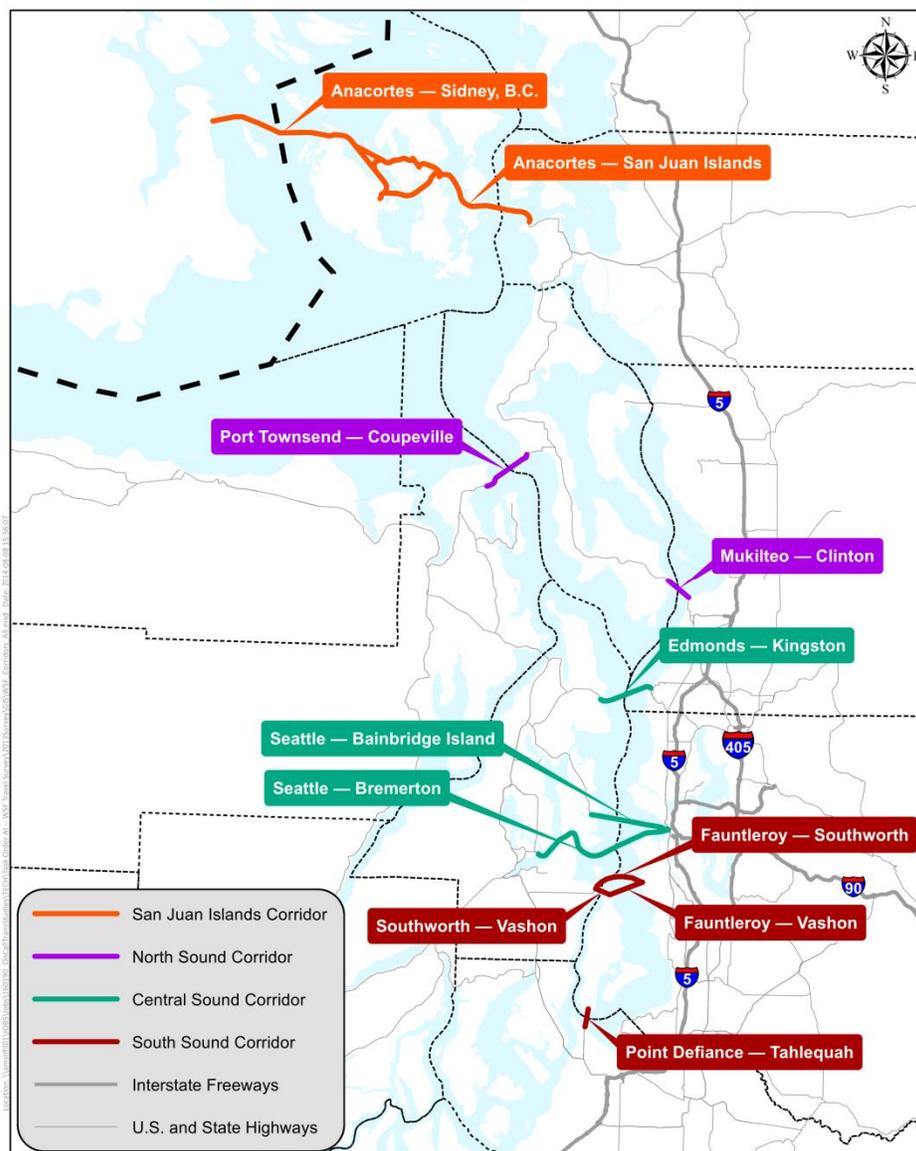


3 CORRIDOR TRAVEL MARKETS

The Washington State Ferry (WSF) routes have been grouped into four travel corridor markets that are shown in Figure 3-1:

- San Juan Island corridor (Anacortes–San Juan Islands, Anacortes–Sidney, B.C. routes)
- North Sound corridor (Whidbey Island) (Mukilteo–Clinton, Port Townsend–Coupeville routes)
- Central Sound corridor (Edmonds–Kingston, Seattle–Bainbridge Island, and Seattle–Bremerton routes)
- South Sound corridor (Fautleroy–Vashon, Fautleroy–Southworth, Vashon–Southworth, and Pt. Defiance–Tahlequah routes)

Figure 3-1. Corridor travel markets for the WSF system



3.1 General Characteristics of the Corridor Travel Markets

This section provides key characteristics that help illustrate the attributes and trends experienced on the different travel corridors. Comparisons among corridors are provided to help illustrate relative differences in general travel behavior and rider demographics. Finally, comparisons to the 2006 survey are provided to highlight significant changes in travel behavior and key demographics.

The tabulations and percentage share distributions of results herein represent the survey responses as expanded to the survey period ridership. More information regarding expansion methods can be found in Chapter 8.

3.1.1 Trip Frequency and Trip Type Differences among Corridors

One clear difference in travel behavior among the corridors is the frequency of trips. The average number of trips per week is skewed heavily toward fewer trips in the San Juans and North Sound Corridors (see Figure 3-2), which have a median number of weekday trips of two and three, respectively. By comparison, the surveyed users of the Central and South Sound Corridors travel on WSF about five times per week on the weekdays. The trip frequency distribution can at least partially be explained by the survey results related to trip purpose. As shown in Figure 3-3, the San Juans and North Sound Corridors have a higher percentage of recreational/shopping trips and a lower percentage of work trips, which tend to be more frequent. The San Juans and North Sound Corridors also have a higher percentage of retirees (about 28 percent vs. about 14 percent) for the Central and South Sound Corridors.

Figure 3-2. Average number of trips per week by corridor

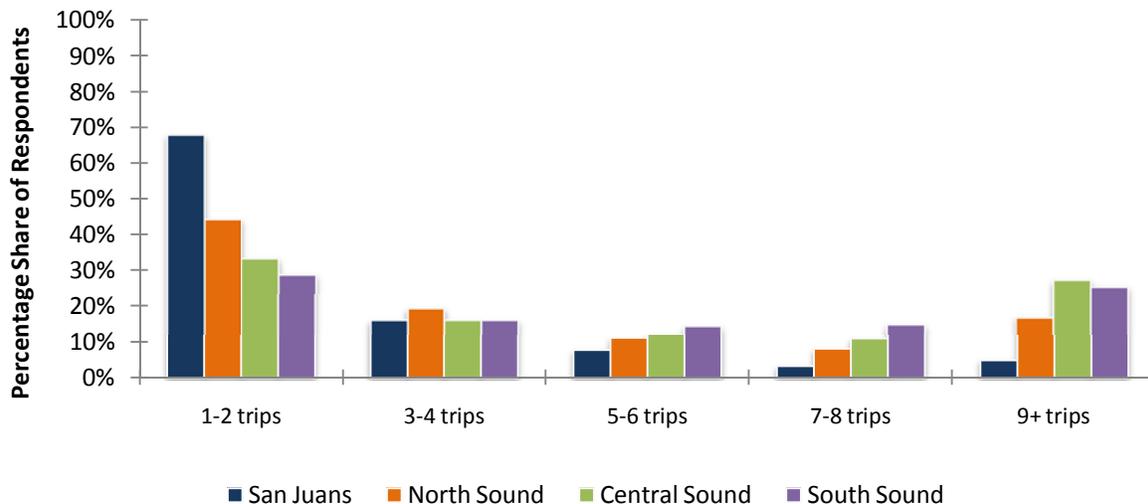
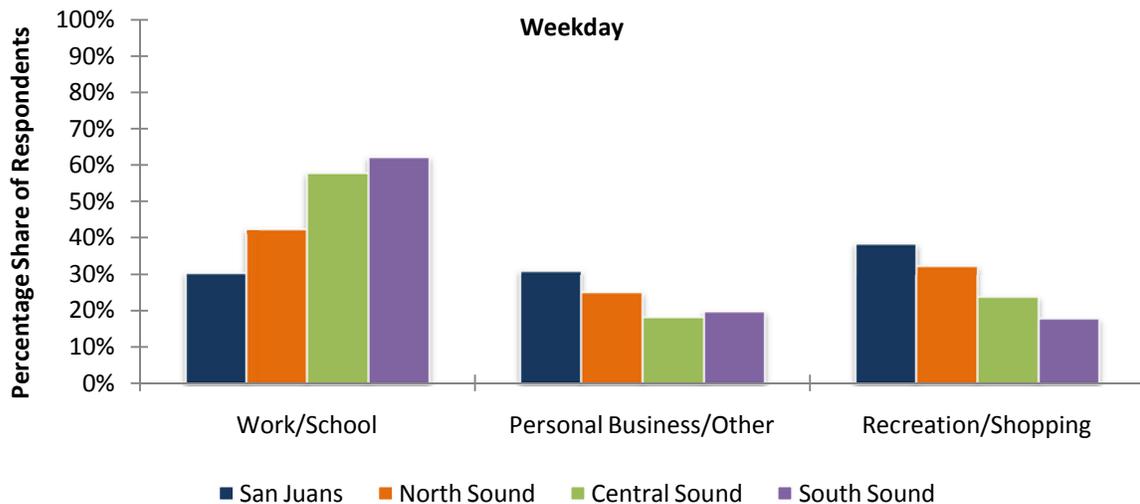


Figure 3-3. Weekday trips by purpose and corridor



3.1.2 Aging Demographic, Trip Frequency and Purpose

For each of the last four WSF onboard surveys, respondents were asked a question regarding their age and the trend is clear. WSF riders as a group are getting older. In the 1993 survey, the average age was 42 years old. By 2006, the average age reported in the survey was 48. This trend is continuing, and in 2013 the average age of all survey respondents is 49. The San Juans, North Sound, and South Sound averages are 50, 52, and 49 respectively, while the Central Sound is more similar to the 2006 survey with an average age of 47. The distribution of age by corridor is shown in Figure 3-4. As might be expected, the corridors with higher average ages also reported a greater percentage of retirees, which reaches 28 percent for the San Juan Islands Corridor and 26 percent for the North Sound Corridor (Whidbey Island). There has not been a consistent trend across corridors in retirement status; the percentage of retirees has increased in the North Sound and South Sound since 2006, and slightly decreased in the San Juans and Central Sound (shown in Figure 3-5). While average age has increased in both the San Juans and Central Sound, a slight decrease in the number of retirees may be explained by individuals remaining in the workforce longer and retiring at a later age. Furthermore, the definition of retired has transformed over the years, with more retirees continuing to work part-time or as self-employed individuals who may not have self-identified as retired on the survey.

Figure 3-4. Distribution of age by corridor, weekday

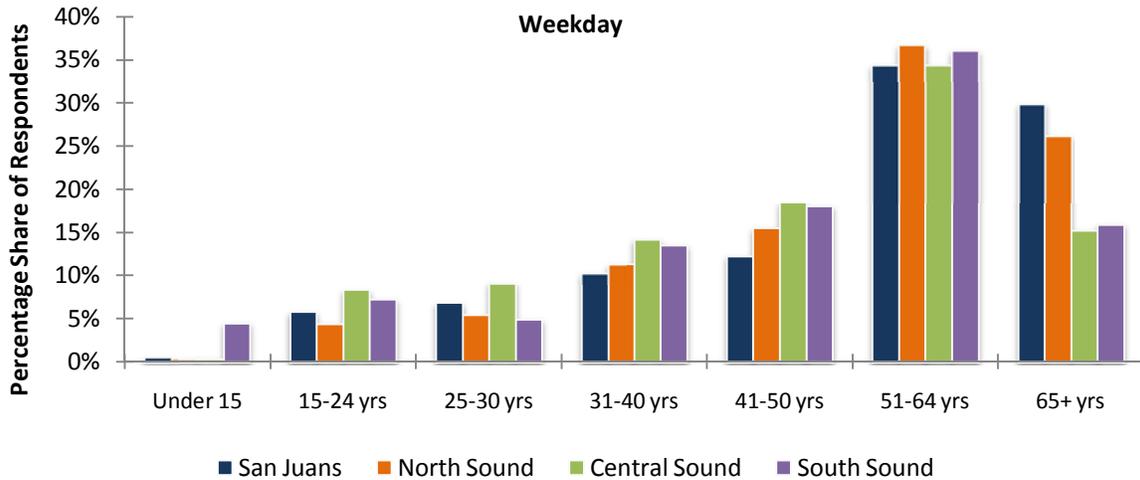
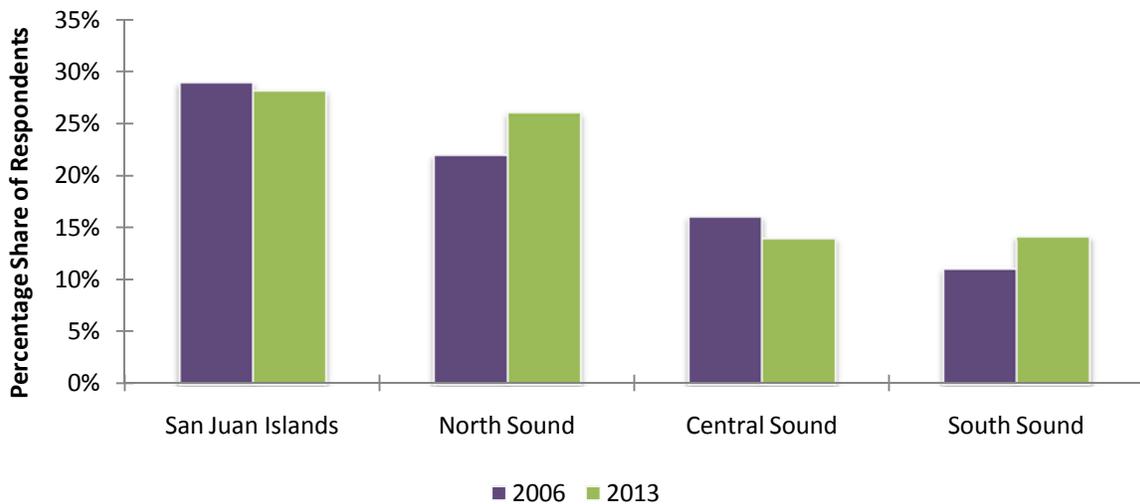


Figure 3-5. Share of retirees by corridor (2006 and 2013)



Of respondents with a valid home location provided, 92 percent live within the 12-county region. General trends in trip purpose differ by corridor and exhibit interesting patterns when compared to the previous survey. When comparing trip purpose among corridors and across time (2006 vs. 2013) some general patterns emerge. The rank order between the corridors of work/school trips for 2013 is the same as in 2006, with the San Juans Corridor exhibiting the lowest share of work/school trips and the South Sound showing the highest. However, as described in the system-wide analysis section, the overall share of work/school trips for all corridors is lower in 2013 than in 2006. In general, these trips have shifted to an increase in recreational shopping trips, with the exception of the South Sound Corridor, which is slightly lower for the recreation/shopping category.

3.2 San Juan Islands Corridor Findings

There are relatively few alternatives to access the San Juan Islands other than WSF routes. Commercial air service is provided by Kenmore Air, which operates small float planes to San Juan, Orcas, and Lopez Islands. Summer season passenger-only service is provided by the Victoria Clipper. However, the vast number of visitors and residents travel to and from the islands via WSF.

3.2.1 Aging Demographic, Trip Frequency and Purpose

Key differences separating the San Juan Islands Corridor from the other three corridors include the much lower weekday trip frequency (two per week vs. three to five for the other corridors) and the percentage of work/school trips. In addition, even though the share of work/school trips is shrinking for all corridors compared to 2006, the San Juans Corridor is exhibiting an even faster decline in work/school trips; however, it should be noted that for the San Juans Corridor this is a small base to begin with. In 2006 for this corridor, work/school trips were the largest share of total trips (about 40 percent) with recreational/shopping and personal business/other making up the remaining 60 percent. By 2013, this pattern shifted with recreation/shopping trips comprising the largest share of total trips (about 40 percent) with business/personal and work/school making up the remaining 60 percent. One likely cause of this shift is an increase in the percentage of retirees in the San Juans, as evidenced by the change in average age of survey respondents from 50 in 2006 to 53 in 2013, the greater percentage of survey respondents over the age of 64, and almost a quarter of the respondents indicating that they are retired. For riders traveling between Anacortes and Sidney, B.C., 37 percent of riders are currently retired, with another 18 percent of riders planning to retire in the next five years. Anacortes–San Juans (including inter-island routes) has fewer retirees (21 percent of riders) and fewer people planning to retire in the next five years (14 percent) than travelers between Anacortes and Sidney, B.C.

3.2.2 Access Patterns and Parking Trends

The percentage of weekday ferry travelers making a round-trip on the same day versus some other day grew from 48 percent in 2006 to 56 percent in 2013. This parallels an increase by about 6 percent in non-motorized boardings that parked a vehicle at the terminal on weekdays. Conversely, the shift in the Saturday round-trip pattern resulted in a decrease of same-day round-trips from 61 percent in 2006 to 48 percent in 2013. In this case, boardings that parked a vehicle at the terminal decreased by 10 percent. Of weekday survey respondents who boarded the ferry in a vehicle, almost 10 percent stated that they boarded by vehicle because transit was not convenient.

3.2.3 Travel Patterns

Based on the survey responses, a trend in travel patterns for the San Juans Corridor includes an increase in the share of trips to/from Orcas and Lopez Islands and a decrease in trips to/from San Juan Island relative to 2006; however, this trend does not correspond with 2013 ridership data, which shows an increase in the share of trips to/from San Juan Island and a decrease in the share of trips to/from Orcas Island since 2006. On the mainland side, the main changes in the share of trips were an increase to/from Skagit County and a decrease in trips to/from the city of Mt. Vernon and all locations east of Skagit, Snohomish, and King Counties.

Of respondents with a valid home location riding on routes serving the San Juan Islands, 53 percent of respondents live on the San Juan Islands. Only riders riding from Anacortes–San Juan Islands or Inter-Island routes were considered, not those riding from Anacortes–Sidney, B.C. If including Anacortes–Sidney, B.C. riders, the statistic becomes 51 percent of riders live on the San Juan Islands.

3.3 North Sound Corridor Findings (Whidbey Island)

Although Whidbey Island does have a bridge at the north end of the island that provides non-ferry access (Deception Pass Bridge), the length of the island (36 miles) and the limited capacity of the bridge means that WSF provides an important access route via the Mukilteo–Clinton and Port Townsend–Coupeville routes. The North Sound Corridor routes combined account for more than 6,500 vehicles traveling to and from Whidbey Island per day, which is about 40 percent of the average daily traffic on Deception Pass Bridge (approximately 16,000 vehicles).

3.3.1 Aging Demographic, Trip Frequency and Purpose

When compared to the other corridors, the North Sound Corridor has the oldest riders (52 years old on average), and the second-highest percentage of retirees at 26 percent. On the Mukilteo–Clinton route, 22 percent of riders are currently retired, with another 15 percent planning to retire in the next five years. Port Townsend–Coupeville has a much greater percentage of retirees, with one-third of the riders currently retired (32 percent) and another 17 percent planning to retire within five years. It is not surprising then that the trip purpose share of weekday work/school trips has decreased from 52 percent in 2006 to 43 percent in 2013, while the share of recreation/shopping trips has increased from 26 percent to 32 percent. This corridor averages three trips per week on weekdays as compared to five trips per week for the Central Sound Corridor, which is more commuter-focused.

Saturday trips exhibited an even greater change in recreation/shopping trips with the share of total trips for that purpose increasing from 57 percent in 2006 to 71 percent in 2013. This corresponds with a large shift in the Saturday round-trip patterns that exhibit a shift of the share of trips “returning on another day” increasing from 15 percent in 2006 to 30 percent in 2013.

3.3.2 Access Patterns and Parking Trends

Access patterns remained relatively constant between 2006 and 2013 for the combined North Corridor routes at approximately 85 percent drive and 15 percent walk/bike for weekday trips. It is worth noting though that more than half of walk-on boardings during the PM peak-period access or egress the ferry by transit, while the vast majority of walk-on boardings during non-PM peak periods and Saturday access or egress by vehicle.

Although weekday parking patterns for non-motorized boardings remained fairly constant, Saturday North Corridor routes exhibited an almost 20-point increase in the percentage share of responses that indicated they parked a vehicle prior to walking aboard the ferry. This difference in Saturday parking behavior is primarily attributed to an increase on the Mukilteo–Clinton route.

Of weekday survey respondents who boarded the ferry in a vehicle, more than 15 percent gave transit not being convenient as one of the reasons for boarding by vehicle.

3.3.3 Travel Patterns

Port Townsend–Coupeville

During weekdays, the notable change in travel patterns between the 2006 and 2013 survey for the Port Townsend–Coupeville route are the increase in the share of trip interchange between the northern portion of Whidbey Island and Port Townsend and the decrease in the shares of trips generally in central and south Whidbey Island, Jefferson County (outside of Port Townsend), King County, and portions of Kitsap County.

Mukilteo–Clinton

Trip distribution for all boarding modes during weekdays did not change substantially between the 2006 and 2013 surveys. The one exception is a moderate increase in the share of trips associated with the zone representing the city of Everett. Generally, trips are concentrated on the central and south Whidbey Island zones and distributed throughout Snohomish and King Counties on the mainland side of the trips.

Refer to Chapter 5 for maps that illustrate the change in travel patterns from 2006 to 2013 for the North Sound Corridor routes.

3.4 Central Sound Corridor Findings

The Central Sound Corridor is the highest traveled corridor in the WSF system, with 12.4 million riders per year. This is down from 13.2 million passengers in 2006 and a peak of 14.4 million passengers in 1999. The corridor serves Kitsap County, Bainbridge Island, and the Olympic Peninsula via the Hood Canal Bridge or driving around the south end of Hood Canal. This is also a highly commuter-oriented corridor with more than 60 percent of the trips associated with work or school. This corridor averages five trips per week on weekdays as compared to three trips per week for the North Sound Corridor.

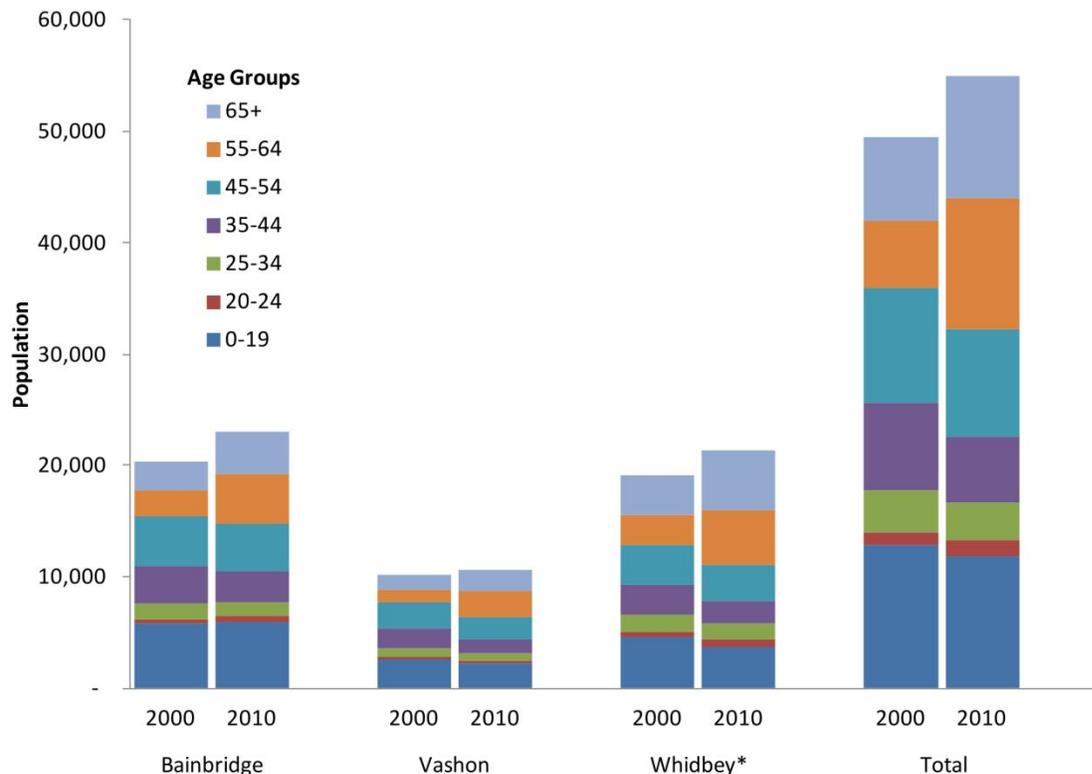
3.4.1 Aging Demographic, Trip Frequency and Purpose

Analysis of the survey results revealed the convergence of several trends. In general this corridor is experiencing an aging population, a reduction in the frequency of commuter trips, and a slow shift toward recreational and shopping trips. As a result, routes that were very commuter-focused in years past, such as Seattle–Bainbridge Island, are transitioning to reflect routes that have a more mixed user base such as Mukilteo–Clinton.

As with other corridors, this corridor exhibits change in the distribution of ages that continues to skew toward older riders. One indicator of the aging rider population is exhibited through a comparison of the share of survey respondents that indicated they were greater than 64 years old. As of 2013, for survey respondents from the Edmonds–Kingston and Seattle–Bainbridge Island routes, 18 percent and 17 percent were older than 64 years of age, 21 percent and 15 percent were retired, and another 14 percent and 14 percent are planning to retire, respectively. Seattle–Bremerton is the exception with only 9 percent of respondents indicating an age greater than 64 years old. Only 10 percent of respondents on the Seattle–Bremerton route are currently retired, and a little over 9 percent plan to retire in the next five years. Since 2006, the Seattle–Bainbridge Island route has exhibited a more rapidly aging rider profile than any route in the corridor, changing from

about 8 percent to 17 percent over 64 years of age between the 2006 and 2013 surveys. These survey results are confirmed by previous demographic and ridership analysis conducted in 2012 using census data for the Vashon Island, Bainbridge Island, and Whidbey Island service areas (shown in Figure 3-6). As shown in the figure, the number of individuals over the age of 64 has increased from 2000 to 2010.

Figure 3-6. Population by age group for Vashon Island, Bainbridge Island, and South/Central Whidbey Islands, 2000 and 2010 US Census



*South and Central Whidbey Island, North Whidbey Island excluded

In general, this corridor has exhibited a shift in trip frequency from the high frequency use patterns (more than 8 one-way trips per week) toward more moderate trip frequency (8 one-way trips per week or less). This change in the pattern of trip frequency is strongly correlated with the work/school trip purpose and is likely related to the aging demographic as well.

3.4.2 Access Patterns and Parking Trends

One notable change in access patterns and parking for the Central Sound Corridor is the decrease in vehicle boardings as a share of all boardings. The decrease ranged from 9 percentage points on the Seattle–Bremerton route, to 7 points on the Seattle–Bainbridge Island route, to 3 points on Edmonds–Kingston. Vehicle boardings as a percentage of total boardings varies between the three routes from a high of 84 percent on Edmonds–Kingston to 39 percent on Seattle–Bremerton during the weekday. Survey findings closely correspond with traffic statistics for the month of October (all times and days). Monthly traffic data show a 10 percent decrease in vehicle boardings for Seattle–

Bremerton, a 10 percent decrease for Seattle–Bainbridge Island, and a 3 percent decrease on the Edmonds–Kingston route.

Along with the decrease in the percentage share of vehicle boardings is an increase in the percentage of survey respondents who indicated that they walked on and parked a car at the terminal. The increase of those who parked a vehicle at the terminal ranged from 11 percentage points for the Seattle–Bainbridge Island and Seattle–Bremerton routes to 16 points on the Edmonds–Kingston route on weekdays. Of weekday survey respondents who boarded the ferry in a vehicle, more than 15 percent gave transit not being convenient as one of the reasons for boarding by vehicle.

3.4.3 Travel Patterns

While there were shifts in travel patterns specific to each route, the patterns of origins and destinations have remained fairly consistent. The one common trend among the three routes when comparing the 2006 and 2013 surveys is a slight increase in the percentage of trips with origins and destinations nearer to the terminals of the route. In other words, there is a slightly greater concentration of trips originating and ending near ferry terminals and a corresponding decrease in trips further from the terminals on each end of the trip. The exceptions to this trend are the routes serving Seattle’s CBD, which may be driven by changes in employment levels. Between 2006 and 2013, there was a slight decrease in employment in the Seattle CBD. However, that was offset by an increase in employment in South Lake Union north of the CBD.

3.5 South Sound Corridor Findings

The routes in the South Sound Corridor include Fauntleroy–Vashon, Fauntleroy–Southworth, Southworth–Vashon, and Point Defiance–Tahlequah. The corridor provides connectivity between Downtown Seattle via Fauntleroy in West Seattle, the north end of Vashon Island, and Southworth in Kitsap County. This corridor also connects the south end of Vashon Island with Tacoma. This corridor is the third-highest traveled corridor in the WSF system, with 3.6 million riders per year. It should be noted that both the 2006 and 1999 survey included passenger-only ferry service between Downtown Seattle and Vashon Island. Historically, WSF operated this route; however, King County officially took over operation of this service in 2008. This route was not included in the 2013 survey.

3.5.1 Aging Demographic, Trip Frequency and Purpose

This corridor has exhibited decreasing ridership for over a decade and currently carries 9,900 riders per day. This is a decrease from 11,000 riders per day in 2006 and a high of 13,000 riders per day in 1999. This corridor, as with others in the system, is experiencing an aging population, a corresponding reduction in the frequency of commuter trips, and a gradual shift toward recreational and shopping trips.

As with other corridors, this corridor exhibits change in the distribution of ages that continues to skew toward older riders. One indicator of the aging rider population is exhibited through a comparison of the share of survey respondents that indicated they were older than 64 years of age. As of 2013, about 16 percent and 18 percent of survey respondents from the Vashon/Fauntleroy/Southworth and Pt. Defiance–Tahlequah routes were older than 64 years of age, respectively. With respect to the change since 2006, the Vashon/Fauntleroy/Southworth routes exhibited a change from about 10 percent to 16 percent over 64 years of age between the 2006 and

2013 surveys. The Point Defiance–Tahlequah route changed from about 15 percent to 18 percent over 64 years of age between the 2006 and 2013 surveys. These survey results are confirmed by previous demographic and ridership analysis conducted in 2012 using census data for the Vashon Island, Bainbridge Island, and Whidbey Island service areas (See Figure 3-6).

In general, this corridor exhibits a shift in trip frequency from the high frequency use patterns (greater than 8 one-way trips per week) toward more moderate trip frequency (8 one-way trips per week or less). This change in the pattern of trip frequency is strongly correlated with the work/school trip purpose and is likely related to the aging demographic as well.

3.5.2 Access Patterns and Parking Trends

The South Sound Corridor exhibits a change in parking similar to that of the Central Sound Corridor. Although driving is still the predominant method of use on South Sound routes (more than 80 percent of weekday trips), the percentage of non-motorized trips that parked at the terminal increased significantly between 2006 and 2013. In 2006, about 26 percent of walk-on survey respondents indicated they parked a car at the terminal during the weekday trips. This response rose to 40 percent by 2013.

Of weekday survey respondents who boarded the ferry in a vehicle, more than 20 percent gave transit not being convenient as one of the reasons for boarding by vehicle.

3.5.3 Travel Patterns

While there were shifts in travel patterns specific to each route, the patterns of origins and destinations have remained fairly consistent. The one common trend among the three South Sound Corridor routes when comparing the 2006 to the 2013 surveys is a slight increase in the percentage of trips with origins and destinations nearer to the terminals of the route. In other words, there is greater concentration in trips originating and ending near ferry terminals and a corresponding decrease in trips farther from the terminals on each end of the trip.