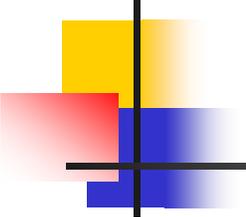


# Passenger-Only Ferry Cost Analysis

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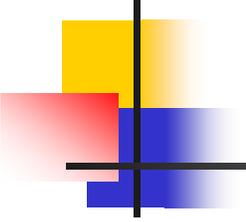
**Joint Transportation  
Committee**  
Prepared By: Parametrix



# Background and Study Purpose

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- Joint Transportation Committee Established Task Force in 2005 to review passenger-only ferry service in Puget Sound
- ESSB 6091 included:
  - Funding for continued Vashon-Seattle service through June 30, 2007
  - Funding appropriation of triangle POF service between Vashon-Southworth-Seattle
  - Existing private POF service applications were frozen until 2006



# Historical Context

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- WSF has operated Vashon-Seattle POF since 1990
- I-695 caused a service reduction to weekdays only in 2000
- Joint Task Force on ferry funding recommended WSF should not consider POF to new communities including Southworth
- In 2003, the legislature funded the Vashon-Seattle POF through 2005 and approved formation of PTBA's
- Kitsap Transit contracted with private operators to provide POF service on two routes

# Passenger-Only Ferry Options



Option 1 – Triangle POF

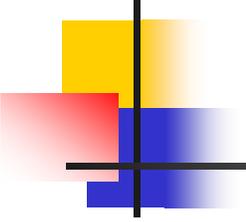


Option 2 – Direct POF from Seattle to Southworth and Seattle to Vashon



Option 3 – Direct PVF from Seattle to Southworth and Direct POF from Seattle to Vashon

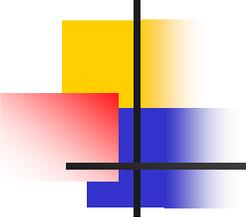
Route	SEATTLE/ VASHON	SEATTLE/ SOUTHWORTH	VASHON/ SOUTHWORTH	SEATTLE/ VASHON	SEATTLE/ VASHON (option)	SEATTLE/ SOUTHWORTH	VASHON/ SOUTHWORTH	SEATTLE/ VASHON	SEATTLE/ SOUTHWORTH	VASHON/ SOUTHWORTH
Vessel	 Chinook or Snohomish			 St. Nicholas	 Kalama or Skagit	 Rachel Marie	 Issaquah, Tillikum, or Klahowya	 Kalama or Skagit	 Issaquah	 Hiyu
Public or Private		WSF		KT (Private)	WSF	KT (Private)	WSF	WSF	WSF	WSF
Type		POF		POF	POF	POF	PVF	POF	PVF	PVF
Vessel Capacity		350		150	250 (seats 190)	200	1200	250 (seats 190)	1200	200
Route Distance (miles)	9.0	9.0	3.0	9.0	9.0	9.0	3.0	9.0	9.0	3.0
Hours of Operation	M-F (5-hours in AM and PM)	M-F (5-hours in AM and PM)	M-F (5-hours in AM and PM)	M-F (5-hours in AM and PM)	M-F (4 hours in AM and PM)	M-F (4-hours in AM and PM)	Same as Existing 7 days (21-hours)	M-F (5-hours in AM and PM)	M-F (16 hours)	M-F (16 hours)
Trip Time (minutes)	38 AM 23 PM	25 AM 40 PM	15 AM & PM	22	30	22	10	30	38	10
No. of Roundtrips per day	6	6	6	6	6	6	20-23		8-10	
Fare (Round Trip)	\$ 7.36	\$ 7.36	\$ 7.36	\$ 7.36	\$ 7.36	\$ 7.36	\$4.00	\$6.36	\$6.10	\$4.00
Fuel Consumption (gal/hr)	157	157	157	68	81	75		81		15



# Ridership-Option 1

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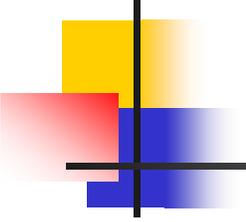
- Total annual ridership=393,000 or 1500 daily
- More than double FY '05 ridership of 188,000
- Larger vessel capacity than current service (350 vs. 250)
- Faster travel time, especially to Southworth
- Third trip added for both AM and PM peak
- Higher assumed fare – \$1.00 round trip
- Ridership estimates appear reasonable, but could be high by 10-20% during first year operations



## Ridership-Option 2

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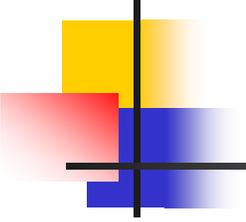
- Ridership is assumed to be the same as Option 1
- Similar service, except direct routes from both Southworth and Vashon to Seattle
- Vessels would operate at 66% of capacity from Vashon and 75% from Southworth on average
- 15 min. faster for Vashon riders in AM peak
- 15 min. faster for Southworth riders in PM peak
- Greater potential for ridership estimates to be achieved compared to Option 1



## Ridership-Option 3

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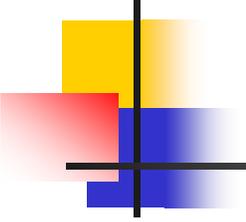
- 145,000 annual riders on Vashon POF
- 215,000 vehicles and 232,000 passengers on Southworth-Seattle PVF
- No fare increase on Vashon POF
- Estimates appear reasonable – Vashon POF estimates continue to assume some riders from Southworth



# Ridership Changes from New Service-Kingston to Seattle

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- New private POF from Kingston-Seattle diverted some riders from WSF Kingston-Edmonds and Bainbridge Island-Seattle PVF routes
- Estimated diversion is 1.9% or 19,000 Riders
- WSF revenue loss is approximately \$50,000 assuming a one-way passenger fare of \$2.75



# Ridership Changes from New Service-Bremerton to Seattle

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- New private POF from Bremerton-Seattle diverted some riders from WSF Bremerton-Seattle PVF Route
- Estimated diversion is 14.5% or 45,200 riders
- WSF revenue loss is approximately \$125,000 assuming a one-way passenger fare of \$2.75

# Cost and Farebox Recovery Estimates

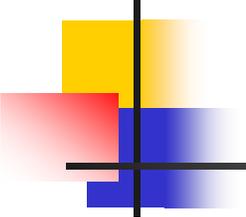
	WSF OPTION 1	OPTION 2						OPTION 3			
		WSF, KT Operated			KT Operated						
		Seattle-Vashon	Seattle-Southworth	Total	Seattle-Vashon	Seattle-Southworth	Total	Seattle-Vashon	Seattle-Southworth	Southworth-Vashon	Total
		WSF	KT		KT	KT		Skagit	Issaquah	Hiyu	
Hours of Operation per Day	10	10	8	—	8	8	—	10	16	16	—
Labor	1,019,500	771,600	421,684 <sup>1</sup>	1,193,284	266,583 <sup>1</sup>	322,324 <sup>1</sup>	588,907	964,500	Same as Existing	1,151,284	2,115,784
Fuel	682,500	281,600	267,696	549,296	240,926	267,696	508,622	352,000	Same as Existing	144,420	496,420
Maintenance	209,500	209,500	57,024	266,524	57,024	57,024	114,048	209,500	Same as Existing	292,000	501,500
Other	179,500	179,500	323,047 <sup>2</sup>	502,547	248,047 <sup>2</sup>	303,127 <sup>2</sup>	551,174	179,500	Same as Existing	276,640	456,140
Vessel lease	Not included	Not Included	300,000	300,000	240,000	300,000	540,000	Not Included	Not Included	Not Included	Not Included
<b>Total Annual Operating and Maintenance</b>	<b>2,091,000</b>	<b>1,442,200</b>	<b>1,369,451</b>	<b>2,811,651</b>	<b>1,052,580</b>	<b>1,250,171</b>	<b>2,302,751</b>	<b>1,705,500</b>		<b>1,864,344</b>	<b>3,569,844</b>
<b>Annual Revenue</b>	<b>1,447,000</b>	<b>577,083</b>	<b>1,104,555<sup>3</sup></b>	<b>1,681,638</b>	<b>733,899<sup>3</sup></b>	<b>1,104,555<sup>3</sup></b>	<b>1,838,454</b>	<b>921,500</b>	<b>Same as Existing</b>	<b>1,132,851</b>	<b>2,054,351</b>
<b>Annual Subsidy Amount</b>	<b>644,000</b>	<b>865,117</b>	<b>264,896</b>	<b>1,130,013</b>	<b>318,681</b>	<b>145,616</b>	<b>464,297</b>	<b>784,000</b>	<b>Same as Existing</b>	<b>731,493</b>	<b>1,515,493</b>
<b>Farebox Recovery</b>	<b>69%</b>	<b>40%</b>	<b>81%</b>	<b>60%</b>	<b>70%</b>	<b>88%</b>	<b>80%</b>	<b>54%</b>	<b>Same as Existing</b>	<b>61%</b>	<b>58%</b>
Office and administration	Not Included	Not Included	Included in Labor	Included in Labor	Included in Labor	Included in Labor	Included in Labor	Not Included	Not Included	Not Included	Not included
Capital Costs (one time costs for terminal improvements and new vessels)	3,000,000	7,000,000 <sup>4</sup>	1,000,000	8,000,000	0	1,000,000	1,000,000	7,000,000 <sup>4</sup>	Not Included	Not Included	7,000,000

<sup>1</sup> Labor costs assume a 3-person crew for Seattle-Vashon and a 4-person crew for Seattle-Southworth. Direct salary costs for crew is assumed to be \$22/\$17/\$12 per hour for Seattle-Vashon and \$22/\$17/\$12 per hour for Seattle-Southworth. Employee benefit costs are assumed to be 38% of direct salary. Overall labor costs for Kitsap Transit operations for Option 2 could be up to 78% higher if union wages similar to WSF operations are assumed.

<sup>2</sup> Expense costs for food, beverage, and concession items are included in the Other category.

<sup>3</sup> Annual Revenue for KT operated service includes \$1.00 per rider average for food, beverage, and concession sales. This totals \$156,816 for Seattle-Vashon and \$236,016 for Seattle-Southworth.

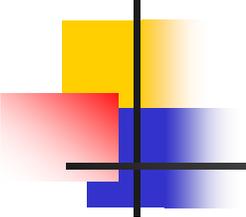
<sup>4</sup> Capital cost is for vessel replacement. This cost could be converted to an annual cost to be directly compared to Kitsap Transit's assumed vessel lease cost.



# Findings and Implementation Risk-Option 1

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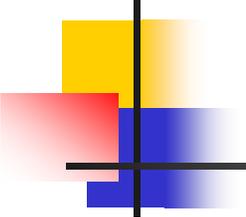
- Significant improvement over current service, especially for Southworth riders
- Farebox recovery is estimated at 69%
- WSF has a long reliable history of service
- Ridership estimates could be high for initial years of service by as much 10-20%
- Operating cost estimates are reliable except for uncertainty of future fuel costs
- Flexibility to expand service to off-peak or weekend times is limited



# Findings and Implementation Risk-Option 2

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- Potential for lower subsidy/higher farebox return than Options 1 or 3 (80%)
- Overall trip times are faster with direct service
- Operational efficiency is highest with KT operating both routes, but impact on WSF existing routes is also the highest
- Ridership and fuel cost risk are similar, but lower than Option 1
- Vessel maintenance, labor, and moorage costs should be closely examined
- Flexibility to expand service is higher



# Findings and Implementation Risk-Option 3

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- Direct PVF route from Southworth to Seattle would be cost-effective
- Seattle-Vashon POF ridership and revenue estimates for Option 3 could be high
- Significant risk exists with implementing this Option
- Consistency with Seattle and Kitsap County Comprehensive Plans may be an issue
- Landside impacts would need to be evaluated