

10/21/2012

**GULF  
ISLANDS**

## A NEW VISION OF FERRY SERVICE



**Working for the islands | A SGI Citizens Initiative**

# **Service Proposal**

## **Southern Gulf Islands**

### **‘Gulf Islands Ferry Corporation’**

**Overview:** In recent years, due to the rising costs and concern over the threats of diminishing service levels, it has become clear that there is a need to review and reinvent how people, vehicles and goods move to and from the Southern Gulf islands.

There have been many ideas shared amongst users to improve operations; this brief is an attempt to amalgamate many of those blue sky thoughts into a workable proposal that offers both short term benefits and long term vision for our water based transportation system.

**Discussion:** With the exception of Saltspring Island, the current model is a ‘hub and spoke’ system with operations based at Swartz Bay. This results in very early morning sailings out to the islands that are very lightly loaded and late evening sailings back to Swartz Bay that are also extremely underutilized.

In addition, Saturna Island service has diminished over the years, what is proposed is provision of a smaller vessel to shuttle traffic between Mayne and Saturna Islands.

Fulford Harbour has outgrown its terminal capacity for several decades now, with seemingly no long term viable solution due to environmental concerns, physical constraints and geographical location.

Finally, the complexity of running two ships to service four islands is a logistical and scheduling nightmare that is a challenge both to BCFS and its customers. In summer, the direct 45 minute sailing from Swartz Bay to Mayne Island can take in excess of 3 hours due to scheduling with stops on multiple islands.

What is proposed is not necessarily dramatic, but is a total reallocation of the route assets and a shift of focus from Swartz Bay to the individual islands served by the ferry fleet. What follows is a vision, route by route, that not only potentially saves both short and long term capital and operating costs but provides both better service and substantial direct economic benefits to the communities served by the ferry system.

The numbers presented within this document are as accurate as possible, but are subject to verification as part of a formal business plan that would evolve from this proposal.



**Route A – Pender (Otter Bay) to Swartz Bay**  
**Vessel – MV ‘Mayne Queen’**

Proposal: The Mayne Queen would be dedicated to operating only on the Pender Island to Swartz Bay run. The vessel would be home ported at either Otter Bay or Village Bay.

Justification: Pender Island have evolved into a community that requires a vessel that can address the individual needs of the island and be flexible in its daily scheduling to reflect those needs. Home porting ideally would be at Otter Bay, but year round port conditions may dictate that the vessel must be home ported at Village Bay on Mayne Island.

Home porting would result in fuel savings, but the complexity of the current utilization of the Mayne Queen makes it difficult to accurately define a net savings.





## **Route B – Mayne Island to Galiano (Sturdies Bay), Pender Island (Otter Bay) and Swartz Bay**

### **Vessel: MV 'Island Sky'**

Proposal: The Island Sky would be used on a circuit route (Mayne – Galiano – Mayne – Swartz) with scheduled stops at Pender to allow interconnectivity of the islands. The vessel would be home ported at Village Bay.

Justification: It has been demonstrated that the Island Sky is ideally suited to Gulf Islands service and the Queen of Cumberland is more than capable of serving on Route 7, where the underutilized Island Sky is currently operated. The combined loads of Saturna / Mayne and Galiano Islands properly complement the capacity of this vessel.

As the Island Sky is reported to have a fuel burn rate that is 30% less than the Cumberland it is estimated a net fuel savings in excess of \$1 million per year would be achieved. Overtime costs directly attributable to the Cumberland's configuration are in excess of \$750,000.00. The Island Sky would eliminate these overtime costs.



**Route C – Saturna Island (Lyall Harbour) to Mayne Island (Village Bay / Saint John Point)**

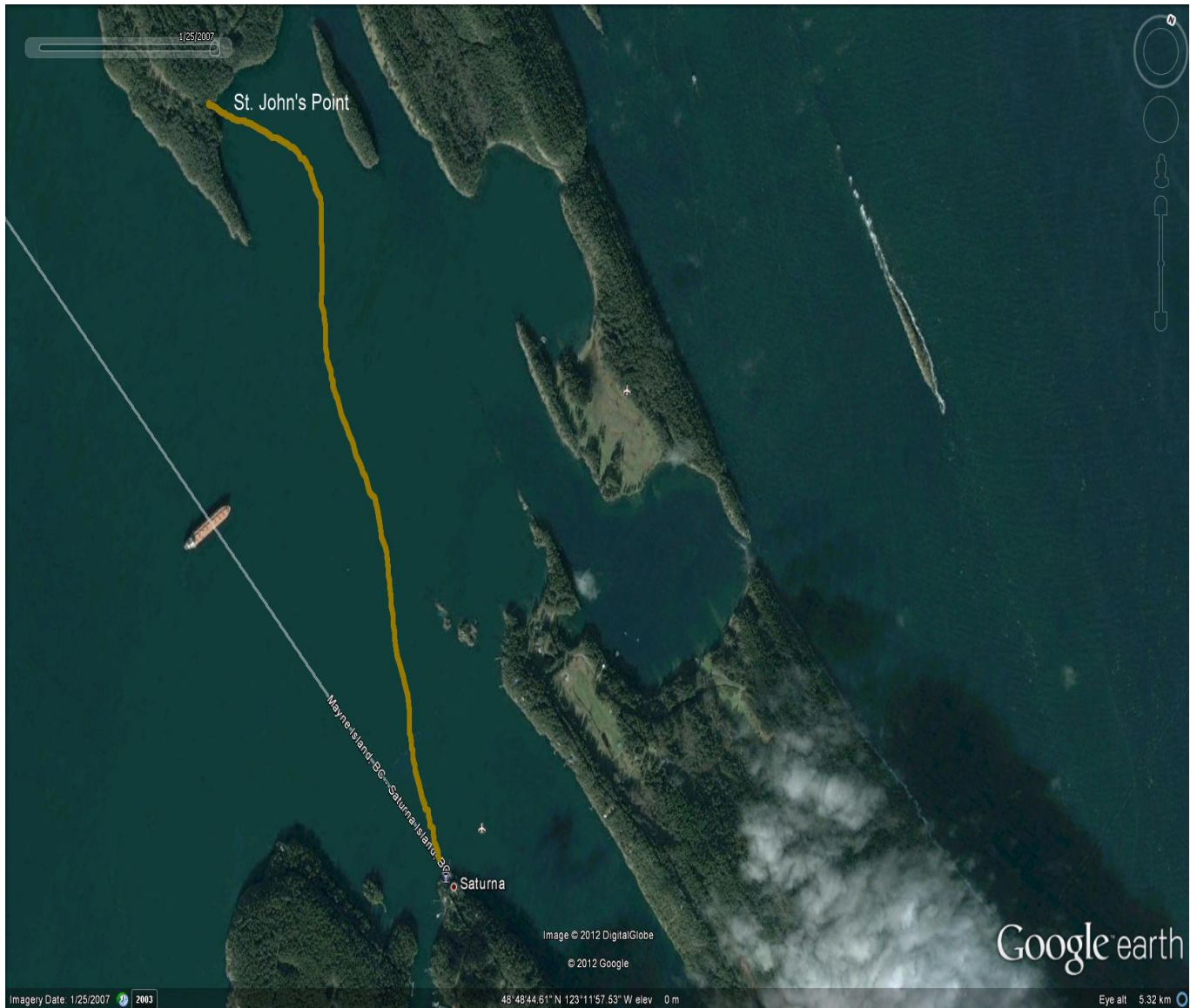
**Vessel: K Class (TBD, but assumed to be one of the ex ‘Albion’ Ferries)**

Proposal: Utilizing a small K Class vessel, this would be a shuttle route between Saturna and Mayne Islands. For simplicity this would be a no toll service. Early routing would be to Village Bay, with plans to establish a terminal to Saint John Point on Mayne Island to provide a short (7 Minute) crossing. The vessel would be home ported at Lyall Harbour.

Justification: The small population of Saturna (~300) does not require, nor can justify, the size of vessels currently being utilized to service the island. Establishing a new route with an efficient small vessel will provide enhanced service and encourage interisland commerce between Mayne and Saturna Islands. Short term capital investment is estimated @ \$3,000,000.00 to acquire vessels and bring them up to standard. Long term investment for establishing a new terminal at Saint John Point is estimated at an additional \$3,000,000.00 with potential for some cost sharing with the Province.

The retired Albion Ferries are currently for sale on the open market. They are sister ships to several K class ferries currently within the BCFS fleet, thus their proven design and fleet commonality should result in seamless implementation. The total acquisition cost is estimated at \$600,000.00.

Fuel savings are estimated to be \$500,000.00 / year using a smaller vessel.



**Proposed new route from Saturna to Mayne Islands**





**Route D – Saltspring Island (Isabella Point) to Swartz Bay**  
**Vessel – MV ‘Skeena Queen’**

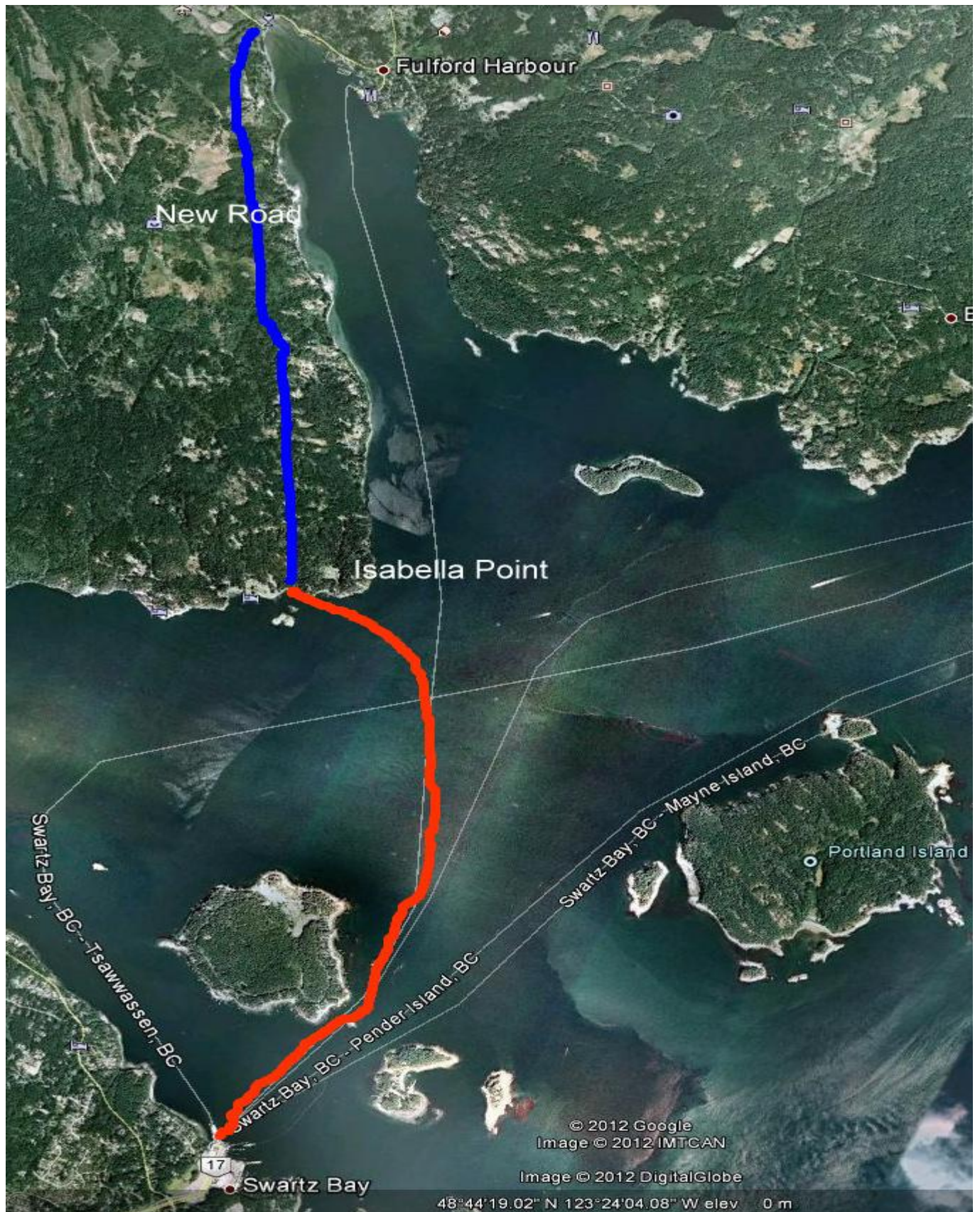
Proposal: Move the existing terminal from Fulford Harbour to Isabella Point.

Justification: Fulford Harbour terminal is not capable of holding enough vehicles, has minimal passenger amenities, no parking facilities and the resulting effect on the local village is both hazardous and socially disruptive to the residents. In addition, the Skeena Queen runs at or over capacity on a consistent basis and a new, larger vessel is anticipated to be needed in the near term. Per trip fuel savings would exceed 50%.

There physically is no way of economically expanding the existing terminal to accommodate the needs of BCFS and its customers. Moving the terminal to Isabella Point will cut the route distance by more than 50%, both effectively doubling the daily capacity of the Skeena Queen, and cutting the resulting fuel burn and emissions per sailing. This will also avoid the anticipated requirement for a larger vessel for this route because of the resulting uplift in daily capacity. First proposed in the 1950’s, this is a logical move.

This proposal would require construction of a new road to Isabella Point and terminal facilities, in the past this has been estimated to cost \$50,000,000.00, but no formal engineering study or review of existing road infrastructure has ever been undertaken to our knowledge. However, this is less than the estimated \$80,000,000.00 to build the larger vessel and resolves the unfixable bottleneck in the Fulford Village.







## Effects of these changes to the viability of ferry operations and the islands they serve

**Fuel Savings:** Using a smaller ferry to Saturna, home porting vessels on the islands served and shortening routes distances results in direct savings in fuel consumption, lower emissions and overall more efficient operations. Home porting eliminates the need for the first and last runs of the day currently required when the ships are home ported at Swartz Bay.

**Economic Impact:** Home porting vessels on the islands provides direct economic stimulation to the local economies by providing well paying jobs in the community. In addition, routing the vessels in a manner that encourages interisland commerce and travel benefits all islands equally, opening up opportunities and resources that may not otherwise exist.

**Environmental Impact:** More effective utilization of vessels results in lower fuel consumption which directly results in lower emissions to the environment.

**Social Impact:** Home porting vessels on the islands will bring crew's families to live on the islands and provide 'new blood' for social and cultural activities. The historical linking of islands culture and community will be re-established.

**Direct, dedicated routes:** Faster, direct, travel makes for more efficient transportation, encouraging more frequent use and simpler schedules – all of which are both resident and visitor friendly changes.

**Proper utilization of vessels:** Each ship closely relates to actual load requirements to the islands served. Effective utilization of the existing asset base eases the need for large capital expenditures to replace vessels and properly matches the vessels with the communities they serve.

## Implementation

With the exception of the Isabella Point / Saltspring route, vessel redeployment can be undertaken almost immediately for short term evaluation. Home ports can be changed when crews are identified that are willing to establish themselves in a new community.

The Saturna link can be established as soon as the vessel is acquired, refitted and crews hired.

The long term process of establishing new terminals needs to be initiated as soon as possible to review the economic viability and the ability to assemble rights of way.



**MV Cy Peck of the Gulf Islands Ferry Corporation 1930-1962**

## **Corporate Structure**

The operations of the Southern Gulf Islands could be undertaken under one of several management models. It is felt that the existing management structure does not function in the best or economic interests of the islands.

**Independent Corporation:** Vessels would be transferred or leased to a new corporation; terminals would remain the property of the Province. Operations would be totally independent of BCFS and would be a contracted service to the Province.

**Separate Management Structure within BCFS:** Operations of the Southern Gulf Islands would be managed within an independent body of BCFS. A board consisting of Island based professionals would oversee all functions of this entity.

**New Crown Corporation:** A new crown corporation would be created to operate minor routes within a specified service area. The unique needs of small island communities often times seem to be lost within the large corporate structure of BCFS, where priorities focus on larger projects and expenditures do not necessarily reflect the priorities or requirements of the customers.

## Conclusion

The current service model for transportation to the Southern Gulf Islands is clearly in need of change. Operations are inefficient, costs are rising and traffic is declining. In its present state the system is broken and is not sustainable.

The opportunity exists to reinvent the system and change the focus of vessel routing from Swartz Bay to the Islands. Ferries can return to being an economic driver on the islands, rather than a drain on the islands economies as they currently exist.

The direct economic benefit to the islands under home porting is obvious, however the revisiting of scheduling to focus on inter island transportation allows localized islands economies to branch out effectively to other islands.

While not touched on within this brief, other service options including passenger only ferries need to be considered for their flexibility and economical operation, especially for interisland transportation.



Swartz Bay circa 1940



## Appendix 1 – conceptual schedules

These schedules are presented as an outline as to what could be achieved redeploying the vessels. They are based on summer season loads, likely there would be lower utilization over the winter months. As is the case currently, special schedules would be developed for long weekends and dangerous cargo sailings.

### Route A

Depart Otter Bay

7:00am

9:00

11:00

11:30 (from Mayne)

3:00pm

5:00

7:00

9:00 (to Mayne for night)

Depart Swartz Bay

8:00am

10:00

12:00pm

4:00

6:00

8:00

## Route B

Depart Mayne Island

5:30am (to Galiano)  
6:30 (to Pender)  
7:00 (to Swartz)  
9:30 (to Galiano)  
11:00 (to Pender / Swartz)  
3:30 (to Swartz)  
6:00 (to Galiano)  
7:30 (to Swartz)

Depart Galiano Island

6:15 am (to Mayne / Swartz)  
10:15 (to Mayne / Swartz)  
6:45pm (to Mayne / Swartz)

Depart Swartz Bay

8:15am (to Mayne/Galiano)  
12:30pm (to Mayne/Galiano)  
4:45 (to Mayne/Galiano)  
8:45 (to Mayne/Galiano)

## Route C

Depart Saturna Island

6:00am

8:00

10:00

1:00pm

5:00

8:45

Depart Mayne Island

7:00am

9:10

11:10

2:00pm

6:00

9:45



## Route D

Depart Saltspring Island

6:30am

8:00

9:30

11:00

12:30pm

2:00

3:30

5:00

6:30

8:00

Depart Swartz Bay

7:15am

8:45

10:15

11:45

1:15pm

2:45

4:15

5:45

7:15

8:45

## **Appendix 2 - Route 7**

### **Island Sky / Cumberland Route Comparison**

**Overview:** Since being assigned to Route 5 (Southern Gulf Islands) in 1992, the Queen of Cumberland has struggled to effectively and efficiently serve the users. Issues with drives, elevated ramps, hull speed and conflicting berth schedules have clearly shown the Cumberland is unsuitable for the route and have earned the ship the nickname ‘Queen of Cumbersome’.

In summer months the Cumberland is switched with the Mayne Queen as it cannot keep the schedule due to high traffic – resulting in substantial overload situations as a smaller vessel is on the route.

Since being launched, the ‘Island Sky’ has repeatedly been identified as an ideal ship to replace the Cumberland. Currently deployed to Route 7, the Sky is one of the newest ships in the BCFS fleet. Having virtually identical vehicle capacity (125 vs. 127) and identical passenger capacity (462) the ships meet similar route requirements. The Sky has a higher hull speed, no elevated ramps and well suited to Route 5. BCFS have always maintained that the Sky is fully utilized on its present run and the Cumberland would be unsuitable as the ramps would seriously conflict with the scheduled sailings of Route 7.

**Analysis:** Recently released Route 7 figures (November 09 – September 2010) reveal that the Cumberland would be suitable for Route 7. The Cumberland has 85 vehicle spaces on the main deck, 127 total with the vehicle ramps deployed. For the purpose of this research, the sailings with 70+ vehicles were identified as a conservative assessment of the number of sailings on Route 7 that would require the deployment of the elevated vehicle ramps.

For the time period studied, there were approximately 5120 sailings on Route 7. The times the 70 vehicle threshold was exceeded was 378 sailings – or just over 7% of total sailings. At times there were weeks when the ramps would never have been deployed if the Cumberland was on Route 7.

It further is important to point out that over the time period studied the Island Sky never appeared to have an overload situation and only approximately 45 sailings carried more than 100 vehicles.

When one considers that Route 7 is a point to point service, and potential delays due to ramp deployment would have minimal impact on the users or BCFS as a whole, it can be rationalized that the Cumberland would be well suited to this route.

It is important to highlight is the fact the Cumberland is unable to maintain its current Route 5 schedule with or without the deployment of the vehicle ramps. The Route 5 schedule is complex, involving 4 islands and interaction with two other vessels, delays tend to snowball over the day as the Cumberland falls further behind on each sailing. The situation is further exacerbated when the other ships that share schedules (Mayne Queen and Queen of Nanaimo) are delayed due to berth conflicts or waiting for traffic – resulting in excessive overtime charges to BCFS. At times the Cumberland is more than 60 minutes behind schedule on Route 5.

If needed the Route 7 schedule could be adjusted to accommodate the Cumberland with no impact on users or BCFS.

**Conclusion:** The Cumberland is well suited for Route 7. Ramp deployment on less than 10% of all sailings annually would not significantly impact schedules or users.

Assigning the Island Sky to Route 5 would result in vastly improved on time service, lessened overtime costs to BCFS and overall increases in customer satisfaction and utilization. Through the FAC, we are advised that over \$850,000.00 in direct overtime costs are budgeted annually due to the Cumberland not being able to keep the schedule

Further consideration could be made to placing the Skeena Queen (100 vehicle capacity) on Route 7 instead of the Cumberland, and moving the Cumberland to Fulford Harbour (Route 4) to add capacity. Route 4 may be suitable for the Cumberland and the Skeena may match the actual loads seen on Route 7.

**December 2010**