

# Staff Papers Series

P82-14

September 1982

DULUTH-SUPERIOR'S  
TOURISM-TRAVEL ECONOMY

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Duluth-Superior's  
Tourism-Travel Economy

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Staff papers are published without formal review within the Department  
of Agricultural and Applied Economics

## Duluth-Superior's Tourism-Travel Economy

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## SUMMARY

This study brings good news to the Twin Ports of Duluth-Superior; tourism there is big business. It offers stability and opportunities for future growth. The economy of that area needs both.

Annual tourism sales totaled \$66 million in 1972. This was 16 percent of total "retail" and "selected services" sector sales for that year. In an average summer week automobile tourists' sales were almost \$2 million, and the Twin Ports were hosts to tourists numbering almost two times the resident population.

This tourism volume offers major potential. Opportunity is especially good when the considerable tourism resources of the cities and the area are considered. Duluth-Superior has major high quality recreational attractions. In addition it is a major gateway to the outstanding north woods and waters recreational features of the geographic region. In the recent past important progress has been made by the cities toward further harnessing the tourism potential of these resources. While this report is based mainly upon 1972 benchmark data it suggests market guidelines that are relevant for the 1980's.



## DULUTH-SUPERIOR'S TOURISM-TRAVEL ECONOMY

### I. INTRODUCTION

This study provides data of tourism-travel's overall impact upon the Duluth-Superior area. It is one of the first sets of comprehensive, statistically valid tourist data to be available for any U.S. city.

Despite the wide-spread nature of tourism and the almost universal quest by cities for income, very little reliable data giving overall economic impact of tourists is available in the U.S. Such data limitation is due to several factors. Tourism has often not been recognized as a viable economic industry. Cities, particularly, have overlooked tourism, instead seeking traditional smokestack industries. This happens in spite of the fact that tourism, in common with most other economic activities, generates jobs, profits, rents and tax base. Businesses that make a large proportion of their sales to tourists have often not recognized that much of their income came from tourism. The limited understanding of tourism often arises from the fact that, while nearly all retail businesses sell to tourists, simple means for separating sales to residents from those to non-residents do not exist and the tourism component goes unrecognized.

Because of measurement difficulties most estimates of urban tourism are only partial measures. They often include as primary estimates of tourists those attending conventions, or commercial lodging guests. These are important tourism segments, but as will be seen here, they constitute only minor fractions of a city's total tourism. One of the most reliable means of comprehensively measuring the total tourism to a metropolitan area is to contact tourists while they are traveling. Such a procedure was used in this study, contacting outbound travelers with the assistance of the Minnesota

and Wisconsin Departments of Transportation. Data from an air traveler study helped to round out the total tourism-traveler picture.

A much different than ordinary view of tourism was obtained in both quantitative and qualitative terms. The Duluth-Superior 1972 income from tourism was estimated at \$66 million. This is 16 percent of the \$412.7 million total of "retail" and "selected services" sales.<sup>3/</sup> In terms of people, Duluth-Superior hosts almost two times its resident population of 133,000 every summer week.

The qualitative insights gained are, if anything, even more significant. Tourism is seen here in its true light - as a complex mosaic of human activities in which individuals of diverse origins, destinations, travel purposes and personal characteristics interact with the community. They range from residents of nearby Minnesota and Wisconsin who come to shop or visit the doctor; to well-to-do Chicago natives who pass through without even stopping, and who view Duluth-Superior mainly as a barrier; to people from a distance who travel to visit friends and relatives there - these visitors to friends form a much more significant economic component than is commonly recognized. Many of these travelers need Duluth-Superior, and Duluth-Superior gains needed economic base in serving them.

The study's findings bring good news to Duluth-Superior. Tourism is a significant economic factor in the area's economy. These picturesquely sited northern cities - often referred to here as the Twin Ports - have suffered disproportionately from cycles of boom and bust over the years. Tourism can add stability and diversification to an economy needing both.

In addition the study provided information about the several tourism market segments. This can be used to develop guidelines for management of Duluth-Superior's tourism industry so that it yields optimum returns to



the local society and economy.

Data from this study, which was originally conducted in 1972, have been made widely available. In addition to publication of parts of the findings in Minnesota Tourist Travel Notes,<sup>2/</sup> they have been released to Duluth-Superior media on a number of occasions. The findings have also formed the basis for discussions with Duluth civic groups. However, the complete set of data have not been generally available in usable form. This publication serves that function. A steady growth in recognition of the potential for tourism management in Duluth-Superior, on the North Shore of Lake Superior, and in the several communities of Northeastern Minnesota make the findings valuable. They not only provide important benchmark data of the 1972 tourism industry; most of the study's implications also apply directly to tourism management in the 1980's.

#### General Definitions

1. Tourist - any individual traveling away from his/her usual area of residence and work. Travel may be for any purpose or any time period.
2. Tourism industry - the economic activity resulting from tourists' travel. Travelers buy, when away from home, not only lodging, food and transportation, but almost everything that they buy when at home - but in very different proportions, for this reason almost all operations offering goods and services to the public participate in the tourism industry.
3. Hospitality industry - those operations providing services that make possible travel and subsistence away from home by tourists. Food, lodging and transportation firms are the principal components.

4. Destination Area <sup>1/</sup> - a geographic area viewed as a major travel goal by a critical mass of travelers. A destination area must have attractions - things to see and do with power to generate traveler interests; and services - means for the traveler to live there and access the attractions.

## II. RESEARCH PROCEDURES AND TRAVEL SEGMENT DEFINITIONS

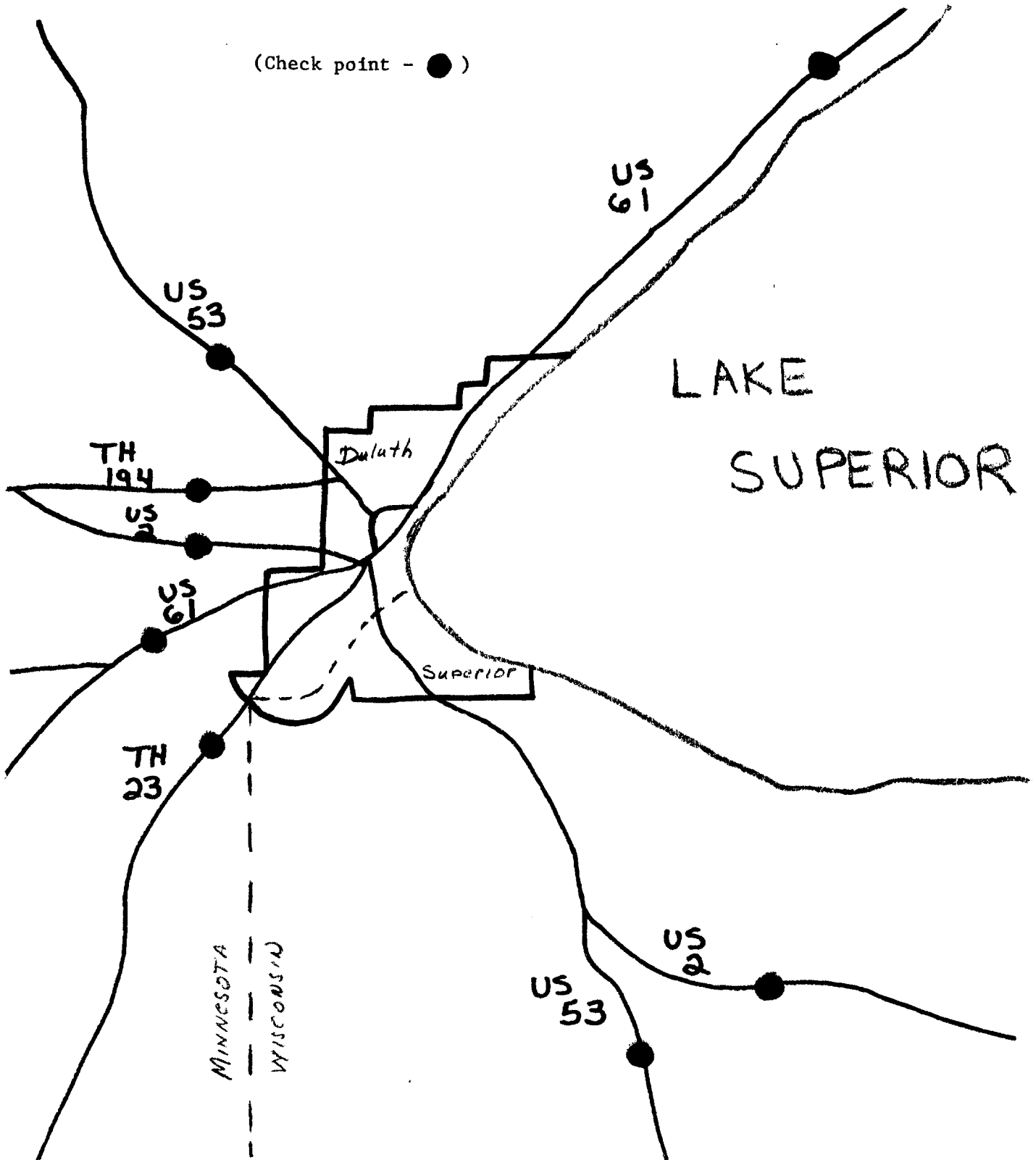
The conduct of this research became possible through the offer of manpower by a unit of 407 Civil Affairs Company of the U.S. Army Reserve, and with full cooperation of the Minnesota and Wisconsin Departments of Transportation. The Duluth District Transportation Offices and the Traffic Survey Sections of the Minnesota Department of Transportation are highway units providing critical and timely inputs.

During the weeks of July 17 and July 24, 1972, two crews composed of Army Reserve personnel interviewed traffic in a random pattern at nine stations of a cordon about Duluth-Superior, Figure 1. Eight of these stations are shown on the accompanying figure. The ninth station covered was on Minnesota Highway 33, which serves as a bypass from I-35 to U.S. 53 around Duluth and through Cloquet. Data from this station was not used, as will be explained later.

Interviewing was conducted every day from Monday, July 17 to Thursday, July 27, except Sunday, July 23. Since sufficient personnel were not available to man all stations continuously, a randomized pattern was set up. This pattern scheduled interviewing on at least two different days at every station. On most days five to seven hours of interviewing was carried out to include hours of the morning and/or afternoon and/or evening up until 8:30 p.m.

Three outbound vehicles were stopped at one time. While these were being interviewed traffic was allowed to flow normally. When the three simultaneous interviews were completed, these vehicles were released and the next three outbound vehicles stopped for interviews. Throughout each interview period all outbound traffic past the check station was counted

FIGURE 1. DULUTH-SUPERIOR HIGHWAY CORDON  
CHECK POINT LOCATIONS



and classified. In addition, temporary automatic counting equipment was used to record all traffic at all stations on a 24-hour basis for the entire two-week period. The results was data gathered on as statistically random basis as operating conditions would permit.

Interviews covered standard origin-destination information. In addition, the interview form and External Survey Manual for this study were modified to gather special additional information from drivers of vehicles who were not residents of the cordoned area. The side of the interview form (see Figure 2) to the right of the heavy black line was completed only for non-residents. It will be noted to contain the following:

Item 10 - Major destination - this was defined as the primary destination location of this trip away from home. In cases of uncertainty, interviewers were asked to record either the point of travel most distant from home or the location where the most time was spent.

Item 11 - Where travelers entered the Duluth-Superior area - this was usually recorded as one of the cordon stations.

Item 12 - Reason for stopping in Duluth-Superior - while there was room to record two purposes, in final editing only one purpose was used. Duluth-Superior stop purposes were classified into 10 categories having the following definitions:

Work - Any stop where time is spent by a passenger vehicle operator to earn a livelihood is usually a "Work" stop. Include attendance at school in this category.

Shopping - Refers to stops made for the purpose of purchasing goods. This includes shopping at establishments where merchandise is sold even though the vehicle passengers did not make a purchase.



Recreation - Includes vacations and any form of recreation stop not covered under "Sightseeing" and "Visit Friends and Relatives".

Sightseeing - Includes auto sightseeing, tours such as harbor tours, visits to zoos or museums, and major expressions of interest in the natural historical and economic features of the area. This would include only off-work interest.

Personal Business, Serve Passenger - Refers to stops to transact personal business where no goods are involved. Activities such as trips to the bank, the barber shop, the beauty shop, to obtain repairs, or pay a bill are "Personal Business". Also included are trips for legal services or consultations, trips to church services and trips made to take a person to some point where he or she, but not the driver is going to perform an activity. Trips to doctors or dentists are in this category. Stops made by prospective students to investigate schooling (not attendance at school) are also included.

Eat Meal - This purpose is most frequently encountered as an intermediate stop purpose. However, there are instances, such as a person going to lunch at a place other than "Home", where this purpose is valid for origin and destination, such as "dining out".

Gas, Oil, Vehicle Service - Stops related to needs for operation of the motor vehicle.

Overnight Lodging - Stops primarily to spend the night. May be either commercial facilities, with friends, camping or other forms of overnight stay.

Visit Friends or Relatives - Trips made to see individuals who are not passengers, for non-business reasons. It is not essential that the visit take place in a home; it may also be a family get-together, parties, picnics, or meeting friends at a tavern if the human interaction is indicated as the important feature.

Attend Convention - All types of conferences and conventions in cases where these are named as a stop purpose.

Item 13 - Duluth-Superior stop location - in this study the information was found difficult to record and code and thus was not used.

Item 14 - Length of stay - each part of a separate day was recorded as a day. Thus those staying overnight were usually reported as staying for two days. An exception to this latter procedure was made in the case of some commercial vehicles.

Item 15 - Overnight lodging in Duluth-Superior - the form of overnight lodging was recorded in four classes plus a special class for commuters:

Commercial - in hotels, motels, guest homes or other commercial overnight rooming facility.

Friends or relatives' home.

Campground - all camping regardless of the form of ownership or management; whether private for profit or governmental.

Other - all not classifiable in the above three - most often this class appeared to be used for sleeping in the vehicle.

Commuters - those commuting to work from outside the area were identified and recorded. Commuters are not considered as tourists.



Item 16 - Was time spent mainly in Duluth or Superior? - it was also possible to record time as spent about equally in both cities.

Item 17 - Expenditures in Duluth-Superior - all personal, non-business expenditures made while in the area were recorded. These were recorded as a total sum and not by classes of expenditures.

Item 18 - Age of party head - the age of each party head was estimated by the interviewers.

In addition to the special questions asked of non-residents, other data relevant to tourism included:

Item 3 - Recreational equipment - it was the intent to record major recreational equipment items that were visible. There appeared to lack uniformity in handling this item and data from it was not employed in the analysis.

Item 6 & 8 - Major travel purpose - using commonly accepted origin-destination study procedures, the purposes for both origin and destination of the immediate trip were recorded. These were the same for both origin and destination and the following classes were recorded:

- Home
- Vacation
- Work or Business
- Personal Business; Serve Passenger
- Shopping
- Eat Meal
- Social Recreation
- School
- Change Mode of Transportation
- Visit Friends or Relatives

Major overall trip purposes for each vehicle were determined by the use of origin purpose, destination purpose and other factors -- primarily the commercial vehicle classification. Seven classes were established for these major trip purposes as follows:

Vacation - trips with vacation as the overall purpose.

Work - all passenger vehicle trips where employment or transaction of business to earn a livelihood is the major purpose. Includes attendance at conventions associated with earning a livelihood, commuters, traveling, service and sales people, etc.

Personal Business - trips where personal matters not including shopping or a livelihood are involved. May include trips to the bank, barber shop, lawyer, doctor, church or a convention not associated with a livelihood.

Shopping - trips made for the purpose of purchasing goods. A trip may have been classed as shopping even though an actual purchase was not made.

Eat-School-Social Recreation - this class combines a number of purposes that usually involve shorter travel and a service destination center. Eat may include dining out; School refers to students only, trips by teachers would be "work", Social Recreation includes golf, swimming, spectator sports and attendance at lectures and cultural events. In the overall this combined class is not large - 4.3%; it consisted of about 60% "social recreation".

Commercial - includes all commercial vehicles. A further subdivision of this class was made for Transportation Department purposes but was not used in this analysis.

Other - a miscellaneous classification which includes "change transportation" plus 15 combinations of purposes that were not determinate and could not be logically grouped with one of the above main trip purposes. Altogether, this class comprises only 1.7% of the total. The "change transportation" class involves transport of people to bus, plane, etc. It was much too small to be treated separately.

A total of 1,282 non-resident vehicles were interviewed at the eight cordon stations during the two-week interview period. These data were separately adjusted for each cordon station based upon the traffic flow at the station. The two-weeks' traffic was combined so that a representative one-week summer traffic resulted. Finally, all data was combined to achieve a weighted total of all non-resident traffic outbound from Duluth-Superior. These data are reported as "findings" in this report.

The basic computation for determining tourist traffic for one summer week from the survey data was as follows:

$$\frac{VP_c}{SP_c} \cdot \frac{T_c}{4} \cdot A = V_c$$

$$\Sigma(V_1 \dots V_8) = V$$

Where:  $VP_c$  = Tourists (or visitors) vehicles sampled at cordon  $c_{(1\dots 8)}$

$SP_c$  = All outbound traffic sampled at cordon  $c_{(1\dots 8)}$  during sampling period.

$A$  = Adjustment factor determined from data study, to correct for bias of sampling periods.

$T_c$  = Total traffic both directions past cordon point for two week period (from traffic counter).

$V_c$  = Duluth-Superior tourists' vehicles for one week at given  
cordon point.

$V$  = Total Duluth-Superior tourists' vehicles for one week.

Since hourly data of all traffic at all cordon points was available this was examined carefully. Comparisons were made of traffic during times of interviewing against traffic at all other hours and against the weekly pattern. It was expected that some further adjustment might be made to the data from one or more of the stations. However, no logical adjustment could be made based upon the traffic data at hand, hence 'A' above was given a value of 1 in each case.

Using the above procedure, the data were expanded to represent an estimated 99,100 non-resident vehicles. The distribution of these vehicles by highway routes is shown in Table 1.

The total tourist or visitor traffic data generated above are conservative estimates. Omitted are at least the following tourists: bus passengers, tourists departing Duluth-Superior by other than the eight cordon points, air and boat traffic. Dollar expenditure estimates are thought subject to further understatement due to recall problems - specific items of expenditures are more easily overlooked than over-stated.

Subject to these problems, the tabular data presented is thought to give an accurate, comprehensive picture of tourists' impact in terms of dollars, people and activities not previously available.

Table 1. Relative Use of Highway Routes by Non-Resident Duluth-Superior Highway Travelers, Summer, 1972.

Highway (Outbound Traffic Only)	Percentage
U.S. 61 - North	17.9
U.S. 53 - MN	14.0
TH 194	5.9
U.S. 2 - MN	7.6
U.S. 62 - South	28.3
TH 23	2.8
U.S. 53 - WIS	5.7
U.S. 2 - WIS	17.8
Total	100.0
Total Number of Vehicles per Week (Includes 6,025 commuter vehicles)	99,100

### III. FINDINGS

In 1972 Duluth-Superior's travel-tourism industry was by far largest during the summer months. Hence the primary observations of this first study were made of summer tourists. Like all metropolitan areas,<sup>5/</sup> Duluth-Superior's tourism industry operates year round - albeit with a very different nature from one season to the next. For this reason estimates for the entire summer and the balance of the year are made in the section that follows. This section focuses upon highlights of the scale and characteristics of the summer automobile tourism industry. Details of these characteristics are given in tables 2 through 21 at the end of this section. In most tables the data are for one summer week. Where applicable, data are given in terms of both vehicles (or parties) and individuals (people).

#### Summer Tourism's Overall Impact

Tourists in Duluth-Superior spent almost \$2 million on an average summer week (\$1,992,000). This sum is equal to 25 percent of an average week's retail and selected services sales. The average 1972 summer tourist party spent \$21.40; the average person spent \$8.60. Tourist volume totaled 229,200 different people in 93,075 vehicles (parties). This means that on an average summer week Duluth-Superior has a tourist flow approaching twice its resident population of 133,000, table 2.

#### Differential Impact: By Whom?

Almost exactly half of the \$2 million weekly tourists' expenditure was made by people who were traveling for recreational purposes - vacation or to visit friends and relatives, table 2. Non-resident shoppers spent over one-fifth (22 percent) of the total, followed by those there on personal business, 14 percent. Those traveling for work purposes (work and commercial transportation) spent \$210,000 weekly or over 10 percent of the total.

The study permitted a measure of commuters. Of all travelers, 6.1 percent, or 6,025 weekly vehicle trips and 7,800 person-trips were thus identified. Commuters are not considered tourists. Their numbers are excluded from all tables except limited cases as indicated in table footnotes. Assuming that all commuters traveled into the city five times per week, these figures show that 1,560 people living outside the cordoned area were commuting to work in Duluth-Superior during the summer of 1972.

Who were the tourists whom this study identified? Not surprisingly the overwhelming proportion, 63 percent, came from the two adjoining states of Minnesota and Wisconsin, table 3. The next largest group, 14 percent, came from four states of the industrial midwest - Illinois, Indiana, Michigan and Ohio. The metropolitan area's far northern location is reflected in the 9 percent of its tourist-travelers from neighboring Canada. The agricultural states of Iowa, North Dakota and South Dakota, while making up an important tourism component in many other parts of Minnesota,<sup>5/6/</sup> are relatively unimportant in Duluth-Superior at less than 4 percent of all tourists.

What brought these travelers to Duluth-Superior? They came for a variety of reasons. For about 41 percent, Duluth-Superior itself was the major destination, table 4. They came for all the complex of reasons that induces travel to a city, table 5. The other 59 percent had another major destination; Duluth-Superior served as a secondary stop, a travel service node, or for many, merely a pass-thru point. These aspects of Duluth-Superior's traveler relationships are examined in detail immediately following. They provide essential insights for tourism management.

### Duluth-Superior as a Travel Destination

Duluth-Superior has a large volume of summer tourist traffic - its weekly volume, 229,200, is equal to almost two times the resident population. But only about 70 percent of these tourists stop, 162,400, slightly over half, 123,500, spend money, and only about 41 percent view the Twin Port cities as their major destination. This insight suggests that Duluth-Superior handles a substantial amount of non-resident traffic that is not economically helpful to its tourism industry.

Despite the high volume of flow-through summer traffic, Duluth and Superior are the service center for a large region of northeastern Minnesota and northwestern Wisconsin. They perform this role by serving a wide variety of needs. Many of these are indicated in the reasons for stopping given by the 70 percent who stopped, table 5.

--- Recreation was the most important "destination" reason for stopping.

Twenty-nine percent of those stopping gave this as the most important reason for their stop. The resident population of 133,000 was an important contributing factor; visits to friends and relatives caused 12.5 percent of those who stopped to do so. This travel segment reflects the 36 percent nationally, who travel to visit friends and relatives.<sup>12/</sup> In Duluth-Superior the proportion is smaller because of dilution by other types of travel, especially those stopping only for limited traveler services as they pass through. Other varied kinds of recreation and sightseeing, when combined, were a reason for stopping for an even larger proportion than those visiting friends and relatives - about 17 percent.

--- Personal reasons, including the conduct of personal business and shopping, brought one-fourth of those who stopped into Duluth-Superior. This group deals with another aspect of the Port Cities' fundamental character - their ability to serve a multiplicity of needs. One aspect



is their retail trade center function; others include provision of health services, legal services, the headquarters center for organizations and a multiplicity of other similar offering and services.

--- Business travel, connected with earning a living, caused about 13 percent to stop (nine percent of all travelers). Included is convention/conference travel. The modern economy and society requires travel for its operation: for technical and managerial consultation, for sales and supply and related situations requiring direct person to person contact. This travel may be by governmental or private employees or by individual entrepreneurs. It may be in connection with the processing and sale of a physical product, or the production of an intangible service. In generating this business travel tourism income accrues to the host community as it serves the needs for living away from home of these travelers.

#### Duluth-Superior as a Gateway

Duluth-Superior's role as a gateway to another point, in terms of numbers of travelers, is even more significant than its role as a primary travel destination. Almost 60 percent of all non-resident vehicles entering Duluth-Superior, excluding commuters, had their major destination elsewhere, table 4.

Duluth-Superior's unusual location substantially augments the quite normal tendency of most cities to act as a traffic node. The southwest-extending arm of Lake Superior causes traffic, based in the populous industrial midwest and bound for attractions of northern Minnesota, Western Ontario and eastern Saskatchewan, to funnel through these cities. The attractions are the northern woods and waters of these northern areas.

They are highlighted by such features as the North Shore of Lake Superior, Voyageurs National Park, the Boundary Waters Canoe Area, Grand Portage National Monument, and Superior National Forest in the United States; the Quetico Park in Ontario and spectacular international waters such as Rainy Lake and Lake of the Woods. U.S. highway 53 and Interstate 35-U.S.61 serve much of this recreational traffic. North-south traffic either to or from Thunder Bay, Ontario, or traveling the Lake Superior great circle route, must also use Interstate 35-U.S. 61. Finally east-west traffic whether of U.S. or Canadian origin or destination uses U.S. 2. Hence Duluth-Superior serves a disproportionate volume of pass-thru tourists.

Almost as many travelers had as their primary destination other places in Minnesota and Wisconsin as were going primarily to Duluth-Superior city, table 4. These were:

Duluth - 33 percent vs. other Minnesota - 31 percent.

Superior - 8 percent vs. other Wisconsin - 7 percent.

Almost as many - 14 percent - were mainly going to Canada as to all Wisconsin locations.

The recreational pull of northern Minnesota and Canada is apparent in the data in table 4. Proportionately about one-third more of those on vacation had "other Minnesota", presumably northern Minnesota, as their major destination compared with all travelers. These vacationers are 59 percent of all having "other Minnesota" destinations. In the case of those having Canada as their major destination 90 percent were traveling primarily on vacation.

This high volume of traffic with destinations elsewhere has both good and bad elements. On the positive side, it represents exposure of Duluth-Superior to many travelers. This offers potential for serving them as they

pass through to the community's economic advantage, and/or for attracting them back on a later trip in which the Twin Ports are the major destination in their own right. On the negative side, these travelers add to traffic congestion when they pass through. They may thus decrease the pleasure of a Duluth-Superior visit for other tourists and add aggravation for residents. If proper information and service are lacking they may view Duluth-Superior as a barrier rather than an attraction and seek to avoid these routes. Evidence of these pros and cons should be evaluated as we examine statistics of these travelers in greater detail.

The data show that 29 percent (27 percent of vehicles) did not consider Duluth-Superior of sufficient importance to stop, table 5. Many of this group might well view the cities as a barrier. It must, however, be noted that there are many occasions in which travelers may not stop at an otherwise attractive stopping place. They may be in haste to reach a more distant point; they may have only recently visited in Duluth-Superior and be on another type of trip on this occasion. Some of the characteristics of those not stopping are examined in the "market" section which follows.

In addition to those not stopping, 23 percent stopped primarily for traveler services: lodging, to eat and automobile service. This 53,000 travelers per week are presumed mainly to have other destinations.

The proportion of those not stopping (29 percent) plus those who stopped for traveler services (23 percent), sums to only 53 percent. This compares with the 59 percent having major destinations outside Duluth-Superior. It means that at least six percent of those going through Duluth-Superior to another primary destination stopped for reasons other than simply traveler services. The reason may have been of any nature as will be noted in the "market" section which follows.

These travelers who stop, even though they have other destinations, represent a major economic input. Their weekly expenditures are estimated at \$550,000 or 28 percent of all summer tourist expenditures in Duluth-Superior.

### Duluth-Superior's Tourist-Travel Market

We have looked in an overall way at tourism's total impact upon Duluth-Superior, including the cities' functions as both a destination area and as a gateway. In this subsection the manner in which these and other factors interact to form Duluth-Superior's tourism-travel industry and its markets are examined in detail. Insights that will help in understanding and guiding the industry's development to the cities' advantage, result.

1. Major Trip Purpose - The overwhelming reason for travel by tourists to and through Duluth-Superior is for pleasure. Two-thirds were traveling either on vacation (55 percent) or to visit friends and relatives (12 percent), table 2. Other major travel reasons are largely associated with the trade center functions of Duluth-Superior: Business to earn a living - 9 percent, personal business - 10 percent, shopping - 8 percent and miscellaneous reasons - 6 percent.

The composition of Duluth-Superior's summer travel-tourism is unique. Vacation travel in Minnesota generally in 1972 accounted for 31 percent of all tourist trips<sup>8/</sup> compared to 55 percent of the Duluth-Superior tourism. This documents the overwhelming character of this northern Minnesota/Wisconsin region as a summer recreation area. Forty percent of all 1972 Minnesota trips were to visit friends and relatives; but only 12 percent of tourists stop in Duluth-Superior were for this purpose. As already noted this low proportion who were visiting friends and relatives results from dilution by the large numbers traveling for other recreational

purposes. In addition, although Duluth-Superior constitute a standard metropolitan statistical area (SMSA), their 133,000 population is small compared to most metropolitan areas, hence there is not the large number of people to attract other people to come for a visit.

2. The Multipurpose Nature of Travel - Much travel is multipurpose in nature. That is, while most travelers can name a specific major reason for making a given trip, there are usually a number of supplemental reasons involved. Often without these reinforcing factors the trip might not be taken.<sup>4/</sup>

Table 6 illustrates some dimensions of travel's multipurpose nature. There the overall reason for the given trip away from home is cross-tabulated with the major reason for stopping in Duluth-Superior. A few illustrations will highlight the data in the table: Without regard to their major overall purpose for travel, some in every travel purpose category stopped in Duluth-Superior to shop. Some of those traveling on vacation stopped in Duluth-Superior in connection with work to earn a living (0.8 percent) and to conduct personal business (1.0 percent). Three percent of those traveling for work to earn a living stopped in Duluth-Superior for recreational purposes. Of those traveling primarily to visit friends and relatives, 2.5 percent stopped to attend a convention. Thus, the area's diverse service and activity offerings operate to help generate travel and induce stops, adding further potential to its travel-tourism industry.

3. Lodging Services as a Tourism Industry Component - A popular tendency is to equate the tourism industry with commercial lodging facilities. While the methods of this research did not permit a breakdown of expenditures by purpose, it clearly indicates that inn keepers are not the major recipient of tourist's spending.

Only 21 percent of Duluth-Superior's tourists stayed there overnight, table 7. Just slightly over half of those staying overnight, 11 percent of all tourists, were lodged in hotels and motels. The balance stayed with friends and relatives (6 percent), in campgrounds (2 percent), and in "other" facilities (2 percent). In terms of those tourists who actually stop in Duluth-Superior, 28 percent stay overnight and 15 percent stay in commercial lodging facilities.

Travelers stay for only short periods, on the average, in Duluth-Superior. Those who stop stay an average of 1.5 days. For those staying overnight, length of stays were as follows:

<u>Length of Stay</u>	<u>Percent</u>
1 night	72
2 nights	12
3 or more nights	<u>16</u>
Total (vehicles)	100% (19,600 vehicles)

Those tourists who come to "visit" or to "work" stay overnight in the largest proportions. On the other extreme, relatively few of those traveling mainly to "shop" or in the "eat, school, social recreation" group stay overnight (table 7).

In general, a larger proportion of those from a distance stayed overnight compared with those from nearby locations. Forty-one percent of travelers from Iowa and the Dakotas stayed overnight compared with 15 percent from Wisconsin and 16 percent from Minnesota, Table 8. Those from other states (beyond the Upper Midwest) and from Canada also stayed overnight in Duluth-Superior in relatively large proportions - 32 percent and 27 percent respectively. More than one-fourth of the Canadian parties staying overnight camped. This partly reflects the much higher rate of camping by Canadian travelers generally and the relatively lower incomes

of Canadian households. A high proportion (40 percent of all staying overnight) of travelers from Iowa, and the Dakotas used "other" facilities. This results mainly from those transporting grain and other commodities who slept in their vehicles.

#### Tourism Market Segments

This subsection examines segments of Duluth-Superior's tourism market and the manner in which they interact with the city to produce its tourism industry.

Tourists from a greater distance were much more likely to be traveling for recreational, especially vacation, reasons, table 9. The agricultural states of Iowa and the Dakotas are a partial exception. One-third of the vehicles from these states were commercial haulers, i.e., mostly grain trucks. Ninety percent of the tourists from the industrial midwestern states were traveling for recreational reasons (vacationing and visiting). This is nearly two times the 48 percent of Minnesota tourists who were traveling for recreational reasons. But the one-sided composition of travelers from distant locations should not be allowed to obscure the fact many more tourists, even more traveling on vacation, originate in the State of Minnesota. There were about two times as many recreational travelers in Duluth-Superior from Minnesota (59,000 per summer week) as from the industrial midwestern states (29,000 per summer week).

Study of the market concentration by home location provides further insight into the possible marketing opportunities and/or their limitations. In one summer week there are 30 Minnesota tourists in Duluth-Superior per 1,000 of Minnesota population, table 10. In the industrial midwestern states there is slightly less than 1 person per 1,000 of resident population of those four states. While data for an entire season are not available,

it may be hypothesized that a full summer's visits per 1,000 residents may be 10 or more times larger than for a single week. But, again, travel from nearby would be expected to be relatively larger over an entire 12 months, due, among other factors, to the trade center function of Duluth-Superior. Duluth-Superior's market is thus heavily concentrated in Minnesota and attenuates rapidly with distance.

The more distant the traveler's home, the less likely that he will have Duluth-Superior as a major destination, table 11. Almost three-fourths of the Duluth-Superior tourists from the industrial midwest are going to Canada or another Minnesota destination. This proportion is also large for those from "other" (more distant) states. The finding complements the observation that a high proportion of tourists from these locations are traveling on vacation. They appear to be seeking high amenity outdoor recreation features.

Not quite three-fourths (72 percent) of all summer tourists actually stopped in Duluth-Superior. But the proportion was much lower for those from the industrial midwest - just over one half (53 percent) stopped, table 12. Of those in this latter group who stopped, almost two-thirds (65 percent) did so for traveler services - few viewed Duluth-Superior as a destination stop.

Tourists from "other" states tend in higher proportion to stop and take advantage of recreational opportunities. These tourists are from beyond the Upper Midwest and almost certainly less frequent travelers to the Duluth-Superior area. They may be taking advantage of this infrequent visit to see the Twin Ports cities.

Per capita incomes of residents living in the states of Illinois, Indiana, Michigan and Ohio average larger than that of any geographic grouping used in this study (the possible exception is "other" states but



they represent a large number of states in a less defined area). Despite their incomes, tourists from the four industrial midwestern states spend less per person in Duluth-Superior than tourists from any other U.S. origin, table 13. They supply 14 percent of the tourists but only 9 percent of the tourist income, table 3. This is a consequence of the low proportion who stop at all in Duluth-Superior and who spend money there, table 14. Further, vacationers in general appear to stop in Duluth-Superior in relatively low proportion, tables 6 and 7 and to spend a disproportionately low amount of money compared to other tourists, tables 15 and 16. It has been noted that a high proportion of tourists from the industrial midwest are traveling mainly on vacation.

Canadians are of special interest since they largely make up the international component of Duluth-Superior's tourism. Compared to travelers originating in the industrial midwest, they stop in much larger proportion - 62 percent. But Canadian visitors ranked lowest as spenders on a per person basis. This low rate is partly due to the fact that Canadian vehicles averaged more occupants per vehicle. A higher proportion of Canadian vehicles spend some money than any other origin class. However, they also had the highest proportion spending less than \$10, except for Iowa, North Dakota and South Dakota where there were many commercial drivers. Canadians also had double the proportion of any other class -- 8% -- staying overnight in campgrounds. These factors are supported by other knowledge relevant to Canadians in 1972. They have lower average incomes than U.S. citizens; and a relatively high proportion camp while traveling. They saw Duluth-Superior as a travel service node. Canadians reported the highest proportion stopping for traveler services -- but they apparently try to do this on a budget basis.

Other relatively low spenders by geographic origin include those from the agricultural states (Iowa, North Dakota, South Dakota). A relatively large number of this group have been noted as commercial grain haulers who sleep in their vehicles as means of reducing expenditures.

When tourists are considered according to their major purpose for travel, shoppers spend twice as much per capita, nearly \$24.00, as the next largest spending class. This is not unexpected since most shoppers, 97 percent, stopped in Duluth-Superior, and their intention was to spend money. Those traveling on personal business, with an average per person expenditure of almost \$12.00, were the second largest spenders. Their higher expenditure level can be supported by reasoning similar to shoppers.

Those in the "eat, school, social recreation" class of travelers are low spenders at only one-tenth the level of shoppers (\$2.40 per person). Another low level spending class consists of travelers involved in commercial transportation. They have other purposes than to spend money. Many on the road for substantial periods have reason to economize on subsistence costs.

The fact that those traveling on vacation are on the average low spenders - less than \$6.00 per person - should not obscure an important point; their total expenditure at \$731,000 per week is by far the largest single class supplying tourist income to Duluth-Superior. Their average is low because many pass through Duluth-Superior without stopping and many who stop apparently only do so for necessary traveler services, table 11.

Those traveling to visit friends and relatives also deserve highlighting. This group is often ignored in terms of tourism. They are, however, above average spenders in Duluth-Superior and they are the third largest in total dollars at \$258,000 per summer week. This finding is directly supported

by other comprehensive tourism research.<sup>4/5/</sup> It suggests that the group deserve serious systematic attention as part of the Duluth-Superior tourism market.

The Duluth Chamber of Commerce places emphasis upon attracting conventions to the city. This emphasis is well justified on several grounds. Conventions provide non-pollution creating income to a community equipped to serve them. Compared to other tourists, Westmoreland estimates the average convention visitor to spend \$55 per day in 1972.<sup>11/</sup> This compares with the average daily expenditure of \$5.60 for all summer tourists, as found by the study (\$8.70 ÷ 1.5 days). Thus conventioners are "big spenders".

Just over one-half of one percent of summer travelers were found to attend conventions. Because of the small size of this percentage any manipulation of it must be done in recognition of the limits of statistical reliability. Expanded to person trips the percentage indicates 14,000 attending conventions. This compares with a convention attendance of 5,650 for July - August 1972 estimated by the Duluth Chamber of Commerce. (This figure does not include a major church convention.)

Is so large a discrepancy possible? In one understanding of convention/conference attendance, yes. The Chamber of Commerce estimates include mainly major visible conventions. But there is a much more extensive system of conferencing that includes:

- Individual firm management conferences.
- Technical consultations.
- Employee training.
- Short courses.
- Interest group meetings (their range in types and topics is almost without limit).

- Governmental functions.
- Information meetings, hearings, etc.

These are only a few examples. They represent the need for communications in our complex and dynamic society. The accessibility, services and amenities of metropolitan areas cause them to serve as the focus for these activities. In so doing they generate another tourism segment.

#### Duluth-Superior: Two Cities, One Complex

This study treats the Duluth-Superior area as a unit. For valid reasons there will be those needing to consider the tourism-travel economy and markets of these two cities separately. For this reason tables 20 and 21 are provided. These give tourists' expenditures separately in Duluth and Superior by tourism home location and by their major purposes for travel. Only selected items from the tables and study data not shown in tabular form are discussed here. Study of the tables will yield much more detail.

Seventy-three percent, totaling 72,000 vehicles, indicated that they stopped somewhere in the Duluth-Superior area. Of these, 81 percent stopped mostly in Duluth, 16 percent stopped mainly in Superior and 3 percent divided stops about equally between the two cities. Distributing the "equal" stops equally between Duluth and Superior, this gives a ratio of Duluth: Superior stops of 4.7:1. The ratio of expenditures is still wider at 5.1:1.

This preference of travelers for Duluth as a stop and place to spend money is expected. It is much the larger city with more complete personal, shopping and traveler services. In addition there is a large preponderance of vehicles originating in Minnesota compared to Wisconsin -- here the ratio is 4.9:1. Of Minnesota vehicles fewer than 10 percent that stopped indicated Superior as the major stop. Vehicles originating in Wisconsin were the only group stopping more frequently in Superior and spending more money there.

Drivers of commercial vehicles differed from most other types of travelers in that Superior was relatively much more important as a destination and as a stop. Almost as many indicated Superior as their major destination as Duluth. Data details supporting this observation include a comparatively high proportion of travelers from Iowa, North Dakota and South Dakota who indicated Superior stops, and a high proportion of overnight stays in Superior. A relatively large number of those were commercial; 28 percent of commercial drivers stayed overnight compared to 22 percent of vacationing travelers. This use of Superior by commercial drivers reflects the commercial/shipping/storage facilities available in Superior.

The fact that Duluth and Superior are two separate municipalities and located in different states produces a distinct division between the two cities. But their unifying factors and complementing features are significant. They share a magnificent harbor - hence their designation as the "Twin Ports". One offers a wider range of shopping and other services, the other provides a relatively large amount of shipping and storage facilities.

Table 2. Automobile Tourists' Expenditures in Duluth-Superior  
by Overall Trip Purpose, for One Summer Week, 1972.

Trip Purpose	Expenditures in Duluth-Superior		Compared With:	
	(\$)	(%)	People (%)	Vehicles (%)
Vacation	731,000	36.7	54.5	44.6
Work	174,000	8.7	6.1	10.2
Personal	282,000	14.2	10.3	13.4
Shopping	447,000	22.4	8.2	8.1
Eat-School-Social Rec.	24,000	1.2	4.3	4.5
Commercial	36,000	1.8	3.1	6.4
Visit Friends and Rel.	258,000	13.0	11.9	10.9
Other	40,000	2.0	1.6	1.9
TOTAL (per week)	1,992,000	100.0	100.0	100.0
			229,200 people	93,075 vehicles

Table 3. Automobile Tourists' Expenditures in Duluth-Superior by Home Location, for One Summer Week, 1972.

Home Location	Expenditures in Duluth-Superior		Compared With:	
	(\$)	(%)	People (%)	Vehicles (%)
Minnesota	1,101,000	55.3	51.3	55.1
Wisconsin	208,000	10.4	11.2	11.1
IL/IN/MI/OH	178,000	8.9	14.0	12.5
IA/ND/SD	59,000	3.0	3.9	4.6
Canada	100,000	5.0	8.7	7.0
Other	346,000	17.4	10.9	9.7
Total (per week)	1,922,000	100.0	100.0	100.0
			229,200 people 93,075 vehicles	

Table 4. Automobile Tourists' Trip Purposes by Major Destination, Vehicles, Summer, 1972.

Major Destination	Overall Trip Purpose (percent)								Total
	Vaca- tion	Work	Per- sonal	Shop	Eat-Sch- Soc. Rec.	Commer- cial	Visit	Other	
Duluth	8.8	54.9	58.3	77.2	55.3	40.0	35.3	14.0	33.3
Superior	1.6	8.9	10.5	12.3	16.7	32.8	9.6	---	7.5
Other Minn.	40.7	26.3	19.2	8.5	24.3	17.6	33.2	54.9	30.9
Other Wisc.	8.7	4.4	5.9	1.0	2.8	1.1	8.9	12.0	6.5
Michigan	3.8	1.0	2.2	---	---	5.7	4.1	3.5	3.0
North Dakota/South Dakota	1.7	2.1	---	---	---	1.1	1.7	3.5	1.3
Canada	27.4	0.3	3.9	1.0	---	1.1	5.8	2.1	13.6
Other	7.3	2.1	---	---	0.9	0.6	1.4	10.0	3.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total No. of Vehicles per week	41,600	9,575	12,500	7,500	4,100	6,000	10,000	1,700	93,075
Total No. of People per week	124,000	14,200	24,000	19,000	10,000	7,000	27,000	4,000	229,200

NOTE: Figures in the table give percent of vehicles. Number of people by trip purpose are given here only for convenience purposes.



Table 5. Automobile Tourists, Vehicles and People, by Primary Reason for Stopping in Duluth-Superior, Summer, 1972.

Reason for Stopping	All Travelers		Only Tourists Who Stopped	
	Vehicles	People	Vehicles	People
	(percent)			
No Stop	27.0	29.1		
Business	15.0	9.1	20.5	12.9
Work or Business	14.3	8.4	19.7	11.9
Attend Convention	.7	.7	0.8	1.0
Personal Reasons	20.2	18.0	27.5	25.4
Shopping	10.3	10.2	14.1	14.5
Personal business	9.9	7.8	13.4	10.9
Traveler Services	19.4	23.2	26.7	32.7
Auto services/gas, etc.	6.7	8.7	9.5	12.2
Overnight lodging	7.2	7.9	9.8	11.1
Eat	5.3	6.6	7.4	9.4
Recreational	18.4	20.6	25.3	29.0
Recreation	6.6	7.4	9.1	10.3
Sightseeing	3.6	4.3	5.0	6.2
Visit friends & rel.	8.2	8.9	11.2	12.5
TOTAL	100.0	100.0	100.0	100.0
Numbers per week	93,075	229,200	67,875	162,366

Table 6A. Automobile Tourists by Overall Trip Purposes and Duluth-Superior Stop Purposes, People, Data, Summer, 1972.

Duluth-Superior Stop Purpose	Overall Trip Purpose (percent)							Total	
	Vaca- tion	Work	Per- sonal	Shop	Eat-Sch. Soc.Rec.	Commer- cial	Visit F. & R.		Other
No Stop	38.7	32.4	13.9	3.1	25.8	25.8	27.7	28.0	29.1
Trade Center	6.0	49.0	60.6	89.1	23.2	70.3	4.6	35.2	27.1
Work/Bus.	(0.8)	(41.3)	(3.4)	(---)	(17.6)	(68.4)	(---)	(11.8)	(8.4)
Shopping	(3.9)	(2.9)	(6.9)	(82.6)	(1.9)	(1.9)	(1.4)	(9.3)	(10.2)
Pers. Bus.	(1.0)	(4.8)	(49.3)	(6.5)	(1.5)	(---)	(0.7)	(11.6)	(7.8)
Convention	(0.3)	(---)	(1.0)	(---)	(2.2)	(---)	(2.5)	(2.5)	(0.7)
Pleasure	19.6	4.6	10.1	3.4	40.1	---	58.4	19.2	20.6
Recreation	(9.7)	(4.2)	(2.2)	(2.3)	(36.7)	(---)	(0.6)	(---)	(7.4)
Sightseeing	(6.6)	(---)	(6.0)	(1.1)	(2.4)	(---)	(1.1)	(4.5)	(4.3)
Visit friends & Rel.	(3.3)	(0.4)	(1.9)	(---)	(1.0)	(---)	(56.7)	(14.7)	(8.9)
Travel Service	35.7	14.0	15.4	4.4	10.9	3.9	9.3	17.6	23.2
Eat	(10.2)	(2.2)	(6.6)	(---)	(6.2)	(---)	(2.2)	(---)	(6.6)
Gss-Auto	(14.2)	(3.6)	(3.6)	(2.3)	(3.6)	(---)	(2.9)	(10.4)	(8.7)
Overnight	(11.2)	(8.2)	(5.2)	(2.1)	(1.1)	(3.9)	(4.2)	(7.2)	(7.8)
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total People per Week	124,000	14,200	24,000	19,000	10,000	7,000	27,000	4,000	229,200

Table 6B. Automobile Tourists by Overall Trip Purposes and Duluth-Superior Stop Purposes, Vehicles Data, Summer, 1972.

Duluth-Superior Stop Purpose	Overall Trip Purpose (percent)										Total
	Vaca- tion	Work	Per- sonal	Shop	Eat-Sch. Soc. Rec.	Commer- cial	Visit F. & R.	Other	Total		
No Stop	39.5	21.5	11.3	2.8	22.3	16.2	27.7	24.2	27.0		
Trade Center	7.9	66.6	69.3	90.7	34.8	81.4	5.0	45.4	39.1		
Work/Bus.	(1.6)	(59.9)	(5.3)	(---)	(29.4)	(80.1)	(---)	(19.9)	(14.3)		
Shopping	(4.6)	(2.1)	(6.2)	(82.6)	(1.8)	(1.3)	(1.6)	(9.1)	(10.3)		
Pers. Bus.	(1.4)	(4.6)	(57.0)	(81.)	(1.8)	(---)	(1.0)	(14.3)	(9.9)		
Convention	(0.3)	(---)	(0.8)	(---)	(1.8)	(---)	(2.4)	(2.1)	(0.7)		
Pleasure	19.3	3.1	7.7	2.9	34.5	---	58.5	16.3	18.4		
Recreation	(9.9)	(2.8)	(1.7)	(2.0)	(31.5)	(---)	(0.6)	(---)	(6.6)		
Sightseeing	(6.1)	(---)	(4.4)	(0.9)	(1.9)	(---)	(1.0)	(3.5)	(3.6)		
Visit Friends & Rel.	(3.3)	(0.3)	(1.6)	(---)	(0.9)	(---)	(56.9)	(12.8)	(8.2)		
Traveler Service	33.3	8.8	11.7	3.6	8.4	2.4	8.6	14.1	19.4		
Eat	(9.3)	(1.3)	(4.9)	(---)	(4.8)	(---)	(1.9)	(---)	(5.3)		
Gas-Auto	(12.6)	(2.1)	(2.5)	(1.8)	(2.7)	(---)	(2.5)	(7.9)	(6.9)		
Overnight	(11.4)	(5.4)	(4.3)	(1.8)	(0.9)	(2.4)	(4.2)	(6.2)	(7.2)		
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
Total People per Week	41,600	9,575	12,500	7,500	4,100	6,000	1,700	10,000	93,075		

Table 7. Automobile Tourists' Lodging Means and Length of Stays in Duluth-Superior by Overall Trip Purpose, Vehicles Data, Summer, 1972.

Lodging Means	Trip Purpose (percent)								Total
	Vaca- tion	Work	Per- sonal	Shop	Eat-Sch. Soc.Rec.	Commer- cial	Visit F. & R.	Other	
No Overnight Stay	78.5	69.7	88.2	98.2	95.8	71.8	60.5	81.9	78.8
Commercial	12.6	28.4	6.4	1.8	2.2	13.8	5.3	4.1	11.3
Friends/ Relatives	4.1	0.6	0.8	---	2.0	2.6	34.2	7.8	6.1
Campground	4.5	0.5	0.6	---	---	---	---	---	2.1
Other	0.4	0.8	4.0	---	---	11.8	---	6.2	1.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent not Stopping in Duluth-Superior	39.5	21.5	11.3	2.8	22.3	16.2	27.7	24.2	27.0
Average Days Stay (all travelers)	0.9	1.7	1.0	1.0	1.0	1.1	1.3	1.2	1.1
Average Days Stay (only those who stopped)	1.5	2.2	1.1	1.0	1.2	1.4	1.8	1.5	1.5

Table 8. Automobile Tourists' Lodging Means and Length of Stays in Duluth-Superior by Home Location, Vehicles Data, Summer, 1972.

Lodging Means	Minn.	Wisc.	Home Location				TOTAL
			IL/IN/MI/OH	IA/ND/SD	Canada	Other	
No Overnight Stay	82.1	83.1	78.2	59.0	73.3	68.0	78.8
Commercial	11.9	6.3	11.2	10.3	13.5	13.7	11.3
Friends/Relatives	3.5	9.0	6.5	12.9	5.1	14.3	6.1
Campground	1.4	---	4.1	1.7	7.5	2.5	2.1
Other	1.1	1.6	---	16.1	0.6	0.5	1.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent not Stopping in Duluth-Superior	19.0	36.0	47.8	20.7	38.0	31.0	27.0
Average Days Stay (all travelers)	1.1	1.0	0.8	1.3	0.9	1.2	1.1
Average Days Stay (only those who stopped)	1.3	1.3	1.6	1.7	1.5	1.8	1.5

Table 9A. Duluth-Superior's Automobile Tourists' Home Locations by Major Trip Purposes, People Data, Summer, 1972.

Trip Purpose	Tourists' Home States (percent)							TOTAL
	Minn.	Wisc.	IL/IN/ MI/OH	IA/ND/ SD	Canada	Other	TOTAL	
Vacation	38.7	49.0	82.0	64.5	78.5	77.7	54.5	
Work	8.8	8.6	2.6	1.4	0.6	1.2	6.1	
Personal	14.9	11.7	2.4	7.7	5.8	2.8	10.3	
Shopping	13.0	11.1	1.1	---	1.0	---	8.2	
Eat-School-Social Rec.	7.7	1.7	0.5	---	1.0	---	4.2	
Commercial	3.9	0.9	---	17.8	0.9	1.6	3.1	
Other	1.0	0.3	3.2	1.6	2.2	3.4	1.6	
Visit Friends and Relatives	12.0	16.7	8.2	7.0	10.0	13.3	11.9	
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Total People for One Week	117,500	25,700	32,000	9,000	20,000	25,000	229,200	

Table 9B. Duluth-Superior's Automobile Tourists' Home Locations' by Major Trip Purposes, Vehicle Data, Summer, 1972.

Trip Purpose	Tourists' Home States (percent)							TOTAL
	Minn.	Wisc.	IL/IN/ MI/OH	IA/ND/ SD	Canada	Other	TOTAL	
Vacation	29.8	40.2	78.4	48.0	72.6	71.8	44.6	
Work	13.8	14.1	5.3	2.3	1.2	2.4	10.2	
Personal	17.9	15.4	3.5	9.0	8.6	4.0	13.4	
Shopping	12.1	11.1	1.2	---	1.2	---	8.1	
Eat-School- Social Rec.	7.5	1.8	0.6	---	1.1	---	4.5	
Commercial	7.6	2.0	---	33.2	2.0	3.7	6.4	
Visit Friends and Relatives	10.3	15.1	8.6	5.8	10.4	13.6	10.9	
Other	1.0	0.3	4.4	1.7	2.9	4.5	1.9	
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Total Vehicles for One Week	51,300	10,400	11,600	4,300	6,500	9,000	93,075	

Table 10. Market Intensity: Duluth-Superior Tourists per 1,000 of Home State Population for All Travel Purposes, and Vacationers Only, People Data, Summer, 1972.

Home State	Trip Purpose	
	All Purposes (per 1,000 pop.)	Vacationers (per 1,000 pop.)
	(percent)	
Minnesota	30.10	8.62
Wisconsin	5.75	2.21
IA/ND/SD	2.13	1.05
IL/IN/MI/OH	0.890	0.683
Canada	0.919	0.667
Other	0.158	0.113



Table 11. Duluth-Superior Tourists, Home Location by Major Destination, Vehicle Data, Summer, 1972.

Major Destination	Home Location						TOTAL
	Minn.	Wisc.	IL/IN/ MI/OH	IA/ND/ SD	Canada	Other	
Duluth	51.8	8.3	9.6	22.2	8.6	13.6	33.3
Superior	3.6	34.8	---	21.2	1.0	2.8	7.5
Other Minn.	28.1	30.7	47.5	31.7	13.6	37.8	30.9
Other Wisc.	7.6	7.0	1.2	6.2	7.3	6.5	6.5
Michigan	3.4	1.3	2.4	0.8	8.0	0.8	3.0
ND/SD	0.2	1.7	3.3	---	5.4	2.4	1.3
Canada	4.2	14.8	24.1	17.1	50.0	24.5	13.6
Other	1.1	1.5	11.9	0.8	6.1	11.6	3.9
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Number of Vehicles	51,300	10,400	11,600	4,300	6,500	9,000	93,075
Total Number of People	117,500	25,700	32,000	9,000	20,000	25,000	229,200

Note: The table gives percent of vehicles. Number of people by states of origin are given here only for convenience purposes.

Table 12A. Tourists' Home Locations by Duluth-Superior Stop Purpose, People Data, Summer, 1972.

Stop Purpose	Minn.	Wisc.	Home Location				TOTAL
			IL/IN/ MI/OH	IA/ND/ SD	Canada	Other	
No Stop	21.8	37.9	47.2	24.9	37.6	31.9	29.1
Trade Center	36.8	28.1	3.4	30.7	8.5	13.0	27.1
Work/Bus.	(12.7)	(2.8)	(1.3)	(21.6)	(0.6)	(2.8)	(8.4)
Shopping	(14.4)	(13.2)	(1.0)	(2.8)	(5.6)	(3.2)	(10.2)
Pers. Bus.	(10.1)	(10.5)	(1.1)	(4.5)	(2.3)	(5.4)	(7.8)
Convention	(0.5)	(1.6)	(---)	(1.8)	(---)	(1.6)	(0.7)
Pleasure	22.0	13.7	15.1	25.2	11.8	33.4	20.6
Recreation	(8.7)	(2.1)	(3.2)	(10.4)	(3.2)	(12.4)	(7.3)
Sightseeing	(4.2)	(3.1)	(4.1)	(4.3)	(5.1)	(7.4)	(4.4)
Visit Friends & Rel.	(9.1)	(8.5)	(7.8)	(10.5)	(3.5)	(13.6)	(8.9)
Travel Service	18.5	20.3	34.3	19.2	42.3	21.7	23.2
Eat	(6.3)	(5.4)	(8.2)	(6.3)	(12.7)	(2.2)	(6.6)
Gas-Auto	(6.9)	(7.9)	(14.8)	(5.0)	(12.0)	(9.7)	(8.7)
Overnight	(5.3)	(7.0)	(11.3)	(7.9)	(17.5)	(9.8)	(7.9)
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total People per week	117,500	25,700	32,000	9,000	20,000	25,000	229,200

Table 12B. Tourists' Home Locations by Duluth-Superior Stop Purpose, Vehicle Data, Summer, 1972.

Stop Purpose	Minn.	Wisc.	Home Location				TOTAL
			IL/IN/ MI/OH	IA/ND/ SD	Canada	Other	
	(percent)						
No Stop	19.0	36.0	47.8	20.7	38.0	31.0	27.0
Trade Center	47.6	34.0	5.1	43.9	10.9	17.8	35.2
Work/Business	(20.7)	(4.6)	(2.5)	(34.6)	(1.2)	(5.3)	(14.3)
Shopping	(14.0)	(14.0)	(1.1)	(2.6)	(6.4)	(3.5)	(10.3)
Personal Business	(12.5)	(14.0)	(1.5)	(5.3)	(3.3)	(7.5)	(9.9)
Convention	(0.4)	(1.4)	(---)	(1.4)	(---)	(1.5)	(0.7)
Pleasure	18.7	12.5	15.0	20.5	11.3	31.6	18.4
Recreation	(7.6)	(2.0)	(3.2)	(8.6)	(3.2)	(12.0)	(6.6)
Sightseeing	(3.2)	(2.6)	(3.8)	(3.2)	(4.6)	(6.5)	(3.6)
Visit Friends & Rel.	(7.9)	(7.9)	(8.0)	(8.7)	(3.5)	(13.1)	(8.2)
Traveler Services	14.7	17.5	32.1	14.9	39.8	19.6	19.4
Eat	(4.9)	(4.5)	(7.5)	(4.7)	(11.5)	(1.9)	(5.3)
Gas-Auto	(5.2)	(6.4)	(13.1)	(3.6)	(10.6)	(8.2)	(6.9)
Overnight	(4.6)	(6.6)	(11.5)	(6.6)	(17.7)	(9.5)	(7.5)
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Vehicles Per Week	51,300	10,400	11,600	4,300	6,500	9,000	93,075

Table 13. Average Automobile Tourists' Expenditures in Duluth-Superior by Home Location, Summer, 1972.

Home Location	All Travelers		Only Travelers Making Expenditures	
	Average/ Vehicle	Average/ Person	Average/ Vehicle	Average/ Person
	(dollars)			
Minnesota	21.50	9.40	39.70*	18.00*
Wisconsin	20.00	8.10	38.40*	16.00*
IL/IN/MI/OH	15.40	5.50	32.00	11.50
IA/ND/SD	13.80	6.60	23.90	11.40
Canada	15.60	5.50	26.00	8.40
Other	38.30	13.70	66.90	23.90
Average - All Locations	21.40	8.70	39.60	16.60

\* Includes data for commuters.

Table 14. Tourists' Expenditure Ranges by Home Location, Vehicle Data, Summer, 1972.

Expenditures	Minn.*	Wisc.*	IL/IN/ MI/OH	IA/ND/ SD	Canada	Other	TOTAL
No Expenditures	48.7	50.1	51.9	42.3	40.1	42.7	47.9
\$ 1 - 10	21.2	25.6	22.1	40.1	30.3	19.7	23.0
\$ 11 - 30	15.3	12.5	10.2	4.9	16.0	11.7	13.6
\$ 31 - 50	6.8	5.2	7.1	5.3	6.0	15.3	7.3
\$ 51 - 100	4.4	3.6	4.8	5.1	5.8	4.6	4.5
\$101 - 250	2.7	1.5	3.6	2.3	1.8	3.1	2.7
\$251 & over	0.9	1.5	0.3	---	---	2.9	1.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

\* Note: Data of commuters is included in these tables. This affects only Minnesota, Wisconsin and total columns.

Table 15. Tourists' Average Expenditures in Duluth-Superior by Overall Trip Purpose, Summer, 1972.

Trip Purpose	All Travelers		Only Travelers Making Expenditures	
	Average/ Vehicle	Average/ Person	Average/ Vehicle	Average/ Person
	(dollars)			
Vacation	17.60	5.90	32.50	10.80
Work	18.30	8.20	37.40*	26.70*
Personal	22.50	11.90	45.80	24.00
Shopping	59.40	23.80	69.00	27.60
Eat-School- Social Rec.	5.90	2.40	15.20	6.30
Commercial	6.00	5.00	14.20	11.80
Visit Friends and Relatives	25.60	9.50	49.60	18.40
Other	23.00	11.00	36.50	17.40
Average - All Trip Purposes	21.40	8.70	39.60	16.60

\* Note: Data for commuters is included in the "work" row in the two right hand columns.

Table 16. Expenditure Range by Overall Trip Purpose of Non-Resident Duluth-Superior Highway Travelers, Vehicles, Summer, 1972. \*

Expenditures	Overall Trip Purpose (percent)								TOTAL
	Vacation	Work	Per- sonal	Shop	Eat-Sch.- Soc.Rec.	Commer- cial	Visit F. & Rel.	Other	
No Expenditures	45.9	60.7	50.7	14.1	61.7	57.5	48.3	36.9	47.9
\$ 1 - 10	27.0	11.6	21.3	22.6	23.3	33.8	19.6	24.5	23.0
\$ 11 - 30	13.9	13.5	11.5	28.6	10.4	3.2	10.8	21.1	13.6
\$ 31 - 50	6.2	7.0	7.1	14.5	3.6	4.9	9.7	8.4	7.3
\$ 51 - 100	4.6	4.0	4.3	11.4	---	---	6.0	---	4.5
\$101 - 250	1.7	3.0	4.3	4.4	1.0	---	3.5	9.1	2.7
\$251 & over	0.7	0.2	0.8	4.4	---	0.6	2.1	---	1.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

\* This table includes data of commuters. It primarily affects the "work" category.

Table 17. Percentage Distribution Per Vehicle of All Persons and of Children for Duluth-Superior Tourists, Summer, 1972.

Number	All Persons	Children
	(percent)	
0	----	74.4
1	31.2	9.8
2	34.3	8.4
3	12.8	3.6
4	13.3	1.6
5	4.7	0.4
6	2.6	0.2
7	0.4	0.2
8	0.4	---
9	0.3	---
No Record	----	1.4
TOTAL	100.0	100.0
Average - All Vehicles	2.4	0.5
Average No. of Children for Vehicles with Children	---	2.0



Table 18. Age Distribution of Party Head of Duluth-Superior Tourists,  
Summer, 1972.

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Age of Party Head	Percent Distribution (%)
0 - 24	6.9
25 - 34	20.8
35 - 44	27.6
45 - 54	21.3
55 - 64	11.5
65 and over	5.4
Not Recorded	6.5
TOTAL	100.0

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Table 20. Tourists' Expenditures Estimated Separately for Duluth and for Superior by Home Location, One Summer Week, 1972.

Home Location of Tourist	Duluth		Superior		Combined	
	(\$)	(%)	(\$)	(%)	(\$)	(%)
Minnesota	1,019,000	61.2	82,000	25.0	1,101,000	55.3
Wisconsin	88,000	5.3	120,000	36.5	208,000	10.4
IL/IN/MI/OH	144,000	8.7	34,000	10.4	178,000	8.9
IA/ND/SD	43,000	2.6	16,000	4.9	59,000	3.0
Canada	80,000	4.8	20,000	6.1	100,000	5.0
Other	290,000	17.4	56,000	17.1	346,000	17.4
TOTAL (one week)	1,664,000	100.0	328,000	100.0	1,992,000	100.0

Table 21. Tourists' Expenditures Estimated Separately for Duluth and for Superior by Overall Trip Purpose, One Summer Week, 1972.

Tourists' Trip Purpose	Duluth		Superior		Combined	
	(\$)	(%)	(\$)	(%)	(\$)	(%)
Vacation	612,000	36.7	119,000	36.3	731,000	36.7
Work	143,000	8.6	31,000	9.5	174,000	8.7
Personal	233,000	14.0	49,000	14.9	282,000	14.2
Shopping	380,000	22.8	67,000	20.4	447,000	22.4
Eat-School- Social Rec.	21,000	1.3	3,000	0.9	24,000	1.2
Commercial	20,000	1.2	16,000	4.9	36,000	1.8
Visit Friends & Relatives	219,000	13.2	39,000	11.9	258,000	13.0
Other	36,000	2.2	4,000	1.2	40,000	2.0
TOTAL (one week)	1,664,000	100.0	328,000	100.0	1,992,000	100.0

#### IV. DULUTH-SUPERIOR'S ANNUAL TOURISM INCOME

Duluth-Superior's annual tourism sales are estimated at \$66 million using data available from this and related travel research. This sum consists of estimated purchases by automobile travelers of \$58.0 million and air travelers of \$8.2 million. Purchases by bus, rail, and water travelers are not estimated. The estimate is conservative to the extent that tourists traveling by these three modes are not included.

The estimated tourist income is equal to 16 percent of 1972 total "retail" and "selected services" sales for Duluth-Superior.<sup>13/</sup> Tourism thus represents a larger than commonly recognized part of the Twin Port's economy. This problem of limited recognition of tourism's economic scale is common, especially in cities. Almost all businesses that sell goods and services at retail make tourists' sales, since tourists buy while away from home, almost everything that they buy as home - but in very different proportions, thus tourism purchases are spread throughout the entire retail and service sector and not limited only to the hospitality businesses.

##### Automobile Tourist Expenditures

In arriving at the \$58 million automobile tourist expenditures the year was divided into three periods:

- An 8 week prime tourist season approximately July and August.
- A 14 week period extending on each end of the prime period from 1 May to September 30.
- A 30 week late fall, winter and early spring period extending approximately from October 1 to April 30.

Throughout the prime tourist season tourist sales were assumed to run at the rate estimated for a single summer week by the primary methods of this study. This gave an eight-week estimate of:

$$8 \times \$1,992,000 = \$15.9 \text{ million}$$

Year-round data from a recent comprehensive study of the Minneapolis-St. Paul area's tourism industry<sup>5/</sup> was used to help estimate the relative rate at which each Duluth-Superior traveler segment would be present in each period - the 14 week and the 30 week periods - compared to summer travel patterns. This was modified by recognition of the differences between Minneapolis-St. Paul and Duluth-Superior. The following estimates were made.

<u>Travel Segment by Purpose</u>	<u>Percent of Summer Tourism Spending Rate</u>	
	<u>Early Summer, Early Fall (14 weeks)</u> (%)	<u>Late Fall, Winter, Spring (30 weeks)</u> (%)
Visitors to friends and relatives	100	60
Shoppers	60	75
Eat/School/Social Rec.	50	100
Commercial	0	0
Work	60	60
Personal Business	75	75
Vacation	25	10
Other	25	25

The overall observation from other metropolitan tourism study is that in the winter season travel from a distance is sharply curtailed. Travel from close by - within 50 - 100 miles - is sustained and may even increase. This is because the shopping, personal business and work segments continue - these are "destination area" travel types. "Visits" are also sustained. In order to be conservative and to allow for Duluth-Superior's severe winter weather, all of these were reduced substantially in the winter as a proportion of summer traffic. Vacation travel, the largest dollar segment was cut to one-tenth. This may be over-conservative due to the growing

winter sports activity in Duluth-Superior and vicinity.

Summarized, the yearly estimate for auto tourist income is:

Summer - 8 weeks	\$15.9 million
Early Summer, early fall - 14 weeks	14.7 million
Late fall, winter, spring - 30 weeks	<u>27.4 million</u>
Total Auto Tourism	\$58.0 million

An alternative method is to estimate annual auto tourist sales by assuming that they vary throughout the year in constant ratio to hotel/motel sales.<sup>10/</sup> Since hotel/motel sales are only a small part of tourism income this procedure would be expected to be less accurate than the above since the various tourism segments would be expected to vary in proportion to each other throughout the year. By this method 1972 auto tourist sales are estimates at \$64 million or about 10 percent higher than the segment method used above.

#### Observations and Data of Air Travelers

By fortunate coincidence a 1973 study was made of non-residents using the Duluth airport.<sup>7/</sup> Expenditures of those unplaning there were:

Passengers of commercial flights	\$8,010,000
General aviation (those using private aircraft)	<u>212,000</u>
Total	\$8,222,000

Although the study did not determine where this money was spent, it is assumed that nearly all can be allocated to Duluth-Superior.

About 92,000 person-visits annually were estimated for all those traveling by air. Their per person economic impact is much higher than that of auto travelers: \$105 per visit compared to \$8.70. Commercial air passengers stayed an average of 3.4 days, spending an average of \$31 per day.

Commercial air passengers to Duluth-Superior differ markedly from the average commercial air traveler. Nationwide, by 1973, about 50 percent of air passengers were traveling for business reasons, down from 57 percent in the 1961-68 era.<sup>9/</sup> By contrast, over 80 percent of the Duluth airport tourists traveled for business reasons. A detailed breakdown by primary trip purpose follows:

Professional consulting services	26.6%
Attend meeting or convention	17.7
Sales	16.8
Customer service	15.9
Purchasing	4.4
Other	<u>18.6</u>
TOTAL	100.0%

This pattern confirms that Duluth, in common with other parts of northern Minnesota, hosts few vacationers who travel by air. Air transportation in the 1960's was one of the most rapidly growing of travel components. Because it easily spans vast distances it has put major destinations throughout the world in competition with each other. It has operated to the disadvantage of Upper Great Lakes destinations such as northern Minnesota and Duluth-Superior. Well over half of Duluth-Superior summer tourists are traveling mainly on vacation but their mode of travel continues to be an extension of the 1930's travel - automobile.

## V. APPLICATIONS OF THIS STUDY TO THE DULUTH-SUPERIOR TOURISM INDUSTRY

Duluth-Superior have a large relative advantage in the tourism industry. This conclusion derives from four basic observations:

1. They have currently a large tourism industry - much larger than commonly recognized.
2. The Twin Ports have major attraction potential giving them an advantage not currently well exploited in further developing destination appeal.
3. They have a major location advantage as the gateway to the north woods and waters appeals of Minnesota, Ontario and Manitoba.
4. Their far north location gives them a relative disadvantage in competing successfully for many other industries suitable for more advantageously located cities.

### Tourism Industry Scale

Duluth-Superior's tourism industry scale at \$66 million in 1972 has been the major thrust of this report. It is 16 percent of all retail and selected services sales.

### Attractions Potential: Destination Qualities and Travel Stopping Appeals

The Twin Ports are one of the most picturesquely sited, most visually accessible and attractive metropolitan centers in the world. This outstanding setting is poorly capitalized upon for the large majority of tourist flow. In addition there are other major features.

The most important of these is the role of Duluth-Superior as a regional service center and as a traveler service center. Many people come because high quality services that they need are available. Others on their way to other destinations are induced to stop for the same reason.

Tourism income derives basically from these factors - attracting people to the area and selling them services and goods. Attractions



can consist of good shopping opportunities and rewarding experiences when visiting friends and relatives as well as the development of specific features providing recreational things to see and do.

Duluth-Superior has made progress in the past, and especially recently, in developing attractions - things for people to see and do. Some of these are noted here, at the risk of overlooking other important features:

- Access to the city visually such as through city parks, Thompson Hill Information Center, Skyline Drive. There is question that many of these are adequately known to the casual visitor.
- Access to nature in the city such as in Hawk Watch Park and Seven Bridges Road.
- The harbor tours and lift bridge rides.
- The arena auditorium provides a cultural, convention and gathering place.
- Railroad museum and its various associated interest groups and activities.
- Canal Park Visitor Center Marine Museum.
- City zoo and campgrounds.
- Spirit Mountain Winter Sports Area provides a focal point for outdoor winter recreation.
- Glensheen is only one of the most accessible of the many unusual buildings and architectural features that deserve visitor attention.
- Universities and colleges in both Duluth and Superior.
- Access to the magnificent harbor is difficult except for the complex around the Canal Park, lift bridge and arena-auditorium (including the harbor tours). The ore docks and most of the loading/docking facilities are inaccessible except from a distance or from the water.

### Strategic "Gateway" Location

Duluth-Superior has a disproportionately heavy pass-through traffic because of its unique location between populations and northern vacation attractions. This represents major market potential because the people are physically there, in person. Barely half of those from the industrial midwest even stopped. Since populations of these states have higher average income the tourism income potential through serving this travel sector is substantial.

Those who pass through Duluth-Superior on the way to northern Minnesota or Ontario are not "lost to Duluth", they would not have come had these northern attractions not been there. Rather they represent a challenge. Possible approaches to the challenge include:

- Major upgrading of information systems for travelers.
- Hospitality training for all who contact people at retail. These should be on-going each year since there is large personnel turnover.
- On-going attention to quality in all hospitality services, especially food and lodging.
- Work at developing a "gateway image" in which Duluth-Superior are part of the overall "northern experience".

### Market Opportunities and Advantages

This subsection summarizes highlights of Duluth-Superior's tourism market segments. It views selected segments by a number of classifications. In doing this it partly repeats some points made earlier in this section.

Minnesota supplies the largest porportion of Duluth-Superior tourists, and they come in the highest proportion from this state. This suggests Minnesota locations are best for short run advertising.

Wisconsin travelers are of major importance in Superior.

Shoppers and those on personal business represent key year round tourist income. They are attracted because the goods and services there represent the best combination of quality, price and access. Many could go to competing areas if Duluth-Superior ceases to provide what attracts them.

Those visiting friends and relatives have probably been overlooked but account for 13 percent of summer tourists' dollars. Because they are year round they are even more important on a 12-month basis. They can be reached through their resident host families.<sup>3/</sup>

Canadians are a special market that varies as the terms of trade between the United States and Canada change. In 1972 they mainly treated Duluth-Superior as a short-term pass-thru service node. In early 1980 they appeared much more interested in opportunities for shopping in Duluth-Superior, but by 1982 this had sharply diminished as the Canadian economy suffered sharp setbacks.

Vacationers were the largest summer component in terms of dollars. In relative terms, most were simply passing through to another destination. Can they be reached with information about Duluth-Superior attractions and services? Two vacationer groups represent special challenges: 1) those from the Industrial Midwest, half of whom passed through without stopping, and 2) winter vacationers.

Air travelers and package tour travelers have been among the most rapidly-growing of the U.S. travel market. Duluth-Superior has participated to only a limited extent in this market. It represents a means of tapping new geographic markets and poses a challenge to the area's tourism industry.

## List of References

1. Blank, Uel, "A Concept of Recreational Focal Areas," Proceedings, Institute of Traffic Engineers, 23rd Annual Meeting, August 1973.
2. Blank, Uel, "The Duluth Tourism Economy," Minnesota Tourist Travel Notes, Vol. 13, No. 1, Spring 1975.
3. Blank, Uel, Life Style-Tourism Interrelationships of Minneapolis-St. Paul Residents, Staff Paper P82-9, Department of Agricultural and Applied Economics, University of Minnesota, July 1982.
4. Blank, Uel, and Michael Petkovich, "The Metropolitan Area: A Multifaceted Travel Destination Complex," Tourism Planning and Development Issues, George Washington University, Washington, D.C., 1980.
5. Blank, Uel, and Michael Petkovich, Minneapolis-St. Paul's Travel Tourism, Executive Summary, University of Minnesota, October 1979.
6. Blank, Uel, and L.R. Simonson, Recreational Resource Use: Who Gains? Who Pays? The Crow Wing Canoe Trail Case. Staff Paper P82-1, Department of Agricultural and Applied Economics, University of Minnesota, January 1982.
7. Howard, Needles, Tewmen and Bergendoff, The Socio-Economic Role of Aviation in Duluth, Minnesota, David Braslau and Associates, Inc., January 1975.
8. Kao, Shih-Wei, A Market Analysis of Travel in Minnesota, Unpublished M.S. thesis, Department of Agricultural and Applied Economics, University of Minnesota, December 1978.
9. Sarames, George, "Innovations and Applications in Travel Research Technology," Proceedings, 1974 Conference, the Travel Research Association.
10. Sielaff, Richard O., Duluth Hotel-Motel Indicators, Bureau of Business and Economic Research, University of Minnesota, Duluth.
11. Westmoreland, H.E., 1972 Duluth Convention Visitor Study, H.W. Westmoreland, Inc.
12. \_\_\_\_\_, Travel During 1972, 1972 Census of Transportation, Department of Commerce, Bureau of the Census.
13. \_\_\_\_\_, U.S. Census of Business, 1972, Department of Commerce, Bureau of the Census.