



MEMORANDUM

To: Eron Berg – Executive Director
Port of Port Townsend

From: Eric Hovee

Subject: Economic Impact Analysis of WSF Potential Ferry Service Curtailments
(Port Townsend-Coupeville & Edmonds-Kingston Routes)

Date: November 24, 2020

In the wake of the current COVID-19 pandemic and associated changes in ferry ridership, the Washington State Ferries (WSF) system is considering steps that could involve reductions in capital and operating expenses. Measures may involve curtailed ferry service – including possible 50% reduction or total discontinuation of the Port Townsend-Coupeville route and 50% reduction in Edmonds-Kingston ferry service. Using readily available data, this report is intended to document the **potential economic impact of reduced access via ferry transportation** for those who live in, commute to work from and visit Jefferson County.

Principal **observations and findings** of this economic and fiscal impact analysis follow:

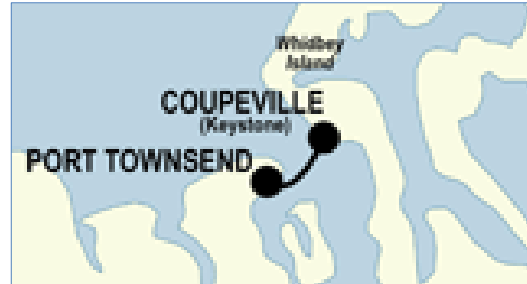
- In 2019, the **Port-Townsend-Coupeville** ferry accounted for a total (direct, indirect and induced) impact of an estimated \$57 million per year in output/spending, 695 jobs and \$30 million in annual labor income to the Port Townsend/Jefferson County economy.
- The **Edmonds-Kingston** ferry represents an added economic impact of \$62 million in annual spending, 955 commuter and local jobs, and \$61 million in annual labor income.
- The visitors utilizing the two ferry routes account for **nearly half (49%) of tourism spending** in Jefferson County and the combination of visitors and commuters represents an estimated **14% of all jobs** held by the county's resident labor force as of 2019.
- With rapid ridership growth, the Port Townsend-Coupeville ferry is most important for its contribution to Port Townsend's **tourism-based economy**; Edmonds-Kingston is most significant for **commuters with high wage opportunities** not as readily available locally.
- **Other economic impacts** resulting from reduced or terminated ferry service are not as readily quantified but potentially significant – locally as for businesses and residents reliant on ferry-based freight deliveries and statewide by impairing Washington's reputation and desirability as a full-service visitor and livability experience.

Background

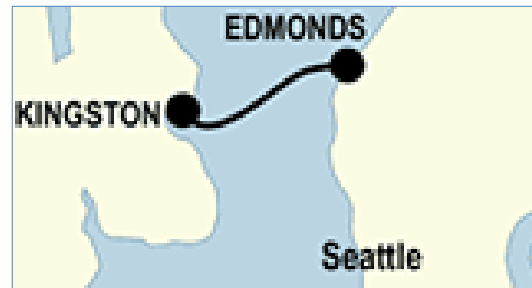
Primary components of ferry service available to Port Townsend and Jefferson County include:

- **Port Townsend-Coupeville** – of 10 sailings eastbound each winter day (starting 6:30 pm and with a last run at 8:30 pm), plus 10 sailings westbound (starting 7:15 am and last run sailing at 9:10 pm) using the Salish ferry. This route provides the most direct access to Port Townsend via Coupeville on Whidbey Island. The summer schedule at least doubles the daily trips. Average sailing time is 35 minutes.
- **Edmonds-Kingston** – with 20 regular sailings each day eastbound (starting 6:25 am with the last departure at 9:40 pm) and 20 westbound departures (starting 7:10 am with the last run at 10:25) and with three additional sailings each way (6 total) on certain days of the week with two vessels (Puyallup and Walla Walla). The Kingston landing offers direct access to Jefferson County via the Hood Canal floating bridge; sailing time is 30 minutes.

Port Townsend-Coupeville Ferry Route



Edmonds-Kingston Ferry Route



Source: Washington State Ferries.
Sailing schedules are as of Fall 2020.

Data Sources & Approach to Analysis

This report is intended to address the economic and fiscal impacts of these two ferry routes that most directly serve Port Townsend and Jefferson County. The approach taken to conducting this analysis is shaped by the data sources most readily available which include:

- WSF-issued annual and quarterly *Travel Statistics Rider Segment Reports* (with breakouts of the Port Townsend-Coupeville and Edmonds-Kingston routes).
- WSF 2013 *Origin-Destination Travel Survey Report* as the most recent dataset providing information on trip purposes together with traveler origins and destinations by route.
- County-level spending data for the years 2015-19 as currently compiled by the firm Tourism Economics for the Washington Travel Alliance (WTA).
- Previous county-level visitor count and spending including party-size and length of stay data for 2017 as provided for WTA by the firm Dean Runyan Associates.
- Jefferson County covered employment data as of 2019 as compiled by the Washington State Employment Security Department (ESD) together with county-specific impact data as available through the U.S. Bureau of Economic Analysis (BEA).

Report Organization

The remainder of this memorandum is organized to cover the following topics:¹

Ferry Ridership & Use Profile
Economic Benefits
Summary Observations

An appendix to this report provides detailed worksheets for estimating direct tourism spending and commuter wages/jobs associated with the Port Townsend-Coupeville and Edmonds-Kingston ferries.

FERRY RIDERSHIP & USE PROFILE

This economic impact report begins with a brief overview of the two ferry routes most directly serving Port Townsend and Jefferson County considered together with comparative ridership profile and trends of recent years.

Ridership Profile & Trends

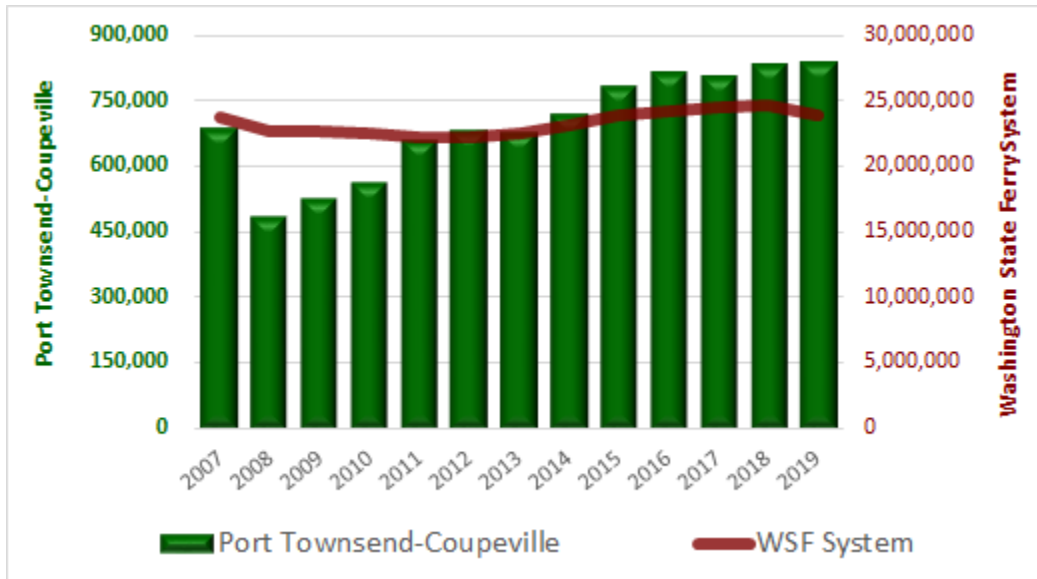
As a point of reference, it is useful to compare ridership characteristics for:

- **The Port Townsend-Coupeville route** – serving just over 843,000 passengers in 2019 (accounting for less than 4% of the WSF system ferry travel total in recent years – but with more rapid ridership growth than has occurred system-wide).
- **The Edmonds-Kingston Ferry route** – with over 4.1 million passengers as of 2019 (and a pattern of year-to-year change which parallels the WSF systemwide trend).
- **The entire Washington State Ferry (WSF) system** – with close to 24 million 2019 riders (but with slowing ridership growth in recent years and actual decline in 2019 ahead of the current pandemic and economic recession).

While the Port Townsend-Coupeville is a relatively small portion of total system riders, it has been experiencing more rapid tourism-led growth with less reliance on workforce commutes. More detailed discussion of the two primary routes serving Jefferson County now follows.

Port Townsend-Coupeville. The graph on the next page provides a year-by-year comparison of ridership on the Port Townsend-Coupeville ferry as compared with the WSF system-wide trend. As with other ferry routes, Port Townsend-Coupeville ferry traffic was affected by the 2007-09 recession, perhaps even more significantly by removal of ferry vessels from service due to safety concerns.² Adding to the economic impact was closure of the Hood Canal Bridge for six weeks in May-June of 2009. Port Townsend-Coupeville counts did not fully recover back to 2007 levels until about 2012, then experienced strong growth subsequently. Overall ridership has increased at a rate averaging 4.8% per year from 2009-19, well above the relatively modest WSF system-wide total ridership growth rate averaging only 0.5% per year.

Port Townsend-Coupeville Ridership Trend (2007-19)

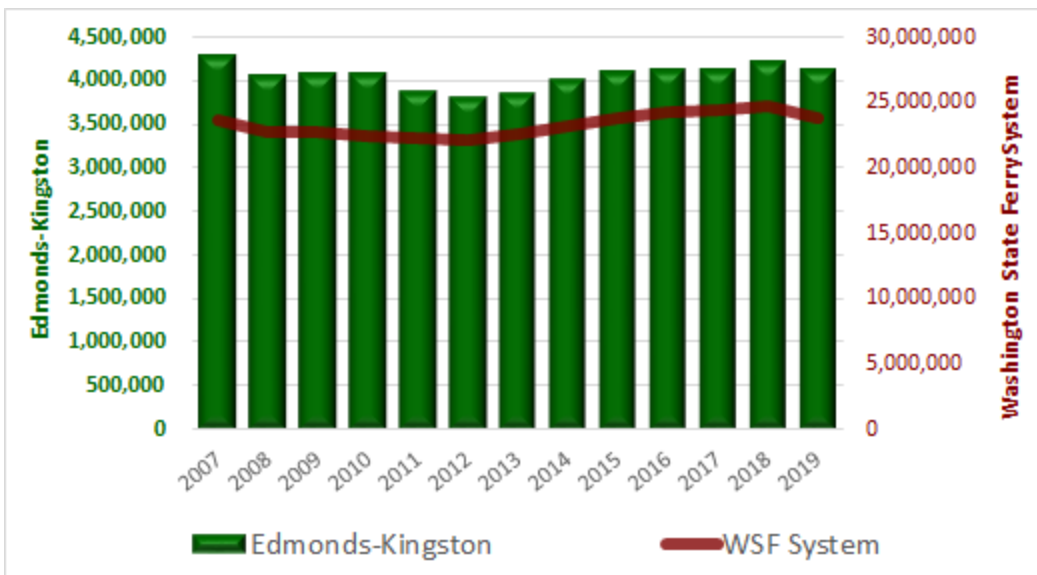


Source: WSF, *Travel Statistics Rider Segment Report(s)*, multiple years.

A similar 44-46% of WSF-wide and Port Townsend travelers are car drivers. On the Port Townsend-Coupeville route, a relatively high 39% of travelers are vehicle passengers as compared with 27% for all WSF routes. An estimated 16% are foot passengers as compared with 29% system-wide.

Edmonds-Kingston. As illustrated by the following graph, ridership on the Edmonds-Kingston route more closely mirrors ridership trends for the entire WSF system.

Edmonds-Kingston Ridership Trend (2007-19)



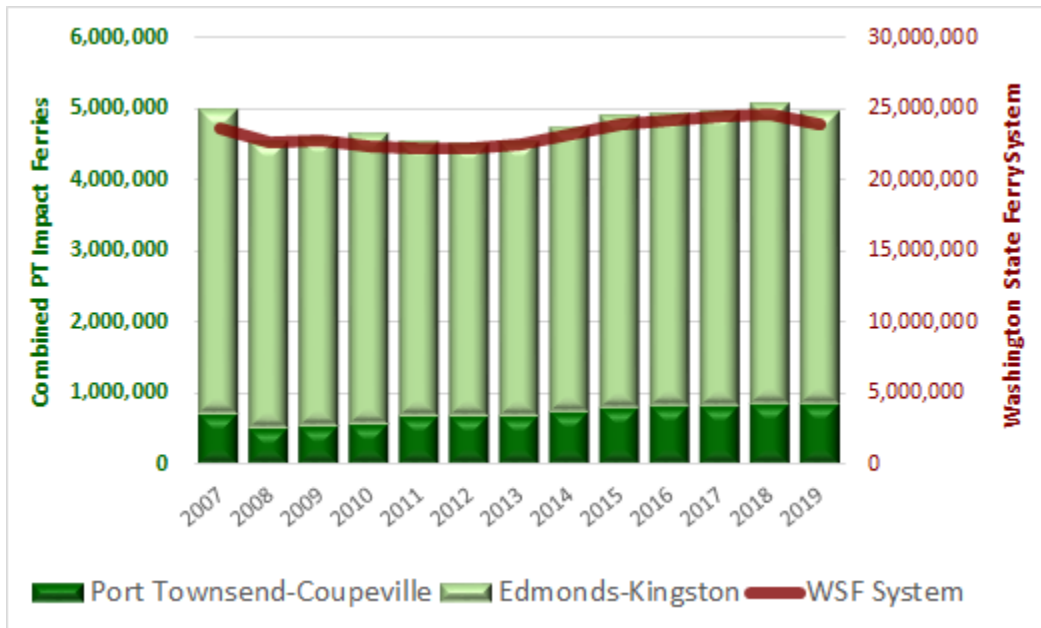
Source: WSF, *Travel Statistics Rider Segment Report(s)*, multiple years.

With 4.1 million riders as of 2019, traffic on this route which serves both Kitsap and Jefferson County (plus adjoining areas) is nearly five times greater than experienced for the Port Townsend-Coupeville route. However, while the route has experienced some minor year-to-year changes, the overall volume of ridership over the last decade has been essentially flat. From 2009-19, total ridership increased by an average of only 0.1% per year – below the similarly modest 0.5% annual ridership growth rate for the full WSF system.

As discussed further below, while this ferry corridor serves visitor traffic, it is more strongly oriented to work commutes. A majority (52%) of all passengers are vehicle drivers, 32% are vehicle passengers and 16% are foot passengers. As with Port Townsend-Coupeville, foot passenger traffic is below and vehicle passenger activity is above the WSF system proportion.

Combined Port Townsend / Kingston Profile. A combined profile of the two ferry routes of primary importance to Jefferson County is provided by the following composite graph. This combination illustrates a blend of the more cyclical tourist orientation of the Port Townsend-Coupeville route coupled with the work-a-day bent of the Edmonds-Kingston route – both of which have proven pivotal to the economic vitality of Jefferson County.

Two Ferry Routes as Compared to WA-Sate Trend (2007-19)

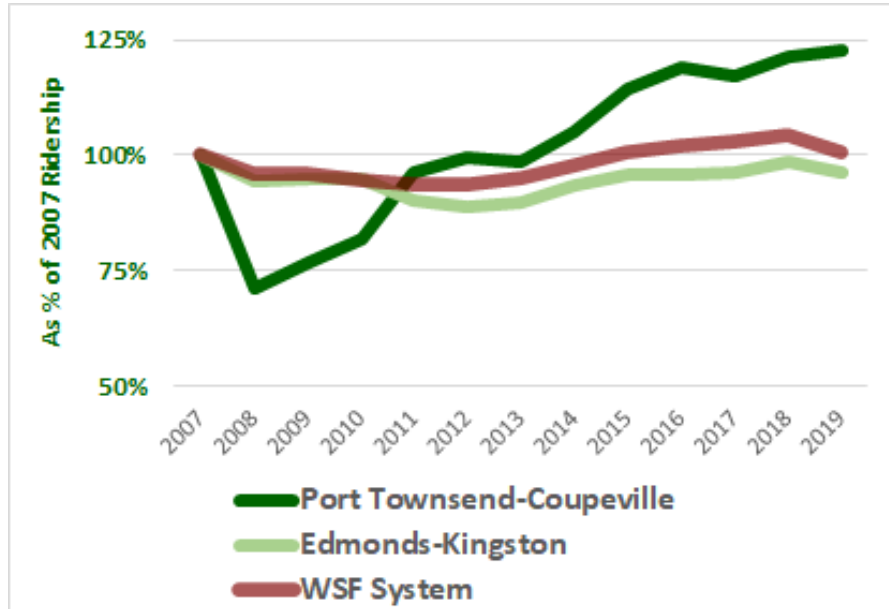


Source: WSF, *Travel Statistics Rider Segment Report(s)*, multiple years.

On a combined basis, the two routes have experienced ridership growth averaging 0.8% per year – above the WSF-wide growth rate of 0.5% -- pulled up by more rapid passenger growth on the Port Townsend-Coupeville route.

Getting to a New Peak. Viewed in terms of ridership as compared to a 2007 peak year, only the Port Townsend-Coupeville route has gone well beyond full recovery in recent years.

Comparative Ferry Ridership Trend (As Compared to 2007)



Source: WSF, *Travel Statistics Rider Segment Report(s)*, multiple years.

Looking forward, the Port Townsend-Coupeville route offers similarly strong growth potential with continued economic growth post-pandemic – perhaps quickly as latent travel demand resurfaces with a reduced COVID infection rate, especially once an effective vaccine is in place.

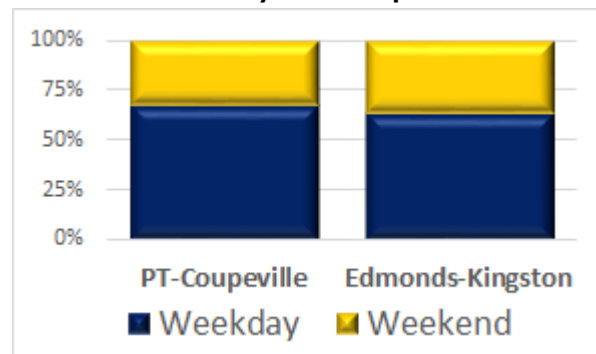
Weekday & Weekend Travel

An item of some importance for this analysis is the determination of the proportion of total ridership (drivers, passengers and walk-ons) that occurs weekdays versus weekends. This is because the purposes of ferry travelers (work/school, recreation/shopping, and personal business/other) vary considerably between weekends and weekdays.

While WSF does not publish ridership counts split between weekdays and weekends, this data was provided by request, indicating that:³

- The shares of weekday versus weekend ridership appear to be roughly **similar** for both ferry routes serving Jefferson County.
- An estimated **68% of Port Townsend** ridership occurs weekdays versus 32% weekends.
- For the **Edmonds-Kingston** ferry, the split is 64% weekdays and

% Shares of Weekday & Weekend Ferry Ridership



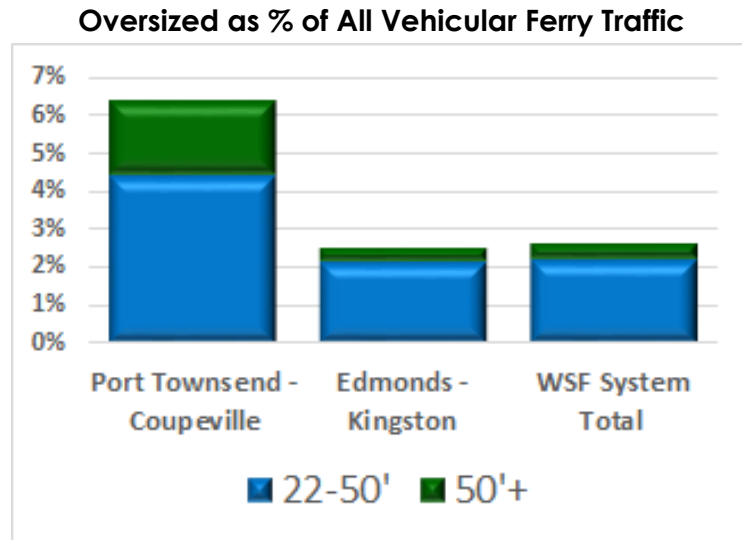
Source: WSF, provided as of October 2020.

36% weekends – somewhat more oriented to weekend ferry travel.

Oversized Vehicles

WSF travel statistics data also include a breakdown of vehicles by size. Of note for the Port Townsend-Coupeville ferry is the relatively large proportion of oversized vehicles, categorized by overall length including trailers as:

- **22-50 foot overall length** – including autos with trailers, some recreational vehicles and trucks which represent 4.4% of all vehicles on the Port Townsend-Coupeville route, more than double the proportion for Edmonds-Kingston or for all routes of the WSF system.



Source: WSF, *Travel Statistics Rider Segment Report*, 2019.

- **50+ foot length** – primarily truck and semi-trailer combinations which comprise 2.0% of all Port Townsend-Coupeville vehicles, about five times the proportion for the Edmonds-Kingston route or for the entire WSF system.

This difference illustrates the much greater reliance of Port Townsend and Jefferson County on ferry service for freight movements than is the case for other portions of the WSF system. If ferry service on the Port Townsend-Coupeville route were to be substantially curtailed or eliminated, freight inbound and outbound would have to travel less directly, for example, diverting to the Edmonds-Kingston ferry.

If Edmonds-Kingston ferry traffic also were to be curtailed, truck freight would need to be re-routed yet more circuitously via the more urbanized Seattle-Bremerton route or travel by road south to Olympia and back north to a central or northern Puget Sound destination.

In addition to adding more truck road-miles, this diversion would adversely affect northern peninsula businesses shipping produce and manufactured products to the eastside Puget Sound market. It could also be expected to adversely affect Jefferson County residents, increasing travel time and raising cost of goods as for groceries, other consumer goods and business/medical supplies from suppliers situated in the central to northern Puget Sound counties of Pierce, King, Snohomish, Skagit and Whatcom.

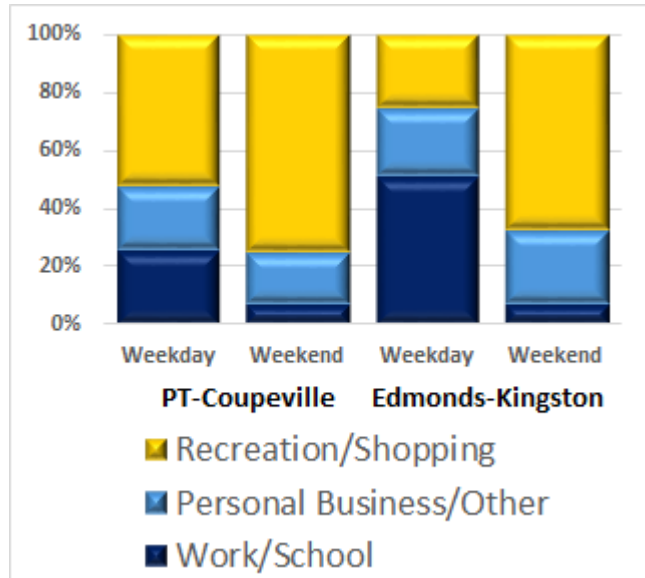
Tourism & Employee Commute Patterns

In addition to ferry ridership counts, an important part of this impact analysis is to ascertain the trip purposes together with origins and destinations of ferry passengers on the Port Townsend-Coupeville and Edmonds-Kingston routes. This information is provided by a periodic WSF Origin-Destination (O-D) Travel Survey Report, most recently conducted in 2013. WSF has postponed updates of this travel survey due to the pandemic, with the next update expected to occur once travel has returned (or changed) to more normalized conditions.

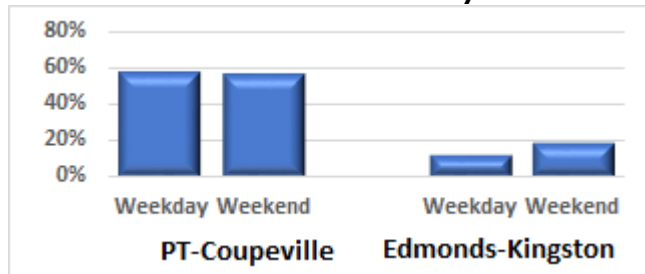
As might be expected, there are some key differences in the profile of those using the Port Townsend-Coupeville ferry and those traveling via Edmonds-Kingston. Data from the 2013 survey most relevant to this impact analysis are summarized by the graphs to the right:

- The Port Townsend-Coupeville ferry is associated with higher proportions of **recreation and shopping** related trips (both weekdays and weekends). Conversely, the Edmonds-Kingston route involves more **work-related travel** (primarily weekday).
- Close to 60% of weekday and 50%-60% of weekend **Westbound trips** are destined to Port Townsend and Jefferson County with the remainder to other peninsula locations. Less than 20% of Edmonds-Kingston westbound travel is to Jefferson County.
- **Eastbound trips** show origins similar to those of destinations, expected as many are round trips.

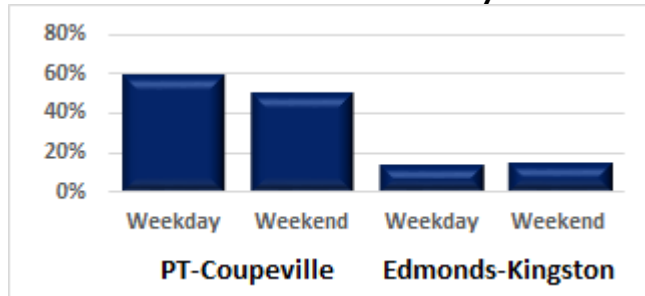
Ferry Trip Purpose (% of Total)



% of Westbound Destinations to Jefferson County



% of Eastbound Origins from Jefferson County



Source: Washington State Ferries, *Travel Statistics Rider Segment Report, 2019.*

Other O-D notes pertinent to the economic impact evaluation include the following:

- While the majority of ferry trips involve the same route both coming and going, between 14-17% involve a different route for ½ of the round trip – either by taking another ferry or driving around. While representing a lesser portion of ferry-related travel, this routing is included as an important part of the economic impact calculation.
- There are minor differences in the shares of total travel headed westbound vs. east as part of a complete ferry-related trip – depending on route, travel direction and weekday or weekend. Overall, 48% of Port-Townsend-Coupeville survey respondents are headed westbound with 52% east. For Edmond-Kingston, the reverse seems to be the case, with 52% headed west versus 48% east. Due to the relatively small difference, a roughly equal 50/50 split is assumed between west/eastbound trips.

Estimating Tourism & Commuter Impacts

Key data variables applied with this analysis and their sources are outlined as follows.

Tourism Data. Tourism-related data comes sources including O-D surveys of WSF plus two tourism sources (Runyan – 2017 and Tourism Economics – 2019) as compiled by county for the Washington Travel Alliance (WTA). Key data parameters applied to both ferry routes and their associated impacts on Port Townsend and Jefferson County are noted as follows:

- Day-trips are per WSF/O-D data for Port Townsend-Coupeville at 45% of non-work travel weekdays, 63% weekends; for Edmonds-Kingston at 52% weekdays, 61% weekends.⁴
- Average length of stay per the WTA information is 2.1 days for overnight visitors.
- Average per day visitor spending is \$80 for day shoppers and \$174 for overnight visitors (adjusted from 2017 to 2019 conditions).
- Economic multipliers specific to Jefferson County are applied for output/spending, employment, labor income and state/local tax revenues per the most recent 2019 WTA-related datasets.

Employee Commute Data. Employment and payrolls associated with workforce commutes by ferry are estimated as follow:

- Commute trips are translated to employment assuming 200 commute days per year, assuming an average of 4 commutes per worker per week over 50 weeks annually (pre-pandemic), consistent with U.S. Bureau of Labor Statistics data.⁵
- Average wage for commuters on the Port Townsend-Coupeville is assumed at a \$58,600 per worker amount as of 2019, as applicable to the northern Puget Sound counties of Whatcom, Island, Skagit and Snohomish. Average wage for commuters on the Edmonds-Kingston route is set at an \$83,000 average for Snohomish, Pierce and King Counties.
- Economic parameters and multipliers for output/spending, employment and labor income specific to Jefferson County are from the U.S. Bureau of Economic Analysis.

ECONOMIC BENEFITS ANALYSIS

Drawing from the ferry travel and tourism-related data, this analysis now proceeds to evaluate the economic and fiscal benefits to Port Townsend and Jefferson County of current operations for Port Townsend-Coupeville and Edmonds-Kingston ferry service. This analysis is intended to quantify current and potential impacts of existing ferry service – both in terms of spending by visitors to Jefferson County and workers commuting by ferry from Jefferson County to places of employment elsewhere in the Puget Sound region.

The analysis applies standard economic impact metrics for spending, employment supported, labor income, and state and local tax revenue. For each of these data metrics, estimates are made of:

- **Direct impacts** – in terms of direct spending in Jefferson County by ferry travelers and earnings of Jefferson County workers commuting elsewhere in the region for work by ferry; and.
- **Economic multiplier effects** – which include indirect spending made by local businesses and induced demand from households who benefit from direct spending and labor income, and then make their subsequent purchases based on the initial non-local economic stimulus.

Impact Analysis Methodology

The impact analysis which follows is driven by three primary sets of background information:

- **WSF ferry rider statistics and O-D data** as summarized by the foregoing portion of this report – with separation between the two ferry routes considered, weekday versus weekend usage, day-trip versus longer stays, and recreation/shopping versus workforce related purposes.
- **Tourism spending and economic multiplier information** available from county-specific reports prepared for the Washington Tourism Alliance.
- **Workforce employment and wage information** available for employment destinations of Jefferson County workforce to places of employment accessible by ferry in the eastern Puget Sound region based on data of the Washington Employment Security Department (ESD) and economic multipliers specific to those workers who commute to/from Jefferson County places of residence based on county-specific data of the U.S. Bureau of Economic Analysis Regional Impact-Output Modeling System (RIMS).

Detailed calculations worksheets for direct visitor or employment/payroll data is provided by the Appendix to this report. What now follows is a summary of economic impact effects noted for each of the two ferry routes considered – coupled with separate estimates for visitor and employee commute related impacts.

Tourism Impacts

Tourism impacts are outlined for the Port Townsend-Coupeville ferry, followed by impacts estimated for the Edmonds-Kingston route.

Port Townsend-Coupeville Ferry Service. As detailed by the first of four charts in the Appendix to this memorandum, Port Townsend and Jefferson County receive close to an estimated \$34 million dollars per year in **direct tourism spending** attributable to the Port Townsend-Coupeville ferry. This equates to more than one-quarter of \$127 million in total direct tourism spending as estimated by Tourism Economics for Jefferson County as of 2019.

This estimate accounts for visitors making a round-trip visit via the Port Townsend-Coupeville ferry route. Also included are visitors making either the trip coming to or the trip leaving from Port Townsend – with the other half of the trip made via an alternate ferry or by driving around to the other side of Puget Sound.

Taken together, approximately 156,000 visitors to Jefferson County arrive and/or leave by the Port Townsend-Coupeville ferry for the primary purpose of recreation or shopping. Adjusted for those who stay overnight, an estimated 238,000 visitor-days in 2019 were spent in Jefferson County due to one or more trips made via the Port Townsend-Coupeville route.

This direct \$34 million direct spending estimate serves as the impetus for calculation of the other economic impacts as detailed by the following chart.

Tourism Direct & Total Impacts: Port Townsend-Coupeville Ferry Service

Impact Factor	Output / Spending	Employment	Labor Income	S/L Tax Revenues
Direct Economic Impact				
Direct Annual Benefit	\$33,772,000	330	\$8,949,000	\$3,249,000
Relationship to	100%	9.78	26.5%	9.6%
Direct Spending	% of Spending	Jobs/million \$	% of Spending	% of Spending
Total Impact				
Economic Multiplier	1.51	1.27	1.49	1.20
Total Annualized Benefit	\$50,996,000	420	\$13,334,000	\$3,899,000

Source: E. D. Hovee estimates as derived from pertinent WSF, Runyan and Tourism Economics data.

With **economic multipliers** included, the Port Townsend-Coupeville ferry accounts for:

- An estimated total \$51 million in total annual spending benefit to Jefferson County.
- 420 jobs resulting directly and indirectly from ferry-related tourism.
- Annual labor income of \$13.3 million (with annual wage averaging \$31,750).
- State and local tax revenues estimated at an annualized figure of \$3.9 million.

Edmonds-Kingston Ferry. As detailed by the second of four charts in the Appendix, Port Townsend and Jefferson County receive an estimated \$28-\$29 million dollars per year **in direct tourism spending** attributable to the Edmonds-Kingston ferry. This equates to about 22% of \$127 million in total tourism spending as estimated by Tourism Economics for Jefferson County in 2019.

As with the Port Townsend-Coupeville ferry, this Edmonds-Kingston estimate covers visitors making a round-trip visit via the Edmonds-Kingston ferry route. Also included are visitors making only either the trip coming to or leaving from Jefferson County – with the other half of the trip made via an alternate ferry or by driving around to the other side of Puget Sound.

Taken together, an estimated 143,000 visitors to Port Townsend/Jefferson County arrive and/or leave by the Edmonds-Kingston ferry for the primary purpose of recreation or shopping. Adjusted for those who stay overnight, over 209,000 visitor-days in 2019 were spent in Jefferson County due to one or more trips made via the Edmonds-Kingston route.

A lower proportion of Jefferson County ferry trips represent recreation/shopping trips on the Edmonds-Kingston route than is the case for the Port Townsend-Coupeville route. However, this is at least partially offset by the much higher travel volume on this route. The result is a direct \$28.5 million direct spending estimate (approaching 85% of that associated with the Port Townsend-Coupeville ferry run). This direct spending serves as the impetus for the other economic impacts as detailed by the following chart.

Tourism Direct & Total Impacts: Edmonds-Kingston Ferry Service

Impact Factor	Output / Spending	Employment	Labor Income	S/L Tax Revenues
Direct Economic Impact				
Direct Annual Benefit	\$28,523,000	280	\$7,558,000	\$2,744,000
Relationship to Direct Spending	100%	9.78	26.5%	9.6%
	% of Spending	Jobs/million \$	% of Spending	% of Spending
Total Impact				
Economic Multiplier	1.51	1.27	1.49	1.20
Total Annualized Benefit	\$43,070,000	355	\$11,261,000	\$3,293,000

Source: E. D. Hovee estimates as derived from pertinent WSF, Runyan and Tourism Economics data.

With **economic multipliers** included, the Edmonds-Kingston ferry accounts for:

- An estimated total \$43 million in total annual spending benefit to Jefferson County.
- 355 jobs resulting directly and indirectly from ferry-related tourism.
- Annual labor income estimated at \$11.3 million.
- State and local tax revenues estimated at an annualized figure of \$3.3 million.

Workforce Commute Impacts

Estimates for workforce commute jobs and associated income are detailed by the last two charts of the appendix. Resulting impacts for the two ferry routes considered now follow.

Port Townsend-Coupeville Ferry Service. WSF data indicates that over 25% of weekday and 6-7% of weekend trips on the Port Townsend-Coupeville route are for work/school-related purposes. In the absence of added data, it is assumed that most (or up to all) of these trips are work-related (including students who also may work as part of their trip across Puget Sound). Also assumed is that the typical employee commutes across the Sound an average of four days per week either due to longer work shifts or a day of work from home (pre-pandemic).

On the Port Townsend-Coupeville run, WSF ferry boarding and O-D based work trip allocations indicate that about 51,700 commuter trips are made each year (as round-trips plus half-portions of trips with one leg occurring via an alternate route). It is estimated that 255 direct jobs for Jefferson County residents are accounted for with this ferry route.

The east of Puget Sound counties most readily reached from the Port Townsend-Coupeville run are Island, Skagit, and Snohomish (although Snohomish requires a second ferry crossing to Mukilteo). The average wage for these three counties is \$58,600 per worker for a total direct annual labor income benefit of \$14.9 million to these commuters who live in Jefferson County. This is 39% above the \$42,200 average wage of all employees working in Jefferson County.⁶

Workforce Commute Impacts: Port Townsend-Coupeville Ferry Service

Impact Factor	Output / Spending	Employment	Labor Income
Direct Economic Impact			
Direct Annual Benefit	NA	255	\$14,943,000
Added Indirect/Induced Impact			
Impact Factor	43.1%	3.1	11.6%
	% of HH income	Jobs/million \$	% of HH income
Indirect/Induced Impact	\$6,440,000	20	\$1,733,000
Total Economic Impact			
With Multiplier Effects	\$6,440,000	275	\$16,676,000

Source: E. D. Hovee estimates from pertinent WSF, ESD and RIMS data. No direct output or spending is associated with employment outside Jefferson County. Indirect and induced effects result from payrolls spent at home.⁷

As shown above, with **economic multipliers** the Port Townsend-Coupeville route accounts for:

- An estimated \$6.4 million in spending from households of workers and spinoff activity.
- Approximately 275 total employees dependent directly or indirectly on ferry service.
- An estimated \$16.7 million of total labor income to residents of Jefferson County.

Edmonds-Kingston Ferry. WSF data indicates that 51% of weekday and 7% of weekend trips on the high-volume Edmonds-Kingston route are for work/school-related purposes – with weekdays well above the 25% figure noted for the Port Townsend-Coupeville route. Assumed is that most (up to all) of these trips are for work-related purposes (including students who may also be working as part of their trip across Puget Sound). Also assumed is that the typical employee commutes across the Sound an average of four days per week either due to longer work shifts or a day of work from home (pre-pandemic).

A relatively low 13-14% proportion of weekday and 17-18% of weekend trips originate in or are destined to Jefferson County. On the Edmonds-Kingston run, WSF ferry boarding data combined with O-D based work trip allocations indicate that about 108,000 commuter trips are made each year (including both round-trips and half-portions of trips with one leg occurring via an alternate route. From this data and the assumptions noted above it is estimated that about 540 direct jobs for Jefferson County residents are accounted for by travelers on this ferry route. This is more than twice the Jefferson County commuter count associated with the Port Townsend-Coupeville route.

Based on this data and the assumptions noted above it is estimated that approximately 540 direct jobs represent commuters on this ferry route. The east of Puget Sound counties most readily reached from the Edmonds-Kingston run are Snohomish, King and Pierce Counties. The average annual wage for these three counties is \$83,000 per worker, nearly double the average wage available from employment at job sites located in Jefferson County.

**Workforce Commute Impacts:
Edmonds-Kingston Ferry Service**

Impact Factor	Output / Spending	Employment	Labor Income
Direct Economic Impact			
Direct Annual Benefit	NA	540	\$44,820,000
Added Indirect/Induced Impact			
Impact Factor	43.1%	3.1	11.6%
	% of HH income	Jobs/million \$	% of HH income
Indirect/Induced Impact	\$19,317,000	60	\$5,199,000
Total Economic Impact			
With Multiplier Effects	\$19,317,000	600	\$50,019,000

Source: E. D. Hovee estimates from pertinent WSF, ESD and RIMS data. No direct output or spending is associated with employment outside Jefferson County. Indirect and induced effects result from payrolls spent at home.

As shown above, with **economic multipliers** the Edmonds-Kingston route accounts for:

- More than \$19 million in spending from households of workers and spinoff activity.
- Approximately 600 total employees dependent directly or indirectly on ferry service.
- An estimated \$50 million of total labor income to residents of Jefferson County.

Combined Impact Summary

The final chart provided with this impact analysis combines results from the two ferry routes considered under either of two scenarios – 100% service termination or 50% service curtailment for both routes. Other results are also possible but not shown with the table – such as full termination of one route and 50% curtailment of another or options involving termination/curtailment to just one route.

Combined Impact Summary: Port-Townsend-Coupeville & Edmonds-Kingston Ferry Service

Impact Factor	Output / Spending	Employment	Labor Income
100% Service Termination			
Direct Economic Impact	\$62,295,000	1,405	\$76,270,000
Indirect/Induced Impact	\$57,528,000	245	\$15,020,000
Total Economic Impact	\$119,823,000	1,650	\$91,290,000
50% Service Curtailment			
Direct Economic Impact	\$31,147,500	705	\$38,135,000
Indirect/Induced Impact	\$28,764,000	120	\$7,510,000
Total Economic Impact	\$59,911,500	825	\$45,645,000
Share of Total Impact by Ferry Route			
Port Townsend-Coupeville	48%	42%	33%
Edmonds-Kingston	52%	58%	67%

Source: E. D. Hovee from sources as indicated.

As indicated by these tabular results, combined economic values directly and indirectly resulting from both tourism and commuter service activity with the Port Townsend-Coupeville and Edmonds-Kingston ferry routes to Jefferson County are estimated at:

- \$120 million in total output or spending annually to Jefferson County.
- Up to 1,650 jobs directly and indirectly supported.
- Over \$91 million of annual labor income.

A clear sense of the magnitude of this impact is perhaps best seen with respect to Jefferson County's job base. The 1,650 jobs made possible for Jefferson County residents due to ferry service represents an estimated 14% of all jobs held the resident labor force as of 2019.⁸

Also as indicated by the above chart, the Edmonds-Kingston ferry is more significant in terms of the support that it provides to commuters traveling to the east side of the Puget Sound for employment – measured both in terms of jobs and labor income. From a total spending perspective, the economic contributions of the Port Townsend and Edmonds routes are somewhat more evenly matched – but with Port Townsend more significant for tourism impact.

Summary Observations

Four observations resulting from this economic and fiscal impact analysis are of particular note:

- 1) The Port Townsend-Coupeville ferry is most important for its contribution to the tourism-based economy of Port Townsend and Jefferson County.** If curtailed or discontinued, the impacts to local tourism (post-pandemic) can be expected to be fairly immediate and sustained. Cuts to Edmonds-Kingston service could further compound the hardship to tourism-based businesses.

This is essentially for two reasons: a) alternative routes via another ferry or by driving are likely to take much longer (especially on fair weather high volume weekends); and b) travel by ferry likely is an integral part of the charm and draw of visitors from outside Washington state or on the eastside of the Puget Sound to the Olympic Peninsula. Impacts to commuter travel may not be as significant (except to Island and Skagit Counties) as long as there is alternative service – especially via Edmonds-Kingston.

- 2) The Edmonds-Kingston ferry is most important for its role providing access to higher wage opportunities for Jefferson County residents to the east side of the Puget Sound.** The impact of potential service curtailment may not be as immediate as for tourism since there are other (albeit longer) ferry and drive-around commute options available to affected commuters.

However, the inconvenience of longer term commutes likely would create longer term incentive for at least some commuters to either relocate out of Jefferson County or to look for alternative (albeit likely lower paying) employment closer to home in the Port Townsend area. This could be considered a most likely scenario pre-pandemic.

The COVID-19 pandemic likely has created the potential for more commuters to work from home more of the time than previously. As yet uncertain is the extent to which this shift in workforce commuting persists or returns to pre-pandemic conditions once the current pandemic subsides.

- 3) There are some economic impacts resulting from reduced or terminated ferry service that are not currently readily quantified but that may prove significant.** Perhaps the best example of this further adverse impact is associated with disruption of freight transportation both for businesses and residents reliant on freight transported between Jefferson County and major industries/distributors on the east side of the Puget Sound. This loss of immediate access is most significant for firms shipping highly perishable or other items for which timeliness of delivery is of high priority.

Examples provided by local sources over the course of this economic impact analysis regarding businesses that depend on regular ferry service range from a wood business (whose products can be found on boats worldwide but reliant on the ferry weekly) and a fish company (transporting via ferry to Puget Sound markets nearly daily). An example of a larger industry is a wood products firm that, between raw materials coming in and finished goods going, out runs 500-600 loads a month on the PT-Coupeville ferry route.

Port Townsend's marine trades sector is dependent on ferry service, for example, with trailer transport of vessels between the west and east sides of the Puget Sound, U.S.

Navy and Coast Guard facilities at Port Hadlock and Port Townsend are reportedly reliant on ferry service year-round – including national security considerations.

What is clear is that trucks are more than twice as dependent on the Port Townsend-Coupeville ferry as these *oversize vehicles* are on the rest of the WSF ferry system. What is not as clear is the extent to which longer routes (via other ferries further south or drive-arounds) might serve as a second best but still viable alternative or further impair the economic competitiveness and sustainability of the Olympic Peninsula economy. Freight impacts warrant further review before decisions on service changes are made.

- 4) A final impact beyond the scope of this Jefferson County focused analysis is the extent to which reduced ferry access attractive to tourists and local residents impairs Washington state’s reputation and desirability as a full-service visitor and livability experience.** An important part of the appeal of Washington state as a place to visit, live and do business lies in the remarkable diversity of its geographic sub-regions. For livability, readily available ferry service is important for residents needing to travel to the east side of Puget Sound not just for periodic discretionary purposes but for regular travel whether for access to shopping for goods not available locally, higher education or medical services.

For Port Townsend-Coupeville travel that is oriented to tourism, potential curtailment of ferry service is also significant to the WSF system – as this route has been experiencing more rapid passenger growth than the rest of the WSF system in recent years.

The removal of highly visible key elements of the full destination Washington state travel experience potentially compromises the attractiveness of the other attractions statewide to the detriment of all – albeit to an extent as yet unknown. At the very least, this becomes a new and not desirable factor in decisions that groups and individuals make as to where to recreate, live and work.

As a final note, it may be that commuter travel by ferry proves to be more vulnerable to reduced ferry ridership as more of the region’s work force works at home, both near- and long-term. While severely affected early in the pandemic, tourism travel may prove more resilient long-term, especially to the extent that visitors seek get-away experiences in less urban, more natural settings going forward.

Understanding that service options for 50% curtailment or potential total termination of ferry service via the Port Townsend-Coupeville and/or Edmonds-Kingston routes are currently being considered, more detailed WSF consideration of long-term as well as immediate impacts of varied ferry service options is suggested.⁹ This will be important to maintaining vital communities dependent on the WSF ferry connection and for re-positioning service to the most promising ridership opportunities in the years ahead.

E. D. Hovee appreciates the opportunity to provide this economic impact analysis on behalf of the Port of Port Townsend together with city and county partner organizations and is prepared to address questions regarding any aspect of this report.

APPENDIX. TOURISM & EMPLOYEE COMMUTE WORKSHEETS

On the next four pages, direct visitor impact calculation worksheets are provided. The first two worksheets address direct visitor spending as the *bottom-line* metric from which other economic impact estimates are derived. The next two pages provide employee commute worksheets for which direct jobs and related labor income represent *bottom-line* metrics.

In order, the worksheets are labelled as follows:

- Direct Visitor Impact: Port Townsend-Coupeville Ferry Service
- Direct Visitor Impact: Edmonds Kingston Ferry Service
- Direct Commuter Impact: Port Townsend-Coupeville Ferry Service
- Direct Commuter Impact: Edmonds-Kingston Ferry Service

Worksheet calculations can be described as **upper half** and **lower half** estimates, as follows:

Upper Half Calculations. All four worksheets begin by breaking down ferry ridership data to isolate the portion of ridership that is relevant to a specific ferry route and to the impact being considered. For both visitors and commuters, travel patterns are differentiated between weekday and weekend activity as the characteristics of travel are quite different for these two time periods. Further adjustments are made for round-trip versus one-way ferry travel and for the portion of travelers originating from and destined to Jefferson County. The result is a total rider benefit estimate – encompassing all travel whether for shopping/recreation, work/school, or personal business/other reasons.

WSF is the source of all data utilized for the upper half calculations. The end-result of these calculations is to arrive at an estimate of the number of ferry riders to which visitor or commuter market capture estimates can then be applied.

Lower Half Calculations. For **tourism**, recreation/shopping travelers are differentiated between day shoppers and overnight visitors using WSF/O-D data. Subsequent calculations are based on count-level tourism estimates provided for the Washington Tourism Alliance – from Dean Runyan Associates (through 2017) and Tourism Economics (through 2019). Key variables important for these calculations include data regarding length of stay and per visitor-day spending – also differentiated between day shoppers and overnight visitors, leading to an estimate of total direct visitor spending.

For **commuters**, a three-step calculation is used. Step one is to estimate annual commute days based on the proportions of weekday and weekend riders traveling for work/school related purposes. The second step involves estimation of direct employment impact based on assumed travel days per employee. The third step applies average wage data to estimate total labor income for the eastside Puget Sound region best served by each of the two routes considered. For the Port Townsend-Coupeville route, the most like job destinations are Island, Whatcom, Skagit and Snohomish Counties. For Edmonds-Kingston, it is Snohomish, King and Pierce.

Direct Visitor Impact: Port Townsend-Coupeville Ferry Service

Description	Visitor Metrics			Comments
	Weekday	Weekend	Total	
Round Trip Ferry Rider Equivalents				2019 vehicles, passengers, and walk-ons per WSF travel statistics
Total Ferry Boardings	843,268			
x % to Weekday/Weekend	67.9%	32.1%	100.0%	Per WSF estimate provided Oct 2020
= Total Boardings Allocated	572,579	270,689	843,268	
% Non-Round Trip (1 of 2 legs)	14.8%	17.4%		Uses another ferry or drives around
Adjusted Travel Total	618,336	296,483	914,819	Assign 1/2 of non-round % to 2nd leg
x % to Jefferson County O-D	59.0%	54.0%		Per 2013 WSF composite of O-D data
= PT/JC Ferry Visitors	364,818	160,101	524,919	
Adjusted to Unique Travelers	182,409	80,050	262,459	1/2 of total (round trip + other) travelers
Total Ferry Rider Benefit	182,409	80,050	262,459	To Port Townsend/Jefferson County
Recreation/Shopping Visitors				
x % Recreation/Shopping	52.5%	75.0%		Per 2013 WSF O-D data
= Recreation/Shopping Visitors	95,798	60,016	155,814	
Length of Stay				
x % Day Shoppers	45.1%	63.2%		Per 2013 WSF O-D data
= Day Shoppers	43,228	37,929	81,157	Also indicates visitor-days
% Overnight Visitors	54.9%	36.8%		Per 2013 WSF O-D data
= Overnight Visitors	52,569	22,087	74,656	In PT/JC for multiple days
x Average Length of Stay (Days)	2.1			For overnight visitors
Overnight Visitor Days	156,779			
Total Visitor Days	237,936			Including day + overnight visitors
Per Visitor-Day Spending				
Day Shoppers	\$80			Per Runyan 2017 adjusted to 2019
Overnight Visitors	\$174			Tourism Economics spending totals
Ferry-Related Visitor Spending				
Day Shoppers	\$6,493,000			Rounded to nearest \$1,000
Overnight Visitors	\$27,279,000			
Total Direct Visitor Spending	\$33,772,000			

Direct Visitor Impact: Edmonds-Kingston Ferry Service

Description	Visitor Metrics			Comments
	Weekday	Weekend	Total	
Round Trip Ferry Rider Equivalents				2019 vehicles, passengers, and walk-ons per WSF travel statistics
Total Ferry Boardings	4,121,283			
x % to Weekday/Weekend	64.1%	35.9%	100.0%	Per WSF estimate provided Oct 2020
= Total Boardings Allocated	2,641,742	1,479,541	4,121,283	
% Non-Round Trip (1 of 2 legs)	14.3%	14.6%		Uses another ferry or drives around
Adjusted Travel Total	2,845,172	1,596,052	4,441,225	Assign 1/2 of non-round % to 2nd leg
x % to Jefferson County O-D	13.5%	17.5%		Per 2013 WSF composite of O-D data
= PT/JC Ferry Visitors	384,098	279,309	663,407	
Adjusted to Unique Travelers	192,049	139,655	331,704	1/2 of total (round trip + other) travelers
Total Ferry Rider Benefit	192,049	139,655	331,704	To Port Townsend/Jefferson County
Recreation/Shopping Visitors				
x % Recreation/Shopping	25.5%	67.5%		Per 2013 WSF O-D data
= Recreation/Shopping Visitors	49,043	94,288	143,331	
Length of Stay				
x % Day Shoppers	52.4%	61.4%		Per 2013 WSF O-D data
= Day Shoppers	25,680	57,885	83,565	Also indicates visitor-days
% Overnight Visitors	47.6%	38.6%		Per 2013 WSF O-D data
= Overnight Visitors	23,363	36,403	59,766	In PT/JC for multiple days
x Average Length of Stay (Days)	2.1			For overnight visitors
Overnight Visitor Days	125,508			
Total Visitor Days	209,073			Including day + overnight visitors
Per Visitor-Day Spending				
Day Shoppers	\$80			Per Runyan 2017 adjusted to 2019
Overnight Visitors	\$174			Tourism Economics spending totals
Ferry-Related Visitor Spending				
Day Shoppers	\$6,685,000			Rounded to nearest \$1,000
Overnight Visitors	\$21,838,000			
Total Direct Visitor Spending	\$28,523,000			

Direct Commuter Impact: Port Townsend-Coupeville Ferry Service

Description	Commuter Metrics			Comments
	Weekday	Weekend	Total	
Round Trip Ferry Rider Equivalents				2019 vehicles, passengers, and walk-ons per WSF travel statistics
Total Ferry Boardings	843,268			
x % to Weekday/Weekend	67.9%	32.1%	100.0%	Per WSF estimate provided Oct 2020
= Total Boardings Allocated	572,579	270,689	843,268	
x % Non-Round Trip (1 of 2 legs)	14.8%	17.4%		Uses another ferry or drives around
Adjusted Travel Total	618,336	296,483	914,819	Assign 1/2 of non-round % to 2nd leg
x % to Jefferson County O-D	59.0%	54.0%		Per 2013 WSF composite of O-D data
= PT/JC Ferry Visitors	364,818	160,101	524,919	
Adjusted to Unique Commuters	182,409	80,050	262,459	1/2 of total (round trip + other) travelers
Total Ferry Rider Benefit	182,409	80,050	262,459	Calculations same as for tourism
Work-Related Trips				
x % Work/School Trips	25.5%	6.5%		Per 2013 WSF composite of O-D data
= Total Annual Commute-Days	46,455	5,224	51,680	
Employment Estimate				
/ Annual Days per Employee	200			Assume average 4 commutes per worker per week over 50 weeks annually
= Potential Employment Impact	230	25	255	Rounded to nearest 5 jobs
Direct Annual Wage Impact				Per WA-ESD covered wage data 2019
Average Wage per Employee	\$58,600			for Whatcom, Island, Skagit, Snohomish
Total Direct Annual Wage	\$14,943,000			Rounded to nearest \$1,000

Direct Commuter Impact: Edmonds-Kingston Ferry Service

Description	Commuter Metrics			Comments
	Weekday	Weekend	Total	
Round Trip Ferry Rider Equivalents				2019 vehicles, passengers, and walk-ons per WSF travel statistics
Total Ferry Boardings	4,121,283			
x % to Weekday/Weekend	64.1%	35.9%	100.0%	Per WSF estimate provided Oct 2020
= Total Boardings Allocated	2,641,742	1,479,541	4,121,283	
x % Non-Round Trip (1 of 2 legs)	14.3%	14.6%		Uses another ferry or drives around
Adjusted Travel Total	2,845,172	1,596,052	4,441,225	Assign 1/2 of non-round % to 2nd leg
x % to Jefferson County O-D	13.5%	17.5%		Per 2013 WSF composite of O-D data
= PT/JC Ferry Visitors	384,098	279,309	663,407	
Adjusted to Unique Commuters	192,049	139,655	331,704	1/2 of total (round trip + other) travelers
Total Ferry Rider Benefit	192,049	139,655	331,704	Calculations same as for tourism
Work-Related Trips				
x % Work/School Trips	51.3%	6.8%		Per 2013 WSF composite of O-D data
= Total Annual Commute-Days	98,520	9,434	107,954	
Employment Estimate				
/ Annual Days per Employee	200			Assume average 4 commutes per worker per week over 50 weeks annually
= Potential Employment Impact	495	45	540	Rounded to nearest 5 jobs
Direct Annual Wage Impact				Per WA-ESD covered wage data 2019
Average Wage per Employee	\$83,000			for Snohomish, King, Pierce Counties
Total Direct Annual Wage	\$44,820,000			Rounded to nearest \$1,000

END NOTES

¹ This report has been prepared for the Port of Port Townsend and participating city and county organizations by the economic and development consulting firm E. D. Hovee & Company, LLC. Since 1984, E. D. Hovee has provided market feasibility and economic impact analysis for a wide range of public, non-profit and private clients – primarily in the Pacific Northwest states of Washington and Oregon.

This analysis has been conducted based on data sources generally deemed to be reliable. However, accuracy of third-party information is not guaranteed and is subject to change without notice. The observations and findings in this report are those of the author and should not be construed as representing the opinion of any other party prior to express approval, whether in whole or part.

² In November, 2007 the Port Townsend-Keystone route (later renamed to "Port Townsend-Coupeville" in 2014) was effectively shut down when all four Steel-Electric class vessels (three in service, one on standby) were removed from service due to safety concerns with minimal advance notice. Severe hull corrosion had been found in those 80-year old boats, with WSDOT determining that the risk of continuing operations was too great. It took four years to restore full service to the route.

³ Per email correspondence of October 2020, WSF provided the estimates of weekday versus weekend ferry ridership for the Port Townsend/Coupeville and Edmonds/Kingston routes. With the Edmonds/Kingston route, it was noted that WSF only redeems tickets for vehicles and walk-ons traveling west; unknown is when those passengers travel east. Consequently, for the rider segment reports westbound numbers (for example, from Edmonds) are doubled to account for the assumed return trip from Kingston. For Port Townsend/Coupeville, all fares are charged as "one-ways," so WSF does have full passenger, vehicle, and walk-on statistics.

⁴ The O-D data of WSF (2013) suggest a higher proportion of day travel than Runyan (2017) which is less detailed in terms of weekday-weekend and Port Townsend versus Edmonds market segments and may be different for ferry travelers than for all tourists to Jefferson County. As applicable, the Runyan data would suggest a higher tourism dollar expenditure than indicated by the WSF data.

⁵ The U.S. Bureau of Labor Statistics (BLS) by press release dated June 25, 2020 provided results of an "American Time Use Survey – 2019 Results." Among its conclusions, the survey notes that: "On days they worked, 24 percent of employed persons did some or all of their work at home and 82 percent of employed persons did some or all of their work at their workplace." For purposes of this report (and pre-pandemic conditions), it is assumed that roughly 80% of the full work week is conducted from the place of employment and 20% from home. Results of the BLS report can be found at the web site: <https://www.bls.gov/news.release/pdf/atus.pdf>

⁶ Wage information for Jefferson and all comparison counties of the east Puget Sound region is from covered employment (QCEW) data of the Washington State Employment Security Department (ESD) as of 2019.

⁷ State and local tax revenues are not estimated for commute trips due to issues with reliable estimation and proper allocation of tax revenues. Uncertain is the extent to which sales tax on purchase of goods and services would be made near the location of east Puget Sound employment versus Jefferson County home location. Port Townsend has a business and occupation (B&O) tax; Jefferson County does not. The other primary revenue source is property taxes on residences of workers, the amount of which will vary by single- and multi-family residence and may not be directly (but more indirectly) affected by presence or absence of ferry service.

⁸ Total civilian labor force of Jefferson County for 2019 was 12,491. With an unemployment rate of 6.1%, the employed labor force is estimated for the year at 11,730 including jobs held in and outside Jefferson County. . Source as of October 2020 is: <https://esd.wa.gov/labormarketinfo/county-profiles/jefferson#labor>

⁹ A more detailed survey-driven approach could be of value to update 7-year old ferry O-D data and provide more targeted WSF-based tourism information to better validate impacts of each of the two ferry routes considered. In effect, this current economic impact report could serve as a starting point – identifying key data questions to address prior to proceeding with final ferry service changes.