

Clearwater & Area Transit System Transit Service Review

1. SCOPE

BC Transit has been asked to review the Clearwater & Area Transit System by the District of Clearwater. The goal of the review is to optimize the existing system and look at possible future developments in the system.

BC Transit staff met with representatives from the District of Clearwater and the Thompson-Nicola Regional District (TNRD) in July 2011 to discuss the existing transit system and to identify the objectives of the service review – namely to:

- Undertake review of the existing Clearwater & Area Transit System
- Identify options to improve the Clearwater & Area Transit System
- Investigate the possibility of summer Saturday transit service to Wells Gray Park
- Viability of local summer Saturday service
- Identify ways to improve customer information
- Recommend cost-neutral service improvement options

District of Clearwater and TNRD staff indicated that the transit network is, and should remain, focused on those who are dependant on transit to meet their daily needs – i.e. lower-income households, people with disabilities, seniors, etc. The exception to this is the District's request for service to Wells Gray Park which would focus on a recreational market.

Public consultation was conducted during the month of November 2011 in the form of a survey mailed out to area residents, with the option of responding by mail or online. 45 online and 14 mail-in responses were received, the results of which are displayed in Appendix B.

2. EXISTING TRANSIT SYSTEM REVIEW

2.1 Existing Network and Service Hours

There are two types of service in Clearwater. Conventional transit serves the general population and offers scheduled bus service that operates on fixed routes. Custom transit refers to door-to-door handyDART service for passengers with disabilities who cannot use conventional transit.

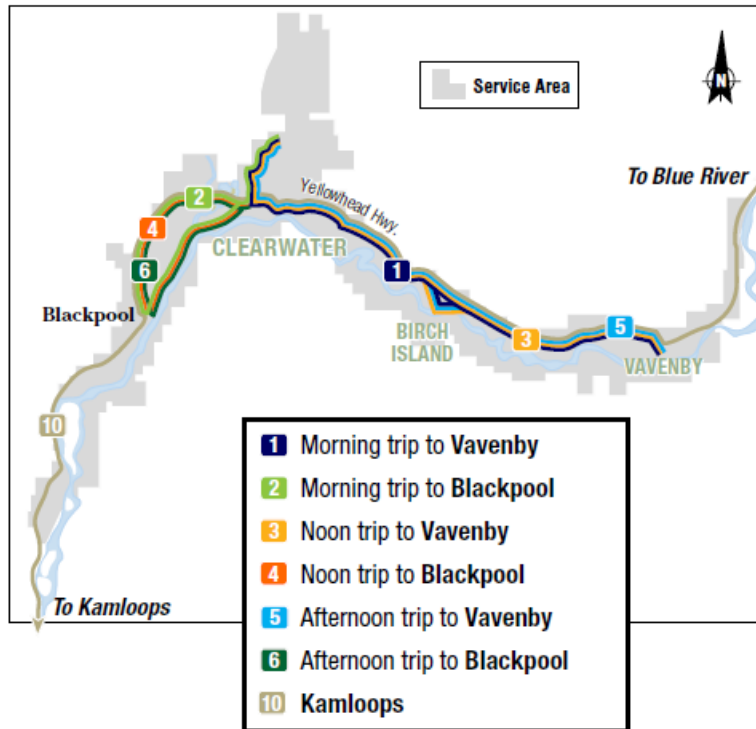
Established in 1998, the conventional system is comprised of a single, two-way route that stretches from Vavenby to Blackpool via Yellowhead Hwy and Clearwater Village. The order in which the bus stops varies by trip, meaning this general route is separated out into six different routes which is quite confusing for the public in terms of understanding the schedule (Figure 1). The routes are:

1. Morning trip to Vavenby
2. Morning trip to Blackpool
3. Noon trip to Vavenby
4. Noon trip to Blackpool

5. Afternoon trip to Vavenby
6. Afternoon trip Blackpool

There is also a regional route, Route 10 (Kamloops), which provides service between Vavenby, Clearwater and Kamloops every Tuesday. The intent of this regional route was to replace the Health Connections route which was cancelled by the Ministry of Health in late 2010. (Health Connections is a health-authority based regional travel assistance program that offers subsidized medical transportation options). This route is fully funded by the District of Clearwater, District of Barriere, Little Fort and the TNRD.

Figure 1. Map of transit service area and routes



As shown in Figure 2, the Vavenby to Blackpool route (Routes 1-6) varies in terms of trip duration, depending on the destinations served and distance covered. For example, the noon Vavenby trip (Route 3) is the longest trip as it also serves the Greer and Mountainview subdivision.

Figure 2. Trip duration based on current schedule

Route	Trip Duration (mins)
<i>Route 1 – To Vavenby / Return (AM)</i>	59
<i>Route 2 – To Blackpool / Return (AM)</i>	41
<i>Route 3 – To Vavenby / Return (Noon)</i>	68
<i>Route 4 – To Blackpool / Return (Noon)</i>	37
<i>Route 5 – To Vavenby / Return (PM)</i>	67
<i>Route 6 – To Blackpool / Return (PM)</i>	9
<i>HandyDART</i>	120
TOTAL	401

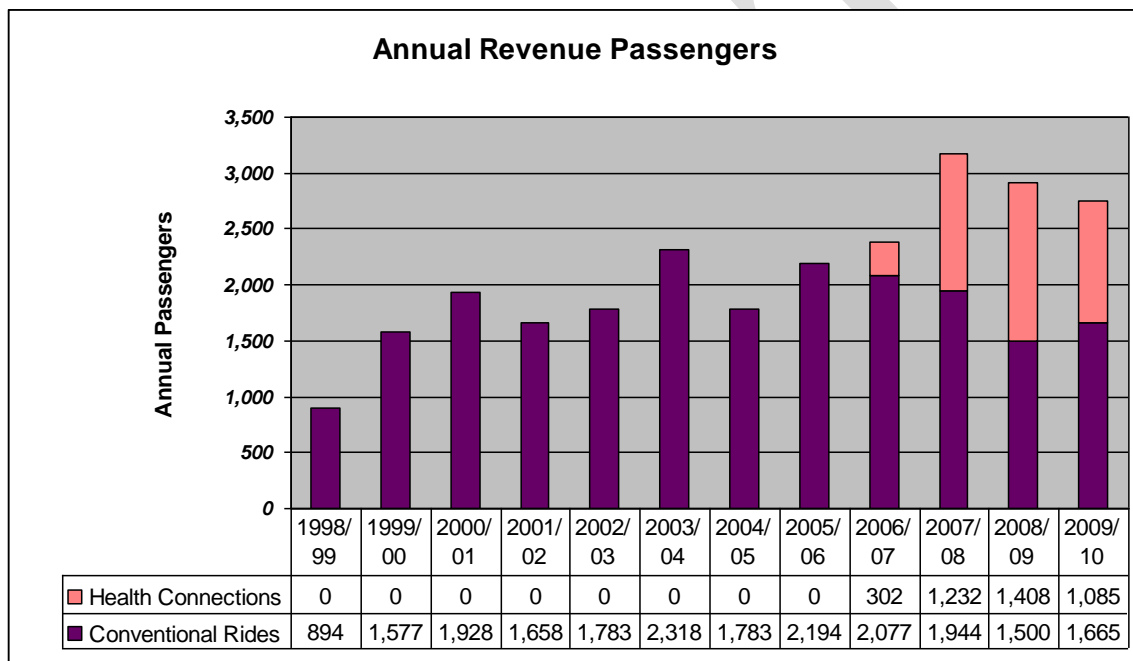
Hours of operation span from 8:05 to 4:15 p.m. Conventional service provides three trips to Vavenby and three trips to Blackpool per day. There is currently a four-hour gap (or “headway”) between these trips. A portion of this time is used to provide handyDART service.

Both conventional and custom transit utilize minibuses. The existing fleet consists of three Ford Polar vehicles, including one spare vehicle.

2.2 Ridership

Ridership fluctuates between 1,500 and 2,000 passengers per year as shown in the graph below. Ridership has actually increased overall since 2006-07 when the Health Connections program was established.

Figure 3. Annual Revenue Passengers (excluding handyDART)



3. CLEARWATER & AREA TRANSIT SYSTEM – IMPROVEMENT OPTIONS

Three different scenarios are discussed in this section. The main objective of all three service options is to make the system easier to understand by creating routes that follow a logical order of destinations that correspond to common travel patterns.

Brookfield Mall is designated as a start and end point for all proposed options. Brookfield Mall is centrally located, offers weather protection and was the most popular destination according to the survey (see Appendix C). Customers will be able to rely on the fact that all routes start at and end at one location throughout the day. In addition, it is proposed that trips follow the same order of stops throughout the day. For example, all trips to Vavenby will stop at key destinations in the same order – an important distinction from the existing system, which has inconsistent routing (i.e. varying by time of day).

All three options aim to improve service levels by optimizing the use of existing service hours where possible.

3.1 Option 1 – Streamlined route network with existing frequency (3 trips per day)

For this option, the proposed route network would offer the same level of coverage as the existing system, with the exception of the short segment along Birch Dr. / Greer Rd. This option recommends the removal of this segment due to safety concerns (the bus is difficult to turn around).

Under Option 1, the system would be separated into three distinct routes:

- Route 1 Clearwater to Vavenby – Brookfield Mall to Vavenby Store via Clearwater loop
- Route 2 Blackpool – Brookfield Mall to Philip Rd & Hwy 5
- Route 3 Wyndhaven – Brookfield Mall to Wyndhaven Dr. & Archibald Rd

Route 1 would provide service to Vavenby and double as a Clearwater circulator, as shown in Figure 5 – i.e. moving people around within the central village area and providing connections to destinations within town. The proposed route would loop clockwise around Clearwater before travelling to Vavenby; on return the bus would do a counter-clockwise loop. The purpose of this circulator-style loop is to allow Clearwater-based customers to access nearby destinations (e.g. the Post Office) without having to travel to Vavenby on route.

For this option, service levels would be the same: 3 trips per day, Monday through Friday. The current level of handyDART / paratransit service would also be maintained: 2 hours per weekday, or 500 hours per year.

Figure 5. Proposed Route 1 – Clearwater to Vavenby

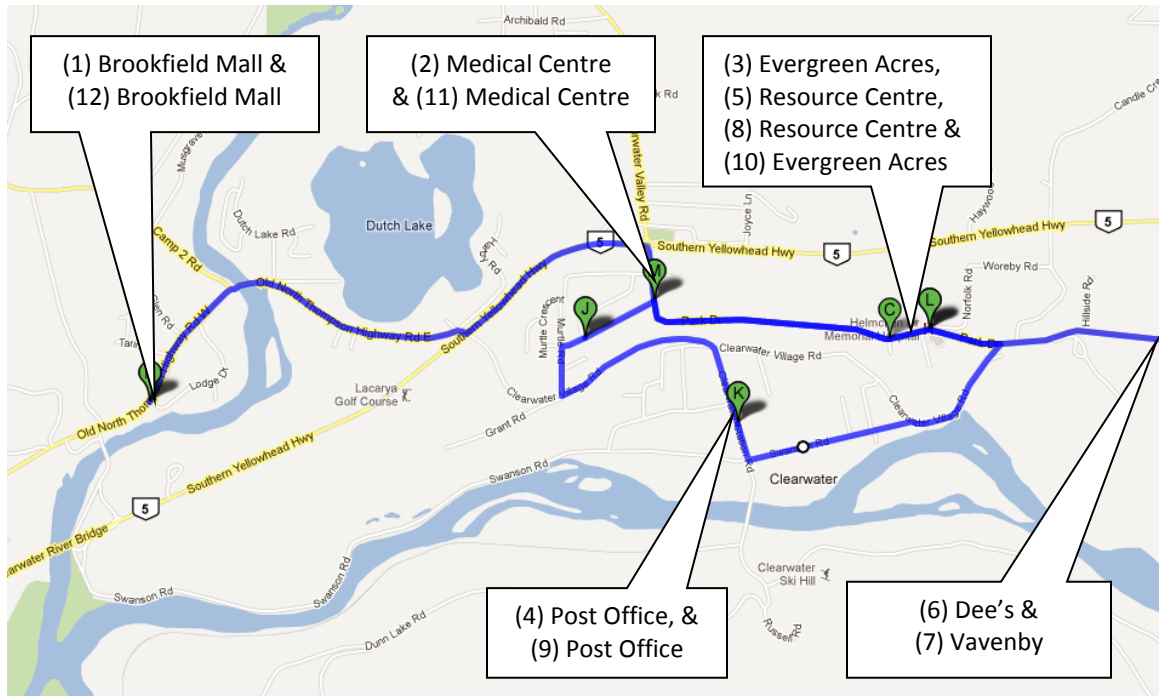
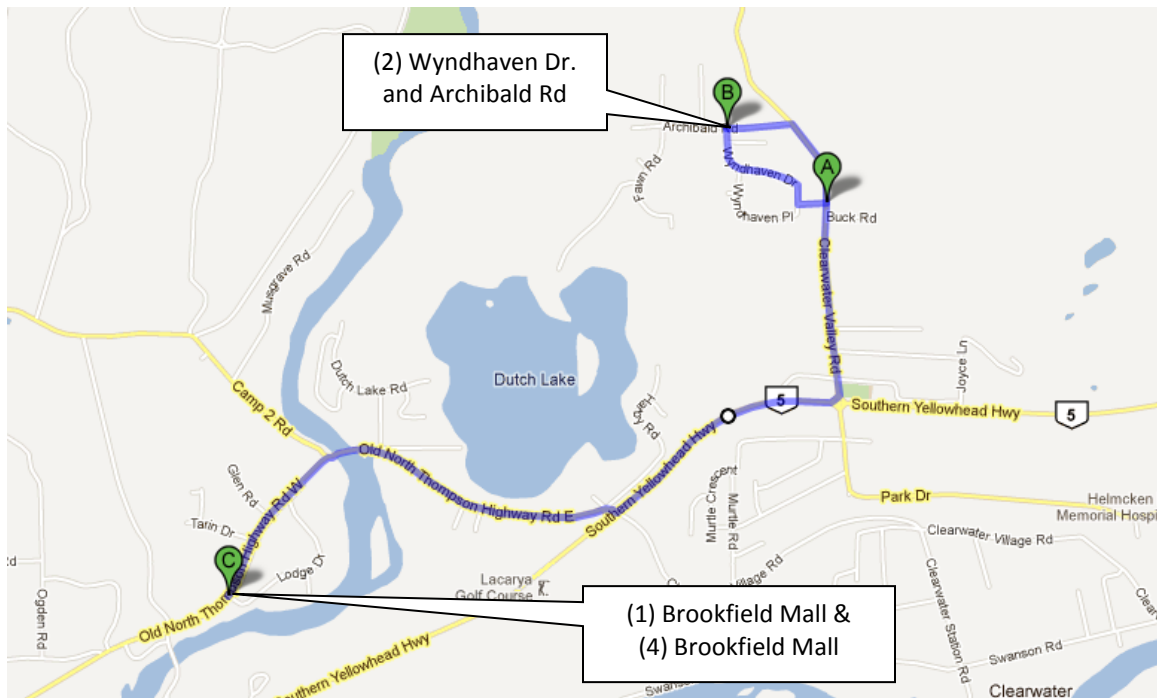


Figure 6. Proposed Route 2 – Blackpool



Figure 7. Proposed Route 3 – Wyndhaven



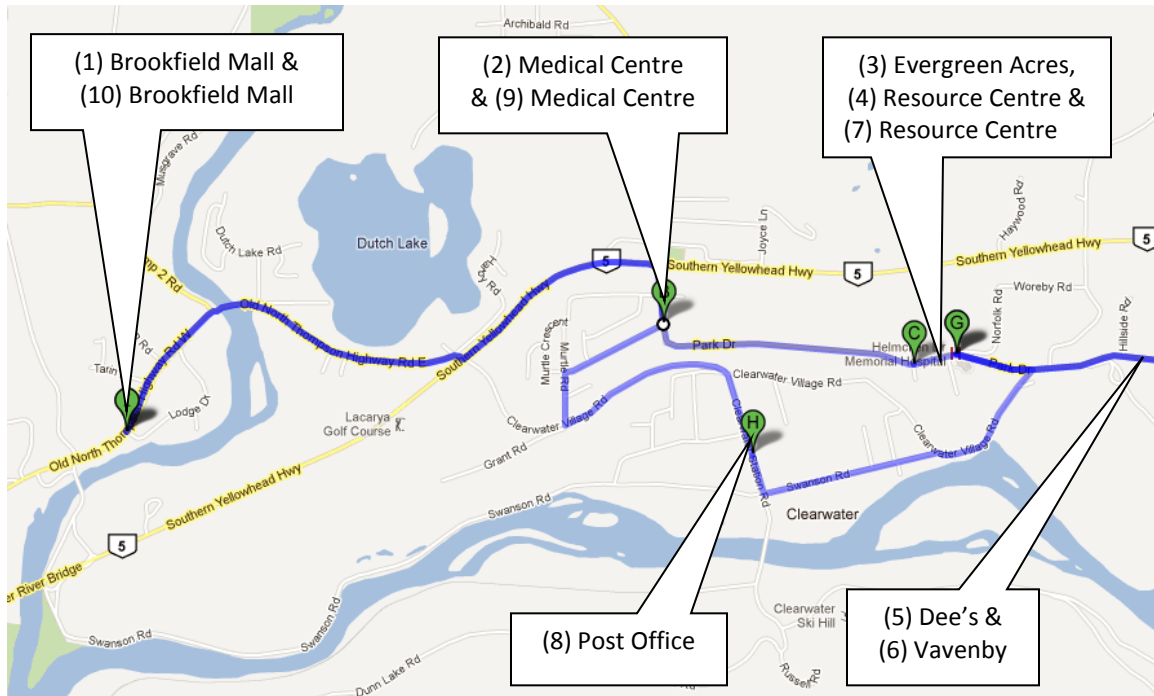
3.2 Option 2 - Reduced Network with Saturday Service (3 trips per day)

Option 2 is similar to the existing system except that service along the section of Clearwater Valley Rd north of the highway would be removed. These non-productive service hours would then be repurposed as Saturday service. Saturday service would operate three trips a day, as per the existing Monday to Friday schedule.

This second option has two routes, Clearwater-Vavenby and Blackpool, both of which start and end at Brookfield Mall. Route 1 Clearwater-Vavenby would follow Park Drive on outbound trips, and Swanson / Clearwater Village Rd. on inbound trips. route 2 Blackpool follows the same route shown in the first Option 1: out to Hwy 5 & Philips Rd and back.

Thus routing is similar to the first option except for a few notable differences including: (a) the absence of service up Clearwater Valley, and (b) a shorter route through Clearwater. A shorter route through Clearwater is a trade-off between efficiency and accessibility. The shorter distance means that fewer service hours are required; and therefore more hours are available for Saturday service. One disadvantage of this option is that customers wanting to travel from Brookfield Mall to Clearwater Village (e.g. the Post Office) would have to go through Vavenby to get there – a 60 minute transit ride for a 5 minute trip by car.

Figure 8. Proposed Route 1 – Clearwater-Vavenby



3.3 Option 3 - Reduced Network with Increased Monday to Friday Frequency (4 trips per day)

Option 3 proposes the same route network as Option 2 however this scenario would introduce a fourth trip Monday to Friday, instead of offering Saturday service. In other words, a trip would be offered every two hours on both routes (i.e. Blackpool and Vavenby-Clearwater).

As noted in Option 2, improved service levels come at the cost of geographic coverage in the Clearwater Village area and along Clearwater Valley Rd. The benefit of increased frequency should be weighed against potential inconvenience resulting from circuitous routing.

4. INVESTIGATE TRANSIT SERVICE TO WELLS GRAY PARK

The District of Clearwater asked BC Transit to investigate the possibility of transit service to Wells Gray Park, as per the Town’s Official Community Plan (Policy 2.40.16 is to “[investigate the possibility of operating a transit service from the Clearwater community to various highlights within Wells Gray Park”]).

Figure 9 shows a potential Wells Gray route to Helmsken Falls.

Preliminary estimates for this scenario are based on the assumption that the Wells Gray route would only operate during summer months (June. 30th to September. 29th), with two trips per Saturday. Ideally, trip times would correspond with local service to and from Vavenby and Blackpool to ensure that local residents could benefit from the service. BC Transit will not support weekend service to Wells Gray since transit users would have no way of connecting with the service. An extra vehicle would be required whether service was provided on weekdays or weekends.

It should be noted that there are a number of existing companies offering transportation to Wells Gray Park, including BC Backcountry Adventures, Discover Wells Gray and Clearwater Lake Tours.

This service is estimated to cost \$2,100 locally (\$55/hr direct op cost, \$25/hr local, 84 hours).

BC Transit does not recommend the implementation of Wells Gray Park transit route for the following reasons:

- Limited ridership potential due to the availability of convenient private transportation options
- Maintenance costs may increase due to the poor condition of Clearwater Valley Rd.

Figure 9. Potential Wells Gray route



5. COMPARISON OF OPTIONS

Figure 10. Service hours required for each option

Option	Route	Trip Duration (Hrs)	Trips Per Day	Annual Service Days	Annual Service Hrs	Total Service Hours Req.	Possible with Current # of Hours?
Option 1 - Streamlined route network w/ current frequency (3x, M-F)	Clearwater-Vavenby	1.4	3	252	1,071	1,945	Yes, plus 65 hrs contingency
	Blackpool	0.3	3	252	227		
	Wyndhaven	0.3	2	252	143		
	HandyDART	2.0	N/A	252	504		
Option 2 - Reduced network w/ Saturday service (3x, M-Sa)	Clearwater-Vavenby	1.2	3	305	1,068	1,952	Yes, plus 58 hrs contingency
	Blackpool	0.3	3	305	275		
	HandyDART	2.0	N/A	305	610		
Option 3 - Reduced network w/ increased frequency (4x, M-F)	Clearwater-Vavenby	1.2	4	252	1,176	1,982	Yes, plus 28 hrs contingency
	Blackpool	0.3	4	252	302		
	HandyDART	2.0	N/A	252	504		

Figure 12. Advantages / disadvantages of each option

Option	Pros	Cons
Option 1 - Streamlined route network w/ current frequency (3x, M-F)	<ul style="list-style-type: none"> • Simplifies existing route network • Does not change service area • Makes it easier to travel within Clearwater (Route 1 Clearwater to Vavenby doubles as Clearwater Village circulator) • Is cost neutral 	<ul style="list-style-type: none"> • Does not improve frequency
Option 2 - Reduced network w/ Saturday service (3x, M-Sa)	<ul style="list-style-type: none"> • Is simpler than existing route network • Improves service levels • Is cost neutral 	<ul style="list-style-type: none"> • Does not improve frequency • Does not serve Greer Rd (section along Greer removed)
Option 3 - Reduced network w/ increased frequency (4x, M-F)	<ul style="list-style-type: none"> • Is simpler than existing route network • Improves service levels • Reduces customer wait times • Responds to survey respondents' request for more frequent service • Is cost neutral 	<ul style="list-style-type: none"> • Does not serve Greer Rd (section along Greer removed)

6. CUSTOMER INFORMATION – IMPROVEMENT OPTIONS

The existing riders guide is difficult to understand given that no two trips travel via the same route. Clear customer information is required if a transit system wishes to attract new users. All three transit service options outlined in this report create a simpler route structure that is easier to understand. The implementation of either of the three options will result in the production of a new Rider's Guide that would be easier to understand.

At the moment there are no bus stops signs or schedules in Clearwater which reduces the visibility of transit in the community. The District of Clearwater has requested BC Transit provide bus stop strip signs and look into the provision of on-road customer information.

7. RECOMMENDATIONS

Each option has its own respective benefits:

- Option 1 is a simplified version of the current system, requiring minimal change
- Option 2 provides Saturday service
- Option 3 offers an extra trip per day

Option 3 is most likely to increase ridership and is therefore the preferred choice. More trips would result in shorter wait times, and thus greater convenience.

The following recommendations have been prepared for the District of Clearwater's consideration:

1. Implement Option 3 as it provides the most opportunity for increased ridership by simplifying the route network and schedule.
2. BC Transit to prepare a Marketing Plan in collaboration with the District of Clearwater.

8. COSTING

[RTM to complete]

DRAFT

APPENDIX A – 2010/11 Conventional Transit Performance Summary for Comparably Sized Paratransit Systems (Year -End Actuals)

Year End Actuals	Population	Licensed Vehicles ¹	Total Revenue Hrs of Service ²	Revenue Passengers	Total Revenue	Total Cost	Local Share Debt Service	Operating Cost	Provincial Contrib.	Local Govt Contribution ³	Cost Recovery	Rides / Hour	Cost / Ride	Operating Cost / Hour	Total Cost / Hour
<i>100 Mile House</i>	6,800	4	3,152	12,706	\$25,555	\$195,747	\$16,216	\$179,530	\$72,101	\$98,097	13.1%	4.0	\$15.41	\$56.96	\$62.10
<i>Ashcroft-Cache Creek-Clinton</i>	8,900	2	3,191	6,956	\$19,374	\$205,442	\$134	\$205,309	\$88,047	\$98,021	9.4%	2.2	\$29.53	\$64.34	\$64.38
<i>Boundary</i>	10,300	2	1,645	6,194	\$9,462	\$111,138	\$12,782	\$98,356	\$60,678	\$40,994	8.5%	3.8	\$17.94	\$59.81	\$67.58
<i>Clearwater & Area</i>	4,900	3	2,346	6,641	\$9,838	\$152,053	\$20,681	\$131,372	\$63,905	\$78,312	6.5%	2.8	\$22.90	\$56.00	\$64.81
<i>Creston Valley</i>	9,700	4	4,912	17,752	\$29,118	\$308,587	\$48,242	\$260,345	\$112,153	\$167,312	9.4%	3.6	\$17.38	\$53.00	\$62.82
<i>Hazelton Regional</i>	6,300	2	2,596	15,019	\$38,786	\$223,646	\$14,919	\$208,727	\$109,986	\$74,874	17.3%	5.8	\$14.89	\$80.13	\$85.88
<i>Kicking Horse Country</i>	7,500	2	3,951	9,647	\$17,183	\$300,068	\$265	\$299,803	\$114,056	\$168,832	5.7%	2.4	\$31.10	\$75.87	\$75.94
<i>Kimberley</i>	7,200	4	4,744	14,650	\$38,983	\$261,481	\$10,098	\$251,382	\$118,499	\$103,991	14.9%	3.1	\$17.85	\$52.99	\$55.12
<i>Osoyoos</i>	5,100	1	1,813	4,949	\$32,252	\$99,573	\$3,099	\$96,475	\$42,756	\$24,571	32.4%	2.7	\$20.12	\$53.21	\$54.91

¹ Includes in-service vehicles *and* spares.

² Includes scheduled and flexible/contingency hours; “deadhead” hours (i.e. when vehicle is not in-service) are not included in this total.





³ Excludes revenue.

APPENDIX B – Survey Results






The online survey was live throughout the month of November (2011). Paper copies of the survey were also mailed out to Clearwater residents. A total of 59 responses were received.

Note that not all respondents completed each question, which is why the total responses vary by question.







1. Whereabouts do you live?

Response	Chart	Percentage	Count
Clearwater		73%	40
Vavenby		9%	5
Blackpool		15%	8
Other:		4%	2
Total Responses			55

2. How often do you use transit?

Response	Chart	Percentage	Count
Daily		9%	5
Weekly		14%	8
Monthly		7%	4
Rarely		16%	9
Never		55%	32
Total Responses			58

3. When do you typically require transit? Select all that apply.

Response	Chart	Percentage	Count
Before 10 AM		76%	44
10 AM to 12 PM		55%	32
12 PM to 2 PM		48%	28
2 PM to 4 PM		52%	30
4 PM to 6 PM		33%	19
After 6 PM		21%	12
Total Responses			58

4. When using transit, what are the usual destinations or areas that you travel to? Select all that apply.

Response	Chart	Percentage	Count
Brookfield Mall		88%	50
Medical Centre		46%	26
Evergreen Acres		19%	11
Resource Centre		26%	15
Clearwater Secondary School		12%	7
Dutch Lake Park		16%	9
Vavenby area, please specify:		14%	8
Blackpool area, please specify:		9%	5
Other, please specify:		61%	35
Total Responses			57

“Other” responses include:

- Raft River Elementary
- Hospital
- Post Office
- Municipal Hall
- Library
- Sportsplex
- Rona / Home Hardware
- Kamloops

5. What would encourage you to take transit?

Response	Chart	Percentage	Count
More frequent service		38%	18
More convenient access to tickets and passes		15%	7
More convenient access to Riders' Guides		15%	7
More information about transit		27%	13
Simpler schedule		19%	9
Simpler routing / maps		10%	5
Better access to transit, e.g. near:		12%	6
Other, please specify:		44%	21
Total Responses			48

6. Any other comments?

	# of responses	% of responses
Conventional service		
Continue the service / I support the service / May use it in future	22	35%
Inconvenient / Doesn't suit my work schedule	8	13%
Weekend service	5	8%
More public information (schedules, routes, stop locations, ticket outlets)	5	8%
More frequent service	5	8%
I've used it	5	8%
More stops	3	5%
I don't need to use it (yet)	3	5%
Have the bus serve community events	3	5%
Residence too far from nearest bus stop	2	3%
More handyDART service	2	3%
Total conventional service comments	63	
Health Connections service		
Continue the service / I support the service / May use it in future	5	45%
I've used it	4	36%
More frequent service	2	18%
Total Health Connections service comments	11	
Other	5	5%
No response	20	20%
* Multiple comments allowed		