Appendix A

Initial Conditions and Trends Analysis

Prepared by KPFF, Inc.

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INTRODUCTION

The Puget Sound Regional Council (PSRC) has commissioned a Regional Passenger-Only Ferry (POF) study of new passenger ferry service to better connect communities throughout the 12-county region surrounding Puget Sound.[1] As a part of this study, this document analyzes the existing regional conditions and the evolving trends in the POF landscape since the previous PSRC study, conducted in 2008. Much has changed in the region, and booming growth following the Great Recession has led to increased travel and congestion, along with increased awareness and investment in transit, including marine transportation. The scope of this POF study is the 12-county Puget Sound region, including Lake Washington and Lake Union.

History of POF in the Puget Sound Region

The long history of water travel on the Salish Sea began with Native Americans utilizing water transportation to connect their communities. During the late 1800s and early 1900s, the waters of Puget Sound were bustling with the Mosquito Fleet, a multitude of steam-powered small craft connecting communities including Seattle, Olympia, Tacoma, Everett, Port Townsend, Bellingham, Victoria, Vancouver, Vashon Island, Bremerton, and Bainbridge Island. Expansion of the landside road and bridge network increased demand for vehicle travel, and many routes converted to vehicle ferries. However, even with this pressure, some passenger ferry routes continued to thrive.

Challenges faced by passenger ferry routes have included unreliable public funding, high fuel costs, and changes in service levels that have led to low ridership. Governance and operations of POF services has to date been guided by the State Legislature. In 2006 legislation identified POF as a form of public transportation, to be funded and operated as other public transit within Washington State and directed Washington State Ferries (WSF) to focus scarce financial resources to the vehicle ferries and cease delivery of passenger-only service. Following this direction, additional funding resources were made available for local agencies to form benefit areas or districts to fund ferry service through taxing authority. This legal framework has shaped the governance structure of the current passenger-only service network—unique in the country—owned and operated by distinct local public agencies.

[1] The 12 counties making up this region are Clallam, Island, Jefferson, King, Kitsap, Mason, Pierce, San Juan, Skagit, Snohomish, Thurston, and Whatcom.

Current Public POF Operators

Two public POF operators, King County Metro (KC Metro) and Kitsap Transit (KT), currently provide service in the Puget Sound Region. These operators have independent branding and operations management. KC Metro's POF service is the King County Water Taxi, while KT operates two POF services: Kitsap Transit Foot Ferry and Kitsap Transit Fast Ferry. Both operators have growing ridership and are exploring route expansion and pursuing new route implementation. Currently all KC Metro and KT routes land in downtown Seattle at the newly constructed King County Pier 50 POF terminal. KT and KC Metro have executed a joint operating agreement to provide service at the King County owned facility with KC Metro providing all shoreside passenger management services. Currently, the Pier 50 terminal infrastructure consists of a newly completed covered queuing area that offers connection to the WSF Colman Dock terminal and a public viewing platform. The in-water infrastructure includes one float with two slips to serve four current routes, which will soon be five as KT begins service from Southworth planned for late 2020. The following sections provide a high-level overview of the two POF services; detailed operator profiles are provided in Attachment I.

KING COUNTY METRO (KC METRO): KC Metro currently operates two routes, one from Vashon Island and one from West Seattle. Both routes connect to downtown Seattle at the King County-owned Pier 50 terminal, where substantial uplands improvements and in-kind float replacement were completed in 2019. The Pier 50 POF terminal float consists of two slips, and also serves as the Seattle Terminal hub for the Kitsap Transit Fast Ferry routes, outlined below.[2]

Figure 1- King County Water Taxi POF Vessel

Ridership on the King County passenger-only routes continues to grow, with over 664,000 passengers on nearly 13,000 trips in 2018.[2] This highly reliable service is supported by a fleet of three vessels: two sister vessels MV Sally Fox and MV Doc Maynard, both 278-passenger vessels, and the Spirit of Kingston, a 149-passenger vessel.[3] The vessels are side-loading, with typical operating profiles of 28 knots. The fleet is maintained at the King County Maintenance Facility, located at the north side of Pier 48, which provides some additional non-service moorage capacity.

The King County Water Taxi operates year-round, with a weekday, peak period-focused schedule to Vashon Island and an expanded schedule to West Seattle that adds evening and weekend service during the spring and summer months. The operations have shown flexibility to offer additional trips during periods of high traffic congestion, such as professional sporting events, the recent Alaskan Way Viaduct closure and other high traffic congestion events.

[2] 2019 King County Water Taxi Facts and Figures
[3] King County Water Taxi website

KC Metro is currently studying multiple route expansion possibilities through two King County Council legislative provisos. One potential route would connect Kenmore to Seattle as the first modern-day KC Metro route to operate across Lake Washington. The other POF route under consideration is from Ballard to Seattle, terminating at the existing Pier 50 POF facility. Each of these routes was identified in a 2015 Expansion Study completed by King County.

KITSAP TRANSIT (KT) FERRIES: KT POF operations include two services: Fast Ferry and Foot Ferry. The Fast Ferry routes cross Puget Sound at higher speeds, while the Foot Ferry operates short local routes at slow speed, with more frequent sailings offered. In 2019, KT carried over 470,000 riders on its Fast Ferry routes and over 560,000 riders on its Foot Ferry routes, showing significant ridership growth in existing service and surpassing ridership expectations in the new services.[4]

Figure 2- Kitsap Fast Ferry Vessels

The KT Fast Ferry routes provide service from Kingston and Bremerton in Kitsap County to downtown Seattle. The routes from Kingston and Bremerton are served by unique vessels. The Kingston route is served by the MV Finest and the Bremerton route is served by three specially designed low-wake vessels, the Rich Passage class, which travel at speeds with low wakes. These routes operate multiple trips a day, with Bremerton service expanding from one-vessel to two-vessel service beginning in February 2020, bringing service to 24 trips a day during weekday morning and evening commute periods as well as Saturday service in the spring and summer months. The Kingston route makes 12 daily commute-period trips during the weekdays, also including Saturday service in the spring and summer months.

A third route is planned for implementation in late 2020, with service from Southworth to Pier 50 in Seattle. KT is currently procuring two new high-speed 250-passenger, side- and bow-loading vessels to serve the Southworth and Kingston routes.

KT also operates two Foot Ferry routes of much shorter distances, one between Port Orchard and Bremerton and the other between Annapolis and Bremerton. These ferries travel at slower speeds than KTs other routes with frequent service scheduled up to every 15 minutes.

REGIONAL CONDITIONS & TRENDS

Trends in Regional Transportation

INCREASED CONGESTION

Increased population and economic growth has put pressure on existing roadway infrastructure and has significantly increased traffic congestion. For example, in the Greater Seattle Area,

[4] Fast Ferry Program: Kitsap Transit website

each driver spent an average of 78 hours in traffic delays in 2017, which has risen from an average of 62 hours in 2008.[5] Simultaneously, concerted investments in the expansion of transportation choices have been made. These investments have largely taken the form of building out a high-capacity transit system supported by a growing network of locally provided transit. POF is just one of many options in this transit system, one that does not contribute to congestion on roadways. Despite this growing network of options, by all indications traffic congestion is continuing to worsen. In 2018, per the INRIX Global Traffic Scorecard, the average annual hours spent in traffic delays rose to 138 hours per driver.

TRANSIT USERS AND TELECOMMUTING

In the past decade, the number and percentage of individuals using transit to get to work has grown in the Puget Sound Region, as has the percentage of the population that telecommutes to work. These changing transportation choices could be a response to multiple factors, including increased roadway congestion and advances in technology.

MULTI-MODAL INVESTMENTS

Regional transportation planning organizations (RTPOs) such as PSRC have placed a larger emphasis on increasing modal transportation options and providing more infrastructure for non-automobile transportation in the recent decades. Growth in this multi-modal transportation system is expected to continue, with expansion of transit infrastructure and levels of services being a prime focus. Many RTPOs and local jurisdictions are attempting to provide more transportation choices and improve the overall efficiency of the regional transportation system.

THE ROLE OF LAND USE PLANNING

Numerous regional and local transportation plans emphasize transit-oriented land development policies to help improve access. Land use planning and development strategies have been identified as crucial to the success of providing viable options to entice people away from driving for the majority of their trips. Encouraging land development near transit hubs and along transit corridors and improving pedestrian and bicycle infrastructure in dense areas are both discussed as favorable strategies.

[5] Congestion Data for Your City – Urban Mobility Report — Urban Mobility Information

Key Themes among Regional Transportation Plans

THE APPROACH OF THIS STUDY TO REVIEW AND IDENTIFY PRIORITIES

For this POF study, an expansive geographic region of the 12 counties surrounding Puget Sound, including the Lake Washington and Lake Union bodies of water, are identified for analysis. Transportation plans from the relevant RTPOs and inter-county organizations were analyzed to understand the regional context of POF demand. The key themes identified in these transportation plans are shown below.

Figure 3- Regional Transportation Themes

Conditions and Trends in the POF Landscape

In addition to regional transportation plans, this body of work closely examined planning related to POF service completed or underway in the 12-county region. The following sections present the key regional trends identified, as well as common elements within the studies. Following this overview is a high-level summary of each of these plans.

EXPANSION

As the Puget Sound region continues to experience population and job growth, vehicle traffic has also increased. Crowded highways and buses in the commute periods have led to an increased interest by transit agencies and the public to explore POF transit options. The region's existing POF operators have experienced growth in ridership and have been evaluating expansion options. During these evaluations, public outreach has indicated a significant positive response for POF expansion throughout the region. This interest and growth are not isolated to the Puget Sound. POF operators in San Francisco and New York are also experiencing exponential growth and expansion opportunities to provide increased service and access to new locations.

KEY POF OPPORTUNITIES

Implemented POF routes have shown key success when able to provide faster ferry service than comparable WSF auto/passenger routes, as is the case of the Bremerton to Seattle POF service provided by the Kitsap Fast Ferry. Other success has

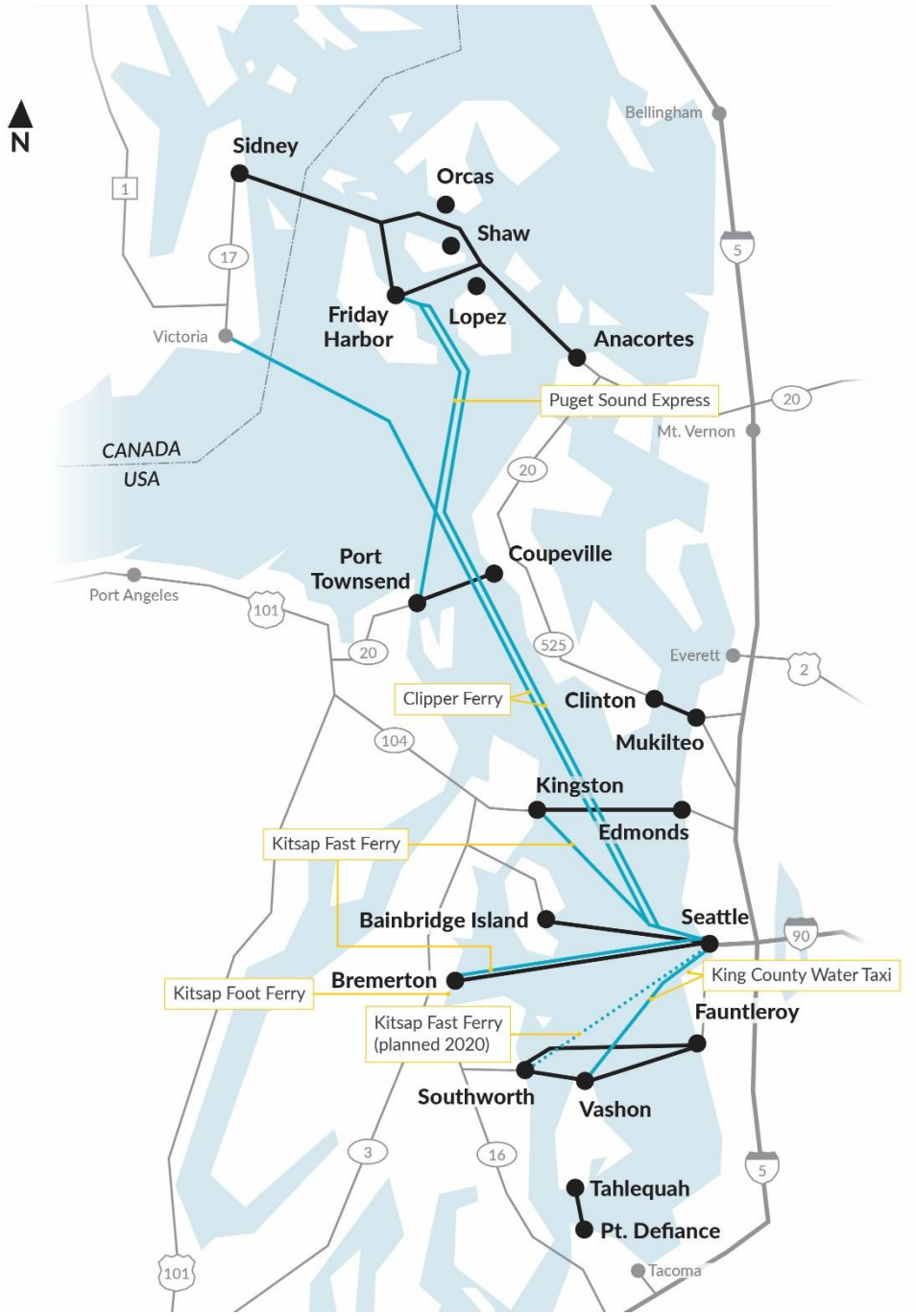


*Figure 4- Existing WSF and Passenger-Only Ferry Routes in the Puget Sound Region, taken from the WSF 2040 Long Range Plan***

**Puget Sound Express and Clipper Ferry Seattle to Friday Harbor operate seasonally

resulted from POF routes that connect locations to key employment centers more directly, avoiding congested highways and roads that inhibit existing landside transportation. Expanding the POF system also presents opportunities for adding flexibility and resiliency to the transportation network and providing surge capacity for special events. For example, during the original Highway 99 traffic closures, the KC Metro POF provided additional capacity to supplement the landside transit.

SEATTLE CAPACITY CONSTRAINTS

Multiple route feasibility studies are currently in process, many of which are planned to land in downtown Seattle. Currently, an existing downtown Seattle POF facility serves four routes from two operating slips. An additional KT route from Southworth to Seattle is expected to come online in late 2020, adding to the current operating challenges. Though new routes landing at this existing facility may be seen as desirable due to potential cost savings and easy passenger transfers, operational capacity for additional routes at this facility is highly limited. Moreover, if service frequency increases on any existing routes, scheduling the use of current facilities could become a substantial challenge. Consequently, additional POF slips and landing facilities, whether at multiple new landing sites, at a new larger regional facility, or at an expanded existing facility, will be needed to accommodate additional routes to downtown Seattle.

INCREASING FOCUS ON ENVIRONMENTAL CONSIDERATIONS

Environmental considerations were a minor consideration in some of the earlier POF studies. However, more attention and focus has been placed on environmental issues in later POF studies with increased knowledge of potential impacts and opportunities provided by advancements in technology.

Emissions

In particular, as technology has advanced, efforts to lower greenhouse gas emissions (GHG) through alternative fuels and vessel propulsion methods have increased in prominence throughout the ferry industry for both POF vessels and vehicle ferries. WSF is currently developing a system-wide electrification plan. Kitsap Transit is operating a new hybrid passenger-ferry from Bremerton to Port Orchard.

Multiple technologies have been developed that allow ferries to lower their GHG emissions. Initially, cleaner grades of diesel were used, such as low-sulfur diesel and then ultra-low-sulfur diesel. An additional method was to use a biodiesel fuel mixture, often ranging from B-5 to B-20. Another commonly used method is propulsion using a combination of diesel fuel and electric power, referred to as hybrid. Many hybrid diesel-electric options are available, each decreasing GHG emissions to varying extents depending on operational conditions.

Zero-emissions all-electric vessels have been developed and are feasible in the right operating conditions. Other low-emissions technologies available include the use of engines powered by liquid fuels such as liquefied natural gas (LNG) and methanol, which offer lower emissions as opposed to traditional diesel. Multiple ferries with engines powered by LNG and methanol are in operation today.

More experimental zero-emissions ferry options are also being explored in the industry. Hydrogen fuel cells are one such option, and multiple projects are in the process of designing and building hydrogen fuel cell-powered ferries. Nuclear power is another zero emissions technology that, though used for other marine vessels, has only recently begun to be seriously explored for ferries. Currently, no nuclear-powered ferries are in operation.

Marine Mammals

Attention to the environmental impacts to marine mammals has also increased. The Southern Resident Orca Task Force's November 2019 report[6] identified concerns related potential whale-strike risks and underwater noise impacts to Southern Resident orca whales that could occur with increasing POF service in Puget Sound. The Task Force recommended an environmental review of these risks and collaborative identification of policies and technologies to mitigate them. Operating protocols have been put in place for all existing ferry operators requiring observation of marine mammals and communication of their location so that other vessel traffic can avoid them. Increased consideration is being given to the underwater noise impact of propulsion systems during the design of a vessel. One technology that poses promise for mitigating sound impacts is the high-speed hydrofoil POF vessel. The Washington Maritime Blue Joint Innovation Program is currently in the process of developing this vessel design to help decrease both GHG emissions and underwater noise impacts on marine ecosystems. This vessel is planned to be zero-emission with lightweight carbon fiber hull construction.

Shoreline Impacts

Wake wash is also an environmental concern for shoreline properties in confined waterways. The Rich Passage class vessels serving the KT Fast Ferry Bremerton to Seattle route have been specially designed and tested to offer ultra-low-wake performance based on its design and operating parameters through the confined waterway of Rich Passage. This work has required extensive monitoring for impacts as shorelines naturally grow and recede with tidal and seasonal variations.

Key Themes among POF Studies

The following themes were identified in the POF studies summarized in this document.

Travel Time Competitiveness
To determine the viability of a potential POF route, many of the studies in this analysis compared the time it would take to travel between destinations via POF to the travel time via existing travel modes.

Ridership
Modelling future ridership was crucial to evaluating potential route and service options for viability. Moreover, understanding future ridership projections affects which long-range strategies and actions need to be planned for and taken to meet future service needs.

[6] Southern Resident Orca Task Force: Final Report and Recommendations.

Access and Land Use Compatibility

When evaluating terminal options for POF service, key concerns included whether POF service was a compatible land and shoreline use. Moreover, how accessible the site was via existing or planned travel modes was often a prime concern.

Costs

Analyzing the capital and operating costs of any new POF services or any changes to existing POF operations was present in nearly all of the studies evaluated. Metrics such as annual operating cost, cumulative capital cost, and farebox recovery were often used to evaluate POF service options.

Fares and Fare Structure

Establishing the proper value for fares, the structure of fares, and the methods for fare collection are key questions for any POF service, and some of the previous studies analyzed fare policy options for existing or potential services.

Community and Stakeholder Support

The studies examined in this report often involved elements of stakeholder or public engagement for the proposed routes or POF business plans. Various methods were used to gain stakeholder feedback, ranging from meetings with key agency partners to public meetings and surveys.

Environmental Impact

Several studies expressed concern over the impact POF service had on ecosystems and the environment. Vessel wake impacts and greenhouse gas (GHG) emissions were often key concerns.

Opportunities for All

Adding transportation choices for disadvantaged communities and ensuring fare equity are ways these studies assess the potential benefits of POF service.

PUBLIC OUTREACH ACTIVITIES

Outreach activities with key stakeholders and engagement with the public are a common thread among the POF studies that have been conducted since 2008. Though the levels and methods of engagement vary, nearly all of the studies conducted or are planning to conduct outreach with the public and/or key agency stakeholders.

POF STUDY SUMMARIES

Introduction

Three main types of POF ferry studies have been identified and analyzed in this report.

Expansion Studies: These studies evaluate the feasibility of potential POF route expansions. Some of these studies focus on identifying potential new routes while others focus on evaluating options for increased service on an existing route.

Operations Studies: These studies analyze different aspects of a given ferry operation and often provide recommendations for improvements.

Long-Range Plans: Less focused on evaluation, these are planning documents that are meant to provide business strategy for POF operators and guide implementation decisions.

These studies have been summarized in chronological order of publication, beginning with the 2008 PSRC Regional POF Study and finishing in the present day. Studies that have been announced but that are still in development have been included in this analysis. They have been placed in a separate section following the summaries of completed studies.

Some studies were included in this analysis despite the fact that ferry services they were conducted for transport both vehicles and walk-on passengers. These vehicle ferry services carry a high volume of passengers and affect the feasibility of developing new POF services in their respective regions. As a result, they were included in this analysis.

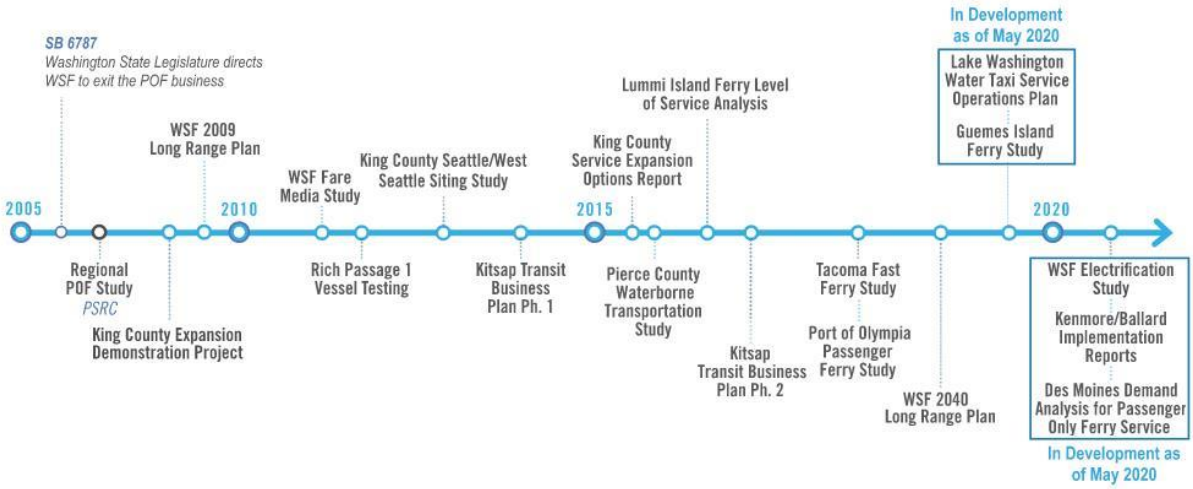


Figure 5- Timeline of POF Studies Examined

Full List of Ferry Studies Examined

- King County Expansion Demonstration Project (2009)
- King County Service Expansion Options Report (2015)
- King County West Seattle Terminal Siting Study (2013)
- Kitsap Transit Passenger-Only Ferry Business Plan and Long Range Strategy Ph. 1 (2014)
- Kitsap Transit Passenger-Only Ferry Business Plan and Long Range Strategy Ph. 2 (2016)
- Lummi Island Ferry Level of Service (LOS) Analysis (2015)
- Pierce County Waterborne Transportation Study (2015)
- Port of Olympia Passenger Ferry Study (2018)
- PSRC Regional POF Study (2008)
- Tacoma Fast Ferry Feasibility Study (2018)
- Washington State Ferries Fare Media Study (2012, conducted by the Joint Transportation Commission)
- Washington State Ferries Long Range Plan (2009)
- Washington State Ferries 2040 Long Range Plan (2019)

Figure 6- Locations of POF Studies Examined

STUDIES CURRENTLY UNDERWAY

- Des Moines Demand Analysis for Passenger-Only Ferry Service
- Guemes Island Ferry Operations & Service Analysis
- King County Ballard Water Taxi Route Implementation Report
- King County Kenmore Water Taxi Route Implementation Report
- Lake Washington Water Taxi Service Study
- Washington State Ferries System Electrification Plan

Regional POF Study

PUGET SOUND REGIONAL COUNCIL

2008

PSRC performed this study to assist in the coordination of state, regional, and local investments, integrate POF planning with other transit improvements, provide guidance for supportive land use, and establish policy framework for POF to be incorporated into upcoming regional transportation plans. Focusing on the four-county region that lies within the PSRC's jurisdiction, the study included initial analysis of 33 potential routes, and then utilized a ridership analysis to eliminate routes with fewer than 200 daily riders. After low ridership routes were filtered out, 17 routes were recommended for further analysis. Additional criteria for route evaluation included modal advantage, land use, operations and system integration, cost, and environment (including wake impact). As a result of the analysis, three new short-term routes were recommended for implementation:

- Kingston to downtown Seattle
- Bremerton to downtown Seattle
- Southworth to downtown Seattle

Three additional routes were identified as potentially feasible in the medium term of four to ten years and were recommended for further study. These routes were:

- Bainbridge Island to Des Moines
- Port Orchard to downtown Seattle
- Kirkland to the University of Washington

The study also determined that five routes could be feasible in more than ten years' time, depending on additional testing and future market conditions. Routes in this category included:

- Suquamish to downtown Seattle
- Kenmore to the University of Washington
- Renton to Leschi
- Des Moines to downtown Seattle
- Shilshole to downtown Seattle

KEY OUTCOMES: *KT POF Business Plan and Long Range Strategy, Transportation 2040 (2010), 2020 PSRC Regional POF Study;* The formation of the King County Ferry District and the King County (referred to as KC Metro), which also ultimately lead to future route feasibility studies (including Kirkland, Kenmore, Renton, Des Moines, and more).

King County Expansion Demonstration Project

KING COUNTY FERRY DISTRICT / KING COUNTY MARINE DIVISION

2009

This report identified numerous candidate routes and conducted an analysis to determine which routes were most feasible to begin implementation in 2010. Initially, 20 route options were identified and analyzed based on land use compatibility, ridership potential and community support. Seven routes were then put forward for further evaluation. Criteria for this evaluation included ridership demand, population served, travel time compared to existing modes, dock availability, landside connections, environmental conditions, operational concerns, costs, farebox recovery, and level of community support. The four candidate routes that were ultimately put forward were Ballard Shilshole Bay Marina to Pier 50, Kenmore to Leschi, Renton to Leschi, and Des Moines to Pier 50. The University of Washington was also identified as a desirable POF landing location, though implementation in the near term was deemed likely infeasible due to logistical challenges caused by light rail construction. Ultimately, none of the candidate routes were implemented, though many have been further examined by follow-up route feasibility studies.

KEY OUTCOMES: *2015 King County Expansion Options Report.*

WSF Long Range Plan

WASHINGTON STATE FERRIES

2009

Shortly prior to the creation of the 2009 Long Range Plan, WSF was mandated to discontinue POF service. In response to the cuts in WSF service imposed by this mandate, the Plan proposed the provision of POF services by local agencies as a solution. The plan focused on vessel upsizing, transit enhancements to terminals, and a vehicle reservation system. Changes to pricing strategies and the WSF marketing program were also recommended. The plan identified key challenges facing WSF including an aging assets base, long lead-time needed to make capital investments, limitations on vehicle-carrying capacity, and potential growth in service demand.

KEY OUTCOMES: Adaptive management strategies, revised performance metrics, capital investment plan. This plan was succeeded by the *WSF 2040 Long Range Plan* in 2019.

WSF Fare Media Study

JOINT TRANSPORTATION COMMITTEE

2012

The purpose of this study was to provide recommendations regarding the most appropriate fare media for WSF to use. The fare system and recommended fare policies would be used in the context of an existing reservation system. The recommendations were also made in the context of WSF's implementation of demand management pricing for vehicles and the organization's need for interoperability with other forms of payment. Directed by the legislature to conduct the study for WSF, the Joint Transportation Committee provided ten key fare policy recommendations including a shift to focus on adaptive fare management and the continual updating of fare policy, a switch to account-based fare systems, reinstating discounted joint fare passes, and basing vehicle fares on a per-foot charge.

West Seattle Terminal Siting Study

KING COUNTY

2013

At the time of this study, the existing West Seattle POF terminal had a five-year lease with Seacrest Park that was ending the following year in 2014 with the option of five single-year lease extensions. This study was undertaken to analyze the viable alternative sites for a permanent landing in West Seattle. Eight potential terminal locations were identified, which were then narrowed to three viable locations based on environmental exposure, land use compatibility, and travel time. These three locations, Seacrest Park, Pier 1, and Jack Block Park, were then evaluated based on permitting requirements, needed infrastructure improvements, available parking, operational adjacency compatibility, and projected ridership from each site to downtown Seattle. King County decided to extend the lease with Seacrest Park, which is still the West Seattle landing site at the time of this report's completion.

KEY OUTCOMES: The West Seattle terminal remained at Seacrest Park following this study.

Passenger-Only Ferry Business Plan and Long Range Strategy Phase 1

KITSAP TRANSIT

2014

The first phase of Kitsap Transit's planning effort identified three POF routes for further analysis and recommended service: Bremerton–Seattle, Kingston–Seattle, and Southworth–Seattle. These routes were analyzed using ridership modeling, terminal site identification, programming needs assessment, and vessel requirements identification. Recommendations for a service delivery model, implementation phasing, and potential funding opportunities were also made. The business plan included a comprehensive and balanced financial plan addressing both start-up capital needs and long-term operating and maintenance needs.

KEY OUTCOMES: *Passenger-Only Business Plan and Long Range Strategy Phase 2.*

Pierce County Waterborne Transportation Study

PIERCE COUNTY

2015

This study identified challenges and recommendations for the long-term financial stability of the Pierce County ferry system, specifically examining funding, service, operations, fare structure, and facilities. Recommended next steps for the ferry system included implementing a ferry district, exploring non-fare revenue sources, and modifying the existing level of service. The study also identified a goal of achieving revenue sustainability for the Pierce County ferry system and proposed doing so by balancing ridership segments and fare levels. Legislation was introduced in 2017 to form a ferry district, as recommended by the study, though this legislation did not pass.

Lummi Island Ferry Level of Service (LOS) Analysis

LUMMI ISLAND FERRY – WHATCOM COUNTY

2015

At the time of this analysis, many capital assets in the Lummi Island Ferry system are aging and will soon need replacement. The goal of the analysis was to develop alternative LOS options for the system, to evaluate the generated alternatives, and to recommend a LOS action plan with a 50-year time horizon. The analysis itself was conducted by first completing a ridership forecast model, establishing a LOS, and then developing vessel characteristics and terminal options. Potential funding sources were then analyzed, and a financial forecast was prepared. Public outreach and community engagement activities were conducted concurrently with the analysis. The construction of a 34-car hybrid diesel-electric vessel was ultimately recommended, along with associated terminal improvements, reconfiguration of passenger queuing, monitoring key performance metrics, and institution of a ferry district.

King County Service Expansion Options Report

KING COUNTY

2015

The goal of this study was to assess the viability and feasibility of potential POF service expansion in Puget Sound and Lake Washington. Numerous route options were analyzed using a three-stepped approach. During the first step of evaluation, 36 potential route combinations were identified. Travel times were then determined for the identified routes and compared to travel times via existing travel mode alternatives. After passing the time competitiveness criteria, the remaining routes were evaluated based on the net operating cost subsidy that would be required at route start-up and at route maturity. The study identified three routes as viable for further consideration: Kenmore to Seattle (landing at the University of Washington), Kirkland to Seattle (landing at the University of Washington), and Ballard to downtown Seattle.

KEY OUTCOMES: *Kenmore & Ballard Implementation Report followed in 2019–2020.*

Passenger-Only Ferry Business Plan and Long Range Strategy Phase 2

KITSAP TRANSIT

2016

Following on the work conducted in Phase 1 in 2014, expanded public engagement activities were conducted, focusing on public and stakeholder feedback from the first phase plan. This feedback was then incorporated into Phase 2 of the Kitsap Transit POF Business Plan, which focused on opportunities for accelerating implementation of the Southworth route, developing alternative fleet configurations, expanding the proposed service schedule to include Saturday service, defining operating agreements and further development of maintenance plans, and fare collection strategy. In response to this report, Kitsap County passed a ballot measure to fund POF service through local sales tax.

KEY OUTCOMES: POF service from Bremerton to downtown Seattle, POF service from Kingston to downtown Seattle. POF service from Southworth to downtown Seattle (beginning in 2020)

Passenger Ferry Study

PORT OF OLYMPIA

2018

This study evaluated the possibility of establishing a Mosquito fleet that would connect Olympia and Seattle with POF service. Costs and benefits of a potential service were examined and broad public outreach was conducted. Ultimately, the study indicated excitement for service from Olympia to Seattle among stakeholders and concluded that service may be more feasible from a travel time perspective, due to improvements in ferry technology. A detailed feasibility study, including demand forecasting, was identified as a crucial next step to developing service. However, the study identified docking capacity in Seattle as a key issue in future POF expansions.

Tacoma Fast Ferry Feasibility Study

PIERCE TRANSIT / CITY OF TACOMA / PORT OF TACOMA

2018

This study assessed prospective POF service between Tacoma and Seattle. Potential routes and landing sites were identified along with required capital improvements, operating cost estimates and ridership and fare revenue estimates. Ultimately, the study concluded that a POF service connecting downtown Tacoma and downtown Seattle was feasible and would generate sufficient ridership and farebox revenue. Next steps towards route implementation were recommended, including the identification of preferred landing locations, the development of alternative route configurations and schedule alternatives, the study of potential economic benefits, and additional outreach activities focused on building regional partnerships and community support.

WSF 2040 Long Range Plan

WASHINGTON STATE FERRIES

2019

With a goal of developing implementable recommendations to improve the sustainability, resiliency, reliability and efficiency of ferry service, the WSF 2040 Long Range Plan provided recommendations of near-, medium-, and long-term capital investments and policy actions to meet future service needs. These recommendations include building new vessels to replace those that need retirement, electrifying the fleet, adding service hours for key routes, and increasing route capacity. Though a key provider of auto ferry service, WSF also provides service for millions of walk-on passengers each year and partners with POF providers in the region. The 2040 Long Range Plan recommends continued partnership between WSF and POF providers, as well as increased focus on walk-on and bike-on passengers.

KEY OUTCOMES: *WSF Electrification Plan*, *WSF Workforce Development Plan*

POF STUDIES CURRENTLY IN DEVELOPMENT

Lake Washington Water Taxi Service Study (DRAFT)

SECO, DEVELOPMENT INC. / KING COUNTY

2020

This planning study is investigating a potential Lake Washington POF route connecting the City of Renton and the South Lake Union area of the City of Seattle. Unique among many of the other studies discussed, the SECO Ferry Study was undertaken by a partnership between a private entity and a public agency. The study seeks to identify route and operating profile characteristics to provide guidance in future implementation decisions. The study seeks to provide answers to key questions regarding who will operate the service, what vessel characteristics will be needed to support service, which sites will be served, and how this transportation mode will compare to existing transit options.

Guemes Island Ferry Operations and Service Analysis (DRAFT)

SKAGIT COUNTY

2020

The early phase of the study assessed the existing Guemes Island Ferry operations and service. Following the initial assessment, the ferry community provided prioritized feedback on desired operational service improvements. The conclusions of the study will provide options for Skagit County to invest in to improve ferry service.

WSF System Electrification Plan (DRAFT)

WASHINGTON STATE FERRIES

2020

Recommended by the WSF 2040 Long Range Plan, the System Electrification Plan seeks to analyze existing vessel and terminal technologies and to identify the combination of vessels, terminal technologies, and operating financial model that will best facilitate fleet electrification. Emissions reductions will be quantified. The plan will include critical actions and investments needed to complete WSF fleet electrification and a long-range financial forecast for operation of the electrified fleet.

Kenmore & Ballard Implementation Reports (DRAFT)

KING COUNTY

2020

The KCMD is currently responding to two legislative provisos to analyze the possible implementation of new POF routes. Two potential routes are currently being examined: Kenmore to Seattle and Ballard to downtown Seattle. Building upon the 2015 Service Expansion Options Report, potential routes and landing sites are being identified along with required capital improvements and operating cost estimates. Additional components of analysis include preliminary environmental impact analysis and a preliminary equity impact review. Public and stakeholder outreach efforts are also being undertaken. When complete, the reports will propose the most viable potential route configurations along with actionable implementation plans outlining steps and costs to establishing new services.

Des Moines Demand Analysis for Passenger-Only Ferry Service (DRAFT)

DES MOINES CITY COUNCIL

2020

This analysis has not yet begun and the Des Moines City Council is currently in the contracting phase for the project. This analysis will focus on quantitatively determining the demand for ferry operation and marina development in Des Moines and then using findings to identify potential funding sources and planning partners. Public outreach is anticipated as is a discussion of environmental sustainability and low-emissions vessel propulsion options. The potential route configurations being examined include options connecting Seattle, Tacoma, and possibly other areas with Des Moines.

Full List of Regional Transportation Plans

- Island Access 2040 (Draft, 2019)
- North Sound Transportation Alliance 2019 Report: Accomplishments & Challenges for 2020 (Draft, 2019)
- Peninsula RTPO Regional Transportation Plan 2040 (2019)
- PSRC Regional Transportation Plan (2018)
- PSRC VISION 2040 (2008)
- PSRC VISION 2050 (Draft, 2020)
- San Juan County Comprehensive Plan: Transportation Element (2016)
- Skagit 2040 Regional Transportation Plan (2016)
- Thurston Regional Planning Council What Moves You: Regional Transportation Plan (2016)
- Thurston Regional Planning Council What Moves You: Regional Transportation Plan Update (Draft, 2020)
- Whatcom Mobility 2040 (2017)

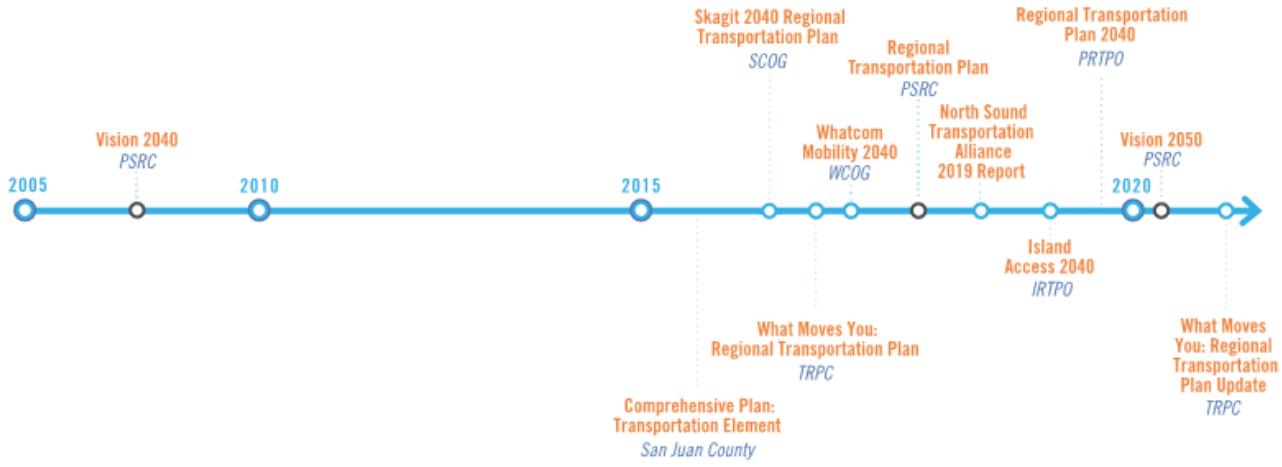


Figure 7- Timeline of Regional Transportation Plans

REGIONAL TRANSPORTATION PLAN SUMMARIES

The following pages include summaries of the regional transportation plans evaluated in this report.

VISION 2040

PUGET SOUND REGIONAL COUNCIL

2008

VISION 2040 is the central Puget Sound region's integrated growth management, environmental, economic, and transportation strategy. It provides clear and specific guidance for the distribution of population and employment growth into types of places defined as "regional geographies." The largest share of growth is distributed to metropolitan and core cities—places with designated regional growth centers that are already connected by major transportation corridors and high-capacity transit. By doing so, this regional growth strategy relieves development pressure on natural resource lands and rural areas. VISION 2040 provides the foundation for transportation strategies and investments found within the Regional Transportation Plan (see page 23).

Skagit 2040 Regional Transportation Plan

SKAGIT COUNCIL OF GOVERNMENTS

2016

With the goals of economic vitality, preservation, safety, mobility, environment, and stewardship, this plan focuses on providing a foundation for selecting the transportation projects that are the highest priority for regional funding and implementation. The plan identifies numerous multimodal investments with an increased focus on the maintenance and improvement of the efficiency of existing systems with less emphasis on new projects and roads. Concerning ferries, the plan discusses the region's existing combined passenger and vehicle ferries and places an emphasis on replacing aging ferry infrastructure.

San Juan County Comprehensive Plan: Transportation Element

SAN JUAN COUNTY

2016

This plan seeks to develop and maintain an integrated, safe and, reliable transportation system while maintaining the aesthetic and rural character of the San Juan region. The plan identifies future planning needs for all modes of transportation, and takes particular note of non-motorized transportation and trails. It explores policies to decrease automobile traffic demand for roadways and ferry systems and favors transportation mode that do not include the development of bridges and tunnels between islands and the mainland. Key policies regarding ferries include the support of increased multimodal integration between landside transportation and ferry transportation, policies to encourage walk-on passengers to existing to WSF routes, and consideration of private marine POF services to provide direct connections to mainland transportation hubs.

What Moves You: Regional Transportation Plan

THURSTON REGIONAL PLANNING COUNCIL

2016

Providing a strategic blueprint for the Thurston County transportation system, this plan was heavily influenced by the results of a transportation investment survey conducted in 2014. The plan provided key recommendations for regional transportation priorities and for specific construction projects. With a focus on multimodal planning, the plan sought to expand transit, biking, and walking infrastructures. With a high percentage of the population being seniors, proposed transportation policies acknowledged differing transportation needs and use choices for differing age groups. Managing future roadway congestion was also a prime concern, though the plan sought to achieve this while avoiding extensive widening of local or arterial roads. Safety, environmental sensitivity, smart transportation technology, and transit-oriented land use policies were also key areas of interest.

Whatcom Mobility 2040

WHATCOM COUNCIL OF GOVERNMENTS

2017*

*amended 2019

Informed by a 2006 ferry study and with the goals of safety, environmental quality, system efficiency, multimodality, access, maintenance, and freight transportation, this plan creates a long-term strategy for transportation investment in Whatcom County. *Whatcom Mobility 2040* identifies and prioritizes a long list of regional transportation projects and investments, prioritizing projects based on alignment with stated goals. Reconstruction of the Lummi Island ferry is listed, as are numerous roadway infrastructure projects. Overall, the plan identifies increased transportation demand and focuses on a comprehensive, cooperative, and continuing process of regional transportation planning. Public outreach efforts were also conducted as a part of the planning process.

Regional Transportation Plan

PUGET SOUND REGIONAL COUNCIL

2018

The Regional Transportation Plan is guided by the regional growth strategy outlined in VISION 2040 to catch up with and keep pace with the growth anticipated in the region. It outlines investments the region is making to improve highway, transit, rail, ferry, bicycle and pedestrian systems to support the safe and efficient movement of people and goods. As relates to POF, the plan includes planning for an integrated 2040 transit network that accounts for POF investments that were being planned and implemented based upon past studies. It also identifies a regional access to transit strategy for ensuring multimodal access to the regional transit system.

Regional Transportation Plan 2040

PENINUSLA REGIONAL TRANSPORTATION ORGANIZATION

2019

Seeking to balance safety, mobility, community, and environmental goals, this regional transportation plan favors multimodality and multiple-occupant vehicle travel for the Peninsula RTPO region. The plan discusses all transportation modes and serves to guide both transportation and land use policies within the Peninsula region. Key policy goals included minimizing environmental impact and investing in transportation that meets the needs of those with different needs due to age, language or income. The plan's policies regarding ferries emphasize ensuring that ferries are well linked to the rest of the regional transportation system and encouraging new ferry service where practical.

Island Access 2040 (DRAFT)

ISLAND REGIONAL TRANSPORTATION PLANNING ORGANIZATION

2019

Island Access 2040 has a strong regional and multimodal perspective and puts extensive focus on marine transit and the region's ferry system. The plan identifies interest in POF service connecting Whidbey Island and Everett as well as service between Langley and Camano Island. Overall, the plan also has goals related to mitigating congestion, improving access to the islands, improving transit efficiency, decreasing environmental impact, improving equity, and improving preparedness in the face of natural disasters such as seismic events.

2019 Report: Accomplishments & Challenges for 2020 (DRAFT)

NORTH SOUND TRANSPORTATION ALLIANCE

2019

Focusing on regional travel between Whatcom, Skagit, San Juan, and Snohomish counties, this report identified five key focus areas for transportation improvement goals in 2020: health and transportation, ferries, transit, active transportation, and passenger rail. A key challenge identified by the report was that factors such as age, disability, or income could limit access to transportation options, making it difficult for some to get to and from medical appointments, pharmacies, and emergency calls. Regarding ferries, this document included the key goals of analyzing the current ferry system and where additional ferry connections may be needed, increasing passenger traffic, and improving connections between ferry service and other mode options.

VISION 2050 (DRAFT)

PUGET SOUND REGIONAL COUNCIL

2020

VISION 2050 is a shared strategy for how and where the central Puget Sound region can grow to a forecast of 5.8 million people and 3.4 million jobs by the year 2050. The Regional Growth Strategy considers how the region can distribute the forecasted growth, primarily within the designated urban growth area, and support development near high-capacity transit in the region. The strategy is a description of a preferred pattern of urban growth that has been designed to minimize environmental impacts, support economic prosperity, advance social equity, promote affordable housing choices, improve mobility, and make efficient use of new and existing infrastructure. VISION 2050 promotes increased usage of low-carbon fuels and fleet electrification to help achieve greenhouse gas reductions. As in VISION 2040, VISION 2050 seeks to protect the environmental health of the region, to increase affordability and choices in housing, to foster economic growth, to focus growth in centers and areas near transit investments, and to protect an open space network. VISION 2050 has a focus on addressing current and past inequities and commits to the development of a regional equity strategy in collaboration with community members. VISION 2050 will inform the 2022 Regional Transportation Plan update, which will address continued growth in the region and build on the multimodal strategies in the current plan, as well as incorporating the results of the Puget Sound Passenger-Only Ferry study.

What Moves You: Regional Transportation Plan Update (DRAFT)

THURSTON REGIONAL PLANNING COUNCIL

2020

The Thurston Regional Planning Council is currently updating its Regional Transportation Plan and is conducting a concerted public outreach effort around doing so. A draft of the plan has not yet been released though key topics the plan is anticipating to address include an increasing population size and number of transit users, preparing for the impacts of climate change, and emerging transportation technologies.

REFERENCES

"2019 Employment Projections Report." Employment Security Department, Washington State, September 2019. https://esdorchardstorage.blob.core.windows.net/esdwa/Default/ESDWAGOV/labor-market-info/Libraries/Industry-reports/Employment-projections/2019%20Employment%20Projections%20Report.pdf.

"2019 King County Water Taxi Facts and Figures." King County, WA, 2019. https://www.kingcounty.gov/depts/transportation/water-taxi/~/media/depts/transportation/water-taxi/kc-water-taxi-facts-2019.pdf.

"Congestion Data for Your City – Urban Mobility Report — Urban Mobility Information." Accessed March 4, 2020. https://mobility.tamu.edu/umr/congestion-data/.

"Draft VISION 2050: GMPB Recommendation." Puget Sound Regional Council, December 5, 2019. https://www.psrc.org/sites/default/files/draft-vision2050-plan.pdf.

"Fast Ferry Program | Kitsap Transit." Accessed March 4, 2020. https://www.kitsaptransit.com/static/372/fast-ferry-program.

INRIX. "Scorecard City." Inrix. Accessed March 4, 2020. https://inrix.com/scorecard-city/.

King County Water Taxi. "King County Water Taxi." King County, WA, October 15, 2019. https://www.kingcounty.gov/depts/transportation/water-taxi.aspx.

"Population by Age, Mapped by County | Office of Financial Management." Accessed March 4, 2020. https://www.ofm.wa.gov/washington-data-research/statewide-data/washington-trends/population-changes/population-age-mapped-county.

"Puget Sound Trends: Aging Population." Puget Sound Regional Council, April 24, 2018. https://www.psrc.org/sites/default/files/trend-aging-201804.pdf.

"Southern Resident Orca Task Force: Final Report and Recommendations." Cascadia Consulting, November 2019. https://www.governor.wa.gov/sites/default/files/OrcaTaskForce_FinalReportandRecommendations_11.07.19.pdf.

"State of Washington: 2019 Population Trends." Office of Financial Management, August 2019. https://www.ofm.wa.gov/sites/default/files/public/dataresearch/pop/april1/ofm_april1_poptrends.pdf.

"Washington State Travel Impacts & Visitor Volume 2010-2018p." Dean Runyan Associates, May 2019. http://www.deanrunyan.com/doc_library/WAStImp.pdf.

ATTACHMENT I: EXISTING PUBLIC POF OPERATOR PROFILES

King County Metro – Water Taxi Operations Profile

START OF POF OPERATIONS: 2008
(Assumed from Washington State Ferries)

CURRENT MANAGING AGENCY:
King County Metro Transit Department

CURRENT FLEET:

MV Sally Fox (104 feet)
- Capacity: 278 passengers
- Crew: 1 captain, 2 deckhands
- Propulsion Energy: Biodiesel
- Typical Route Assignment: Vashon Island- Downtown Seattle

MV Doc Maynard (104 feet)
- Capacity: 278 passengers
- Crew: 1 captain, 2 deckhands
- Propulsion Energy: Biodiesel
- Typical Route Assignment: West Seattle-Downtown Seattle

Spirit of Kingston (72 feet)
- Capacity: 149 passengers
- Propulsion Energy: Biodiesel
- Typical Route Assignment: West Seattle-Downtown Seattle

ANNUAL FUEL CONSUMPTION (2019):
Approx. 231,000 gallons system-wide

ROUTES IN OPERATION: 2
- Vashon Island to Downtown Seattle
- West Seattle to Downtown Seattle

ROUTE EXPANSION STUDIES UNDERWAY: 2
- Ballard to Downtown Seattle
- Kenmore to Seattle

ROUTE SUMMARY

	Route Length	*Vessel Capacity*	*Vessel Service Speed*	*Level of Service*	*2019 Annual Ridership*	*Farebox Recovery*
Vashon Island–Downtown Seattle	10 miles	278 passengers	28 knots	M-F commute service, year round	257,685	55.6%
West Seattle–Downtown Seattle	2 miles	149 to 278 passengers	28 knots	M-F commute service, year round Apr – Oct: M-F expanded service; Sat & Sun service	443,993	30.9%

MODAL COMPARISONS BY ROUTE

West Seattle–Seattle

	Origin-Destination	*Time (min.)*	*Fare*
King County Water Taxi	Seacrest Park- Pier 50	17	$10.00 RT
King County Metro Bus	Seacrest Park- Pier 50	42	$5.50 RT
Car via Hwy 99[1]	Seacrest Park- Pier 50	16 - 30	$6.21 RT

*Travel Times from Google Maps for 9:00 am weekday arrival.
** This cost comparison does not include parking fees, which range by origin location. For reference, a parking fee was assumed in the Tacoma to Seattle study at a cost of $16.
[1] Includes a 65.8 miles GSA mileage rate at ($0.575 per mile) for each way

Vashon Island–Seattle

	Origin-Destination	*Time (min.)*	*Fare*
King County Water Taxi	Vashon Island Ferry Dock-Pier 50	29	$11.50 RT
King County Metro Bus	Vashon Island Ferry Dock-Pier 50	74	$5.50 RT
Car via WSF Ferry[2]	Vashon Island Ferry Dock-5th & Madison	60 - 100	$51.47 RT

*Travel Times from Google Maps for 9:00 am weekday arrival.
** This cost comparison does not include parking fees, which range by origin location. For reference, a parking fee was assumed in the Tacoma to Seattle study at a cost of $16.
[2] Car trip cost includes WSF standard vehicle and driver and 13.9 miles GSA mileage rate at ($0.575 per mile) for each way

Kitsap Transit (KT) – Passenger-Only Ferry Operations Profile

START OF POF OPERATIONS: July 2017

CURRENT MANAGING AGENCY:
Kitsap Transit

CURRENT FLEET:

Carlisle II (59 feet)
- Energy Source: Ultra low-sulfur diesel
- Typical Route Assignment: Port Orchard-Bremerton

Admiral Pete (65 feet)
- Capacity: 120 passengers
- Crew: 1 captain, 2 crew members
- Energy Source: Ultra low-sulfur diesel

Rich Passage 1, Reliance, Lady Swift (3 vessels, each 72 feet)
- Capacity: 118 passengers
- Crew: 1 captain, 2 crew members
- Energy Source: Ultra low-sulfur diesel
- Low Wake Vessels
- Typical Route Assignment: Bremerton-Seattle

Waterman (70')
- Capacity: 150 passengers
- Crew: 1 captain, 2 crew members
- Propulsion Energy: Hybrid diesel-electric
- Low Wake Vessel
- Typical Route Assignment: Port Orchard-Bremerton

ANNUAL FUEL CONSUMPTION (2018):
Approx. 297,000 gallons for Fast Ferry Routes

Finest (114 feet)
- Capacity: 350 passengers
- Crew: 1 captain, 2 crew members
- Energy Source: Ultra low-sulfur diesel
- Typical Route Assignment: Kingston-Seattle

Vessels under Construction: 2
- (250 passengers each)

ROUTES IN OPERATION: 4

Fast Ferries
- Bremerton to Seattle
- Kingston to Seattle

Local Foot Ferries
- Annapolis to Bremerton
- Port Orchard to Bremerton

ROUTES BEING IMPLEMENTED: 1

Fast Ferry
- Southworth to Downtown Seattle

KT ROUTE SUMMARY

	Route Length	*Vessel Capacity*	*Vessel Service Speed*	*Level of Service*	*2019 Annual Ridership*	*Farebox Recovery*
Bremerton–Seattle	17 miles	118 passengers	27–38 knots	M-F commute service, year round May- Sept: M-F expanded service, Sat. service	301,531	**26%** for all Fast Ferry Routes (2019)
Kingston–Seattle	17.5 miles	350 passengers	27–38 knots	M-F commute service, year round May- Sept: M-F expanded service, Sat. service	175,397	
Annapolis–Bremerton	1.7 miles	120 to 150 passengers	10–15 knots	M-F frequent commute and expanded mid-day service, year-round	**~560,000** for all Foot Ferry routes	**25.8%** for all foot ferry routes (2018)
Port Orchard–Bremerton	2.0 miles	150 passengers	10–12 knots	M-Fri frequent commute and expanded mid-day service, Sat. service, year-round		

MODAL COMPARISONS BY ROUTE

Bremerton–Seattle

	Origin-Destination	*Time (min.)*	*Fare*
Kitsap Fast Ferry	Bremerton Ferry Dock- Pier 50	36	$12.00 RT
WSF Ferry	Bremerton Ferry Dock–Seattle Ferry Terminal	60	$8.65 RT
Car via WSF Ferry[3]	Bremerton Ferry Dock–Seattle Ferry Terminal	87	$31.50 RT
Car via WA-16E & I-5N[4]	Bremerton Ferry Dock–Pier 50	85–150	$75.67 RT

*Travel Times from Google Maps for 9:00 am weekday arrival.
** This cost comparison does not include parking fees, which range by origin location. For reference, a parking fee was assumed in the Tacoma to Seattle study at a cost of $16.
[3] WSF standard vehicle and driver
[4] Includes a 65.8 miles GSA mileage rate at ($0.575 per mile) for each way

Kingston–Seattle

	Origin-Destination	*Time (min.)*	*Fare*
Kitsap Fast Ferry	Kingston Ferry Dock–Pier 50	48	$12 RT
Car via WA 305 & WSF Ferry[5]	Kingston Ferry Dock–Pier 50	80–100	$47.49 RT
WSF Ferry & Bus	Kingston Ferry Dock–2nd & Marion	119	$14.15 RT

*Travel Times from Google Maps for 9:00 am weekday arrival.
** This cost comparison does not include parking fees, which range by origin location. For reference, a parking fee was assumed in the Tacoma to Seattle study at a cost of $16.
[5] Car trip cost includes WSF standard vehicle and driver and 13.9 miles GSA mileage rate at ($0.575 per mile) for each way

ATTACHMENT II: MODAL COMPARISON CASE STUDY FOR POTENTIAL POF SERVICE

When evaluating potential new POF service, not simply existing service, it is vital to understand how a potential POF service would compare to existing mode options. Using the Tacoma Fast Ferry Feasibility Study, an example of how future POF service could compare to existing modes has been included. The Tacoma Fast Ferry Feasibility Study found that a potential new POF service connecting Tacoma and downtown Seattle would perform well in comparison to other mode options, with a lower travel time than many alternative options, though with slightly higher fares than existing express bus.

Figure 1- Tables and Findings from the Tacoma Fast Ferry Feasibility Study

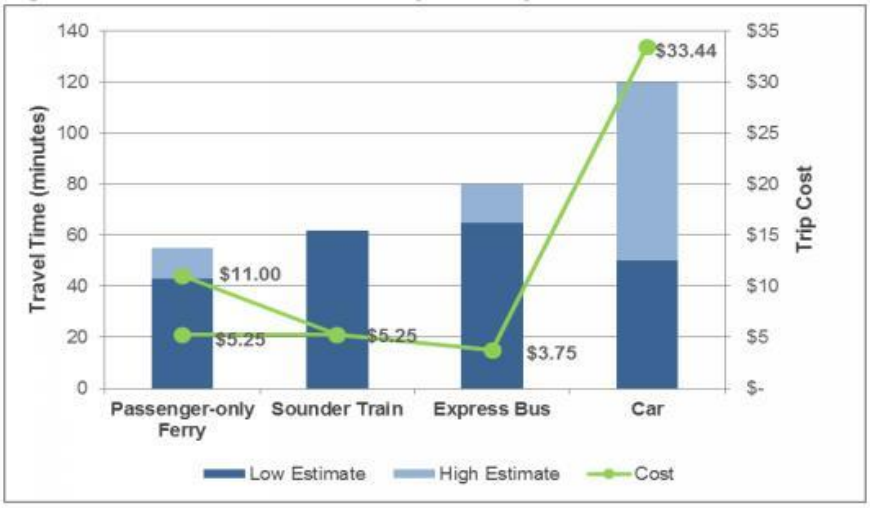
Table 2: Travel Time Comparisons by Mode[3]

	Origin - Destination	Time (min.)	Fare
Passenger Only Ferry[4]	Point Defiance - Pier 50	43	$5.25 / $11.00
	Ruston - Pier 50	45	$5.25 / $11.00
	Old Town - Pier 50	47	$5.25 / $11.00
	Seaport/Maritime Museum - Pier 50	50	$5.25 / $11.00
	11th Street - Pier 50	56	$5.25 / $11.00
Sounder Train	Tacoma Dome Sta. - King Street Sta.	62	$5.25
Express Bus	Tacoma Dome Sta. - King Street Sta.	65-80	$3.75
Car	Tacoma Dome Sta. - King Street Sta.	55-120	$33.44[5]

Figure 2 outlines these travel time and fare comparisons graphically by mode. Variable travel times by landing site location are grouped together under the "passenger-only" category. Similarly, the variable travel time of traveling by car is also shown.

[3] Travel times for car are typical times from Google Maps for 9:00 am weekday arrival. Sounder train times were based on scheduled time from Tacoma Dome Station to King Street Station. Express bus travel times were based on observed travel times from Tacoma Dome Station to Fourth Avenue South and South Jackson Street in Seattle.
[4] Travel time calculated using a cruising speed of 35 knots.
[5] Car trip cost includes 32 miles at GSA mileage rate ($.545), plus $16 one-way parking (half of $32 daily parking).

Figure 2: Travel Time and Cost Comparison by Mode



ATTACHMENT III: EXISTING PRIVATE POF OPERATOR PROFILES

San Juan Clipper – Operations Profile

START OF POF OPERATIONS: 1986

CURRENT MANAGING AGENCY:
Clipper Vacations

CURRENT FLEET:

Victoria Clipper V (167.3 feet)

- Capacity: 525 passengers
- Crew: 5 to 7
- Waterjets
- Typical Route Assignment: Seattle - Victoria, Seattle - Friday Harbor

ROUTES IN OPERATION: 2

- Seattle to Victoria
- Seattle to Friday Harbor (Seasonal)

ROUTE SUMMARY

	Route Length	*Vessel Capacity*	*Vessel Service Speed*	*Level of Service*
Seattle–Victoria	106.2 miles	525 passengers	36 knots	Year-round recreational service; 1 to 2 RT per day
Seattle–Friday Harbor	2 miles	525 passengers	36 knots	Recreational Service May – October

Puget Sound Express – Operations Profile

CURRENT MANAGING AGENCY:
Puget Sound Express

CURRENT FLEET:

- Saratoga
- Glacier Spirit
- Red Head
- Chilkat Express

ROUTES IN OPERATION: 1

- Friday Harbor to Port Townsend (Seasonal)

ROUTE SUMMARY

	Level of Service
Friday Harbor–Port Townsend	Recreational Service May – October; 1 RT per day