 45.3 I	12.3		
		I 13.8 I	I 22.5 I	I 10.0 I			
		I 5.1 I	I 1.7 I	I 5.6 I			
	3.	I 147 I	I 17 I	I 209 I	373		
GOOD		I 39.4 I	I 4.6 I	I 56.0 I	31.0		
		I 33.2 I	I 19.1 I	I 31.1 I			
		I 12.2 I	I 1.4 I	I 17.3 I			
	4.	I 85 I	I 16 I	I 114 I	215		
VERY GOOD		I 39.5 I	I 7.4 I	I 53.0 I	17.8		
		I 19.2 I	I 18.0 I	I 16.9 I			
		I 7.1 I	I 1.3 I	I 9.5 I			
	5.	I 104 I	I 10 I	I 234 I	348		
DON'T KNOW		I 29.9 I	I 2.9 I	I 67.2 I	28.9		
		I 23.5 I	I 11.2 I	I 34.8 I			
		I 8.6 I	I 0.8 I	I 19.4 I			
		I-----I	I-----I	I-----I			
	COLUMN	443	89	673	1205		
	TOTAL	36.8	7.4	55.9	100.0		

NUMBER OF MISSING OBSERVATIONS = 85

ST MARY'S RIVER FERRY USER SURVEY - JULY 1983
 RATING FOR SELECTED SERVICE CHARACTERISTICS
 FILE NONAME (CREATION DATE = 09/28/83)

***** C R O S S T A B U L A T I O N O F *****
 ONOFF EASE OF GETTING ON OR OFF BY FSERV ISLAND SERVICE

		FSERV				
	COUNT	I				
ROW	PCT	ISUGAR	NEEBISH	DRUMMOND	ROW	
COL	PCT	IISLAND	ISLAND	ISLAND	TOTAL	
TOT	PCT	I	1.1	2.1	3.1	
ONOFF						
	1.	I 17	I 4	I 40	I 61	
POOR		I 27.9	I 6.6	I 65.6	I 4.8	
		I 3.6	I 4.3	I 5.7	I	
		I 1.3	I 0.3	I 3.2	I	
	2.	I 49	I 11	I 131	I 191	
FAIR		I 25.7	I 5.8	I 68.6	I 15.1	
		I 10.4	I 11.7	I 18.6	I	
		I 3.9	I 0.9	I 10.3	I	
	3.	I 191	I 43	I 299	I 533	
GOOD		I 35.8	I 8.1	I 56.1	I 42.1	
		I 40.7	I 45.7	I 42.5	I	
		I 15.1	I 3.4	I 23.6	I	
	4.	I 207	I 36	I 230	I 473	
VERY GOOD		I 43.8	I 7.6	I 48.6	I 37.3	
		I 44.1	I 38.3	I 32.7	I	
		I 16.3	I 2.8	I 18.2	I	
	5.	I 5	I 0	I 4	I 9	
DON'T KNOW		I 55.6	I 0.0	I 44.4	I 0.7	
		I 1.1	I 0.0	I 0.6	I	
		I 0.4	I 0.0	I 0.3	I	
	COLUMN	469	94	704	1267	
	TOTAL	37.0	7.4	55.6	100.0	

NUMBER OF MISSING OBSERVATIONS = 23

ST MARY'S RIVER FERRY USER SURVEY - JULY 1983
 RATING FOR SELECTED SERVICE CHARACTERISTICS
 FILE NONAME (CREATION DATE = 09/28/83)

***** CROSSTABULATION OF *****
 COND CONDITION OF VESSEL BY FSERV ISLAND SERVICE

COND	FSERV				ROW TOTAL
	COUNT	ISUGAR	NEEBISH	DRUMMOND	
	PCT	ISLAND	ISLAND	ISLAND	
	1.	5	2	60	67
POOR		7.5	3.0	89.6	5.3
		1.1	2.1	8.6	
		0.4	0.2	4.8	
	2.	33	7	132	172
FAIR		19.2	4.1	76.7	13.7
		7.1	7.4	18.9	
		2.6	0.6	10.5	
	3.	245	43	335	623
GOOD		39.3	6.9	53.8	49.6
		52.6	45.7	48.1	
		19.5	3.4	26.7	
	4.	155	34	131	320
VERY GOOD		48.4	10.6	40.9	25.5
		33.3	36.2	18.8	
		12.3	2.7	10.4	
	5.	28	8	39	75
DON'T KNOW		37.3	10.7	52.0	6.0
		6.0	8.5	5.6	
		2.2	0.6	3.1	
	COLUMN	466	94	697	1257
	TOTAL	37.1	7.5	55.4	100.0

NUMBER OF MISSING OBSERVATIONS = 33

ST MARY'S RIVER FERRY USER SURVEY - JULY 1983
 RATING FOR SELECTED SERVICE CHARACTERISTICS
 FILE NQNAME (CREATION DATE = 09/28/83)

***** CROSSTABULATION OF *****
 PARK PARKING - WAITING AREA BY FSERV ISLAND SERVICE

PARK	FSERV						
	COUNT	I			ROW		
	ROW PCT	ISUGAR	NEEBISH	DRUMMOND	ROW		
	COL PCT	IISLAND	ISLAND	ISLAND	TOTAL		
TOT PCT	1.I	2.I	3.I				
	1.	I 45	I 6	I 52	I 103		
POOR		I 43.7	I 5.8	I 50.5	I 8.2		
		I 9.6	I 6.3	I 7.4			
		I 3.6	I 0.5	I 4.1			
	2.	I 104	I 15	I 157	I 276		
FAIR		I 37.7	I 5.4	I 56.9	I 21.9		
		I 22.3	I 15.8	I 22.4			
		I 8.2	I 1.2	I 12.4			
	3.	I 197	I 43	I 348	I 588		
GOOD		I 33.5	I 7.3	I 59.2	I 46.6		
		I 42.2	I 45.3	I 49.6			
		I 15.6	I 3.4	I 27.6			
	4.	I 118	I 31	I 140	I 289		
VERY GOOD		I 40.8	I 10.7	I 48.4	I 22.9		
		I 25.3	I 32.6	I 20.0			
		I 9.3	I 2.5	I 11.1			
	5.	I 3	I 0	I 4	I 7		
DON'T KNOW		I 42.9	I 0.0	I 57.1	I 0.6		
		I 0.6	I 0.0	I 0.6			
		I 0.2	I 0.0	I 0.3			
	COLUMN	467	95	701	1263		
	TOTAL	37.0	7.5	55.5	100.0		

NUMBER OF MISSING OBSERVATIONS = 27

ST MARY'S RIVER FERRY USER SURVEY - JULY 1983
 RATING FOR SELECTED SERVICE CHARACTERISTICS
 FILE NOMAME (CREATION DATE = 09/28/83)

***** CROSSTABULATION OF *****
 COURT COURTESY OF EMPLOYEES BY FSERV ISLAND SERVICE

COURT	FSERV				ROW TOTAL	
	COUNT	I	I	I		
	ROW PCT	ISUGAR	NEEBISH	DRUMMOND		
	COL PCT	IISLAND	ISLAND	ISLAND		
	TOT PCT	I	1.I	2.I	3.I	
	-----I-----I-----I-----I					
POOR	1.	I	12 I	12 I	33 I	57
		I	21.1 I	21.1 I	57.9 I	4.5
		I	2.6 I	12.6 I	4.7 I	
		I	0.9 I	0.9 I	2.6 I	
	-----I-----I-----I-----I					
FAIR	2.	I	43 I	19 I	68 I	130
		I	33.1 I	14.6 I	52.3 I	10.2
		I	9.2 I	20.0 I	9.6 I	
		I	3.4 I	1.5 I	5.4 I	
	-----I-----I-----I-----I					
GOOD	3.	I	182 I	22 I	226 I	430
		I	42.3 I	5.1 I	52.6 I	33.8
		I	38.9 I	23.2 I	31.9 I	
		I	14.3 I	1.7 I	17.8 I	
	-----I-----I-----I-----I					
VERY GOOD	4.	I	225 I	42 I	373 I	640
		I	35.2 I	6.6 I	58.3 I	50.4
		I	48.1 I	44.2 I	52.7 I	
		I	17.7 I	3.3 I	29.3 I	
	-----I-----I-----I-----I					
DON'T KNOW	5.	I	6 I	0 I	8 I	14
		I	42.9 I	0.0 I	57.1 I	1.1
		I	1.3 I	0.0 I	1.1 I	
		I	0.5 I	0.0 I	0.6 I	
	-----I-----I-----I-----I					
	COLUMN		468	95	708	1271
	TOTAL		36.8	7.5	55.7	100.0

NUMBER OF MISSING OBSERVATIONS = 19

ST MARY'S RIVER FERRY USER SURVEY - JULY 1983
 RATING FOR SELECTED SERVICE CHARACTERISTICS
 FILE NONAME (CREATION DATE = 09/28/83)

***** C R O S S T A B U L A T I O N O F *****
 FARE FARE STRUCTURE BY FSERV ISLAND SERVICE *****

FARE	COUNT	FSERV			ROW TOTAL
		ISUGAR ISLAND	NEEBISH ISLAND	DRUMMOND ISLAND	
ROW PCT	COL PCT	TOT PCT	1.1	2.1	3.1
POOR	1.	55	13	93	161
		34.2	8.1	57.8	13.2
		12.1	14.4	13.8	
		4.5	1.1	7.6	
FAIR	2.	115	27	172	314
		36.6	8.6	54.8	25.8
		25.3	30.0	25.6	
		9.4	2.2	14.1	
GOOD	3.	179	28	273	480
		37.3	5.8	56.9	39.4
		39.4	31.1	40.6	
		14.7	2.3	22.4	
VERY GOOD	4.	78	18	100	196
		39.8	9.2	51.0	16.1
		17.2	20.0	14.9	
		6.4	1.5	8.2	
DON'T KNOW	5.	27	4	35	66
		40.9	6.1	53.0	5.4
		5.9	4.4	5.2	
		2.2	0.3	2.9	
COLUMN TOTAL		454	90	673	1217
		37.3	7.4	55.3	100.0

NUMBER OF MISSING OBSERVATIONS = 73

APPENDIX E

Historical and Projected
Population, Employment and Service Characteristics

POPULATION FIGURES FOR MICHIGAN AND THE EASTERN UPPER PENINSULA, 1970-1995

Governmental Unit	YEAR							
	1970	1980	1981 ^{2/}	1982	1983	1985	1990	1995
Michigan	8,881,826	9,258,344	9,265,560 ^{1/}	9,208,486 ^{1/}	9,155,481 ^{1/}	9,471,899	9,812,297	10,089,910
<u>Eastern Upper Peninsula</u>								
Chippewa Co.	32,412	29,029	29,317	29,409	29,071	30,072	31,714	32,776
Luce Co.	6,789	6,659	6,453	6,244	6,014	7,092	7,718	7,987
Mackinac Co.	9,660	10,178	10,262	10,154	10,014	10,532	11,011	11,429
TOTAL	48,861	45,866	46,032	45,807	45,099	47,696	50,443	52,192
EUP as % of Michigan	0.550	0.495	0.497	0.497	0.497	0.504	0.514	0.517

Notes: ^{1/} The Michigan population estimates for 1981, 1982 and 1983 from the U.S. Department of Commerce, Bureau of the Census, are somewhat lower than the Michigan Department of Management and Budget figures presented in the table. Census estimates for 1981, 1982 and 1983 are 9,209,800, 9,115,900, and 9,068,800 respectively.

^{2/} All 1981-1995 population figures are Michigan Department of Management and Budget estimates. The 1985, 1990, and 1995 figures will be revised by DMB later in 1984.

Source: U.S. Department of Commerce, Bureau of the Census and Michigan Department of Management and Budget.

EMPLOYMENT FIGURES FOR MICHIGAN (000's), 1970-1986

Governmental Unit & Employment Category	Year							
	1970 ^{2/}	1980 ^{2/}	1981	1982	1983	1984	1985	1986
<u>Michigan</u>								
Employed	3,252.8	3,756.0	3,777.7 ^{1/}	3,614.0	3,684.9	3,783.0	3,863.5	3,921.7
Unemployed	202.5	534.0	529.6	661.6	605.1	484.1	529.9	561.1
Labor Force	3,455.3	4,290.0	4,306.7	4,275.6	4,290.0	4,267.2	4,393.4	4,482.7
Unemployment Rate	5.9%	12.4%	12.3%	15.5%	14.1%	11.3%	12.1%	12.5%
<u>E. Upper Peninsula</u>								
Employed	12.4	18.2	18.6 ^{3/}	18.2	18.7	19.1	19.5	19.8
Unemployed	1.8	3.7%	4.5	5.2	5.3	4.8	5.1	5.3
Labor Force	14.2	21.9	23.1	23.4	24.1	23.9	24.6	25.1
Unemployment Rate	12.7%	16.9%	19.5%	22.2%	22.0%	20.1%	20.7%	21.1%
EUP as % of Michigan ^{4/}	0.381/0.411	0.485/0.510	0.480/0.510	0.504/0.547	0.507/0.562	0.505/0.560	0.505/0.560	0.505/0.560

- Notes: ^{1/} The 1981-86 Michigan figures were prepared by Chase Econometrics.
^{2/} The 1970 and 1980 Michigan and Eastern Upper Peninsula (Chippewa, Mackinac and Luce counties) figures were obtained from the Census.
^{3/} The 1981-83 Eastern Upper Peninsula figures were obtained from MESCC.
^{4/} The left percentage is derived using "employed" figures; the right percentage using labor force.

Source: Chase Econometrics, U.S. Department of Commerce, Bureau of the Census, and MESCC.

ANNUAL CROSSINGS, PASSENGERS AND VEHICLES FOR ST. MARY'S RIVER FERRY SERVICES, 1976-1984

Island Service	YEAR								
	1976	1977	1978	1979	1980	1981	1982	1983 2/	1984 3/
<u>Drummond</u>									
Crossings	17,087	17,580	18,395	18,497	18,726	18,968	17,581	18,432	18,500
Passengers	161,644	162,057	168,566	165,590	218,008	229,107	204,456	212,882	215,000
Vehicles	75,014	76,310	78,506	82,353	80,066	73,196	76,424	80,918	81,000
<u>Neebish</u>									
Crossings							3,776 1/	5,132	5,100
Passengers							12,354	17,368	17,500
Vehicles							6,258	8,334	8,300
<u>Sugar</u>									
Crossings					25,220	31,433	28,155	28,845	29,000
Passengers					191,046	214,077	202,929	218,633	218,000
Vehicles					125,820	114,394	118,873	110,118	115,000
<u>Total</u>									
Crossings					43,946	50,401	49,512	52,409	52,600
Passengers					409,054	443,184	419,379	448,883	450,500
Vehicles					205,886	187,590	201,555	199,370	204,300

Notes: 1/ Neebish Island Service 1982 figures are May-September.
 2/ 1983 figures are actually October 1982-September 1983 while figures for earlier years are calendar.
 3/ Figures for 1984 are estimates.

BASIC AND TOTAL RIDERSHIP BY MONTH FOR DRUMMOND, NEEBISH, AND SUGAR ISLAND FERRY SERVICES, OCT. 1982-SEPT. 1983

Month	<u>Drummond Island</u>			<u>Neebish Island</u>			<u>Sugar Island</u>			<u>All Islands</u>		
	<u>1/ Basic</u>	<u>Total</u>	<u>% Basic of Total</u>	<u>Basic</u>	<u>Total</u>	<u>% Basic of Total</u>	<u>Basic</u>	<u>Total</u>	<u>% Basic of Total</u>	<u>Basic</u>	<u>Total</u>	<u>% Basic of Total</u>
October	8,500	18,836	45.1	600	1,696	35.4	12,600	19,267	65.4	21,700	39,799	54.5
November	8,500	13,426	63.3	600	1,352	44.4	12,600	14,290	88.2	21,700	29,068	74.7
December	8,500	8,891	95.6	587	587	100.0	12,600	12,713	99.1	21,687	22,191	97.7
January	8,500	8,530	99.6	0	0	0.0	11,937	11,937	100.0	20,437	20,467	99.9
February	8,500	8,782	96.8	0	0	0.0	11,970	11,970	100.0	20,470	20,752	98.6
March	8,500	10,459	81.3	287	287	100.0	12,600	14,190	88.8	21,387	24,936	85.8
April	8,500	16,016	53.1	540	540	100.0	12,600	15,074	83.6	21,640	31,630	68.4
May	8,500	23,275	36.5	600	1,311	45.8	12,600	20,141	62.6	21,700	44,727	48.5
June <u>2/</u>	5,800	20,319	28.5	600	2,230	26.9	10,100	19,705	51.3	16,500	42,254	39.0
July <u>2/</u>	5,800	31,032	18.7	600	3,316	18.1	10,100	27,283	37.0	16,500	61,631	26.8
August <u>2/</u>	5,800	30,016	19.3	600	4,028	14.9	10,100	29,073	34.7	16,500	63,117	26.1
September	8,500	23,300	36.5	600	2,021	29.7	12,600	22,990	54.8	21,700	48,311	44.9
Total	93,900	212,882	44.1	5,614	17,368	32.3	142,407	218,633	65.1	241,921	448,883	53.9

Notes: 1/ Basic refers to that portion of the ridership using the island ferry services year-round to accommodate basic needs such as employment, school, medical-dental services, and financial matters. The tripmakers are generally permanent island residents, non-island residents working on the islands, and those performing services on the islands.

2/ School children trips have been subtracted for Drummond (2,700 per month) and Sugar (2,500 per month) island ferry services for the months of June, July and August to estimate basic trip totals.

Source: Michigan Department of Transportation, Passenger Transportation Planning Section, Surface Systems Unit.

APPENDIX F

St. Mary's Ferry System Schedules

St. Mary's Ferry System Schedule

Drummond Island

Sugar Island

(Summer Schedule)

(Year-round Schedule)

<u>Leave Island</u>	<u>Leave Mainland</u>	<u>Leave Island</u>	<u>Leave Mainland</u>
6:10 AM	6:40 AM	6:00 AM	6:15 AM
7:10	7:20	6:30	6:45
7:30	7:45	7:00	7:15
8:30	9:00	7:30	7:45
10:00	10:30	8:00	8:15
11:00	11:30	8:30	8:45
12:00 Noon	12:30 PM	9:00	9:15
1:10 PM	1:40	9:30	9:45
2:10	2:40	10:00	10:15
3:10	3:45	10:30	10:45
4:10	4:30	11:00	11:15
5:00	5:30	11:30	11:45
6:00	6:30	12:00 Noon	12:15 PM
7:10	7:30	12:30 PM	12:45
8:00	8:30	1:00	1:15
9:10	9:40	1:30	1:45
10:10	10:40	2:00	2:15
11:10	11:30	2:30	2:45
12:00 Midnight	12:30 AM	3:00	3:15
1:00 AM	1:30	3:30	3:45
3:10	3:30	4:00	4:15
5:00	5:40	4:30	4:45
		5:00	5:15
		5:30	5:45
		6:00	6:15
		6:30	6:45
		7:00	7:15
		7:30	7:45
		8:00	8:15
		8:30	8:45
		9:00	9:15
		9:30	9:45
		10:00	10:15
		10:30	10:45
		11:00	11:15
		11:30	11:45
		12:00 Midnight	12:15 AM

On Fridays and Saturdays, the ferry runs until 2:00 AM.

Neebish Island
Summer 1982 Schedule

<u>Sunday</u>	<u>Monday</u>	<u>Tuesday</u>	<u>Wednesday</u>	<u>Thursday</u>	<u>Friday</u>	<u>Saturday</u>
	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	
	8:00	8:00	8:00	8:00	8:00	8:00 AM
9:00 AM	9:00	9:00	9:00	9:00	9:00	9:00
10:00	10:00	10:00	10:00	10:00	10:00	10:00
			12:00 Noon			12:00 Noon
	2:00 PM	2:00 PM	2:00 PM	2:00 PM	2:00 PM	2:00 PM
3:00 PM	3:00	3:00	3:00	3:00	3:00	3:00
4:00	4:00	4:00	4:00	4:00	4:00	4:00
5:00	5:00	5:00	5:00	5:00	5:00	5:00
	6:00	6:00	6:00	6:00	6:00	6:00
	7:00	7:00	7:00	7:00	7:00	7:00
					9:00	9:00
					10:00	10:00

APPENDIX G
Fare Structure Data

Fare Structure

	<u>Drummond</u>	<u>Neebish</u>	<u>Sugar</u>
Car, pickup, driver	\$ 3.25	\$2.50	\$ 1.25
Car, pickup, driver- Senior Citizen	\$ 1.65	\$1.25	\$.65
Motorcycle, driver	\$ 1.30	--	\$.75
Adult	\$.80	\$.60	\$.50
Senior Citizen, Handicapped	\$.40	\$.30	\$.25
Student	\$.30	--	--
Child	--	--	\$.15
Trucks 130" WB and over	\$ 6.20	--	\$ 2.00
Tandem trucks	\$ 7.15	--	\$ 3.50
Trailer to 15'	\$ 3.25	--	\$ 1.25
Trailer 15' to 20'	\$ 5.20	--	\$ 1.50
Trailer 20' or more	\$ 6.50	--	\$ 1.75
House trailer	\$26.00	--	\$25.00
Trip after schedule plus fare	\$ 9.75	--	\$ 7.50
Trip between scheduled runs (plus fare - Sugar).	\$ 3.25	--	\$15.00

Note: Discounted fares for Drummond, Neebish and Sugar islands are 40 percent, 90 percent and 72 percent of the regular fares respectively. These figures are for a car or pickup truck and the driver. In addition, discount fares are sometimes available for other vehicle types, senior citizens and students.