

Whatcom Council of Governments
Passenger Only Ferry Study

FINAL REPORT

November 22, 2006

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1. International Passenger-only Ferry Study Project Description

Nature of the project

This study explores market and other factors associated with potential viability of an international passenger ferry service connecting the city of Blaine, including the Semiahmoo peninsula with the community of White Rock in British Columbia, Canada, and other regional points in lower BC and Northwest Washington. Such a service could provide much-needed transportation connections among U.S. and Canadian border communities and a transportation alternative for commuters, tourists, students and other travelers. This project included a preliminary analysis, identification of appropriate vessel type, size, docking facility, permitting processes, and financing options for acquisition and operation. Operational and logistical considerations are addressed in this report including international inspection agency considerations and optimal service route characteristics.

Background and existing work

The reintroduction of modern passenger-only ferry service for the Whatcom/Lower mainland B.C. region has been suggested and discussed informally in many transportation forums over the last decade. Northwest Washington and Southwest British Columbia has a strong history of local and regional marine movement of people and goods. Passenger schooners plied the coastal waters of Western North America and a “Mosquito Fleet” provided local and regional mobility. As rail, roads, and highways were constructed, the use of the marine mode decreased. Now, as highway infrastructure becomes more costly and environmental concerns become more pointed, local and regional marine transportation has re-emerged as an alternative of interest. Transportation-focused meetings of citizens, transportation specialists, and elected officials over the last three years have yielded gathering interest in passenger-only ferry service for the region.

This study measured and recorded operational, logistical and financial considerations inherent in providing passenger-only ferry services, and examined economies of scale, service parameters, costs and potential project partnerships needed to implement such services.

This work provides answers to many of the questions concerning the what, where, how and when of adding passenger-only ferry travel to transportation choices for the traveling public as well as to questions of operational and financial aspects of establishing new passenger-only ferry services. Several previous studies have examined various aspects of such a system, but none have been comprehensive. The biggest missing pieces include quantification of potential demand, current capital and operating costs, and steps necessary to overcome obstacles such as funding.

The International Passenger-Only Ferry Study includes this report of potential terminal locations, commuter trip demand, and an assessment of possible connections with land based transit services. The study will analyze the scale, vessel type and costs, operating system requirements and develop a preliminary operating budget.

A literature review has disclosed numerous northwest Washington and cross-border passenger-only ferry studies. See **Section 2: Literature Review** for a discussion of other works on this topic.

2. Literature Review

THE POTENTIAL FOR EXPANDED FERRY SERVICE AT THE BELLINGHAM CRUISE TERMINAL, Port of Bellingham, undated (circa 1995).

This undated and un-attributed report appears to have been prepared by Port of Bellingham (POB) staff. It is generally anecdotal in style and content. The report is a compendium of one-time observations intended as a decision-making tool for POB officials. Identification of possible landing sites along with photos thereof is included. The most pertinent portions of the report for this study are found among the conclusions listed in its Summary:

“There is always a need for more affordable ferry service to the San Juan Islands ... public ferry services continue to operate at a loss.”

“Growth appears to continue in the Islands excursion market ... Cheap fares, compounded by ticket booklet discounts aboard the Washington ferries may be hard to compete against.”

“With bus and Amtrak service, the Bellingham Cruise Terminal is seen by islanders as an appropriate facility to meet the island, versus tourist, needs.”

“Based on past performance, Bellingham-Friday Harbor loads are artificially limited by the small craft size.”

“State regulations preclude Bellingham carriers from competing directly with the Washington State Ferries within the San Juan Islands.”

And those listed in its recommendations:

“If committed to promoting year-round service, the Port [POB] may want to assist in the form of joint marketing or seasonally adjusted passenger facility charges.”

“The Port [POB] should continue to work with its current operators to maintain and expand service.”

NORTH SOUND CONNECTING COMMUNITIES FERRY OPPORTUNITIES STUDY, Wilbur Smith Associates for Cascadia Center of Discovery Institute, January 2005.

The North Sound Connecting Communities Project (NSCCP) coalition, consisting of members from five counties, obtained grant funding for a consultant (Cascadia Center of the Discovery Institute) to assist in completing a multi-modal commuter study in 2002. A portion of the study, the NSCCP Ferry Opportunities Study, was intended to assist decisions makers by providing a better understanding of the “needs, opportunities, barriers, and implementation options for regular passenger only ferry service for commuting and other types of trips in the North Sound”. The study also examined the possibility of private or semi-private firms providing the ferry services instead of the State providing the ferry services. Potential passenger ferry route locations were identified as well as a number of tasks which, if implemented, would aid the launch of a passenger ferry service.

Initial findings identified nine routes; two for initial considerations, three for secondary consideration, and four routes for future considerations. Additional analysis estimated that, in order to cover costs, eighty percent of ferry seating would need to be filled on a regular basis. However, the research on the corridors examined indicated that sufficient demand for passenger ferry services exists.

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A feasibility study conducted by the consultant posed three questions:

1. Who will ride the ferries?
2. How many riders will there be?
3. What times of the day/year will they ride?

Ridership estimates, stated as being optimistic, indicating higher numbers of such a service might be possible.

The Cascadia Center study reports, "The initial projections of ridership and system service produced in this analysis seem to indicate that fare revenues and other funding could sustain a viable though minimal passenger ferry service in the north Sound." The need for voter approval is also identified. Although the costs of a passenger ferry program were estimated, benefits were not in this study. The recommendations of the report include suggestions from transit providers that a detailed origin-destination study be completed prior to any level of implementation.

MOSQUITO FLEET FEASIBILITY STUDY, Case Existological Laboratories Ltd. for Washington Public Ports Association, December 1990.

Upon examining data regarding the feasibility of fast passenger ferry business within the Puget Sound Region, Case Existological Laboratories Ltd. (CELL) determined that it was both economically and socio-economically efficient to implement such a ferry business in the region. CELL concluded that, based on economic comparison, the fast passenger ferry can rival other forms of commuting in affordability, convenience, and time. Tourism expected to accompany the implementation of a fast ferry passenger system was also projected to generate a significant amount of revenue for coastal communities.

Due to high fixed and operating costs, a new extensive route system implemented before sufficient demand had been established could not be sustained. However, the study suggests implementation of a smaller, primary route system. Beginning small would help to control both fixed and operating costs. Once demand for initial routes is established, additional routes could be added at the discretion of each region.

Also outlined in the study were key issues for a successful fast passenger ferry business. These included safety, financial success, compatibility with communities, and reduced roadway congestion. Safety could be accomplished by employing a trained crew, using a proven vessel. Financial success could be accomplished by establishing adequate fares without public financing. Compatibility with community goals could be established through careful selection of the terminal location and vessel design.

FOOT PASSENGER FERRY SERVICE FEASIBILITY STUDY, BELLINGHAM-POINT ROBERTS-FRIDAY HARBOR (DRAFT), Reid Crowther and Partners, July 1995.

Reid Crowther and Partners, in conjunction with the Port of Bellingham, conducted the Foot Passenger Ferry Service Feasibility Study to determine the economic viability of routing passenger ferry services among Point Roberts, Bellingham, and Friday Harbor. The study was intended to identify the economic opportunities and limitations, focusing the on following:

- Identifying sites with the greatest potential demand,
- Determining if sufficient demand for the service existed

- Providing information to assist in determining an appropriate working profile.

The study also examined characteristics that determine economic viability: vessel design, passenger capacity, routing, frequency, seasonality, and potential service utilization.

The study found that the route with the greatest potential was the Point Roberts-Friday Harbor route. Although the ferry service itself is not expected to generate significant revenue, other business sectors in both Point Roberts and Friday Harbor were expected to benefit. The Bellingham-Friday Harbor route was found to be unlikely because a private operator currently operates the same route. The Bellingham-Point Roberts route has the greatest potential of serving the business/commercial market sector and offers opportunities for business in both communities. Vacationers and recreational day trippers are expected to use the service most. However, both sectors are highly seasonal (mid-May to mid-September).

HIGH SPEED FERRIES AND COASTWISE VESSELS: EVALUATION OF PARAMETERS AND MARKETS FOR APPLICATION, National Ports and Waterways Institute (LSU) for Center for the Commercial Deployment of Transportation Technologies, June 2000.

Many cargo vessels handling domestic containers or trailers can, and do, handle passengers. The largest of such situations is currently operating between the Puget Sound and Alaska.

Combining passengers and cargo may increase revenues. However there are significant differences in vessel components and schedules, as well as structural and logistical differences in terminals. Challenges to mixed, passenger-cargo systems are listed below:

- “Coastal vessels would need to provide accommodations for passengers, including sitting/lounges areas, restaurants, amenities and even sleeping arrangements in the case of overnight trips.
- Coastal terminals would need to include waiting lounges, parking for cars, public transport, etc.
- Location of terminals would be different, since passenger terminals are usually located in downtown areas, where public transportation is available while cargo terminals are located outside the city, where truck access is more convenient.
- Service schedules would be different, since passengers are not expected to come on/off board during late night hours. This may limit the operational flexibility of the coastal service, resulting in lower utilization of the coastal vessels and higher operating costs.

INFORMATION PACKET, All American Marine Incorporated, undated.

The information packet, published by All American Marine Incorporated, outlined the advantages of semi-planning demi-hulled ferries. Design characteristics which increased stability and fuel efficiency, while reducing drag and wake, were also identified. The packet included general specifications (which includes construction, dimensions, engine size, performance, passenger capacity, and fuel capacity) and contact information for each vessel.

MARINE OPTIONS: GREATER VANCOUVER TO SQUAMISH FEASIBILITY STUDY, Jonathon Seymour and Associates for BC Ministry of Transportation, December 2001.

The study, contracted by the BC Ministry of Transportation, determined the feasibility of a pas-

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senger ferry between Vancouver and Squamish. The favored vessel design, based on weather, sea conditions, wake, and debris, was identified in the study. Passenger capacity was also a key factor in the feasibility study; vessels with the ability to carry 220 passengers and 350 passengers were used for the various cost calculations.

Terminal locations for both Vancouver and Squamish were refined. Due to the remoteness of the Squamish region, the primary linkage was identified as private automobiles, which requires adequate parking and a pick-up/drop-off loop. Locations within Vancouver were considered for their proximity to other modes of transportation, such as transit or rail options.

A joint effort between public and private entities was considered to be the most economically efficient approach to the ferry system. Government entities could be “involved as the instigator of the service.” Private entities, because of cost advantages, could be involved in the “management of the vessels and/or terminals.”

Project risks and benefits were also considered. Project risks included inadequate demand, issues over wake/wash generation, and reduction of established commuter options, should the ferry system fail. Project benefits included the creation of a tourism element, possibilities of deploying routes to other locations, and provision of services to patrons of the 2010 Olympics.

CRUISING INTO PROFITS, Cruise Industry Association of BC, March 1991

The Cruise Industry Association of B.C., recognizing the potential for small vessel tourism in the area, hosted a seminar in 1991 to highlight the possibilities of and challenges that the small vessel industry faces in BC and the surrounding regions. Delegates from over sixty-five organizations, such as coastal communities, port organizations, and tourism suppliers, were in attendance.

Several speakers, although motivated by different goals, responded to the idea of the small vessel cruise industry capturing a major segment of the tourism sector. In order to cultivate the industry, the following focus areas were developed from the variety of comments prepared by the speakers: organization, marketing, product development, communication, and policy legislation.

Identifying the target audience is also essential to industry development. Securing a share of the cruise industry is contingent on recognizing and capturing segments of the population that would, at least in the early stages of development, promote the expansion of the industry.

3 International Service Requirements

The following descriptions cover most of the issues that must be addressed in development of U.S. – Canada, cross-border, passenger-only ferry services.

Organizational, Vessel and Crew Requirements

In addition to the standard safety requirements of the U.S. Coast Guard, vessels operating on an international route must comply with the regulations of the International Maritime Organization (IMO). These regulations include:

International Convention for the Safety of Life At Sea (SOLAS) that sets the requirements for safety and equipment standards of the vessel. Some of the additional equipment includes; inflatable life rafts, rescue vessels, long range pyrotechnic signals (flares), life jacket lights and whistles, Search and Rescue Transponders (SART), Emergency Position Indicating Radio Beacons (EPIRB), Navigation Text Receiver (NAVTEX), and Global Marine Distress Safety System (GMDSS). The typical initial cost of the additional equipment for a 149 passenger vessel is approximately \$80,000 with \$10,000 annual maintenance costs.

International Ship and Port Security Code (ISPS) that sets the requirements for vessel and facility security. Each company must develop and operate under an approved Company and Vessel Security Plan which includes; crew, passenger, vendor, freight and baggage security, staff training and exercises, operational procedures, security equipment and communications for all three levels of Marine Security (MARSEC).

Safety Management System (SMS). Each company must develop and operate under an approved SMS plan that details the responsibilities of the Company, Master, Crew and shoreside personnel. The plan details; safety and environmental protection, responsibilities and authority, resources and personnel, operating procedures, emergency preparedness, maintenance, verification, documentation and review.

International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) which sets the standards and requirements for training and licensing. Masters operating internationally are required to have additional certification in basic safety training, bridge resource management, crisis management and human behavior, crowd management, survival craft proficiency and GMDSS. The average cost for this additional certification is \$10,000. All vessel crew must also be certified in crowd management.

IMO required Inspections by the U.S. Coast Guard are required annually for SOLAS vessels from every two to five years for domestic vessels.

Customs and Immigration Requirements

Vessel operating companies transporting passengers across the international border are required to supply the infrastructure for the services of Customs and Border Protection (CBP) in both the U.S. and Canada Border Services Agency (CBSA) in Canada.

Clearance facilities are required by CBSA to include secure transition from the vessel to the facility, a pre-inspection space measuring 1.5 square meters per passenger with a baggage retrieval area, a private secondary-inspection area with search and holding room, administrative area, and secure communications infrastructure.

CBSA will supply clearance officials to vessel arrivals under pre-approved schedules at loca-

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tions they currently serve. New locations, if approved, require full cost-recovery from the vessel operator.

Pre-clearing travelers before they board cross-border vessels as U.S. Customs and Border Protection (CBP) does in Victoria and Sidney, B.C. is a key to ensuring the carrier is not logistically and financially responsible for returning inadmissible passengers to Canada.

The availability of CBP pre-clearance functions at alternate locations would have to be negotiated with CBP and is unknown at this time.

CBP arrival clearance is also required. Facility requirements and locations are also subject to negotiation with CBP.

International carriers are also required to obtain a \$50,000 customs bond.

The foregoing requirements must be met before initiating any new passenger-only ferry services across the U.S. - Canada border. Costs associated with those requirements and other aspects of establishing international passenger ferry service have not been fully analyzed. An additional study will be necessary to quantify all such costs before provision of such services may be further considered.

4. Market Research

4.1 Pilot Service

As part of the Whatcom Council of Governments' (WCOG) Passenger-Only Ferry Study grant from the U.S. Federal Transit Administration, a pilot project was conducted during the winter months of 2005-06 to provide data on potential markets and service characteristics.

WCOG worked with Victoria-San Juan Cruises and the Port of Bellingham to operate a daily passenger ferry between Friday Harbor on San Juan Island and the City of Bellingham in Whatcom County. The goal of the pilot was to directly test the market and survey passengers about a variety of service characteristics.

4.1.1 FTA Grant information

The WCOG Passenger-Only Ferry Study grant from the U.S. Federal Transit Administration (FTA) is to examine demand and feasibility of increased passenger-only ferry service in the region.

4.1.2 Route

The pilot project offered service between the City of Bellingham in Whatcom County, Washington, and the City of Friday Harbor on San Juan Island, in San Juan County, Washington. See **Figure 4-1**.

4.1.3 Schedule

Figure 4-1

Passenger-only ferry service route (shown in red)

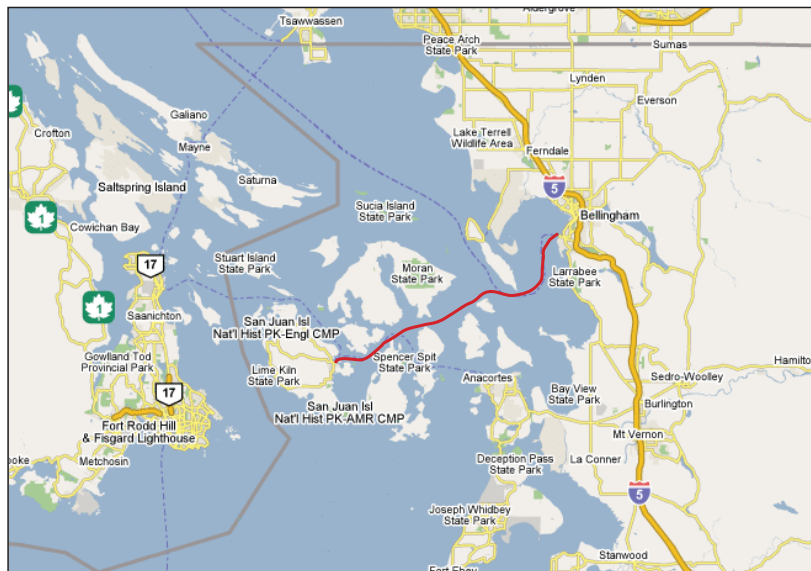


Table 4-1

Pilot project passenger ferry service schedule

Monday - Friday Schedule	
Departs Bellingham Arrives Friday Harbor	7:00am 8:40am
Departs Friday Harbor Arrives Bellingham	9:00am 10:40am
Departs Bellingham Arrives Friday Harbor	3:00pm 4:40pm
Departs Friday Harbor Arrives Bellingham	5:00pm 6:40pm
Crossing time: One hour and forty minutes	

The pilot service consisted of two round-trips a day, five days a week (Monday through Friday only). See **Table 4-1** for the pilot project schedule.

For "day-trippers," the schedule allowed mainland residents to have eight hours on San Juan Island (9:00am – 5:00pm). San Juan Island residents had a total of four hours in Bellingham (11:00am – 3:00pm).

A weekend schedule was not developed for this project.

4.1.4 Boat & Terminals

The service was contracted through the Port of Bellingham and operated by Victoria – San Juan Cruises with the vessel Victoria Star II, a 100 foot boat licensed for 149 passengers (see **Figure 4-2**). The boat runs on bio-diesel. Passenger amenities included indoor and outdoor seating, a snack bar, and restroom facilities.

The Victoria Star II called at the Bellingham Cruise Terminal in Fairhaven. In Friday Harbor, the boat docked at the Friday Harbor Terminal's Spring Street landing.

4.1.5 Passenger Fares

Fares were priced as follows:

- Adults (ages 13 and older): \$10 one-way
- Youth (ages 6-12): \$5 one-way
- Child (ages 0-5): free
- Commuter book of ten: \$75 (ten one-way trips)

Prices were designed to be competitive with the Washington State ferry system (see **Appendix A: Fare Comparisons**).

Figure 4-2

The Victoria Star II vessel



4.2 Introduction to the Data

Data for the market analysis were collected through three separate survey efforts. Passengers who used the pilot service between Friday Harbor and Bellingham were asked to fill out a survey. A second survey was distributed by mail to all household addresses on San Juan Island. Data were also collected through an online survey form. More information about the separate data sources follows.

4.2.1 Ridership and Revenue

Ridership and revenue data were collected by staff of Victoria-San Juan Cruises. See **Appendix B: Detailed Ridership Information**.

4.2.2 On-Board Surveys (Passenger)

Passengers who used the Bellingham - San Juan ferry service between November and March 31 were given a survey form to fill out during their crossing (see **Appendix C: Sample of Passenger Survey**). Passengers purchased 3,896 one-way trips during the project's operation. A total of 743 surveys were turned in, representing 19 percent of total trips. Of these passenger trips, 1,126 were commuter-book tickets, showing that, at the very least, 29 percent of passengers used the service on more than one day. Passengers were asked to only fill out the survey once, and to fill out one survey per household.

Commuter tickets were sold in books of 10. Assuming, on the low end, that purchasers bought one book each, we can estimate that 112 people made 5 round-trips each (30 percent of all trips). Of 3,896 total tickets, if approximately 1,126 of those were commuter tickets (approximately 112 passengers), then there was an estimated 1,447 unique passengers. With 743 survey responses, the study received a 53 percent unique-passenger survey response rate.

4.2.3 Surveys of San Juan Island Households (Household)

In January 2006, two-page mail-in surveys regarding passenger ferry service between San Juan Island and Bellingham were sent to every household on San Juan Island (see **Appendix D: Sample of Household Survey**). A total of 4,947 surveys were mailed, 650 of which were filled out and mailed back. This represents a 13.1 percent return rate.

The survey asked general questions regarding age and frequency of trips off San Juan Island. It also asked specific questions regarding trip purpose, preferred schedules, and limitations to passenger-only service. The survey also solicited information from those who would not ride the pilot service as it was operated, and was intended to find out what service would attract those individuals to passenger-only ferry service.

Based on November, 2004 data from the San Juan County Elections Department, 6,842 people reside on San Juan Island¹. San Juan County's entire population, which includes other islands, is 15,500 (2005 data). Approximately 9 percent of the total population of San Juan Island mailed in responses to the household survey.

Demographic comparisons of respondents and the general population of San Juan Island are

1 San Juan County Elections Department website (May, 2006): <http://www.co.san-juan.wa.us/elections/statistics.asp>

discussed in **Section 4.4.2**.

4.2.4 Online Surveys (Online)

A version of the project survey was posted on the WCOG website (see **Appendix E: Sample of Online Survey**). The online survey was advertised on the WCOG website, on the Victoria-San Juan Cruises website, www.whales.com, and included in several of the newspaper and online advertisements for the service. The survey was available between February 1 and April 1, 2006.

From the 110 online surveys submitted, 54 percent of survey respondents were residents of Whatcom County; 42 percent were residents of San Juan County; and an additional 5 percent of respondents resided outside of the sample area (Greater Puget Sound or out-of-state).

Results of the online survey are summarized in **Appendix F: Summary of Online Survey Results**.

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4.3 Pilot Service Statistics

The 18 week pilot project was operated between Bellingham and Friday Harbor, Monday through Friday. The following data were collected from Victoria-San Juan Cruises staff.

4.3.1 Ridership

The pilot project had a total of 3,896 passenger trips. Daily ridership averaged 44 persons. See **Table 4-2**.

Table 4-2

Total number of passengers by run

Date	Day	RUN					Weekly Total
		West 7AM	West 3PM	East 9AM	East 5PM	Daily Total	
30-Nov-05	Wednesday	2	2	0	2	6	39
01-Dec-05	Thursday	3	2	1	2	8	
02-Dec-05	Friday	5	5	2	13	25	
05-Dec-05	Monday	7	14	11	10	42	178
06-Dec-05	Tuesday	8	10	12	2	32	
07-Dec-05	Wednesday	2	7	2	5	16	
08-Dec-05	Thursday	5	4	5	15	29	185
09-Dec-05	Friday	22	7	22	8	59	
12-Dec-05	Monday	12	9	6	8	35	
13-Dec-05	Tuesday	14	6	6	9	35	210
14-Dec-05	Wednesday	9	8	11	12	40	
15-Dec-05	Thursday	3	7	4	12	26	
16-Dec-05	Friday	13	11	9	16	49	404
19-Dec-05	Monday	8	10	8	5	31	
20-Dec-05	Tuesday	4	5	4	4	17	
21-Dec-05	Wednesday	20	12	17	8	57	182
22-Dec-05	Thursday	9	20	7	22	58	
23-Dec-05	Friday	7	14	9	17	47	
26-Dec-05	Monday	37	13	26	20	96	149
27-Dec-05	Tuesday	18	8	7	14	47	
28-Dec-05	Wednesday	11	11	16	7	45	
29-Dec-05	Thursday	46	26	22	45	139	228
30-Dec-05	Friday	13	28	11	25	77	
02-Jan-06	Monday	25	4	9	19	57	
03-Jan-06	Tuesday	3	5	10	10	28	182
04-Jan-06	Wednesday	12	5	2	10	29	
05-Jan-06	Thursday	6	6	4	12	28	
06-Jan-06	Friday	7	14	6	13	40	149
09-Jan-06	Monday	6	16	6	4	32	
10-Jan-06	Tuesday	8	7	8	7	30	
11-Jan-06	Wednesday	6	8	8	5	27	228
12-Jan-06	Thursday	4	5	7	4	20	
13-Jan-06	Friday	7	11	5	17	40	
16-Jan-06	Monday	15	14	8	21	58	239
17-Jan-06	Tuesday	15	7	7	5	34	
18-Jan-06	Wednesday	12	10	4	17	43	
19-Jan-06	Thursday	17	6	5	16	44	156
20-Jan-06	Friday	7	17	8	17	49	
23-Jan-06	Monday	5	5	14	5	29	
24-Jan-06	Tuesday	12	8	7	4	31	239
25-Jan-06	Wednesday	10	4	4	11	29	
26-Jan-06	Thursday	8	6	2	11	27	
27-Jan-06	Friday	7	45	51	20	123	156
30-Jan-06	Monday	10	5	3	6	24	
31-Jan-06	Tuesday	8	6	1	17	32	
01-Feb-06	Wednesday	8	3	2	9	22	156
02-Feb-06	Thursday	8	7	3	10	28	
03-Feb-06	Friday	10	15	11	14	50	

Date	Day	RUN					Weekly Total
		West 7AM	West 3PM	East 9AM	East 5PM	Daily Total	
06-Feb-06	Monday	16	3	7	8	34	271
07-Feb-06	Tuesday	11	13	18	11	53	
08-Feb-06	Wednesday	10	18	15	13	56	
09-Feb-06	Thursday	21	8	7	18	54	223
10-Feb-06	Friday	18	17	11	28	74	
13-Feb-06	Monday	14	4	4	11	33	
14-Feb-06	Tuesday	14	15	3	10	42	321
15-Feb-06	Wednesday	16	8	10	26	60	
16-Feb-06	Thursday	19	5	1	15	40	
17-Feb-06	Friday	4	20	10	14	48	119
20-Feb-06	Monday	27	8	15	22	72	
21-Feb-06	Tuesday	25	10	7	30	72	
22-Feb-06	Wednesday	29	15	12	25	81	156
23-Feb-06	Thursday	22	9	8	19	58	
24-Feb-06	Friday	9	7	7	15	38	
27-Feb-06	Monday	9	5	4	10	28	269
28-Feb-06	Tuesday	2	8	2	0	12	
01-Mar-06	Wednesday	5	2	1	6	14	
02-Mar-06	Thursday	12	5	1	11	29	156
03-Mar-06	Friday	4	14	8	10	36	
06-Mar-06	Monday	6	14	21	4	45	
07-Mar-06	Tuesday	5	12	7	7	31	269
08-Mar-06	Wednesday	2	4	5	6	17	
09-Mar-06	Thursday	4	6	6	8	24	
10-Mar-06	Friday	14	9	2	14	39	262
13-Mar-06	Monday	14	4	4	12	34	
14-Mar-06	Tuesday	35	9	7	38	89	
15-Mar-06	Wednesday	8	7	1	14	30	305
16-Mar-06	Thursday	12	18	4	14	48	
17-Mar-06	Friday	19	10	12	27	68	
20-Mar-06	Monday	20	12	12	18	62	262
21-Mar-06	Tuesday	23	18	6	28	75	
22-Mar-06	Wednesday	9	5	1	15	30	
23-Mar-06	Thursday	9	22	4	13	48	305
24-Mar-06	Friday	13	4	15	15	47	
27-Mar-06	Monday	15	21	12	15	63	
28-Mar-06	Tuesday	12	5	7	11	35	305
29-Mar-06	Wednesday	25	18	10	31	84	
30-Mar-06	Thursday	13	26	4	18	61	
31-Mar-06	Friday	15	11	8	28	62	
TOTAL RIDERSHIP							3896
Avg daily ridership							44
18 weeks total							

4.3.2 Passenger Age

Passengers were slightly older than the average for the study regions (see **Figure 4-3**). The Whatcom County passengers were older than the average in Whatcom County.

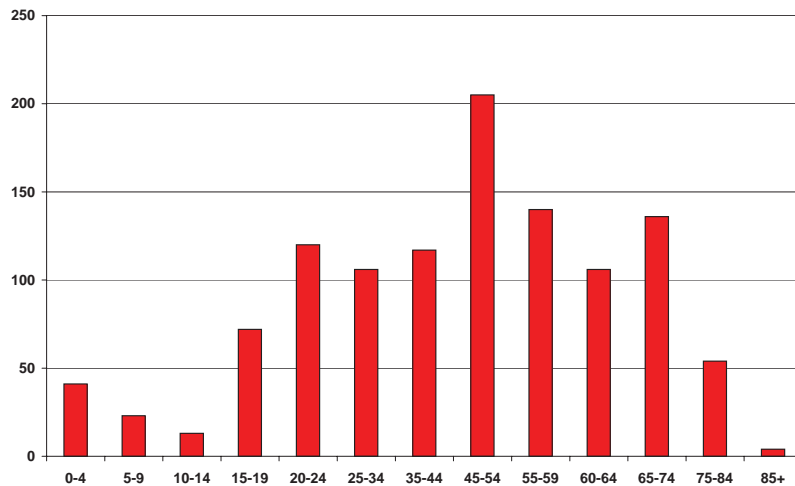
Passengers from San Juan Island were also older, when compared to San Juan Island census data from 2000.

4.3.3 Residency and Trip Patterns

The majority of passenger trips originated in Whatcom County (55 percent of all riders). Of the Whatcom County residents, 46 percent live in Bellingham. The rest of the Whatcom County residents were from Ferndale, Blaine, Everson, and Lynden.

Figure 4-3

Passengers by Age Group



Approximately one-third of all passengers originated from Friday Harbor (30 percent), with the rest of the passenger residency made up of out-of-state residents or people visiting from outside of Whatcom County. See **Figure 4-4**.

4.3.4 Trip Purpose

Passengers were asked to identify the main purpose of their ferry trip for that specific day. **Figure 4-5** illustrates those reported trip purposes.

Figure 4-5

Passengers by Residence

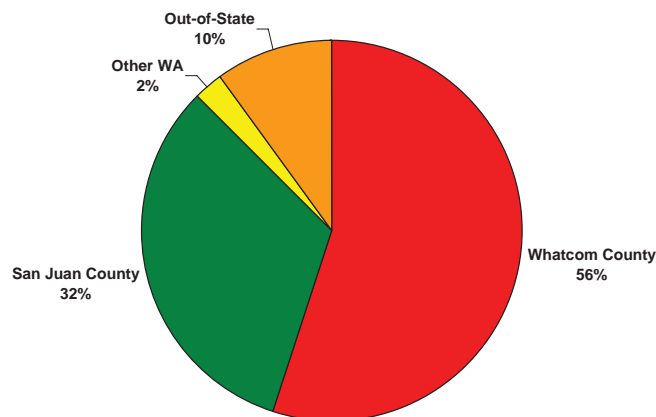
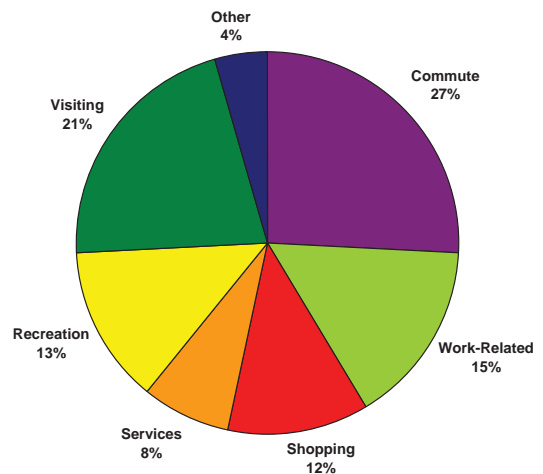


Figure 4-5

Passenger Trip Purpose



4.4 Market Analysis

4.4.1 Introduction

Three geographic markets were considered to assess the possible present day regional demand for passenger-only ferry service: The island market (residents of San Juan Island and the surrounding islands); the mainland market (Whatcom County residents); and recreational travelers (tourists and visitors). Each market represents different needs for frequency and amenities.

Data collected from the on-board passenger surveys (“Passenger”), the mailed household surveys sent to all residents of San Juan Island (“Household”), and the survey posted on the internet (“Online”) were summarized by respondents’ place of residence to develop the following analysis.

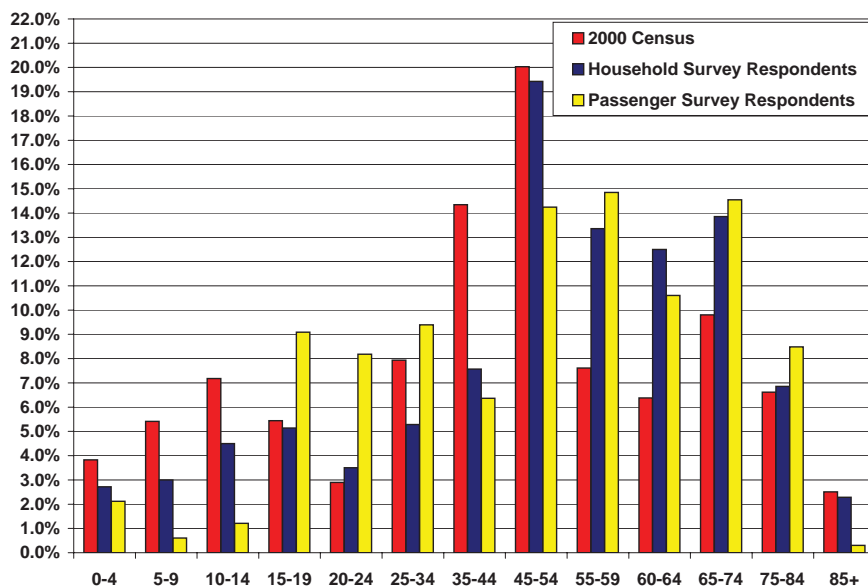
4.4.2 San Juan Islanders

Data for San Juan Islanders are collected from all three data sources mentioned above.

Figure 4-6 shows household survey and passenger survey respondents by age distribution, compared to the year 2000 census data for San Juan Island. This comparison shows that: ages 15-34 were over-represented as passengers but appeared on household surveys in closer proportion to their population; ages 35-54 were under-represented as both ferry passengers and household survey respondents; and ages 55-74 were over-represented as both ferry passengers and household survey respondents.

Figure 4-6

Comparative Age Distributions: Year 2000 Census of San Juan Island, San Juan Island Household Survey, and Passenger Survey



“Household” and “Passenger” survey respondents were asked to identify the number of off-island trips made each year for specific trip purposes. **Figure 4-7** and **Figure 4-8** compare responses from the two sources. Results are similar. San Juan Islanders were also asked about the frequency of off-island trips (see **Figure 4-9** and **Figure 4-10**). 80 percent of respondents take off-island trips between one and four times a month.

Online survey data results reflect similar responses from the San

Juan Island residents. Online survey respondents from San Juan Island were predominantly between the ages of 25 and 65 and their survey responses generally reflect those from the household and passenger surveys (see **Appendix F: Online Survey Results**).

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Figure 4-7

San Juan Island Off-Island Trips by Purpose (Household Survey)

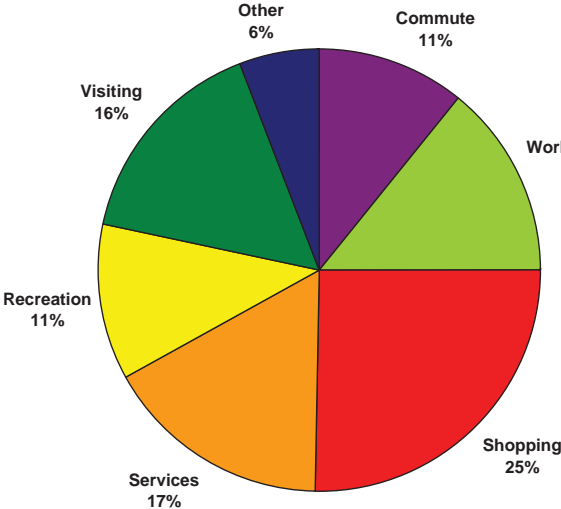


Figure 4-8

San Juan Island Off-Island Trips by Purpose (Passenger Survey - San Juan County Residents)

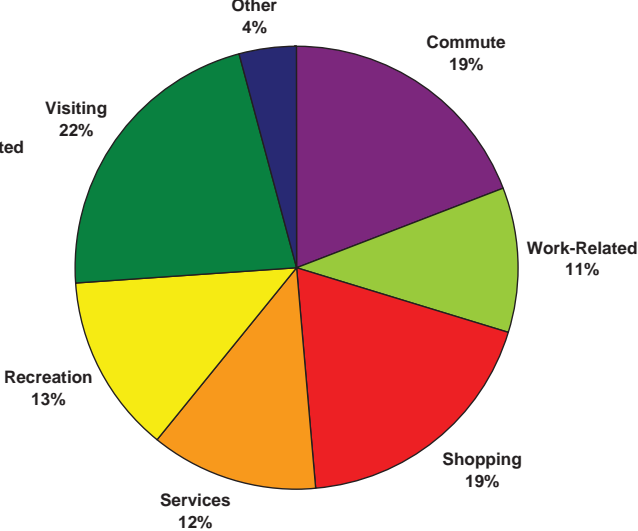
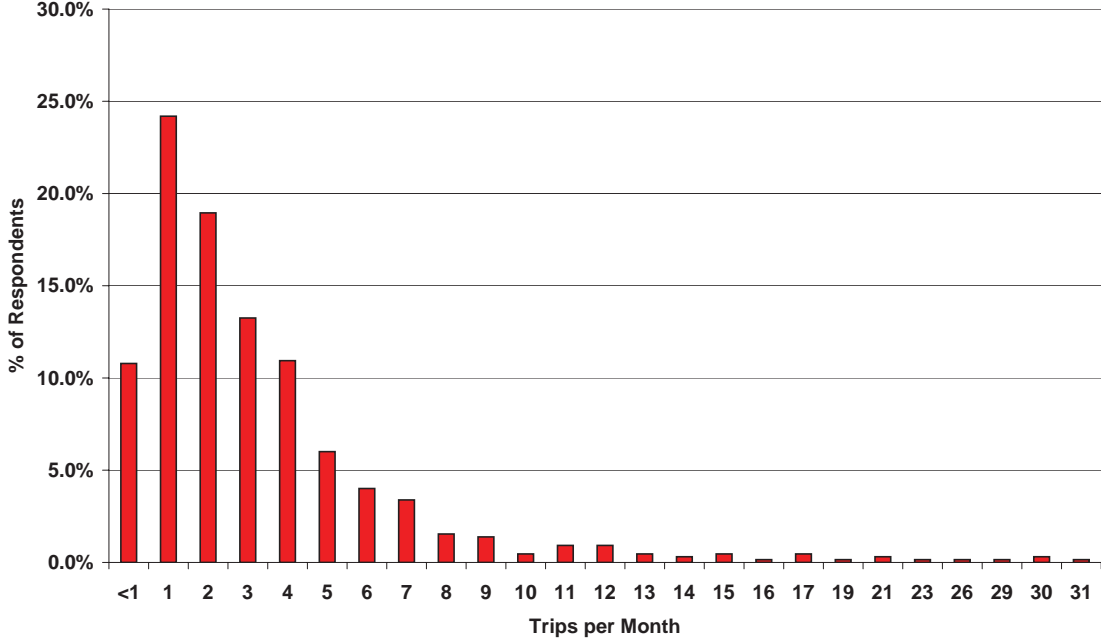


Figure 4-9

San Juan Island Off-Island Trips per Month (Household Survey)



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4.4.3 Regional Mainland

The regional mainland market is defined as passengers who reside within Whatcom County. An assessment of this market is based, primarily, on the results of the passenger survey. Most passengers (56 percent) reported Whatcom County residence. San Juan Island residents accounted for 32 percent of pilot project passengers. Visitors were 12 percent of pilot project passengers. See **Table 4-3** for a breakdown of passenger survey respondents by residence.

Of all mainland-resident survey respondents, 80 percent live in Whatcom County, 15 percent live out-of-state, and the rest reside in other parts of Washington State.

Analysis in Section 4.4.3 focuses on the 56 percent of passenger survey respondents who live in Whatcom County. All other respondents' results are reviewed in **Section 4.4.2**

Passenger Regions of Origin

Whatcom County	408	55.1%
San Juan County	240	32.4%
Other WA	17	2.3%
Out-of-State	75	10.1%
TOTAL	740	

Whatcom County

City	State	Count	%
Bellingham	WA	338	45.7%
Ferndale	WA	21	2.8%
Blaine	WA	13	1.8%
Lummi Island	WA	11	1.5%
Everson	WA	7	0.9%
Lynden	WA	7	0.9%
Birch Bay	WA	6	0.8%
Maple Falls	WA	2	0.3%
Deming	WA	1	0.1%
Nooksack	WA	1	0.1%
Point Roberts	WA	1	0.1%
SUBTOTAL		408	55.1%

San Juan County

City/Island	State	Count	%
Friday Harbor	WA	222	30.0%
Eastsound	WA	5	0.7%
Waldron Island	WA	3	0.4%
Lopez Island	WA	3	0.4%
Orcas Island	WA	2	0.3%
Deer Harbor	WA	1	0.1%
Henry Island	WA	1	0.1%
Roche Harbor	WA	1	0.1%
Shaw Island	WA	1	0.1%
Stuart Island	WA	1	0.1%
SUBTOTAL		240	32.4%

Other WA

City	State	Count	%
Seattle	WA	4	0.5%
Sedro Woolley	WA	4	0.5%
Mt. Vernon	WA	3	0.4%
Marysville	WA	1	0.1%
Olympia	WA	1	0.1%
Spokane	WA	2	0.3%
Port Hadlock	WA	1	0.1%
Puyallup	WA	1	0.1%
SUBTOTAL		17	2.3%

Out-of-State

City	State	Count	%
Magdeburg		1	0.1%
Gustavas	AK	3	0.4%
JUNEAU	AK	1	0.1%
Calgary	AB	1	0.1%
Tofino	BC	1	0.1%
Red Bluff	CA	2	0.3%
San Diego	CA	2	0.3%
San Francisco	CA	2	0.3%
Broomfield	CA	1	0.1%
Carlsbad	CA	1	0.1%
Glen Ellen	CA	1	0.1%
Glendale	CA	1	0.1%
Moraga	CA	1	0.1%
Novato	CA	1	0.1%
Riverside	CA	1	0.1%
Santa Clara	CA	1	0.1%
Ourray	CO	1	0.1%
Baltic	CT	1	0.1%
Ft. Walton Beach	FL	2	0.3%
Key West	FL	1	0.1%
Shalimar	FL	1	0.1%
Corning	IA	1	0.1%
Rexburg	ID	1	0.1%
Chicago	IL	1	0.1%
Skokie	IL	1	0.1%
Canterbury	Kent	1	0.1%
Paint Lick	KY	1	0.1%
Payton	MA	1	0.1%
Provincetown	MA	1	0.1%
Elkton	MI	1	0.1%
Weaverville	NC	1	0.1%
Albuquerque	NM	2	0.3%
Arroyo Seco	NM	1	0.1%
Santa Fe	NM	1	0.1%
Syndey		1	0.1%
Loudonville	NY	2	0.3%
Bronxville	NY	1	0.1%
Gloversville	NY	1	0.1%
Mayfield	NY	1	0.1%
Sarnia	ON	1	0.1%
Portland	OR	4	0.5%
Eugene	OR	3	0.4%
Corvallis	OR	2	0.3%
Independence	OR	1	0.1%
North Bend	OR	1	0.1%
Philadelphia	PA	1	0.1%
Montreal	QC	2	0.3%
Rapid City	SD	1	0.1%
Fife Lake	SK	1	0.1%
Marysville	TN	1	0.1%
Lubbock	TX	1	0.1%
Lufkin	TX	1	0.1%
Pasadena	TX	1	0.1%
San Antonio	TX	1	0.1%
Texas City	TX	1	0.1%
Salt Lake City	UT	2	0.3%
Eau Claire	WI	2	0.3%
Wautoma	WI	1	0.1%
SUBTOTAL		75	10.1%

Figure 4-10

San Juan Island Off-Island Trips per Month
(Passenger Survey - San Juan County Residents)

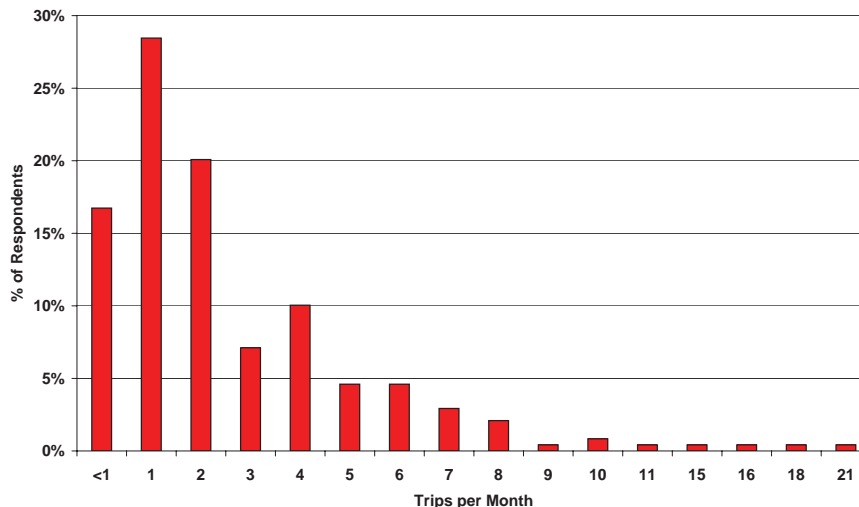


Table 4-3
Passenger Cities of Residence

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(San Juan County residents) or **Section 4.4.4** (visitors to the area).

The age breakdown of Whatcom County passengers is similar to the demographic age statistics for Whatcom County as a whole, based on 2000 Census information. See **Figure 4-11**.

Mainlanders' trip purposes differ from those of San Juan Islanders. A majority of trips were made to San Juan Island for work or work-related purposes (56 percent). See **Figure 4-12** and **Figure 4-13**.

Figure 4-11

*Ages of Whatcom County Residents
 (2000 Census of Whatcom County & Passenger Survey - Whatcom
 County Residents)*

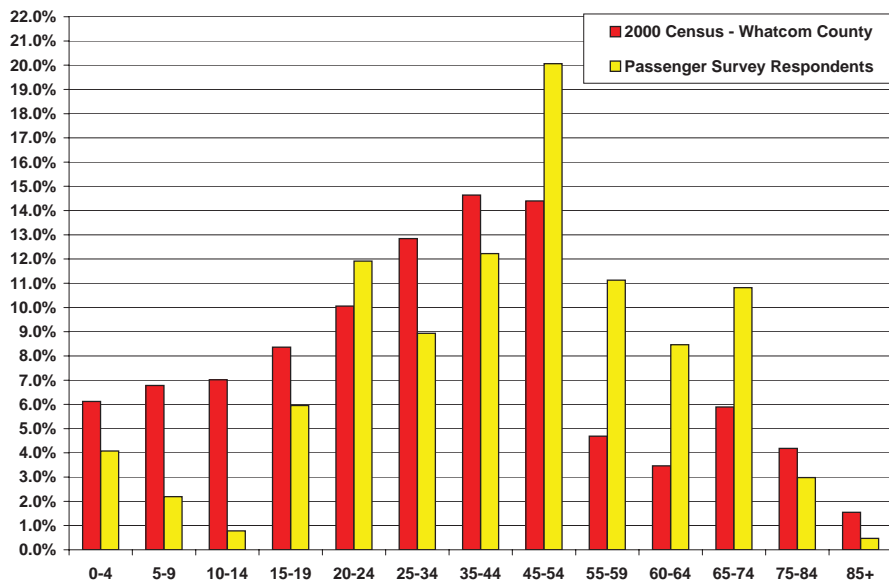


Figure 4-7

*Mainland Passenger Trip Purposes
 (Passenger Survey - Whatcom County Residents)*

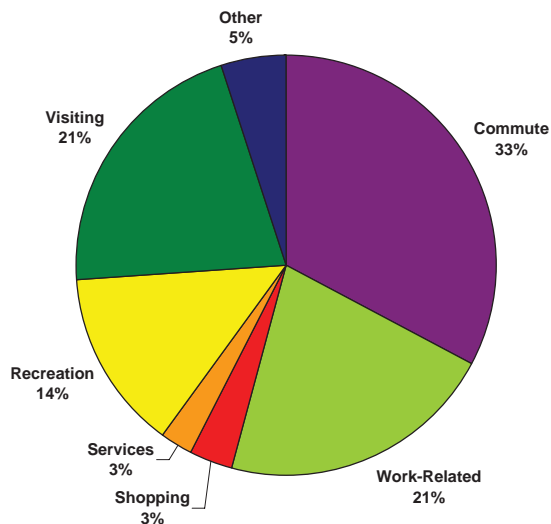


Figure 4-8

*San Juan Passenger Trip Purposes
 (Passenger Survey - San Juan County Residents)
 Shown for comparison*

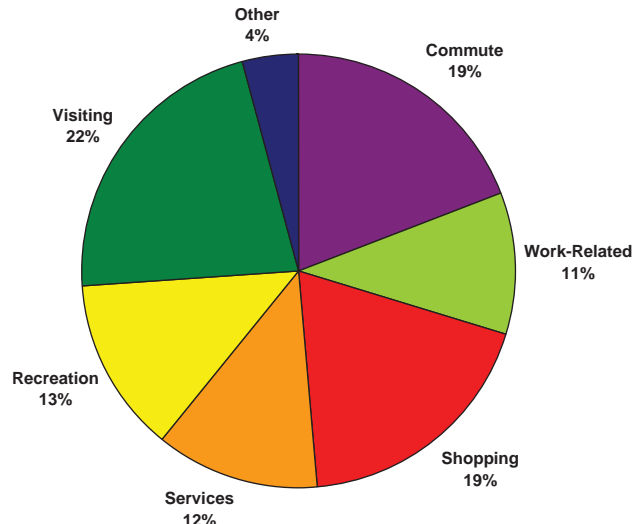
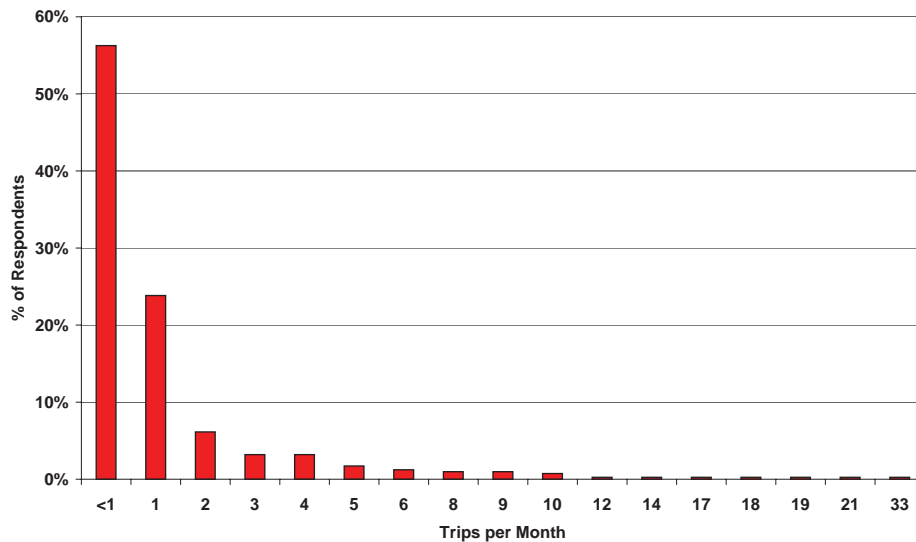


Figure 4-12

*Frequency of trips to San Juan Island for Whatcom County Residents
 (Passenger Survey)*



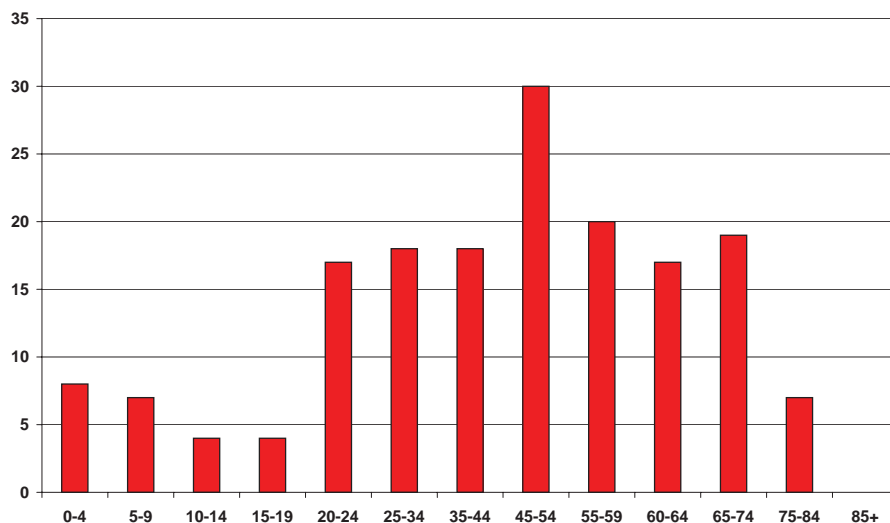
Over 93 percent of the mainland resident passengers traveled to San Juan Island less than four times a month, with over 50 percent of them crossing less than once a month, or infrequently. See **Figure 4-12**.

4.4 Visitors to the Area

A little over 12 percent of all passengers on the pilot project ferry service were visitors to the area. Visitors are defined as those who listed their residence as outside of Whatcom County. Ages of visitors are shown in **Figure 4-13**.

Figure 4-13

*Ages Distribution of Visitors
 (Passenger Survey - Out-of-State/Other WA Residents)*



4.5 Survey-based Optimal Service Scenario

4.5.1 Introduction

This section considers survey responses from the three market components (San Juan Island residents, Mainland residents, and Visitors) and suggests optimal characteristics that would best serve the largest identified market.

4.5.2 Comparisons of Markets

The age distribution of passenger survey responses from San Juan Island compared to the census-based distribution showed lower ridership by 35-54 year-olds and higher ridership by other age groups (older youth and seniors).

For Whatcom County, the same kind of comparison indicated ridership in closer proportion to overall age distribution. This would seem to corroborate the higher rate of work-related trips originating in Bellingham.

4.5.3 Features of Optimal Service

Schedule

Both San Juan Island residents and passengers using the pilot ferry service were asked to define their optimal trip schedule. The predominant request was for weekend service, and a schedule that allowed San Juan Island residents to spend more time in Bellingham. The optimal schedule listed in **Table 4-4** is based on both passenger survey results (see **Figure 4-14**) and household surveys (see **Figure 4-15**).

Weekend service was, by a significant margin, the most requested change to the schedule. It is critical that any new service include scheduled weekend transportation.

Other schedule requests include coordinating the schedule with the Amtrak train south to Seat-

Table 4-4

*Optimal passenger-only ferry schedule between
Friday Harbor and Bellingham*

WESTBOUND		EASTBOUND	
Depart Bellingham	Arrive Friday Harbor	Depart Friday Harbor	Arrive Bellingham
8:20	10:00	7:20	9:00
16:20	18:00	15:20	17:00

Boat A (based in Bellingham)

Boat B (based in Friday Harbor)

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Figure 4-14

Passenger survey schedule preferences

Optimal Friday Harbor Arrival Times

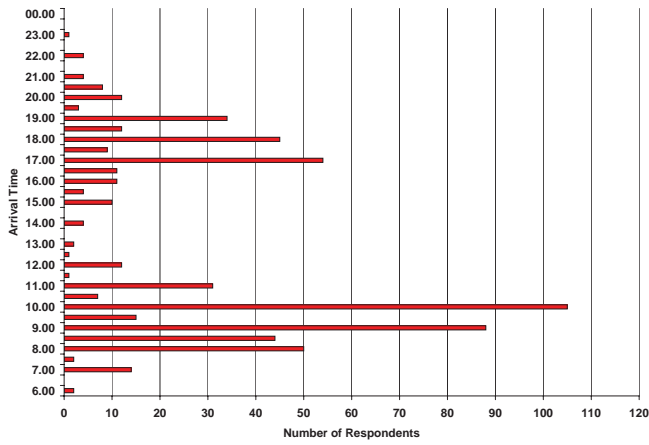
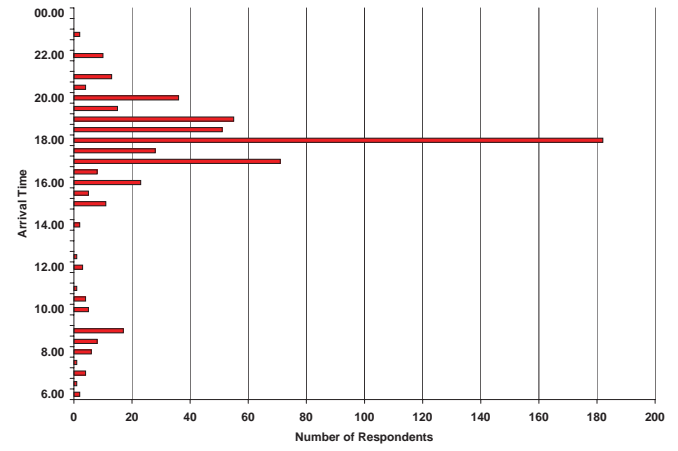


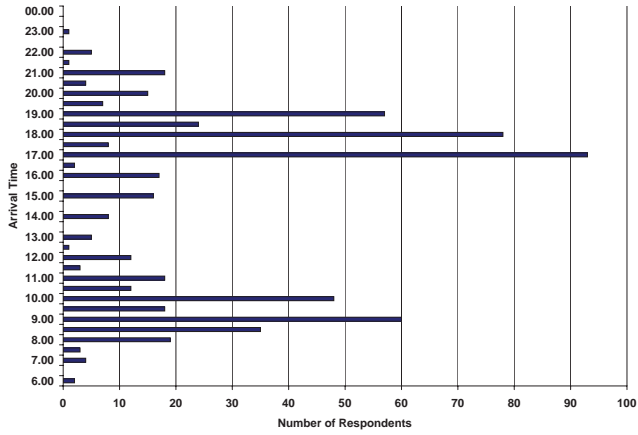
Figure 4-15

Household survey schedule preferences

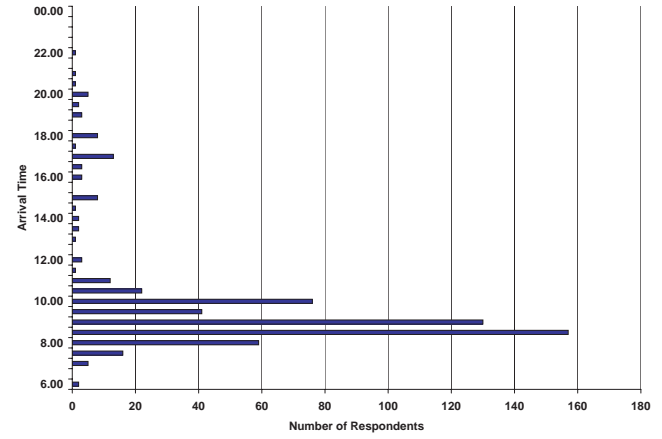
Optimal Friday Harbor Arrival Times



Optimal Bellingham Arrival Times



Optimal Bellingham Arrival Times



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Figure 4-16

Passenger survey on-board amenities requested

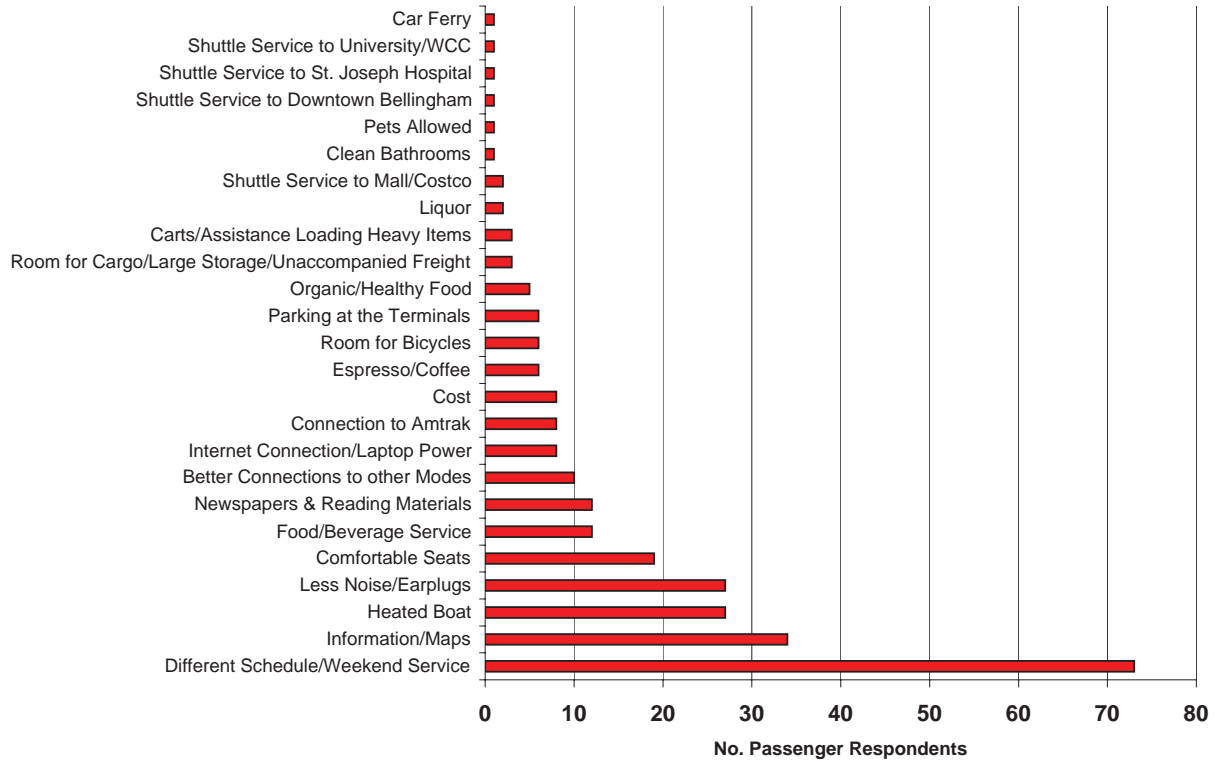
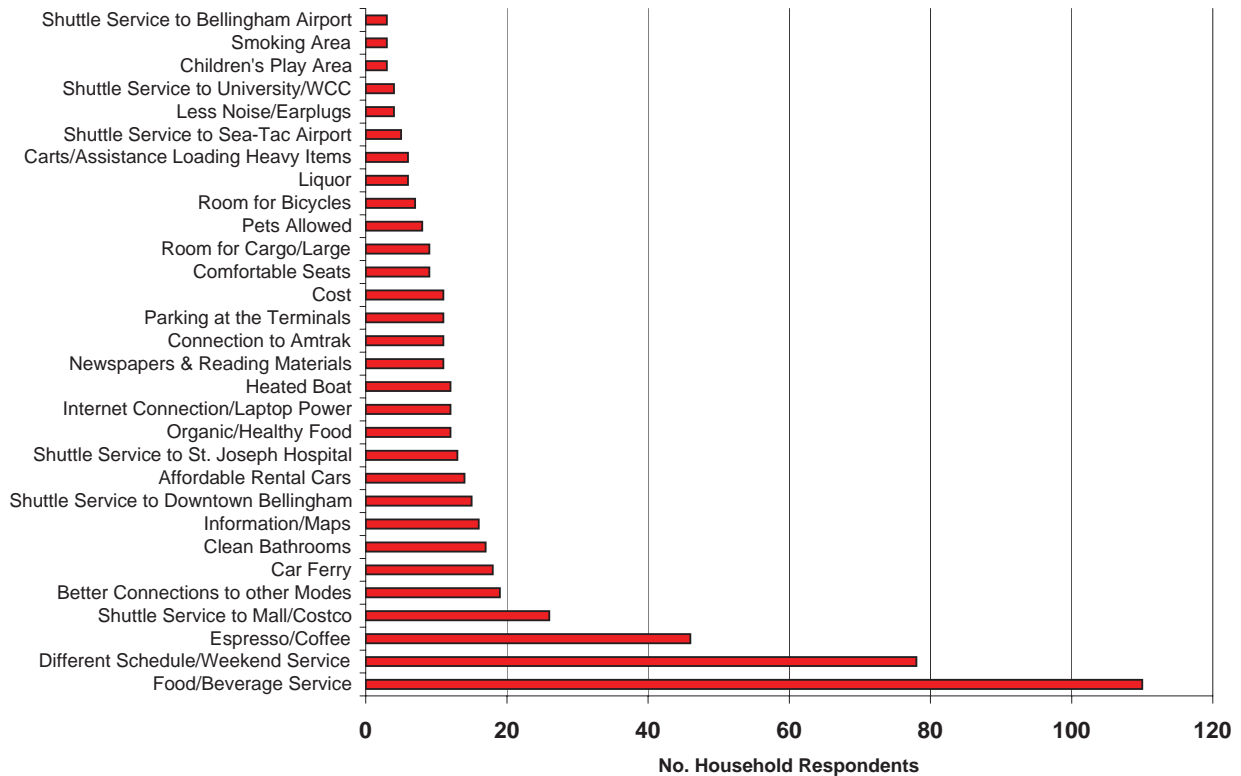


Figure 4-17

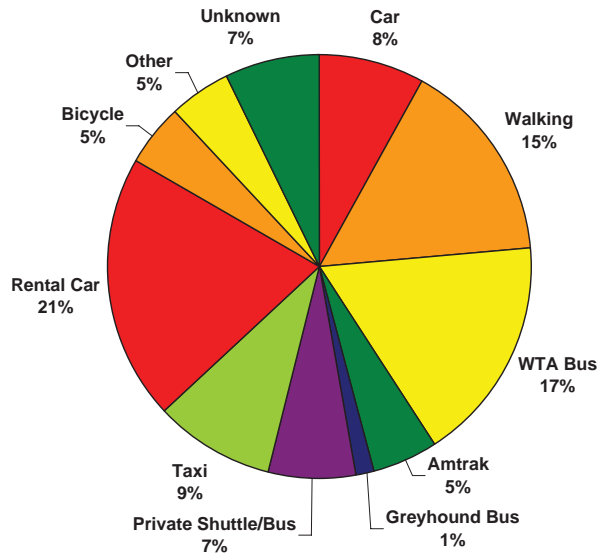
Household survey on-board amenities requested



tle, and with the Washington State Ferry system in order to pick up passengers from surrounding San Juan Islands (see **Figure 4-16** and **Figure 4-17**). Presumably, riders would also want the opportunity to connect with newly established Intercounty transit services.

Figure 4-18

Transportation connections in Bellingham (San Juan Island Household Survey)



Service Amenities

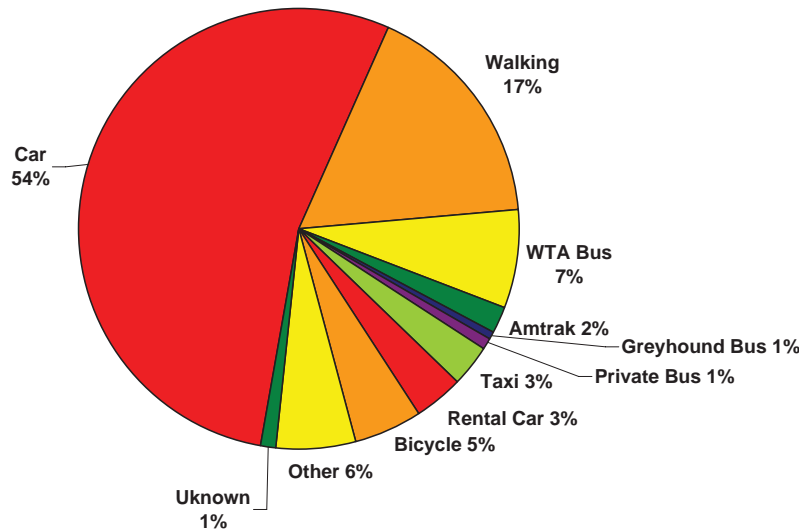
On-board amenities requested include more information about the route, including maps, other destinations, and possible connections with other modes. As was provided in the pilot project ferry service, food and beverage services, as well as storage space for bicycles and bulky items were also requested. Other requests include newspapers and other reading materials (see **Figure 4-16** and **Figure 4-17**).

Pricing

A small percentage of survey respondents expressed concern over the pricing. Conversely, many comments were received praising the affordability of the service. Added connections and routes may require adjustments. The WA State ferry service will be a relevant benchmark for consumers.

Figure 4-19

Transportation connections in Bellingham (Passenger Survey)



Transportation Connections

In Bellingham, a majority of respondents said they would use either private cars or rental cars to and from the terminal in Fairhaven. Of the San Juan Island household survey respondents, 17 percent said they would use the bus system as well. 17 percent of passenger survey respondents said they would walk to and from the Bellingham terminal. See **Figure 4-18** and **Figure 4-19**.

In Friday Harbor, the most predominant form of transportation to and from the ferry terminal is by private vehicle. Approximately 39 percent of passengers coming from Bell-

ingham to Friday Harbor said they would walk to and from the terminal. See **Figure 4-20** and **Figure 4-21**.

4.5.4 Limitations

Survey respondents were asked to identify any factors they perceived as limitations to their use of passenger-only ferry service between Bellingham and Friday Harbor. The results for both the household survey and the passenger survey are shown in **Figure 4-22** and **Figure 4-23**.

As illustrated in **Figure 4-22** and **Figure 4-23**, the number-one limitation to using the pilot project passenger ferry service was the schedule. San Juan Island residents also stated that they needed a car to transport purchases and bulky items, or to get to and from the ferry terminal.

4.5.5 Estimated Ridership

62 percent of passenger survey respondents said that they would use the service in the future for all of their Bellingham/Friday Harbor needs. 35 percent said the service served some of their needs, but not all of them.

Over 87 percent of passenger survey respondents said they would make more frequent trips to Bellingham or Friday Harbor if the ferry service was permanent.

Potential, future ridership is explored in greater detail in **Section 6**.

Figure 4-20

Transportation connections in Friday Harbor (Passenger Survey)

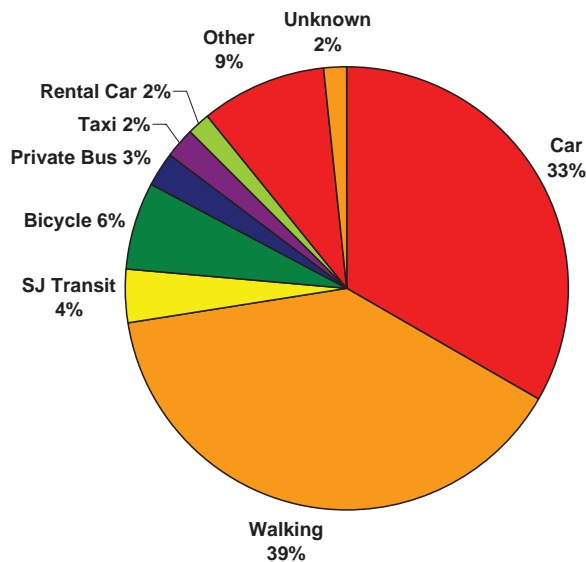


Figure 4-21

Transportation connections in Friday Harbor (Household Survey)

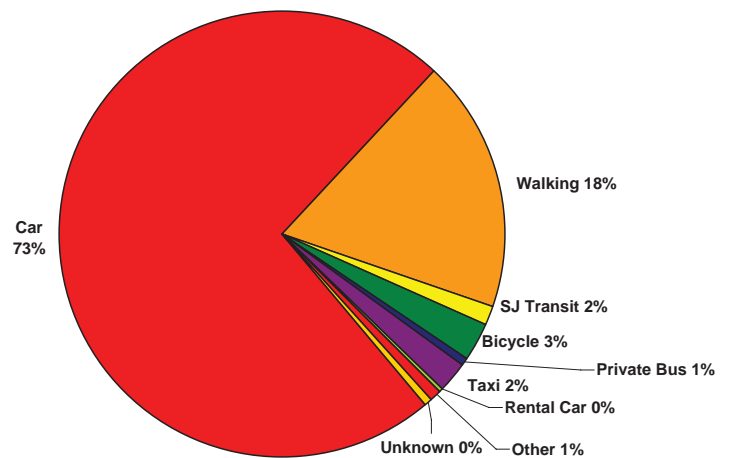


Figure 4-22

*Limitations to using a passenger ferry service
(Passenger Survey)*

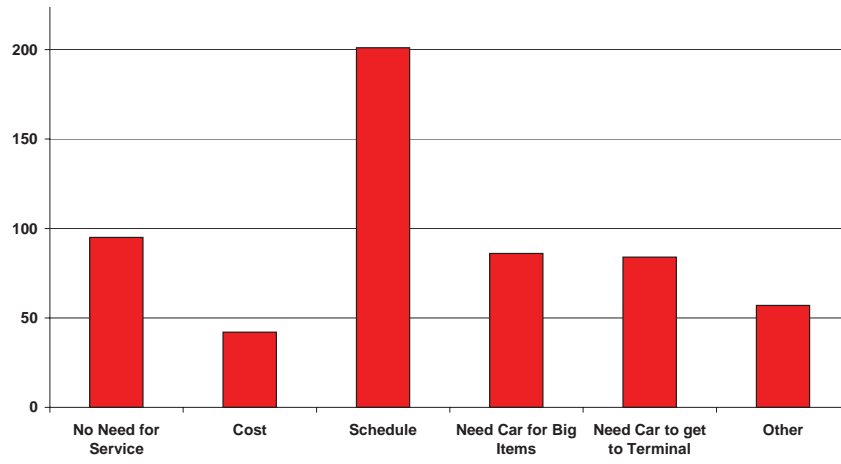
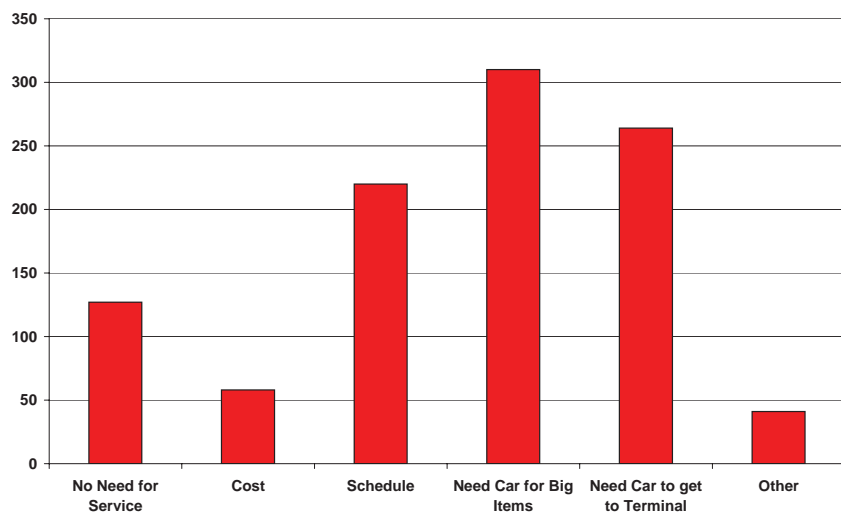


Figure 4-23

*Limitations to using a passenger ferry service
(Household Survey)*



4.5.6 Revenue

Based on an operating cost of \$2,000 a day (cost estimate provided by Victoria- San Juan Cruises), revenues from the pilot project covered approximately 15 percent of the total cost of the service.¹

4.5.7 Alternative Routes

Survey respondents were asked to identify other origin-destination preferences to travel by passenger ferry.

San Juan Island household survey respondents listed several locations to travel to and from via passenger ferry. The following are the top five choices:

- Friday Harbor to Victoria, B.C. (31 percent of respondents to this question)
- Friday Harbor to Vancouver, B.C. (12 percent of respondents to this question)
- Friday Harbor to Sidney, B.C. (Vancouver Island)
- Friday Harbor to Port Townsend, WA
- Friday Harbor to Seattle, WA

For passenger ferry respondents to this question, the top five origin-destination requests were:

- Bellingham to Orcas Island, WA
- Bellingham to Victoria, B.C.
- Friday Harbor to Seattle, WA
- Bellingham to Lopez Island, WA
- Friday Harbor to Sidney, B.C. (Vancouver Island)

A full listing of desired routes and response rates is available in **Appendix G: Full List of Desired Routes**.

¹ The pilot project collected \$25,980.13 in fares to offset the total operating cost of \$174,000.

5. Vessel Configuration

Substantial research has been completed on vessel types for passenger-only ferry services. **Section 2** identifies a number of studies that examined this issue closely. Some time has elapsed since the most recent vessel size and configuration analyses for this study area, however, and newer designs have emerged including new hull designs, power systems and low-/no-wake configurations. At least two boat manufacturers in the Bellingham, WA area have developed designs appropriate for passenger-only ferry use in the local waters.

As a result of federal regulations, vessel manning requirements and their associated cost become a determinant of vessel size relative to anticipated demand and cost of operation. Vessel over all length and displacement determine whether a mate and deckhands are required, for example. Wake generation is also regulated and thus an aspect of vessel design in coastwise operations. These factors must be weighed carefully in selecting appropriate vessel design(s).

6. Ridership Projections and Financial Considerations

This section details an estimation of what ridership on a permanent Bellingham-Friday harbor passenger ferry service would be.

This analysis is primarily based on four data sources: ridership measures observed during the December 2005-March 2006 pilot service, survey data collected during the pilot service, San Juan Island and Whatcom County U.S. Census data (year 2000), and quarterly traffic statistics from the Washington State Ferry’s Anacortes-Friday Harbor route.

Markets Served

As illustrated in previous descriptions of the survey data collected during the pilot service, the market for Bellingham-Friday Harbor ferry service can be divided into three groups: 1) residents of San Juan Island, 2) residents of Whatcom County, and 3) visitors to the area. This analysis will proceed with a primary emphasis on San Juan and Whatcom residents. As discussed later, out-of-area visitor ridership is a very seasonal market.

Market Size Estimation

To estimate the size of the ridership markets on each end of the ferry run, total population numbers were adjusted to account for age-group difference observed during the 2006 pilot service. For each of 13 age groups (in the table below), the percentage of total (2000) population in that age group was compared to the percentage of pilot-service passengers in that age group. The estimated future market percentage was conservatively taken to be the smaller of the two. This is plotted on the charts below.

Table 6-1: San Juan Residents – current market size

Age Groups	2000 Census		2006 Pilot Ridership	Adj. Market %	Adj. Market Est.
0-4	264	3.8%	2.1%	2.1%	146
5-9	373	5.4%	0.6%	0.6%	42
10-14	495	7.2%	1.2%	1.2%	84
15-19	375	5.4%	9.1%	5.4%	375
20-24	200	2.9%	8.2%	2.9%	200
25-34	547	7.9%	9.4%	7.9%	547
35-44	989	14.3%	6.4%	6.4%	439
45-54	1381	20.0%	14.2%	14.2%	982
55-59	525	7.6%	14.8%	7.6%	525
60-64	440	6.4%	10.6%	6.4%	440
65-74	676	9.8%	14.5%	9.8%	676
75-84	456	6.6%	8.5%	6.6%	456
85+	173	2.5%	0.3%	0.3%	21
Total	6,894	100.0%	100.0%	71.5%	4,932

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Chart 6-1:

Age-group Adjusted San Juan Island Market Capture Based on 2006 Pilot Service Experience

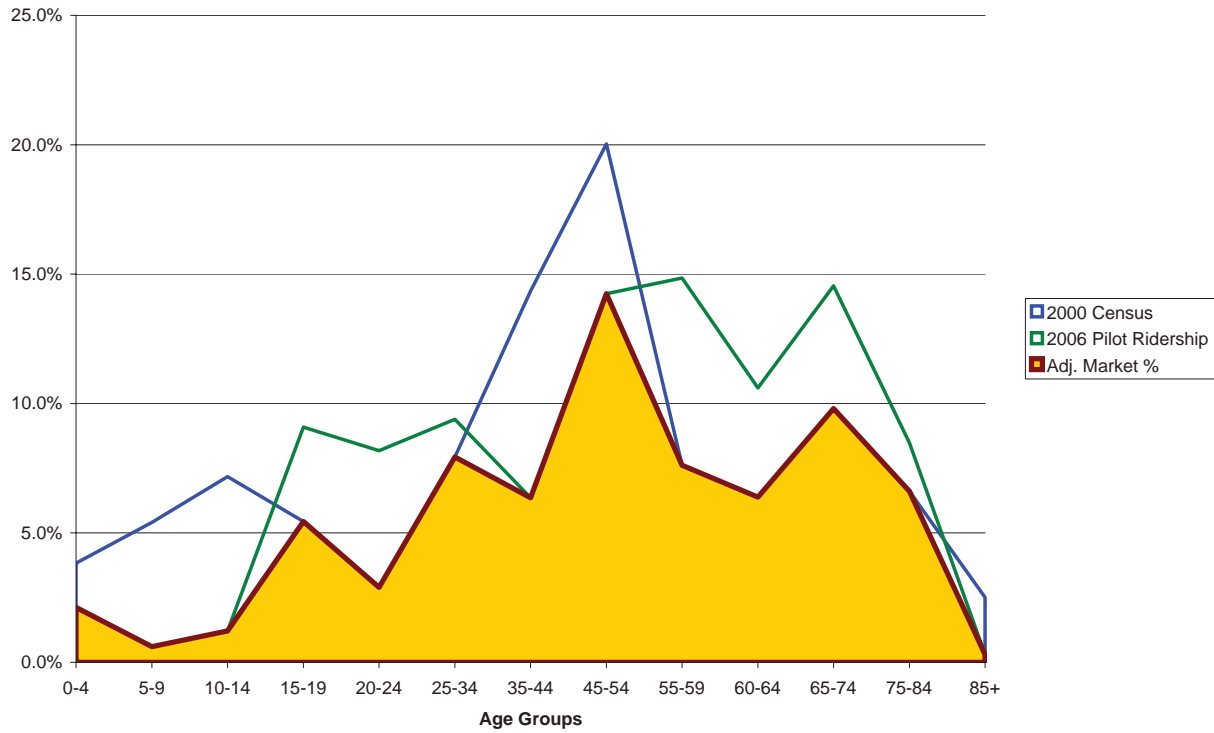
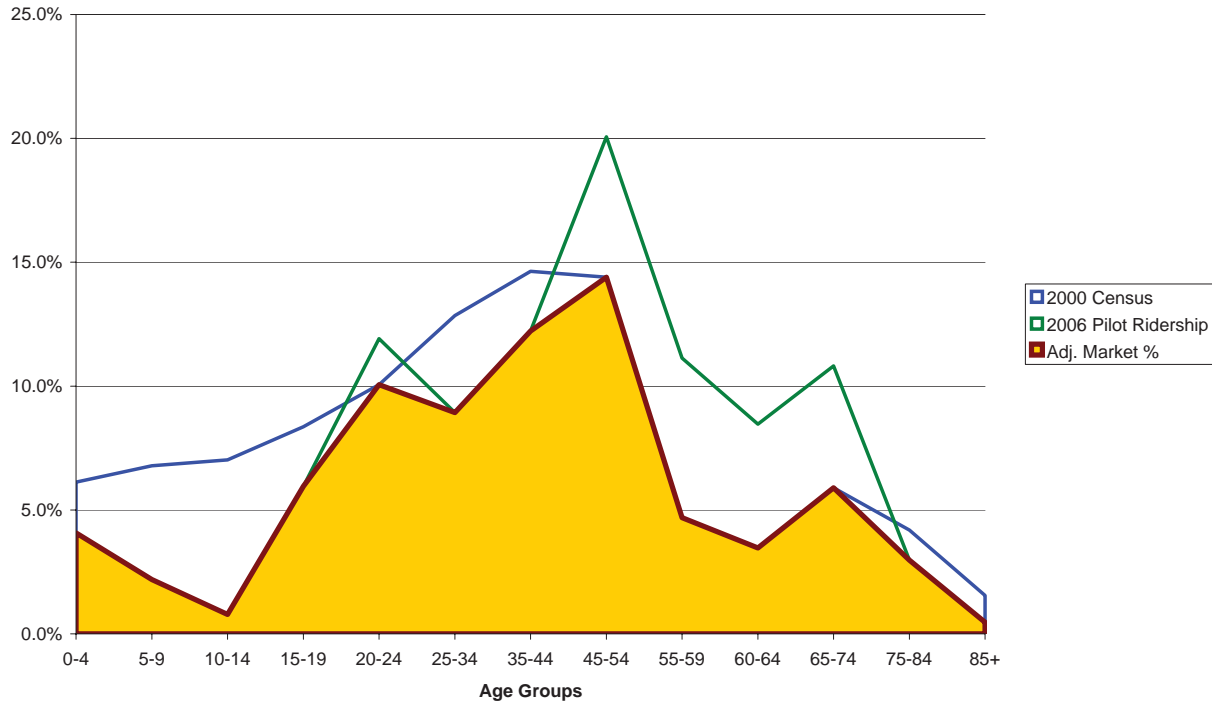


Table 6-2: Whatcom County – current market size

Age Groups	2000 Census	2000 Census	2006 Pilot Ridership	Adj. Market %	Adj. Market Est.
0-4	10,210	6.1%	4.1%	4.1%	6,798
5-9	11,312	6.8%	2.2%	2.2%	3,660
10-14	11,707	7.0%	0.8%	0.8%	1,307
15-19	13,946	8.4%	6.0%	6.0%	9,936
20-24	16,776	10.1%	11.9%	10.1%	16,776
25-34	21,429	12.8%	8.9%	8.9%	14,903
35-44	24,418	14.6%	12.2%	12.2%	20,394
45-54	24,018	14.4%	20.1%	14.4%	24,018
55-59	7,819	4.7%	11.1%	4.7%	7,819
60-64	5,779	3.5%	8.5%	3.5%	5,779
65-74	9,833	5.9%	10.8%	5.9%	9,833
75-84	6,985	4.2%	3.0%	3.0%	4,968
85+	2,582	1.5%	0.5%	0.5%	784
	166,814	100.0%	100.0%	76.1%	126,976

Chart 6-2:

Age-group Adjusted Whatcom County Market Capture Based on 2006 Pilot Service Experience



So, to summarize and clarify, the calculations illustrated on the above tables and plotted on the above charts conclude that an adjusted, current-day market size would be:

- For San Juan Island: 4,932 people
- For Whatcom County: 126,976 people

Estimation of Trip-Demand Within Markets

The next step is to look at the stated trip-making behavior of survey respondents.

San Juan Island Market

For San Juan Island, the ability to affordably mail a survey to every Island household improves the validity of this estimation. **Figure 4-12** shows the reported trip-making behavior of San Juan residents. The same feedback is used as the starting point for the following table. To estimate the San Juan Island based market potential for monthly, foot-passenger trips on a Bellingham-Friday Harbor service, the following steps were taken.

- The percentage of responses associated with each trip-frequency category was multiplied by the adjusted-market population to produce the estimated number of San Juan Residents in each trip-frequency group.
- The trip-frequency group people-counts were then multiplied by the corresponding

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monthly trip number to produce *estimated trips* (except for frequency <1 which was multiplied by .25).

- Based on typical split between vehicle-borne passengers and foot-passengers on the WSF run between Anacortes and San Juan Island (about 1/3), a foot-passenger estimate was produced by multiplying *estimated trips* by % by foot.
- Incorporating a conservative assumption that one-half of off-island trips would always be served by the existing WSF runs, the estimated “% by foot” is halved to produce an upper bound market of monthly trips by San Juan Island residents – 2,746.

Table 6-3: Estimation of Trips from the San Juan Market Based on stated trip frequency.

Trips-per-month categories	Number of household respondents	Percent	San Juan Adj Market Pop: 4,932	Est trips	% by foot 33%	% served by Bellingham ferry 50%
<1	70	10.8%	532	17.5	6	3
1	157	24.2%	1,193	1,193	394	197
2	123	19.0%	935	1,869	617	308
3	86	13.3%	654	1,961	647	324
4	71	10.9%	540	2,158	712	356
5	39	6.0%	296	1,482	489	245
6	26	4.0%	198	1,186	391	196
7	22	3.4%	167	1,170	386	193
8	10	1.5%	76	608	201	100
9	9	1.4%	68	616	203	102
10	3	0.5%	23	228	75	38
11	6	0.9%	46	502	166	83
12	6	0.9%	46	547	181	90
13	3	0.5%	23	296	98	49
14	2	0.3%	15	213	70	35
15	3	0.5%	23	342	113	56
16	1	0.2%	8	122	40	20
17	3	0.5%	23	388	128	64
19	1	0.2%	8	144	48	24
21	2	0.3%	15	319	105	53
23	1	0.2%	8	175	58	29
26	1	0.2%	8	198	65	33
29	1	0.2%	8	220	73	36
30	2	0.3%	15	456	150	75
31	1	0.2%	8	236	78	39
	649	100.0%	4,932	16,645	5,493	2,746

To clarify, the calculations laid out in the above table conclude that San Juan island residents could make, on average, 2,746 trips per month on a Bellingham-Friday Harbor passenger ferry service.

Whatcom County Market

Table 6-4 below carries out the same method for the Whatcom County resident market. Note though that the numbers here are based on surveys administered to passengers on the 2006 pilot service – not household surveys like used on San Juan Island.

Table 6-4: Estimation of Trips from the Whatcom County Market Based on stated trip frequency.

Trips-per-month categories	Number of household respondents	Percent	Whatcom Co. Adj. Market Pop.	Est. Trips	% by foot	% Served by B'ham Ferry 90%
			126,976		33%	
<1	229	56%	71,443	57	19	17
1	97	24%	17,027	17,027	5,619	5,057
2	25	6%	1,046	2,092	690	621
3	13	3%	33	100	33	30
4	13	3%	1	4	1	1
5	7	2%	0	0	0	0
6	5	1%	0	0	0	0
8	4	1%	0	0	0	0
9	4	1%	0	0	0	0
10	3	1%	0	0	0	0
12	1	0%	0	0	0	0
14	1	0%	0	0	0	0
17	1	0%	0	0	0	0
18	1	0%	0	0	0	0
19	1	0%	0	0	0	0
21	1	0%	0	0	0	0
33	1	0%	0	0	0	0
	407		89,551	19,281	6,363	5,726

To clarify, the calculations laid out in the above table conclude that Whatcom County residents could make, on average, 5,726 trips per month on a Bellingham-Friday Harbor passenger ferry service.

Washington State Ferry service to Friday Harbor

Publicly available Washington State Ferry (WSF) traffic statistics are reviewed in this analysis for two reasons. First, it is beneficial to check the stated trip-making behavior of San Juan Island residents against historical WSF ferry volumes as well as the Bellingham-Friday Harbor passenger volumes during the pilot-service. Secondly, historical WSF traffic volumes, made available by calendar quarter, provide a basis for estimating seasonal variation in travel demand to and from San Juan Island.

Three WSF routes include stops at Friday Harbor: Anacortes-Friday Harbor, Anacortes-San Juan Islands, and Anacortes-Sidney, BC.

Four vessels rotate in the service of these routes: the M/V Chelan, the M/V Yakima, the M/V Hyak, and the M/V Illahee.

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These routes and vessels provide 10 Anacortes-to-Friday Harbor trips per day and 9 Friday Harbor-to-Anacortes trips per day (based on Fall 2006 schedule).

Table 6-5: Current Anacortes-Friday Harbor Washington State Ferry Service Schedule

Leave Anacortes	Leave Friday Harbor
6:10	6:00
7:45	8:05
9:35	11:10
2:40	1:40
5:05	4:15
5:25	6:45
6:00	6:55
8:25	8:00
9:30	11:40
10:25	

Quarterly WSF Traffic Data

WSF publishes quarterly ridership data by route¹. These data separate passengers into vehicle drivers, vehicle passengers, and foot passengers. Historical data are currently available on-line through 2003.

The following table compiles quarterly data on the Anacortes-Friday Harbor route from 1st quarter 2003 through 2nd quarter 2006.

Table 6-6: Quarterly Washington State Ferry ridership data; Anacortes-Friday Harbor route

Quarter	Vehicle drivers	Vehicle passengers	All drive-on passengers	Foot passengers	Total riders	Avg vehicle occupancy
Q1 2003	61,312	41,110	102,422	21,056	123,478	1.67
Q2 2003	80,914	66,502	147,416	46,986	194,402	1.82
Q3 2003	103,628	107,686	211,314	98,810	310,124	2.04
Q4 2003	68,160	48,162	116,322	26,926	143,248	1.71
Q1 2004	62,108	41,968	104,076	22,210	126,286	1.68
Q2 2004	81,488	64,916	146,404	49,248	195,652	1.80
Q3 2004	103,648	103,894	207,542	87,948	295,490	2.00
Q4 2004	69,776	51,160	120,936	26,196	147,132	1.73
Q1 2005	61,968	41,188	103,156	23,054	126,210	1.66
Q2 2005	80,898	64,266	145,164	46,686	191,850	1.79
Q3 2005	100,746	107,634	208,380	79,138	287,518	2.07
Q4 2005	65,964	47,508	113,472	24,138	137,610	1.72
Q1 2006	59,504	38,420	97,924	18,986	116,910	1.65
Q2 2006	82,166	65,290	147,456	40,410	187,866	1.79

Source data: Washington State Department of Transportation. Compilation and follow-on calculations by WCOG.

In addition to understanding the volumes of trips to and from San Juan Island via the Washington State Ferry, the table below takes the reported quarterly numbers and converts them into average monthly count estimates and weekly, week-day volume estimates. Because the Bellingham-Friday Harbor pilot service only operated on weekdays during winter months, it is important to be able to compare market capture of the two services.

¹ http://www.wsdot.wa.gov/ferries/traffic_stats/

Table 6-7: WSF Anacortes-Friday Harbor Quarterly Data; foot-passenger estimates for month and week-day volume.

Quarter	Foot passengers	Monthly Estimate (1/3 of Quarterly Est.)	Weekly Estimate (1/4 of Monthly Est.)	Mon-Fri Estimate (5/7 of Weekly Est.)
Q1 2003	21,056	7,019	1,755	1,253
Q2 2003	46,986	15,662	3,916	2,797
Q3 2003	98,810	32,937	8,234	5,882
Q4 2003	26,926	8,975	2,244	1,603
Q1 2004	22,210	7,403	1,851	1,322
Q2 2004	49,248	16,416	4,104	2,931
Q3 2004	87,948	29,316	7,329	5,235
Q4 2004	26,196	8,732	2,183	1,559
Q1 2005	23,054	7,685	1,921	1,372
Q2 2005	46,686	15,562	3,891	2,779
Q3 2005	79,138	26,379	6,595	4,711
Q4 2005	24,138	8,046	2,012	1,437
Q1 2006	18,986	6,329	1,582	1,130
Q2 2006	40,410	13,470	3,368	2,405

Monday-Friday Volume Comparison Between WSF and the Bellingham-Friday Harbor Pilot Service

The following table takes the M-F estimated WSF passenger volume calculated in the above table and includes it in a side-by-side comparison with the corresponding four months of observed travel volume on the Bellingham-Friday Harbor pilot.

Table 6-8: Comparison of Pilot Service to WSF Walk-on Ridership Anacortes-Friday Harbor.

Months	Bellingham Pilot Riders	Pilot weekly averages (1/4)	WSF Est Weekly, Weekday foot passengers	Bellingham Pilot Ridership as a % of WSF Market
Dec	1,016	254	1,437	17.7%
Jan	854	214	1,130	18.9%
Feb	955	239	1,130	21.1%
Mar	1,071	268	1,130	23.7%

Year-round Estimate of Demand

A quick look at the quarterly WSF Anacortes-Friday Harbor ridership data reveals that passenger volume is highly seasonal. Similar seasonal variation would also be expected on a future Bellingham-Friday Harbor service – especially if weekend service were added to the schedule.

To estimate annual ridership by quarter on a hypothetical Bellingham-Friday Harbor service, this analysis applies an expansion-factor to the passenger volumes observed on the pilot service from January-March 2006 (the first calendar quarter). The expansion-factor is the average

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quarterly increase (over the available 3-years of data) on WSF Friday-Harbor foot passenger traffic indexed to the first calendar quarter (always the lowest volume quarter). The first quarter ridership value used below (2,800) is the actual volume observed from January-March 2006 on the pilot service.

Table 6-9: Quarterly Expansion of Winter Ridership

Average Quarterly Multipliers Based on WSF Friday Harbor Service		Bellingham-Friday Harbor Service		
		Est. Quarterly Ridership (Service was Mon.-Fri. only)	Est. Quarterly Ridership (7-days/week)	Est Daily Ridership (1/90 of Quarterly Est.)
Q1	1.000	Actual Volume 2,880	4,032	45
Q2	2.151	6,194	8,671	96
Q3	4.028	11,602	16,243	180
Q4	1.168	3,365	4,711	52

The above table is undoubtedly a low estimate since it is based on ridership levels observed on a moderately-publicized pilot service in its first and only months of operations. As a check on both this estimation and on the above estimates based on population and survey feedback, the estimated existing trip-demand from San Juan Island and Whatcom County are listed in the table below.

Table 6-10: Conversion of Monthly-Trip Estimates to Daily Trips

	Monthly trips	Daily trips
Est. San Juan Island Market	2,746	92
Est. Whatcom County Market	5,726	191
Total	8,472	282

Because the above daily trip estimate is built from stated demand from San Juan Island and Whatcom County only, and does not account for seasonal influxes of visitors, the 282-people figure should be used as a higher-end value for 1st or 4th quarter ridership. Although WCOG's research doesn't cover the characteristics of spring and summer travel, it is likely that the much larger volumes are visitor-driven.

Table 6-11: Application of Quarterly Ridership Expansion to Low & High Winter (Q1) Estimates

Seasonal Expansion		LOW	HIGH
		Est daily ridership based on pilot volume	Est daily ridership based on survey analysis
Q1	1.00	45	282
Q2	2.15	96	606
Q3	4.03	180	1,136
Q4	1.17	52	329

10 Year Forecast of Daily Ridership

Based on the high and low quarterly estimates of ridership shown in table 11, table 12 applies a 2 percent annual population growth rate for the next ten years. This extrapolation assumes: that

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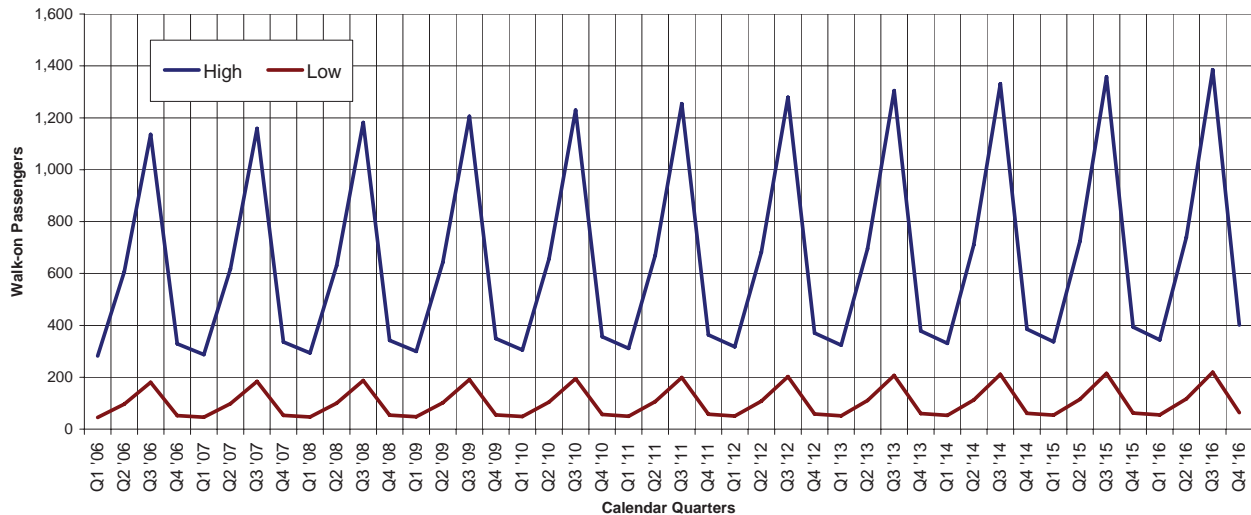
population of the regional markets and the peak visitor markets of the summer will experience population growth at similar rates and; that the recent, 3-year historical variation in quarterly ridership (relative to the first calendar quarter) will remain constant. The corresponding table and chart are below.

Table 6-12: Application of Quarterly Ridership Expansion to Low & High 2006 Estimates (based on 2 percent annual population growth)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Q1 Low	45	46	47	48	49	50	51	52	53	54	55
Q1 High	282	288	293	299	305	311	318	324	330	337	344
Q2 Low	96	98	100	102	104	106	108	110	112	115	117
Q2 High	606	618	630	643	656	669	682	696	710	724	739
Q3 Low	180	184	187	191	195	199	203	207	211	215	219
Q3 High	1,136	1,159	1,182	1,206	1,230	1,254	1,279	1,305	1,331	1,358	1,385
Q4 Low	52	53	54	55	56	57	59	60	61	62	63
Q4 High	329	336	342	349	356	363	371	378	385	393	401

Chart 6-3:

High and Low Forecast Foot Ferry Passengers



Forecast Ridership Revenue

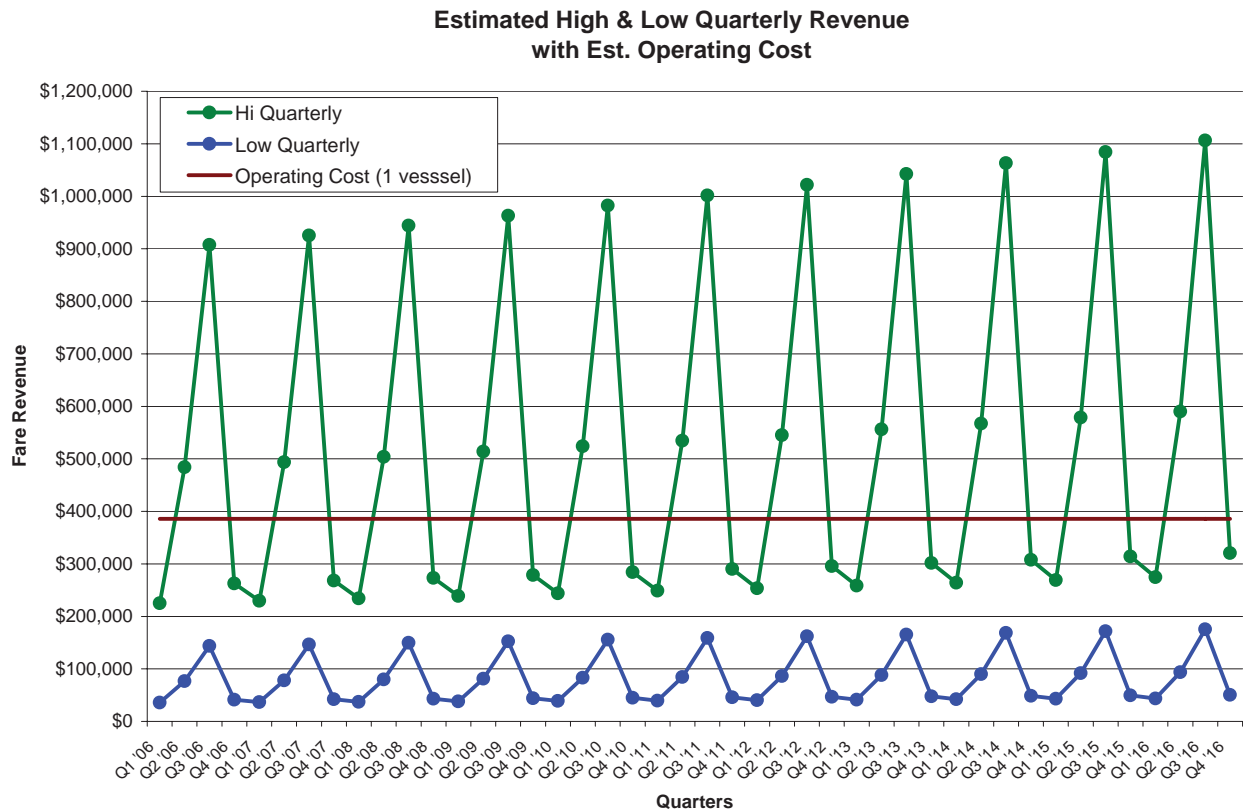
The fare structure for the 2005-2006 pilot service was discussed earlier in this report. Re-listed are the pilot service fare categories and prices along with the percentage of pilot service ridership that paid each fare.

Pilot ridership and fares		
Adults	\$10	66%
Commuters	\$7.50	29%
Youth	\$5	2%
Child	\$0	3%

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Much like the chart above, the Chart 6-4 below illustrates this proportioned revenue stream in 2006 prices.

Chart 6-4



Operating costs shown in Chart 6-4 above are approximate for one - 149 passenger, 30 knot catamaran consuming, nominally, 65 gallons per hour. Approximate costs were obtained from Victoria San Juan Cruises staff.

Operating Costs

Operating costs include all those expenses associated with providing passenger-only ferry services in the North Sound area. Note that profit is not included in the following array:

- | | |
|-------------------------------|----------------------------------|
| Wages – Vessel and land side | Payroll - Taxes and insurance |
| Advertising/Promotion | Financial Management |
| Computer and related | Dock rental – Multiple locations |
| Drug testing | Dues/Memberships |
| Employee training | Insurance |
| Licenses and fees | Office rents and supplies |
| Legal and accounting fees | Security |
| Communications | Travel |
| Training | Uniforms |
| Taxes – Property and business | Vessel fuel and maintenance |

Capital Costs

Capital costs include vessel acquisition, creation or improvement of land side infrastructure and any other incremental costs associated with the equipment needed to operate and properly maintain passenger ferry vessels.

7. Findings and Conclusions

A business case for regional or international passenger-only ferry services is found to be extremely difficult due to multiple, and in some regards insurmountable, regulatory barriers and high capital and operating costs. Location of existing land side infrastructure may not provide adequate access in the right places to capture a meaningful market share, U.S. Customs and Border Protection requirements for secure facilities alone provides significant inhibition and security is getting tighter.

Conversely, based on the findings of the pilot survey, a latent but robust level of market demand does appear to exist between San Juan and Whatcom Counties. Survey data generated during the pilot service described in **Section 4** indicates sufficient demand and warrants further investigation of developing a scheduled service. Service locations, frequencies and vessel design should be evaluated on the basis of this and other studies.

It is possible that along with a strong demand for passenger-only services at some locations, other locations with less demand may need to be served as part of a service system or route. An origin - destination pair, for example might be comprised of a high demand origin with a low demand destination, or a trip set with multiple landings may include a low demand port of call in order to make the trip work in some way. Thus, varying levels of demand could create a need for financial support such as that received by transit organizations for the provision of public transportation. It is likely that some public funding will be needed to establish or operationally support passenger-only services.

Some routes or route segments could prove profitable, but it could be argued that a greater public good is achieved by including subsidy-dependant service-locations in a larger service area, thereby serving more of the region's travel demand. Ten year projections included in this study reflect sufficient forecasted demand to consider implementation options, funding sources, and potential partnerships.

Appendix A Fare Comparisons

The rates for the pilot project passenger ferry were determined by comparing relative fares of the two other methods of transportation for those traveling between Bellingham and Friday Harbor.

Washington State Ferries

The Washington State Ferry system is the predominant form of transportation between the San Juan Islands themselves and the mainland. This service is subsidized by Washington State and offers the following fares:

- Passenger-only fares (walk-on, as compared to drive-on with vehicle) between Anacortes (Skagit County) and Friday Harbor are \$10.10 during non-peak months, \$12.20 during peak travel months on Wednesday-Saturday. Sunday-Tuesday rates are \$9.10 during non-peak, and \$11.00 during peak months. This is the round-trip cost.
- There is a \$2.00 bicycle surcharge (\$4.00 during peak season).
- To compare the cost for residents of Whatcom County, an additional charge was calculated for the mileage to travel to the Anacortes ferry. The distance from downtown Bellingham is 43.36 miles each way. At a \$0.485 mileage rate, that equals \$42 round-trip between Bellingham and the terminal.

If one does not include the cost of travel to and from Anacortes, the Washington State Ferry service is the most affordable option. However, once the mileage to Anacortes was included, the total cost round-trip elevated to \$42 not including the ferry fare. That equals approximately \$52 per trip.

The rates were therefore established to be somewhat similar to the Washington State Ferry system: \$10 each direction as compared to round-trip.

The pilot passenger ferry service did not charge extra for bicycles.

Airfare

Two airlines regularly serve travelers between Bellingham International Airport and the Port of Friday Harbor. This service is much faster than ferry service, but more expensive.

- San Juan Island Airlines charges \$44 each direction.
- Island Air charges \$105 for up to three passengers each direction, and \$143 for up to 5 passengers. In addition, there is a \$7 per passenger fuel surcharge.
- Both airlines require each passenger to pay \$4.50 departing Bellingham and \$3 departing Friday Harbor in airport fees.

In summary, airfare costs a minimum of \$40 each way.

Appendix B Detailed Ridership Information

December, 2005

**Bellingham - Friday Harbor Passenger Ferry Pilot Project
Detailed Ridership Report**

Day	Date	Bellingham to Friday Harbor (West)					Friday Harbor to Bellingham (East)					Daily Total			
		Adults 10.00	Commuters 7.50	Children 5.00	Infants (Free)	Total Pax	Revenue	Departure	Adults 10.00	Commuters 7.50	Children 5.00		Infants (Free)	Total Pax	Revenue
Wed	30-Nov-05	7:00 AM	2	0	0	0	2	20.00	9:00 AM	0	0	0	0	0	0.00
Wed	30-Nov-05	3:00 PM	2	0	0	0	2	20.00	5:00 PM	2	0	0	2	20.00	
Thur	1-Dec-05	7:00 AM	3	0	0	0	3	30.00	9:00 AM	1	0	0	1	10.00	
Thur	1-Dec-05	3:00 PM	2	0	0	0	2	20.00	5:00 PM	2	0	0	2	20.00	
Fri	2-Dec-05	7:00 AM	2	3	0	0	5	42.50	9:00 AM	2	0	0	2	20.00	
Fri	2-Dec-05	3:00 PM	5	0	0	0	5	50.00	5:00 PM	12	1	0	13	127.50	
Mon	5-Dec-05	7:00 AM	3	4	0	0	7	60.00	9:00 AM	9	2	0	11	105.00	
Mon	5-Dec-05	3:00 PM	11	1	0	2	14	117.50	5:00 PM	4	4	0	8	70.00	
Tue	6-Dec-05	7:00 AM	6	2	0	0	8	75.00	9:00 AM	10	1	0	11	107.50	
Tue	6-Dec-05	3:00 PM	6	3	0	1	10	82.50	5:00 PM	6	2	0	8	75.00	
Wed	7-Dec-05	7:00 AM	0	2	0	0	2	15.00	9:00 AM	1	1	0	2	17.50	
Wed	7-Dec-05	3:00 PM	6	1	0	0	7	67.50	5:00 PM	2	0	0	2	20.00	
Thur	8-Dec-05	7:00 AM	4	1	0	0	5	47.50	9:00 AM	5	0	0	5	50.00	
Thur	8-Dec-05	3:00 PM	3	1	0	0	4	37.50	5:00 PM	4	1	0	5	47.50	
Fri	9-Dec-05	7:00 AM	4	18	0	0	22	175.00	9:00 AM	5	17	0	22	177.50	
Fri	9-Dec-05	3:00 PM	6	1	0	0	7	67.50	5:00 PM	7	7	1	15	122.50	
Mon	12-Dec-05	7:00 AM	8	3	0	1	12	102.50	9:00 AM	6	0	0	6	60.00	
Mon	12-Dec-05	3:00 PM	8	1	0	0	9	87.50	5:00 PM	6	2	0	8	75.00	
Tue	13-Dec-05	7:00 AM	12	2	0	0	14	135.00	9:00 AM	3	3	0	6	52.50	
Tue	13-Dec-05	3:00 PM	6	0	0	0	6	60.00	5:00 PM	8	1	0	9	87.50	
Wed	14-Dec-05	7:00 AM	7	2	0	0	9	85.00	9:00 AM	9	2	0	11	105.00	
Wed	14-Dec-05	3:00 PM	7	1	0	0	8	77.50	5:00 PM	12	0	0	12	120.00	
Thur	15-Dec-05	7:00 AM	2	1	0	0	3	27.50	9:00 AM	4	0	0	4	40.00	
Thur	15-Dec-05	3:00 PM	6	1	0	0	7	67.50	5:00 PM	8	2	0	10	95.00	
Fri	16-Dec-05	7:00 AM	12	1	0	0	13	127.50	9:00 AM	9	0	0	9	90.00	
Fri	16-Dec-05	3:00 PM	11	0	0	0	11	110.00	5:00 PM	11	4	0	16	140.00	
Mon	19-Dec-05	7:00 AM	4	3	0	1	8	62.50	9:00 AM	7	1	0	8	77.50	
Mon	19-Dec-05	3:00 PM	9	1	0	0	10	97.50	5:00 PM	2	3	0	5	42.50	
Tue	20-Dec-05	7:00 AM	1	3	0	0	4	32.50	9:00 AM	3	1	0	4	37.50	
Tue	20-Dec-05	3:00 PM	4	1	0	0	5	47.50	5:00 PM	3	1	0	4	37.50	
Wed	21-Dec-05	7:00 AM	13	6	0	1	20	175.00	9:00 AM	12	5	0	17	157.50	
Wed	21-Dec-05	3:00 PM	7	5	0	0	12	107.50	5:00 PM	6	1	0	7	67.50	
Thur	22-Dec-05	7:00 AM	7	0	0	2	9	70.00	9:00 AM	5	2	0	7	65.00	
Thur	22-Dec-05	3:00 PM	11	7	1	1	20	167.50	5:00 PM	13	5	1	19	172.50	
Fri	23-Dec-05	7:00 AM	7	0	0	0	7	70.00	9:00 AM	5	4	0	9	80.00	
Fri	23-Dec-05	3:00 PM	9	5	0	0	14	127.50	5:00 PM	9	7	0	16	142.50	
Mon	26-Dec-05	7:00 AM	11	19	1	6	37	257.50	9:00 AM	8	16	0	24	200.00	
Mon	26-Dec-05	3:00 PM	6	6	0	1	13	105.00	5:00 PM	8	3	5	16	127.50	
Tue	27-Dec-05	7:00 AM	16	2	0	0	18	175.00	9:00 AM	6	0	0	6	60.00	
Tue	27-Dec-05	3:00 PM	7	0	0	1	8	70.00	5:00 PM	14	0	0	14	140.00	
Wed	28-Dec-05	7:00 AM	9	2	0	0	11	105.00	9:00 AM	14	2	0	16	155.00	
Wed	28-Dec-05	3:00 PM	8	1	2	0	11	97.50	5:00 PM	4	2	0	6	55.00	
Thur	29-Dec-05	7:00 AM	29	3	6	8	46	342.50	9:00 AM	15	5	0	20	187.50	
Thur	29-Dec-05	3:00 PM	20	4	2	0	26	240.00	5:00 PM	31	2	6	39	355.00	
Fri	30-Dec-05	7:00 AM	11	1	0	1	13	117.50	9:00 AM	6	5	0	11	97.50	
Fri	30-Dec-05	3:00 PM	13	10	2	3	28	215.00	5:00 PM	17	4	2	23	210.00	
Totals			346	128	14	29	517	4,490.00		336	119	14	30	499	4,322.50

Monthly Revenue Total 8,812.50

Monthly Passenger Total 1,016

Appendix B Detailed Ridership Information

January, 2006

**Bellingham - Friday Harbor Passenger Ferry Pilot Project
Detailed Ridership Report**

Day	Date	Departure	Bellingham to Friday Harbor (West)				Friday Harbor to Bellingham (East)				Daily Total								
			Adults 10.00	Commuters 7.50	Children 5.00	Infants (Free)	Total Pax	Revenue	Adults 10.00	Commuters 7.50		Children 5.00	Infants (Free)	Total Pax	Revenue				
Mon	2-Jan-06	7:00 AM	24	0	0	1	0	25	245.00	7	1	0	1	9	77.50	57			
Mon	2-Jan-06	3:00 PM	4	0	0	0	0	4	40.00	16	2	1	0	19	180.00	542.50			
Tue	3-Jan-06	7:00 AM	2	1	0	0	0	3	27.50	8	2	0	0	10	95.00	28			
Tue	3-Jan-06	3:00 PM	5	0	0	0	0	5	50.00	9	1	0	0	10	97.50	270.00			
Wed	4-Jan-06	7:00 AM	10	2	0	0	0	12	115.00	2	0	0	0	2	20.00	29			
Wed	4-Jan-06	3:00 PM	5	0	0	0	0	5	50.00	9	1	0	0	10	97.50	282.50			
Thur	5-Jan-06	7:00 AM	5	1	0	0	0	6	57.50	4	0	0	0	4	40.00	28			
Thur	5-Jan-06	3:00 PM	6	0	0	0	0	6	60.00	6	6	0	0	12	105.00	262.50			
Fri	6-Jan-06	7:00 AM	6	1	0	0	0	7	67.50	5	0	0	1	6	50.00	40			
Fri	6-Jan-06	3:00 PM	12	0	1	1	1	14	125.00	11	2	0	0	13	125.00	367.50			
Mon	9-Jan-06	7:00 AM	9	7	0	0	0	16	142.50	5	1	0	0	6	57.50	32			
Mon	9-Jan-06	3:00 PM	5	1	0	0	0	6	57.50	2	2	0	0	4	35.00	292.50			
Tue	10-Jan-06	7:00 AM	7	1	0	0	0	8	77.50	7	1	0	0	8	77.50	30			
Tue	10-Jan-06	3:00 PM	7	0	0	0	0	7	70.00	6	1	0	0	7	67.50	292.50			
Wed	11-Jan-06	7:00 AM	2	4	0	0	0	6	50.00	8	0	0	0	8	80.00	27			
Wed	11-Jan-06	3:00 PM	8	0	0	0	0	8	80.00	3	2	0	0	5	45.00	255.00			
Thur	12-Jan-06	7:00 AM	0	4	0	0	0	4	30.00	7	0	0	0	7	70.00	20			
Thur	12-Jan-06	3:00 PM	5	0	0	0	0	5	50.00	1	3	0	0	4	32.50	182.50			
Fri	13-Jan-06	7:00 AM	3	4	0	0	0	7	60.00	3	2	0	0	5	45.00	40			
Fri	13-Jan-06	3:00 PM	9	2	0	0	0	11	105.00	8	7	1	1	17	137.50	347.50			
Mon	16-Jan-06	7:00 AM	8	4	2	1	1	15	120.00	6	2	0	0	8	75.00	58			
Mon	16-Jan-06	3:00 PM	10	4	0	0	0	14	130.00	14	5	2	0	21	187.50	512.50			
Tue	17-Jan-06	7:00 AM	5	8	1	1	1	15	115.00	5	2	0	0	7	65.00	34			
Tue	17-Jan-06	3:00 PM	7	0	0	0	0	7	70.00	2	3	0	0	5	42.50	292.50			
Wed	18-Jan-06	7:00 AM	7	5	0	0	0	12	107.50	4	0	0	0	4	40.00	43			
Wed	18-Jan-06	3:00 PM	5	5	0	0	0	10	87.50	11	6	0	0	17	155.00	390.00			
Thur	19-Jan-06	7:00 AM	12	5	0	0	0	17	157.50	5	0	0	0	5	50.00	44			
Thur	19-Jan-06	3:00 PM	5	1	0	0	0	6	57.50	13	2	1	0	16	150.00	415.00			
Fri	20-Jan-06	7:00 AM	4	3	0	0	0	7	62.50	2	5	0	1	8	57.50	49			
Fri	20-Jan-06	3:00 PM	11	6	0	0	0	17	155.00	7	9	0	1	17	137.50	412.50			
Mon	23-Jan-06	7:00 AM	3	2	0	0	0	5	45.00	9	5	0	0	14	127.50	29			
Mon	23-Jan-06	3:00 PM	4	1	0	0	0	5	47.50	2	3	0	0	5	42.50	262.50			
Tue	24-Jan-06	7:00 AM	3	9	0	0	0	12	97.50	6	1	0	0	7	67.50	31			
Tue	24-Jan-06	3:00 PM	8	0	0	0	0	8	80.00	0	4	0	0	4	30.00	275.00			
Wed	25-Jan-06	7:00 AM	4	6	0	0	0	10	85.00	4	0	0	0	4	40.00	29			
Wed	25-Jan-06	3:00 PM	4	0	0	0	0	4	40.00	6	5	0	0	11	97.50	262.50			
Thur	26-Jan-06	7:00 AM	3	5	0	0	0	8	67.50	2	0	0	0	2	20.00	27			
Thur	26-Jan-06	3:00 PM	5	0	0	1	1	6	50.00	6	4	0	1	11	90.00	227.50			
Fri	27-Jan-06	7:00 AM	5	2	0	0	0	7	65.00	8	42	1	0	51	400.00	123			
Fri	27-Jan-06	3:00 PM	6	39	0	0	0	45	352.50	13	7	0	0	20	182.50	1,000.00			
Mon	30-Jan-06	7:00 AM	8	2	0	0	0	10	95.00	3	0	0	0	3	30.00	24			
Mon	30-Jan-06	3:00 PM	5	0	0	0	0	5	50.00	5	1	0	0	6	57.50	232.50			
Tue	31-Jan-06	7:00 AM	2	6	0	0	0	8	65.00	1	0	0	0	1	10.00	32			
Tue	31-Jan-06	3:00 PM	6	0	0	0	0	6	60.00	6	11	0	0	17	142.50	277.50			
Totals			274	141	5	4	4	424	3,822.50	267	151	6	6	430	3,832.50				
										Monthly Passenger Total		854				Monthly Revenue Total		7,655.00	

** 1/27 Friday Harbor Walkers group.
** 1/31 50 mph winds. Airplanes canceled.

Appendix B Detailed Ridership Information

February, 2006

**Bellingham - Friday Harbor Passenger Ferry Pilot Project
Detailed Ridership Report**

Day	Date	Bellingham to Friday Harbor (West)					Friday Harbor to Bellingham (East)					Daily Total		
		Adults 10.00	Commuters 7.50	Children 5.00	Infants (Free)	Total Pax	Revenue	Departure	Adults 10.00	Commuters 7.50	Children 5.00		Infants (Free)	Total Pax
Wed	1-Feb-06	2	6	0	0	8	65.00	9:00 AM	2	0	0	0	2	20.00
Wed	1-Feb-06	3	0	0	0	3	30.00	5:00 PM	5	4	0	0	9	80.00
Thur	2-Feb-06	2	6	0	0	8	65.00	9:00 AM	3	0	0	0	3	30.00
Thur	2-Feb-06	5	1	0	1	7	57.50	5:00 PM	4	6	0	0	10	85.00
Fri	3-Feb-06	6	4	0	0	10	90.00	9:00 AM	10	1	0	0	11	107.50
Fri	3-Feb-06	14	1	0	0	15	147.50	5:00 PM	4	8	2	0	14	110.00
Mon	6-Feb-06	8	8	0	0	16	140.00	9:00 AM	6	1	0	0	7	67.50
Mon	6-Feb-06	3	0	0	0	3	30.00	5:00 PM	2	6	0	0	8	65.00
Tue	7-Feb-06	6	5	0	0	11	97.50	9:00 AM	18	0	0	0	18	180.00
Tue	7-Feb-06	13	0	0	0	13	130.00	5:00 PM	8	3	0	0	11	102.50
Wed	8-Feb-06	8	2	0	0	10	95.00	9:00 AM	6	7	0	2	15	112.50
Wed	8-Feb-06	13	5	0	0	18	167.50	5:00 PM	6	5	0	2	13	97.50
Thur	9-Feb-06	4	16	0	1	21	160.00	9:00 AM	4	2	0	1	7	55.00
Thur	9-Feb-06	8	0	0	0	8	80.00	5:00 PM	5	13	0	0	18	147.50
Fri	10-Feb-06	9	9	0	0	18	157.50	9:00 AM	8	3	0	0	11	102.50
Fri	10-Feb-06	12	5	0	0	17	157.50	5:00 PM	14	13	0	1	28	237.50
Mon	13-Feb-06	5	9	0	0	14	117.50	9:00 AM	1	3	0	0	4	32.50
Mon	13-Feb-06	0	4	0	0	4	30.00	5:00 PM	3	8	0	0	11	90.00
Tue	14-Feb-06	6	8	0	0	14	120.00	9:00 AM	1	2	0	0	3	25.00
Tue	14-Feb-06	10	4	0	1	15	130.00	5:00 PM	5	5	0	0	10	87.50
Wed	15-Feb-06	2	14	0	0	16	125.00	9:00 AM	9	0	0	1	10	90.00
Wed	15-Feb-06	5	3	0	0	8	72.50	5:00 PM	11	15	0	0	26	222.50
Thur	16-Feb-06	10	9	0	0	19	167.50	9:00 AM	0	1	0	0	1	7.50
Thur	16-Feb-06	5	0	0	0	5	50.00	5:00 PM	8	7	0	0	15	132.50
Fri	17-Feb-06	4	0	0	0	4	40.00	9:00 AM	10	0	0	0	10	100.00
Fri	17-Feb-06	17	1	0	2	20	177.50	5:00 PM	7	5	0	2	14	107.50
Mon	20-Feb-06	13	12	1	1	27	225.00	9:00 AM	12	1	0	2	15	127.50
Mon	20-Feb-06	6	0	0	2	8	60.00	5:00 PM	6	16	0	0	22	180.00
Tue	21-Feb-06	10	14	1	0	25	210.00	9:00 AM	6	0	0	1	7	60.00
Tue	21-Feb-06	9	1	0	0	10	97.50	5:00 PM	17	12	1	0	30	265.00
Wed	22-Feb-06	12	16	0	1	29	240.00	9:00 AM	8	3	0	1	12	102.50
Wed	22-Feb-06	9	5	0	1	15	127.50	5:00 PM	6	18	0	1	25	195.00
Thur	23-Feb-06	8	13	0	1	22	177.50	9:00 AM	8	0	0	0	8	80.00
Thur	23-Feb-06	8	0	0	1	9	80.00	5:00 PM	7	12	0	0	19	160.00
Fri	24-Feb-06	5	3	1	0	9	77.50	9:00 AM	7	0	0	0	7	70.00
Fri	24-Feb-06	7	0	0	0	7	70.00	5:00 PM	10	4	1	0	15	135.00
Mon	27-Feb-06	5	2	0	2	9	65.00	9:00 AM	3	0	0	1	4	30.00
Mon	27-Feb-06	5	0	0	0	5	50.00	5:00 PM	9	1	0	0	10	97.50
Tue	28-Feb-06	1	1	0	0	2	17.50	9:00 AM	2	0	0	0	2	20.00
Tue	28-Feb-06	7	1	0	0	8	77.50	5:00 PM	0	0	0	0	0	0.00
Totals		285	188	3	14	490	4,275.00		261	185	4	15	465	4,017.50
													Monthly Revenue Total	8,292.50
													Monthly Passenger Total	955

** 2/20 Holiday

Appendix B Detailed Ridership Information

March, 2006

**Bellingham - Friday Harbor Passenger Ferry Pilot Project
Detailed Ridership Report**

Day	Date	Bellingham to Friday Harbor (West)					Friday Harbor to Bellingham (East)					Daily Total		
		Adults 10.00	Commuters 7.50	Children 5.00	Infants (Free)	Total Pax	Revenue	Departure	Adults 10.00	Commuters 7.50	Children 5.00		Infants (Free)	Total Pax
Wed	1-Mar-06	5	0	0	0	5	50.00	9:00 AM	1	0	0	0	1	10.00
Wed	1-Mar-06	2	0	0	0	2	20.00	5:00 PM	4	2	0	0	6	55.00
Thur	2-Mar-06	10	2	0	0	12	115.00	9:00 AM	1	0	0	0	1	10.00
Thur	2-Mar-06	3	2	0	0	5	45.00	5:00 PM	9	1	0	1	11	97.50
Fri	3-Mar-06	2	2	0	0	4	35.00	9:00 AM	8	0	0	0	8	80.00
Fri	3-Mar-06	13	1	0	0	14	137.50	5:00 PM	6	4	0	0	10	90.00
Mon	6-Mar-06	3	3	0	0	6	52.50	9:00 AM	19	2	0	0	21	205.00
Mon	6-Mar-06	12	1	0	1	14	127.50	5:00 PM	3	1	0	0	4	37.50
Tue	7-Mar-06	4	1	0	0	5	47.50	9:00 AM	7	0	0	0	7	70.00
Tue	7-Mar-06	11	1	0	0	12	117.50	5:00 PM	7	0	0	0	7	70.00
Wed	8-Mar-06	2	0	0	0	2	20.00	9:00 AM	4	0	1	0	5	45.00
Wed	8-Mar-06	3	0	1	0	4	35.00	5:00 PM	6	0	0	0	6	60.00
Thur	9-Mar-06	4	0	0	0	4	40.00	9:00 AM	4	1	0	1	6	47.50
Thur	9-Mar-06	5	0	0	1	6	50.00	5:00 PM	4	4	0	0	8	70.00
Fri	10-Mar-06	9	4	1	0	14	125.00	9:00 AM	1	1	0	0	2	17.50
Fri	10-Mar-06	8	1	0	0	9	87.50	5:00 PM	11	2	0	1	14	125.00
Mon	13-Mar-06	10	4	0	0	14	130.00	9:00 AM	4	0	0	0	4	40.00
Mon	13-Mar-06	4	0	0	0	4	40.00	5:00 PM	9	3	0	0	12	112.50
Tue	14-Mar-06	28	4	2	1	35	320.00	9:00 AM	6	1	0	0	7	67.50
Tue	14-Mar-06	9	0	0	0	9	90.00	5:00 PM	31	4	2	1	38	350.00
Wed	15-Mar-06	2	6	0	0	8	65.00	9:00 AM	1	0	0	0	1	10.00
Wed	15-Mar-06	6	1	0	0	7	67.50	5:00 PM	8	6	0	0	14	125.00
Thur	16-Mar-06	7	5	0	0	12	107.50	9:00 AM	4	0	0	0	4	40.00
Thur	16-Mar-06	15	2	0	1	18	165.00	5:00 PM	11	2	0	1	14	125.00
Fri	17-Mar-06	7	12	0	0	19	160.00	9:00 AM	8	2	0	2	12	95.00
Fri	17-Mar-06	7	2	0	1	10	85.00	5:00 PM	13	13	0	1	27	227.50
Mon	20-Mar-06	16	4	0	0	20	190.00	9:00 AM	10	2	0	0	12	115.00
Mon	20-Mar-06	9	2	0	1	12	105.00	5:00 PM	12	6	0	0	18	165.00
Tue	21-Mar-06	18	5	0	0	23	217.50	9:00 AM	6	0	0	0	6	60.00
Tue	21-Mar-06	18	0	0	0	18	180.00	5:00 PM	23	5	0	0	28	267.50
Wed	22-Mar-06	6	3	0	0	9	82.50	9:00 AM	1	0	0	0	1	10.00
Wed	22-Mar-06	5	0	0	0	5	50.00	5:00 PM	14	1	0	0	15	147.50
Thur	23-Mar-06	8	1	0	0	9	87.50	9:00 AM	3	1	0	0	4	37.50
Thur	23-Mar-06	19	2	1	0	22	210.00	5:00 PM	11	2	0	0	13	125.00
Fri	24-Mar-06	7	6	0	0	13	115.00	9:00 AM	13	1	0	1	15	137.50
Fri	24-Mar-06	4	0	0	0	4	40.00	5:00 PM	11	2	2	0	15	135.00
Mon	27-Mar-06	14	1	0	0	15	147.50	9:00 AM	10	2	0	0	12	115.00
Mon	27-Mar-06	17	4	0	0	21	200.00	5:00 PM	14	1	0	0	15	147.50
Tue	28-Mar-06	5	7	0	0	12	102.50	9:00 AM	4	2	0	1	7	55.00
Tue	28-Mar-06	4	0	0	1	5	40.00	5:00 PM	5	6	0	0	11	95.00
Wed	29-Mar-06	20	4	1	0	25	235.00	9:00 AM	6	4	0	0	10	90.00
Wed	29-Mar-06	10	5	0	3	18	137.50	5:00 PM	20	6	2	3	31	255.00
Thur	30-Mar-06	11	0	0	2	13	110.00	9:00 AM	4	0	0	0	4	40.00
Thur	30-Mar-06	12	11	3	0	26	217.50	5:00 PM	15	1	0	2	18	157.50
Fri	31-Mar-06	9	6	0	0	15	135.00	9:00 AM	7	1	0	0	8	77.50
Fri	31-Mar-06	9	2	0	0	11	105.00	5:00 PM	22	5	0	1	28	257.50
Totals		412	117	9	12	550	5,043		401	97	7	16	521	4,773
												Monthly Passenger Total	1,071	
												Monthly Revenue Total	9,815.00	

Appendix C Sample of Passenger Survey

Welcome aboard. This ferry service is running from November 28, 2005 through April 31, 2006 as a test of its usefulness and appeal to the traveling public.

In addition to the number of people who use the new service, deciding whether or not to continue public support for a Bellingham-Friday Harbor ferry service will be based on passenger feedback. **So... What do you think?** Please contribute *your* feedback below and return the completed form to a member of the crew before departing the ferry.

If you are traveling with other members of your household, please return only **one questionnaire for your household** for this ferry trip.

Thank you!

1. Please give your current place of residence.

City/Town _____

State/Province: _____

Country _____

2. **Ages:** For yourself and any members of your household who are traveling with you on this ferry trip, please write the number of people that fall into each of the following age categories.

0-5	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-59	60-64	65-74	75-84	85+
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

3. In the table below, please indicate the number of annual trips that all the members of your household typically make to or from San Juan Island (not just on this ferry).

Estimated annual trips by ALL household members between Bellingham & Friday Harbor.		
On each line you fill out, please use either the <i>per-month</i> column OR the <i>per-season</i> columns.		
# Trips per month	# Trips per season	
	Fall-Winter	Spring-Summer
Example		

4. What is the main purpose of your (and your household's) ferry trip today?

Please check the appropriate box below.

Example

# Trips per month	# Trips per season	# Trips per season	Trip purposes
			Services (i.e. banking, health care, etc.)
			Recreation (i.e. museum, hiking, casino)
			Commute to or from my place of work
			Work-related trips
			Shopping
			Services (i.e. banking, health care, etc.)
			Recreation (i.e. museum, hiking, casino)
			Visiting friends and family.
			Other:

5. If you have written trip numbers in the *monthly* or *season* columns in the table above, do you think that a permanent Bellingham-San Juan Island ferry service (like you're riding now) would meet your future travel needs for these trips?

- Yes for all of them.
- Yes for some of them: Which purposes? _____
- No.

Please continue on reverse.

Appendix C Sample of Passenger Survey

6. Do you expect that you will make more Friday Harbor or Bellingham trips because this ferry service is available (especially if this ferry service were to be made permanent)?
- No
 Yes

7. Schedule preferences: Please list, in your priority order, two schedule pairs for this ferry service that would serve your household best.

Schedule pair	Arriving in:	Arrival time	AM/PM	Weekday/ Weekend-day/ Every day
Example				
1 st choice				
2 nd choice				

8. Please check any factors that you feel currently limit this ferry service's usefulness to your household.

- I/we have limited need for or interest in going to Bellingham or Friday Harbor
 Cost The current schedule
 Need a car to transport large items Need a car to travel to & from the terminal
 Other: _____ Other: _____

9. Please list any other marine ferry routes in the North Sound region (including coastal and island locations in Canada) that you expect your household would use if available.

	Between	
Example	and	
	and	
	and	
	and	

10. What scheduled run are you on now?

- 7:00 A.M. to Friday Harbor. 3:00 P.M. to Friday Harbor.
 9:00 A.M. to Bellingham. 5:00 P.M. to Bellingham

11. What was, or will be, your transportation connection in Bellingham?

- Personal vehicle Greyhound bus Bicycle
 Walking Private shuttle bus/van Other _____
 WTA bus Taxi cab I don't know
 Amtrak train Rental vehicle

12. What was, or will be, your transportation connection in Friday Harbor?

- Personal vehicle Bicycle Rental vehicle
 Walking Private shuttle bus/van Other _____
 San Juan Transit Taxi cab I don't know

13. Please list any transportation services or on-boat amenities that you feel would have made your use of this ferry service today more effective or enjoyable.

Thanks again. We hope you're enjoying your trip with us.

Appendix D

Sample of San Juan Island Household Survey

San Juan Island – Bellingham Passenger Ferry Household Information Form

Dear San Juan Island household,

A federally-funded test of passenger ferry service is now operating between Friday Harbor and Bellingham (please see the enclosed informational flyer).

Your answers to the questions below will help determine whether or not such a service should be made permanent.

Please complete and return in the envelope provided.

Thank you!

1. For your household, please enter the number of people that fall into each of the following age categories.

0-5	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-59	60-64	65-74	75-84	85+
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

2. By filling in the table below, please indicate how often your household typically makes trips from San Juan Island (by any means of transportation) for the following purposes. Each household member's trips should be counted individually and totaled.

Household Off-Island Trip Frequency		
# Trips	Per: week, month, or year	Trip purposes
		Services Example (banking, health care, etc.)
		Visiting Example (friends and family)
		Commute to or from my place of work
		Work-related trips
		Shopping
		Services (i.e. banking, health care, etc.)
		Recreation (i.e. museum, hiking, casino)
		Visiting friends and family.
		Other:

3. Please indicate which of your household's current trips could be served by the new (or a permanent) Bellingham ferry.

Please check the appropriate boxes below.

4. Please check the purposes that your household would probably make new trips to Bellingham for if ferry service is available.

Please check the appropriate boxes below.

Please continue on reverse.

Appendix D Sample of San Juan Island Household Survey

San Juan Island – Bellingham Passenger Ferry Household Information Form

5. Please check any factors that you feel currently limit this ferry service's usefulness for your household.
- I/we have limited need for, or interest in, going to Bellingham.
- Cost The current schedule
- Need a car to transport large items Need a car to travel to & from the terminal
- Other: _____ Other: _____

6. Schedule preferences: Please list two schedule-pairs for this ferry service that would serve your household best.

Schedule pair	Arriving in:	Arrival time	AM/PM	Weekday/ Weekend-day/ Every day
Example				
1 st choice				
2 nd choice				

7. Please list any other marine ferry routes in the North Sound region (including coastal and island locations in Canada) that you expect your household would use if available.

	Between	
Example	and	
	and	
	and	
	and	

8. For this passenger ferry service, what would be your household's most likely transportation connection in Bellingham?

- Personal vehicle Greyhound bus Bicycle
- Walking Private shuttle bus/van Other _____
- WTA bus Taxi cab I don't know
- Amtrak train Rental vehicle

9. For this passenger ferry service, what would be your household's most likely transportation connection in Friday Harbor?

- Personal vehicle Bicycle Rental vehicle
- Walking Private shuttle bus/van Other _____
- San Juan Transit Taxi cab I don't know

10. Please list transportation services or on-boat amenities that you feel would make your household's use of this ferry service more likely, effective or enjoyable.

PLEASE MAIL COMPLETED SURVEYS to:
Whatcom Council of Governments
314 E. Champion Street
Bellingham, WA 98225
Attn: Ferry Study
(A postage-paid envelope is provided.)

Thanks again.
We hope to see you on the ferry soon.

Appendix E Sample of the Online Survey

Mindfly Survey Utility

<http://www.wcog.org/mfclient/survey/default.asp?surveyid=8>

PAGE: 1 OF 1

Please complete each of the following questions as indicated.

1) What city do you live in?

2) Please select your age category: (Please Select One)

Please Select

3) How often do you travel to or from San Juan Island? (Please Select One)

Please Select

4) What is the main purpose of your household's current travel to or from San Juan Island? (Please rank - order the following trip purposes that apply to your household, starting with 1 as your most frequent purpose)

Note: Numeric values only.

- Commute to or from my place of work
- Work-related trips
- Shopping
- Services (i.e. banking, health care, etc.)
- Recreation (i.e. museum, hiking, casino)
- Visiting friends and family
- Other

5) Which of your household's San Juan Island trips could be served by the Bellingham passenger ferry? (Select All that Apply)

- Commute to or from my place of work
- Work-related trips
- Shopping
- Services (i.e. banking, health care, etc.)
- Recreation (i.e. museum, hiking, casino)
- Visiting friends and family
- Other

6) Please check any factors that you feel currently limit this ferry service's usefulness for your household (select all that apply). (Select All that Apply)

- I/We have limited need for, or interest in, traveling between San Juan Island and Bellingham
- Cost
- Need a car to transport large items
- The current schedule
- Need a car to travel to and from the terminal
- Other

7) For this passenger ferry service, what would be your household's most likely transportation connection in BELLINGHAM? (Select All that Apply)

Appendix E Sample of the Online Survey

Mindfly Survey Utility

<http://www.wcog.org/mfclient/survey/default.asp?surveyid=8>

- Personal vehicle
- Walking
- WTA bus
- Amtrak train
- Greyhound bus
- Private shuttle/van
- Taxi cab
- Rental vehicle
- Bicycle
- Other
- I don't know

8) For this passenger ferry service, what would be your household's most likely transportation connection in FRIDAY HARBOR? (Select All that Apply)

- Personal vehicle
- Walking
- San Juan Transit
- Bicycle
- Private shuttle/van
- Taxi cab
- Rental vehicle
- Other
- I don't know

9) Please list transportation services or on-boat amenities that you feel would make your household's use of this ferry service more likely, effective, or enjoyable.

[Finish Survey](#)

Whatcom Council of Governments
Passenger Only Ferry Study

Appendix F Online Survey Results

Whatcom County Survey Results

Total Whatcom County Respondents: 59

Which of your household's San Juan Island trips could be served by the Bellingham passenger ferry?		
Commute to or from my place of work	5	3.5%
Work-related trips	5	3.5%
Shopping	32	22.7%
Services (i.e. banking, health care, etc.)	8	5.7%
Recreation (i.e. museum, hiking, casino)	47	33.3%
Visiting friends and family	25	17.7%
Other	19	13.5%
TOTAL	141	

Please check any factors that you feel currently limit this ferry service's usefulness for your household (select all that apply)		
I/We have limited need for, or interest in, traveling between San Juan Island and Bellingham		
	4	5.6%
Cost	8	11.1%
Need a car to transport large items	9	12.5%
The current schedule	38	52.8%
Need a car to travel to and from the terminal	9	12.5%
Other	4	5.6%
TOTAL	72	

For this passenger ferry service, what would be your household's most likely transportation connection in BELLINGHAM?		
Other	1	1.0%
Personal vehicle	42	42.9%
Walking	17	17.3%
WTA bus	16	16.3%
Amtrak train	1	1.0%
Greyhound bus		
Private shuttle/van	2	2.0%
Taxi cab	3	3.1%
Rental vehicle	1	1.0%
Bicycle	14	14.3%
I don't know	1	1.0%
TOTAL	98	

For this passenger ferry service, what would be your household's most likely transportation connection in FRIDAY HARBOR?		
Other	7	6.5%
Personal vehicle	8	7.5%
Walking	45	42.1%
Private shuttle/van	1	0.9%
Taxi cab	2	1.9%
Rental vehicle	6	5.6%
Bicycle	19	17.8%
I don't know	6	5.6%
San Juan Transit	13	12.1%
TOTAL	107	

Please select your age category:		
5-9	1	1.7%
15-19	1	1.7%
20-24	4	6.9%
25-34	15	25.9%
35-44	10	17.2%
45-54	13	22.4%
55-59	8	13.8%
60-64	4	6.9%
65-74	2	3.4%
85+	0	0.0%
TOTAL	58	

How often do you travel to or from San Juan Island?		
At least once a day	1	1.7%
At least once a week	5	8.6%
At least once a month	11	19.0%
Once every two months	14	24.1%
Once a season	11	19.0%
Once a year	10	17.2%
Rarely	4	6.9%
Never	2	3.4%
TOTAL	58	

San Juan County Survey Results

Total San Juan County Respondents:46

Which of your household's San Juan Island trips could be served by the Bellingham passenger ferry?		
Commute to or from my place of work	6	3.6%
Work-related trips	16	9.6%
Shopping	39	23.4%
Services (i.e. banking, health care, etc.)	30	18.0%
Recreation (i.e. museum, hiking, casino)	35	21.0%
Visiting friends and family	29	17.4%
Other	12	7.2%
TOTAL	167	

Please check any factors that you feel currently limit this ferry service's usefulness for your household (select all that apply)		
I/We have limited need for, or interest in, traveling between San Juan Island and Bellingham		
	7	9.9%
Cost	4	5.6%
Need a car to transport large items	13	18.3%
The current schedule	31	43.7%
Need a car to travel to and from the terminal	12	16.9%
Other	4	5.6%
TOTAL	71	

For this passenger ferry service, what would be your household's most likely transportation connection in BELLINGHAM?		
Other	5	3.6%
Personal vehicle	14	10.1%
Walking	25	18.1%
WTA bus	24	17.4%
Amtrak train	8	5.8%
Greyhound bus	2	1.4%
Private shuttle/van	4	2.9%
Taxi cab	13	9.4%
Rental vehicle	18	13.0%
Bicycle	15	10.9%
I don't know	10	7.2%
TOTAL	138	

For this passenger ferry service, what would be your household's most likely transportation connection in FRIDAY HARBOR?		
Other	6	7.2%
Personal vehicle	38	45.8%
Walking	27	32.5%
Private shuttle/van		0.0%
Taxi cab	3	3.6%
Rental vehicle		0.0%
Bicycle	9	10.8%
I don't know		0.0%
San Juan Transit		0.0%
TOTAL	83	

Please select your age category:		
5-9		0.0%
15-19	1	2.2%
20-24	2	4.3%
25-34	6	13.0%
35-44	7	15.2%
45-54	13	28.3%
55-59	10	21.7%
60-64	6	13.0%
65-74	1	2.2%
85+		0.0%
TOTAL	46	

How often do you travel to or from San Juan Island?		
At least once a day	1	2.2%
At least once a week	9	19.6%
At least once a month	25	54.3%
Once every two months	7	15.2%
Once a season	2	4.3%
Once a year	0	0.0%
Rarely	1	2.2%
Never	1	2.2%
TOTAL	46	

Whatcom Council of Governments
 Passenger Only Ferry Study

Appendix F Online Survey Results

Other Results

Total Other Respondents:5

Which of your household's San Juan Island trips could be served by the Bellingham passenger ferry?		
Commuter to or from my place of work	2	11.8%
Work-related trips	2	11.8%
Shopping	2	11.8%
Services (i.e. banking, health care, etc.)	3	17.6%
Recreation (i.e. museum, hiking, casino)	5	29.4%
Visiting friends and family	2	11.8%
Other	1	5.9%
TOTAL	17	

Please check any factors that you feel currently limit this ferry service's usefulness for your household (select all that apply)		
I/We have limited need for, or interest in, traveling between San Juan Island and Bellingham	3	33.3%
Cost	1	11.1%
Need a car to transport large items	1	11.1%
The current schedule	2	22.2%
Need a car to travel to and from the terminal	1	11.1%
Other	1	11.1%
TOTAL	9	

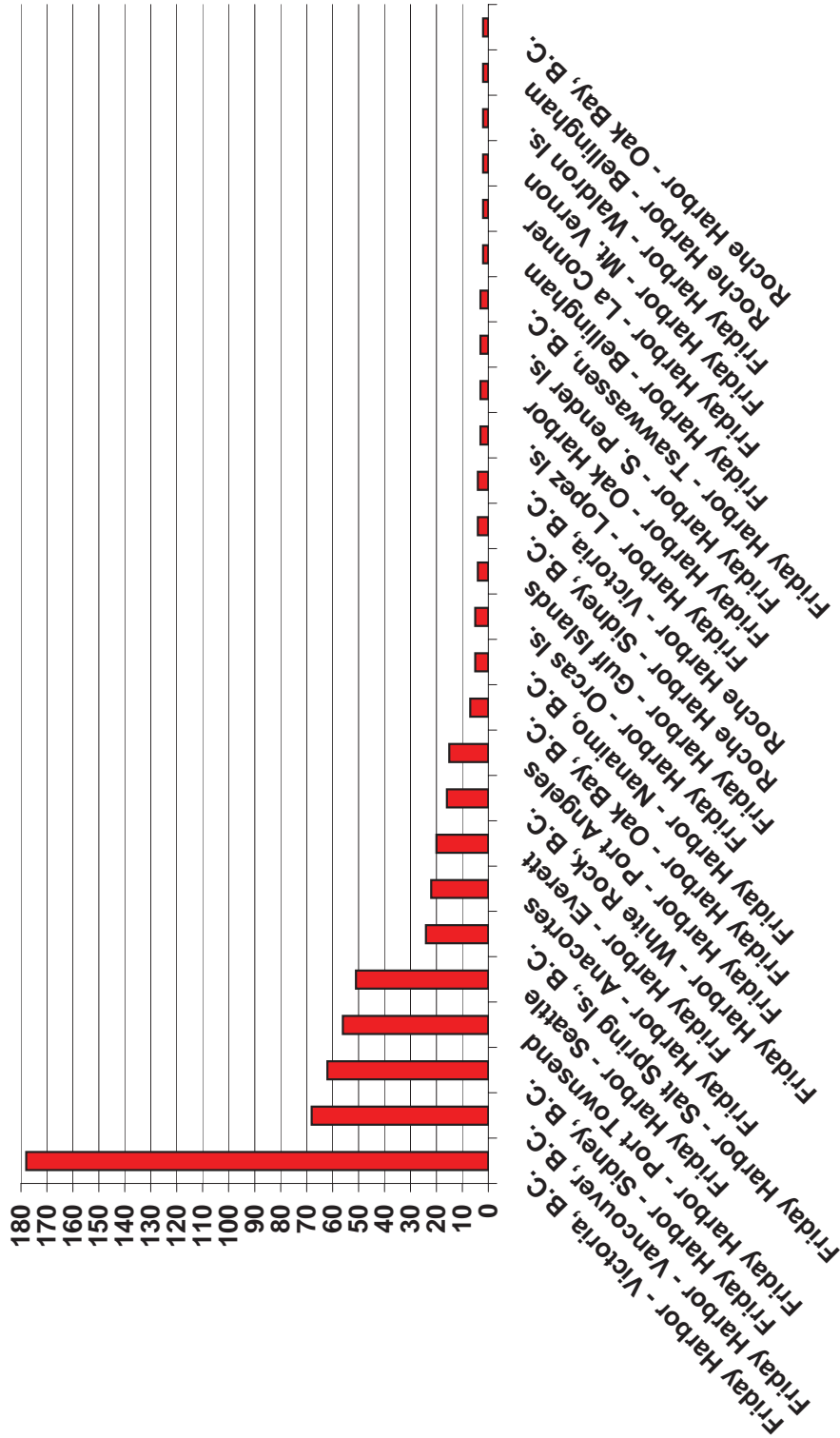
For this passenger ferry service, what would be your household's most likely transportation connection in BELLINGHAM?		
Other	0	0.0%
Personal vehicle	4	50.0%
Walking	1	12.5%
WTA bus	1	12.5%
Amtrak train	0	0.0%
Greyhound bus	0	0.0%
Private shuttle/van	0	0.0%
Taxi cab	1	12.5%
Rental vehicle	0	0.0%
Bicycle	1	12.5%
I don't know	0	0.0%
TOTAL	8	

For this passenger ferry service, what would be your household's most likely transportation connection in FRIDAY HARBOR?		
Other	0	0.0%
Personal vehicle	0	0.0%
Walking	4	50.0%
Private shuttle/van	0	0.0%
Taxi cab	2	25.0%
Rental vehicle	0	0.0%
Bicycle	2	25.0%
I don't know	0	0.0%
San Juan Transit	0	0.0%
TOTAL	8	

Please select your age category:		
5-9	0	0.0%
15-19	0	0.0%
20-24	0	0.0%
25-34	1	20.0%
35-44	0	0.0%
45-54	1	20.0%
55-59	0	0.0%
60-64	1	20.0%
65-74	1	20.0%
85+	1	20.0%
TOTAL	5	

How often do you travel to or from San Juan Island?		
At least once a day	0	0.0%
At least once a week	1	20.0%
At least once a month	0	0.0%
Once every two months	1	20.0%
Once a season	1	20.0%
Once a year	1	20.0%
Rarely	1	20.0%
Never	0	0.0%
TOTAL	5	

Appendix G
 Full List of Desired Routes
 Household Survey Respondents



Appendix G
 Full List of Desired Routes
 Passenger Survey Respondents

