

# Clearwater and Area

## Transit Service Review



November, 2016



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## Executive Summary

In partnership with the District of Clearwater and the Thompson Nicola Regional District (TNRD), BC Transit has undertaken a Service Review of the Clearwater and Area Transit System. As identified within the Service Review Memorandum of Understanding, the key objectives of the Service Review included the following:

- general review of ridership and system performance;
- more detailed review of Clearwater Community Loop and route 10 Valley Connector performance;
- opportunities to simplify and improve system legibility and to improve the presentation of transit information within the Rider's Guide; and
- potential cost savings and efficiencies pertaining to fleet requirements and allocation<sup>1</sup>.

### Community Overview

The population in the Clearwater area is aging, and this demographic shift may cause transit ridership growth as larger portions of the population become reliant on alternative modes of transportation.

### Clearwater and Area Transit System

The Clearwater and Area Transit System provides both fixed-route and handyDART service. One bus operates every weekday between 8:00am and 4:15pm, providing primarily fixed-route service between Vavenby, Clearwater, and Blackpool with handyDART service operating during gaps in the fixed-route schedule. The fixed-route service between Vavenby, Clearwater, and Blackpool is split into 6 different routes which is challenging for the public to understand. On Tuesdays and Thursdays, a second bus provides regional fixed-route service between the Clearwater area and Kamloops. Additionally, Northern Health Connections service is available to Clearwater and TNRD residents, with weekly regional service from McBride to Kamloops along Highway 5.

This report provides a number of key findings related to transit system performance in Clearwater:

- ridership on the Clearwater and Area Transit System is typical given the level of transit service provided and the land use and population density patterns in the Clearwater area;
- although the Clearwater Community Loop pilot provided an important service that was strongly supported by the community, changes to the routing and scheduling could increase performance and better meet community needs; and
- the 10 Valley Connector is performing well, but substantial ridership growth can occur before capacity becomes a concern and expansion is required.

With the exception of the 10 Valley Connector, the fares for the Clearwater and Area Transit System have not changed since the system was established in 1998, and this report includes recommendations from the Clearwater Fare Review which is being conducted simultaneous to the Service Review.

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<sup>1</sup> An extra vehicle was procured for the Clearwater Community Loop pilot, but it was not needed to operate the service and a decision was made to not replace the vehicle. Clearwater is now operating with the minimum fleet size, and there are no available cost savings or efficiencies related to fleet.

## **Public Consultation**

Public consultation for the Clearwater and Area Transit Service Review was conducted in two phases:

- Listening Phase (Phase 1)
- Reporting Back (Phase 2)

This approach was taken to ensure that the final review reflects the needs and priorities of the community.

A number of consultation techniques were used to maximize opportunities for both public and stakeholder input including surveys, open house events, and key stakeholder meetings involving the 'Front Door to Grocery Store' study participants, the District of Clearwater's Age Friendly Committee, District of Clearwater staff and Yellowhead Community Services staff.

## **Service Options and Supporting Actions**

A summary of the proposed service change option and supporting actions from this Service Review are presented in Table 1 and Table 2 respectively below.

## **Recommendations**

BC Transit recommends that the District of Clearwater:

- **receive this report for information and provide comment; and**
- **direct staff to work with BC Transit to implement Service Option #1 and the Fare Review proposal for Spring 2017.**

**Table 1 – Service Option Summary**

#	Proposed Service Option	Benefits	Challenges
1	Restructure the Clearwater and Area Transit System	Improved system legibility, customer experience, and potential for ridership growth, and reduction of redundant duplication of service and improved system efficiency	Current customers must adapt to minor changes in current routing and scheduling

**Table 2 – Supporting Action Summary**

	Proposed Supporting Action	Benefits	Challenges
1	Utilize BC Transit’s Development Referral Program	Better integrate future development with transit	
2	Integrate Fare Review recommendations with Service Review	Simplify the fare structure and increase customer understanding	
3	Improve transit infrastructure and information at key bus stops	Increase profile of transit in community and customer convenience. Improve access to transit info. and reduce barriers to transit	Infrastructure improvements require additional funding
4	Simplify the presentation of the transit system within the Rider’s Guide	Improve system clarity for riders	
5	Alter Electronic Bus Signs by Route	Improve system clarity for riders	Requires implementation of service option 1 to be beneficial
6	Ensure bicycle rack access on buses for customers	Improve multi-modal transportation options and system reliability for transit users with bicycles	The vehicle type currently without a bicycle rack has never had one installed before (fleet issue)
7	Adopt Service Standards and Performance Guidelines	Provides guidelines for optimizing transit service and prioritizing expansion	
8	Review and update how ridership data is collected	More disaggregate ridership data can assist with future transit service optimization and expansion prioritization	

## 1.0 Introduction

In partnership with the District of Clearwater and the Thompson Nicola Regional District (TNRD), BC Transit has undertaken a Service Review of the Clearwater and Area Transit System. It has been almost five years since Clearwater's last Service Review, and it is BC Transit's organizational goal to review systems approximately every five years. This provides the opportunity to optimize transit service and to address any issues that have developed since the last review.

### 1.1 Objectives

As identified within the Service Review Memorandum of Understanding, the key objectives of the Service Review included the following:

- general review of ridership and system performance;
- more detailed review of Clearwater Community Loop and route 10 Valley Connector performance;
- opportunities to simplify and improve system legibility and to improve the presentation of transit information within the riders guide; and
- potential cost savings and efficiencies pertaining to fleet requirements and allocation<sup>2</sup>.

### 1.2 Service Review Process

The following steps were undertaken by BC Transit staff between May and November 2016 as part of the Service Review:

#### May / June

- Data collection and Phase 1 Public Consultation (on-board survey and driver consultation)
- Preliminary service change option development (from data and public consultation results)

#### July

- Feedback on preliminary service change options from District of Clearwater and Local Operating Company staff

#### September

- Service Review update presentation to Council and Service Review Report draft

#### October

- Phase 2 Public Consultation (open houses and surveys for community feedback on service change options)

#### November

- Final revisions to service change options and finalization of Service Review Report

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<sup>2</sup> There was an extra vehicle procured for operating the Clearwater Community Loop, but it was not needed to operate service and a decision was made to not replace the vehicle. Clearwater is now operating with the minimum fleet size, so there are no available cost savings or efficiencies related to fleet.

## 2.0 Community Overview

### 2.1 Demographics

The Clearwater and Area Transit System serves the District of Clearwater and portions of the Thompson-Nicola Regional District. Table 3 shows the overall population figures by age group for the District of Clearwater in the 2011 census<sup>3</sup> and compares it to the BC average; the District of Clearwater has a higher proportion of children, youth, and younger seniors than British Columbia as a whole, but a lower proportion of adults and slightly lower proportion of older seniors.

Figure 1 displays the North Thompson area population by age category in 1998<sup>4</sup> and 2015. The aging baby boomer population in the North Thompson area may drive transit ridership growth as larger portions of the population become reliant on alternative modes of transportation.

Table 3 - Clearwater and Area Population and Comparison to BC Average (2011 Census)

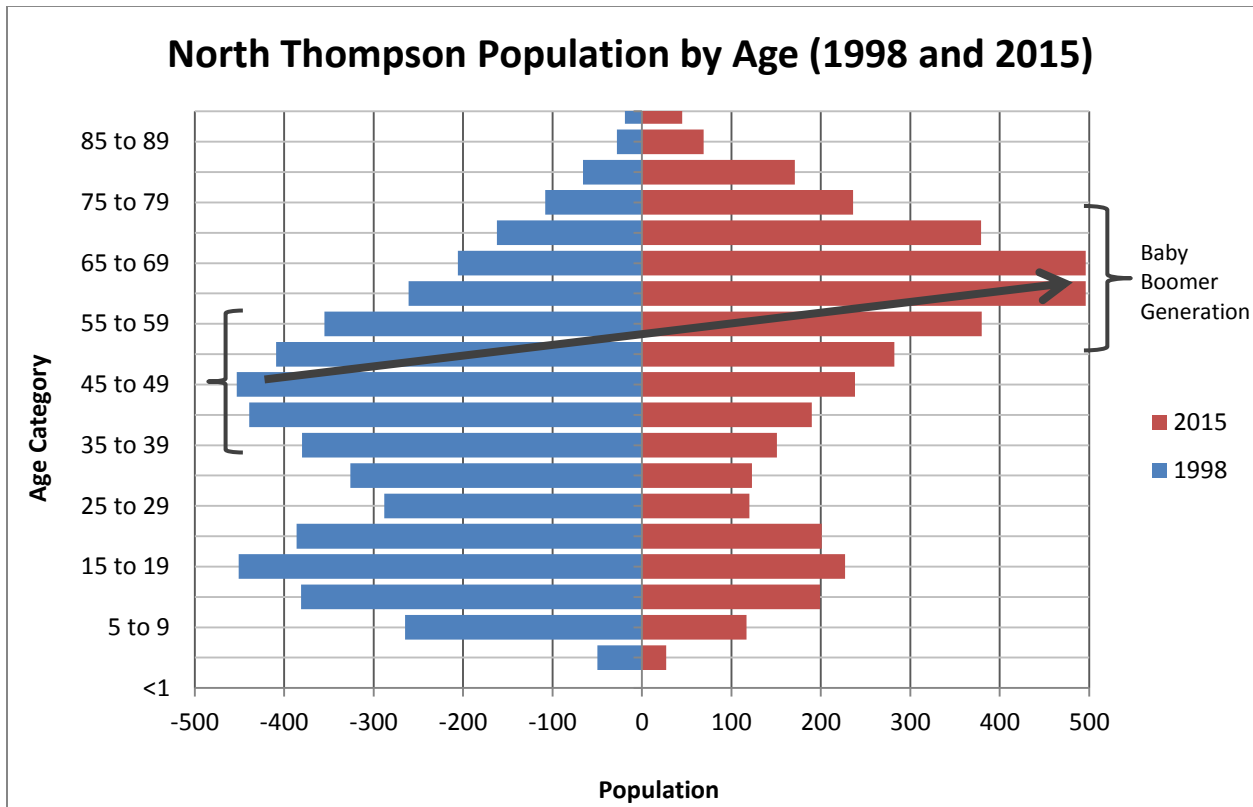
Age Category	Clearwater		British Columbia	
	Population	% of Population	Population	% of Population
Child (0-9 years)	280	12.3%	438,580	10.3%
Youth (10-19 years)	320	14.1%	513,945	12.0%
Adult (20-64 years)	1,355	59.7%	2,758,810	64.6%
Younger Seniors (65-74 years)	230	10.1%	371,615	8.7%
Older Seniors (75+ years)	85	3.7%	189,620	4.4%
Total	2,270	100%	4,272,570	100%

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<sup>3</sup> The census boundaries for the District of Clearwater were changed between the 2006 and 2011 censuses, making a direct population size comparison within the current district boundaries over time impossible.

<sup>4</sup> 1998 was the year that the Clearwater and Area Transit System was first established

Figure 1 – North Thompson Local Health Area Population by Age



Source: Population estimates for 'North Thompson Local Health Area' (1998-2015) by BC Stats, BC Ministry of Citizens' Services. The boundary map for the 'North Thompson Local Health Area' is located in *Appendix D*



## 3.0 Clearwater and Area Transit System

### 3.1 Background

Established in 1998, the Clearwater Regional Transit System is currently operated by Yellowhead Community Services and offers both fixed-route and handyDART services<sup>5</sup>. This section outlines the history, existing transit system routes, system performance, fares, and fleet for the Clearwater and Area Transit System.

### 3.2 Transit System History

The Clearwater and Area Transit System was established in April 1998 with approximately 1700 annual service hours<sup>6</sup>. The original service provided three, consistently-routed round trips between Vavenby, Clearwater, and Blackpool, with handyDART service available in the gaps between these scheduled trips. Over time, route and schedule variations were introduced to improve service efficiency and to cater to individual community needs. A summary of the key historical system changes is provided below:

#### 2003

- Routing was differentiated between the morning, noon, and afternoon scheduled trips to better cater to individual community needs.
- Afternoon service to Blackpool was discontinued.
- Some scheduled service was extended to Greer and Mountainview.
- One monthly round trip was provided to Kamloops on Route 6.

#### 2007

- Route 6 Kamloops became Route 10 Kamloops (provided by Interior Health), with service frequency increased from monthly to weekly.
- Afternoon service to Blackpool was reinstated.

#### 2010/11

- Interior Health discontinued funding for Route 10 Kamloops, so it became funded locally through an agreement between the District of Clearwater, the TNRD, and the District of Barriere.

#### 2012

- Summer Saturday service to Dutch Lake Beach and the Clearwater Farmers Market was piloted in 2012 and run again in 2013, but it was discontinued afterwards due to low ridership.

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<sup>5</sup> Fixed-route transit services operate along a defined route and schedule, and handyDART provides door-to-door service for passengers with mobility challenges who cannot use the fixed-route service.

<sup>6</sup> The system has expanded by 60% since 1998 to operate with approximately 2750 annual service hours.

## 2014

- The Route 10 Kamloops was changed to the Route 10 Valley Connector and service was expanded from one to two trips per week. Monthly service to Avola/Blue River on the Route 10 Kamloops was also added.

## 2015

- The Clearwater Community Loop pilot project was implemented from November 2015 to February 2016, improving transit frequency in the Clearwater area.

## 2016

- The District of Clearwater approved expansion to implement the Clearwater Community Loop year-round.

## 3.3 Clearwater and Area Transit System Today

### 3.3.1 Fixed-Route Transit

The local fixed-route system provides service between Clearwater, Vavenby, and Blackpool. These local transit services are split into six different routes, many of which cover the same area, making it especially challenging for new users to understand the routing and schedule (Table 4, Figure 2).

Table 4 – Clearwater Local Transit Routes

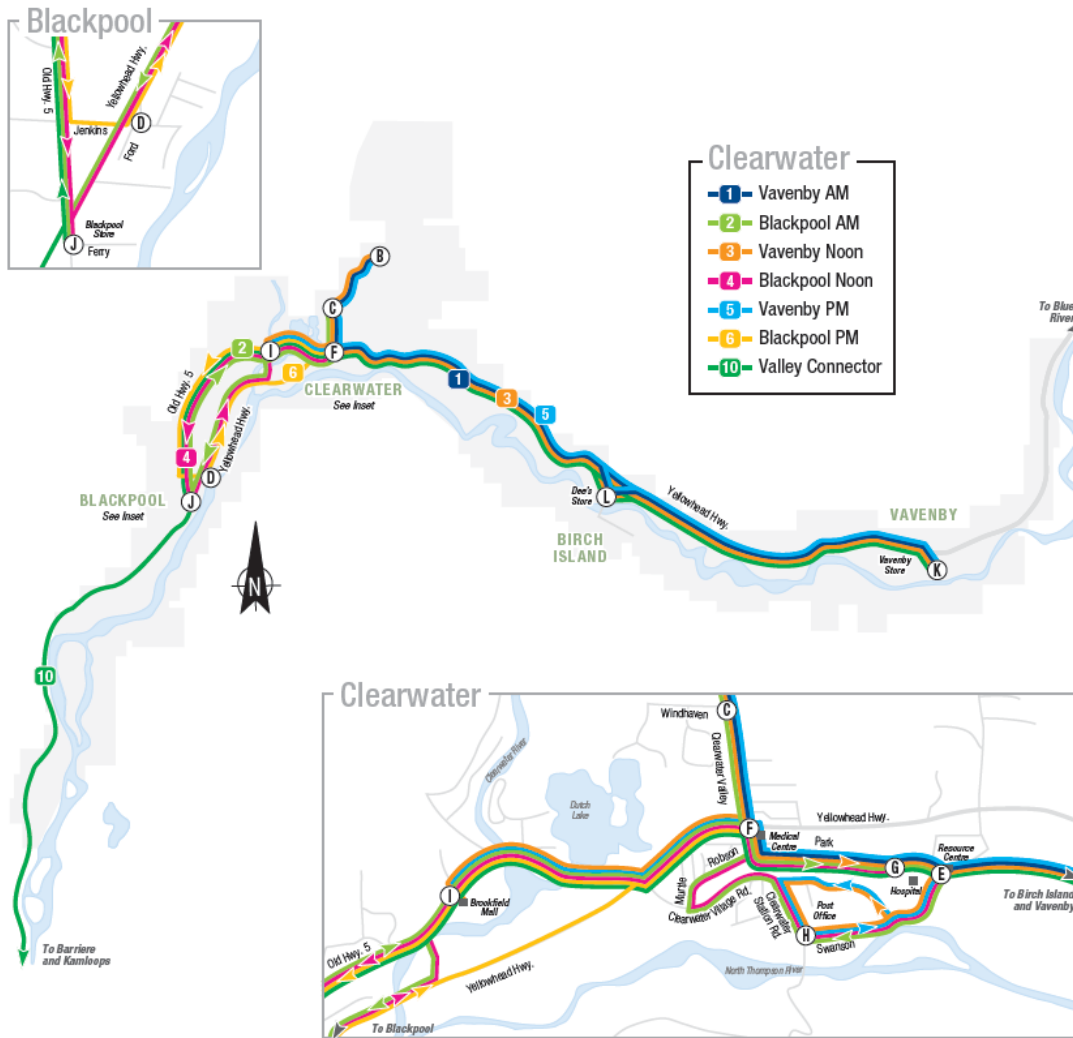
Route	AM	Noon	PM
1 Vavenby AM	X		
2 Blackpool AM	X		
3 Vavenby Noon		X	
4 Blackpool Noon		X	
5 Vavenby PM			X
6 Blackpool PM			X

In 2011, the Route 10 Valley Connector was added to the fixed-route system, which now provides regional transit service between the Clearwater area and Kamloops every Tuesday and Thursday. The intent of this regional route was to replace the Health Connections<sup>7</sup> service which was made unavailable to non-medical passengers in late 2010. This route is fully funded by the District of Clearwater, District of Barriere, and the TNRD.

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<sup>7</sup> Health Connections is a health-authority based regional travel assistance program that offers subsidized medical transportation options

Figure 2 – Current Clearwater and Area Transit System Routing



### 3.3.2 handyDART Service

The handyDART service in Clearwater provides door-to-door service for passengers with mobility challenges that are unable to use the fixed-route system. handyDART operates during the breaks in the fixed-route service between 10-11am and 2-3pm every weekday. Given the short handyDART trip windows, depending on demand, some handyDART passengers are encouraged to take the fixed-route service for one direction of their trip.

### 3.3.3 Northern Health Connections Service

The Northern Health Connections service is operated separately from BC Transit, and transports medical patients from McBride to Kamloops every Thursday. This service departs McBride at 5:45am and arrives in Kamloops at 11:25am. The return bus departs Kamloops at 4:00 pm and arrives in McBride at 8:00 pm. The fare for this service is \$10 per trip. This service is used minimally by residents from the Clearwater area, with only two passengers from Clearwater in 2015. This is due to a number of factors including only allowing medical passengers, operating on the same day as the Route 10 Valley Connector, and charging a higher fare.

## 3.4 System Performance

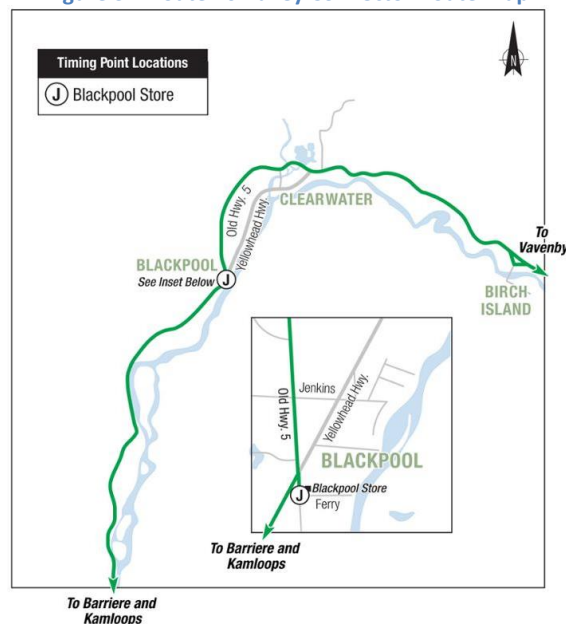
Ridership on the Clearwater and Area Transit System is typical given the level of transit service provided and the land use and population density patterns in the Clearwater area. The following sections provide more detail on the Route 10 Valley Connector and the Clearwater Community Loop pilot performance.

### 3.4.1 Route 10 Valley Connector Performance

#### Background

The 10 Valley Connector provides service between Blue River, Avola, Vavenby, Clearwater, Blackpool, Little Fort, Barriere, and Kamloops (Figure 3). The 10 Valley Connector service was implemented with one weekly round trip in 2011 when Northern Health Connections changed its policy and restricted non-medical passengers on its service to Kamloops. In 2014, service on Route 10 Valley Connector was expanded to a second weekly round trip.

Figure 3 – Route 10 Valley Connector Route Map



**Performance**

Annual ridership on the 10 Valley Connector started at roughly 1,600 passengers in 2011/12 and grew to 2,300 passengers in 2015/16 (Figure 4). Today, this service averages approximately 22 passengers per round trip, which works out to roughly 2.5 rides per service hour (Table 5). Additionally, the majority of ridership on the 10 Valley Connector comes from Clearwater and Barriere (Table 6).

Given current ridership levels on the 10 Valley Connector and community feedback, it is recommended that Clearwater focus its limited expansion resources on re-implementing a streamlined and integrated Clearwater Community Loop. However, ridership should be monitored on the Route 10 Valley Connector moving forward, and an additional weekly round trip can be prioritized if capacity becomes an ongoing issue.

Figure 4 – Route 10 Valley Connector Annual Ridership Over Time

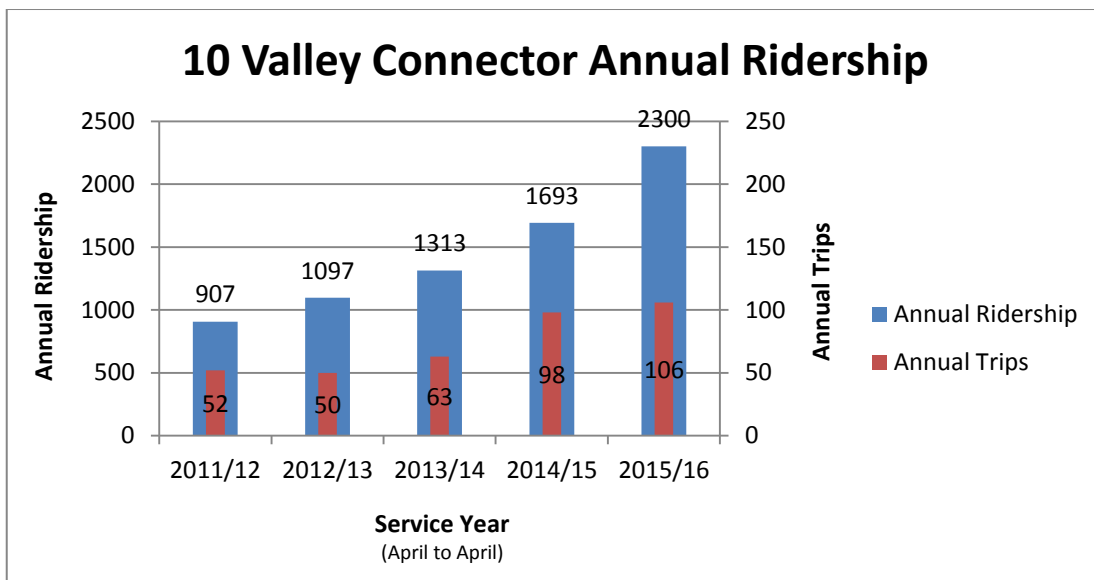


Table 5 - 10 Valley Connector Ridership Statistics (2015/16)

Days of Service	Number of Round Trips	Total Ridership	Rides Per Service Hour	Rides Per Round Trip
106	106	2,300	2.5	21.7

Table 6 - Ridership by Community for 10 Valley Connector (2015/16)

	Blue River & Avola	Vavenby	Clearwater	Little Fort	Barriere	Total
Ridership	106	231	1,189	20	812	2,300
Percent of Total Ridership	4.6%	10.0%	51.7%	0.9%	35.3%	100%

### 3.4.2 Clearwater Community Loop Performance

#### Background

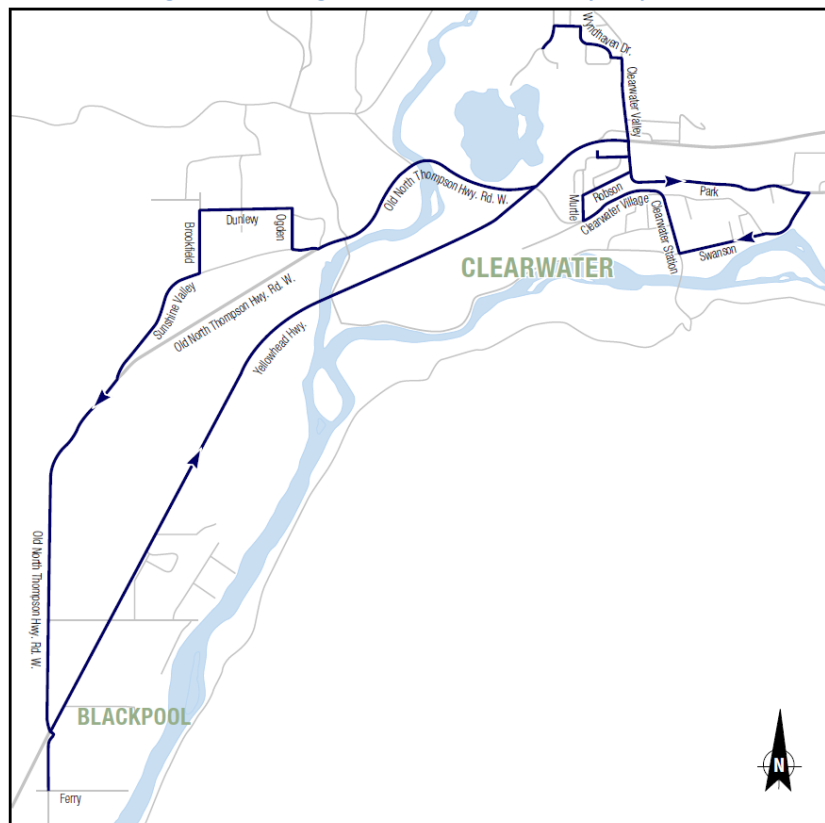
The Clearwater Community Loop pilot project ran from November 2015 to February 2016. The pilot project was informed by the UNBC “District of Clearwater Seniors’ Needs” study in 2012 and the follow-up study “From Front Door to Grocery Store.” The purpose of the Community Loop was to provide additional transit frequency and accessibility for Clearwater Seniors, allowing a greater proportion of Clearwater’s population to ‘age in place,’ and to remain active and mobile without the need for a personal vehicle.

The planning for this pilot project happened quickly, and BC Transit had a limited role in the design and implementation of this service<sup>8</sup>. After the pilot project ended, the community expressed strong support for the service, and the District of Clearwater approved expansion to continue the Clearwater Community Loop service year round.

#### Routing and Schedule

Figure 5 outlines the routing for the Clearwater Community Loop pilot project. During the pilot, this service operated four daily trips at 10am, 11am, 12pm, and 1pm on Mondays, Wednesdays, and Fridays.

Figure 5 – Routing for Clearwater Community Loop Pilot



<sup>8</sup> The routing and schedule for the Clearwater Community Loop pilot project was designed by Yellowhead Community Services.

**Performance**

From discussions with the local operating company, during the pilot project, large portions of the Clearwater Community Loop garnered little to no ridership including the Wyndhaven, Sunshine Valley, and Blackpool neighbourhoods. Additionally, the average ridership on the Clearwater Community Loop pilot worked out to approximately 2 rides per trip and service hour which is low even for a system of Clearwater’s size.

The Clearwater Community Loop provided duplicate service on the 12:00pm and 1:00pm trips with the currently operating 3 Vavenby and 4 Blackpool (noon) trips. This is shown through the lower ridership numbers on these two trips (Table 8). Additionally, qualitative comments from the Local Operating Company mention that the ridership on the 3 Vavenby and 4 Blackpool tended to be lower while the Inner Loop Circulator was operating, providing confirmation of the duplication of service being offered during those trip times.

**Table 7 - Clearwater Community Loop Pilot Performance Statistics**

Days of Service	Number of Trips	Total Ridership	Rides Per Service Hour	Rides Per Trip
44	176	409	2.3	2.3

**Table 8 - Ridership by Trip Time for Clearwater Community Loop Pilot**

Trip Times	10:00	11:00	12:00	1:00
Total Ridership by Trip Time	113	122	94	80
Percent of Total Ridership	28%	30%	23%	20%

### 3.5 Clearwater and Area Transit Fares

With the exception of the Route 10 Valley Connector, transit fares have not changed in Clearwater since the system was established in 1998. Current transit fares for the Clearwater and Area Transit System are shown below in Table 9. BC Transit is conducting a Fare Review for the Clearwater and Area Transit System in conjunction with the Service Review. The Fare Review recommendations were designed to simplify the fare structure and increase customer understanding, and the report can be found in *Appendix E*.

Table 9 – Clearwater and Area Transit Fares

<b>Fares</b>			
	all fares subject to change		
<b>Cash</b>	<b>Zone 1</b>	<b>Zone 2</b>	<b>Zone 3</b>
All passengers	\$ 1.50	\$ 2.00	\$ 2.50
Child, 4 or under	free	free	free
<b>Tickets (10)</b>			
All passengers	13.50	18.00	22.50
<i>Please have exact change ready. Drivers do not carry change.</i>			
<b>Zone Descriptions</b>			
<b>Zone 1</b>	Blackpool		
<b>Zone 2</b>	Clearwater		
<b>Zone 3</b>	Birch Island and Vavenby		
<b>Service to Kamloops – 10 Valley Connector</b>			
All trips must be prebooked. Please call ahead for availability and for service to Blue River. Schedule is in this Rider’s Guide.			
<b>From Blue River</b>			
All passengers			\$ 10.00
<b>From Clearwater/Vavenby</b>			
All passengers			\$ 7.50
<b>From Little Fort/Barriere</b>			
All passengers			\$ 5.00
<b>Ticket &amp; Pass Outlets</b>			
You can buy tickets on the bus from the driver, or at the Yellowhead Community Service office at 612 Park Drive in Clearwater.			



### 3.6 Fleet

The Clearwater and Area Transit System fleet is composed of two ARBOCs and one Mercedes Sprinter (Table 10). These vehicles are used interchangeably for all transit services in Clearwater, with the exception that the Mercedes Sprinter is not used for the Route 10 Valley Connector.

Table 10 – Vehicle Types in Clearwater

Vehicle Type	Seating Capacity	Wheelchair Capacity	Bike Rack
ARBOC	20	3	Yes
Mercedes Sprinter	12	3	No

### 4.0 Public Consultation

Public consultation for the Clearwater and Area Transit Service Review was conducted in two phases:

- Listening Phase (Phase 1)
- Reporting Back (Phase 2)

This approach was taken to ensure that the final review reflects the needs and priorities of the community. A number of consultation techniques were used to maximize opportunities for both public and stakeholder input:

- **Online / paper surveys** – Surveys were included in both phases of consultation, with current transit users, drivers, and the general public encouraged to participate.
- **Key Stakeholder Engagement** – Consultation meetings were held with the ‘Front Door to Grocery Store’ study participants, the District of Clearwater’s Age Friendly Committee, District of Clearwater staff and Yellowhead Community Services staff.
- **Open House Events** – Four open house events were held in Phase 2 consultation, with events hosted in Vavenby, Clearwater, and Blackpool.

## 4.1 Phase 1 Public Consultation

### 4.11 On-Board Survey

An on-board survey was conducted in late May to gather information about current transit users and to get feedback on how the system could be improved. A total of 21 transit users provided feedback through the survey. The on-board survey results provide a profile of transit users in Clearwater and feedback on the Clearwater Community Loop pilot and the 10 Valley Connector. Some of the key results are summarized below:

- The majority of respondents lived in Vavenby (48%) or Clearwater (33%);
- respondents tended to be older, with 65% of respondents between the ages of 45 and 74;
- most respondents were regular transit users, with 70% of respondents taking transit more than 2 days a week;
- most respondents used the 10 Valley Connector only occasionally, with 35% of respondents using it monthly and 40% using it several times a year;
- during the pilot project, a few respondents used the Clearwater Community Loop several times a week, but the majority used it infrequently or did not use it at all; and
- 60% of survey respondents found out about the Clearwater and Area Transit System and schedule through family or friends, 15% found out through Yellowhead Community Services, and 10% asked a bus driver.

See Table 11 for a summary of additional comments from survey respondents and *Appendix B* for detailed results from the on-board survey.

**Table 11 – Key Feedback from Phase 1 Public Engagement**

Improvements to Existing Services	Infrastructure and Vehicles
Re-implement the Clearwater Community Loop	Ensure bike rack consistency
Focus Clearwater Community Loop on key business areas and integrate with other transit	Better placement of bus shelters
More trips and later service to Vavenby	
More trips on the 10 Valley Connector	
Weekend service	
More service to Birch Island / Dees Store	

#### 4.12 Driver Consultation

Key information gathered from bus drivers and other local operating company staff through the Service Review process included the following:

- key origin and destination information;
- ridership details from the Clearwater Community Loop pilot;
- identification of trips with on-time performance issues; and
- feedback on proposed service options.

### 4.2 Phase 2 Public Consultation

In October 2016, the second phase of public consultation included the presentation of draft service change options to the public at four Open Houses and on-board and online surveys; one survey specifically targeted handyDART users and the other targeted fixed-route transit users. In addition, a Service Review update was provided to the ‘Front Door to Grocery Store’ study participants.

#### 4.21 Open Houses



**Public Open House Events at Buy Low Foods and Evergreen Acres**

Four open house events were hosted throughout the Clearwater area on Wednesday, October 19<sup>th</sup> to get feedback on routing and scheduling proposals. A total of 51 attendees the four open house events hosted in Clearwater, Vavenby, and Blackpool (Table 12).

**Table 12 – Open House Attendance by Location**

Open Houses	Time	Attendees
Vavenby Store	8:00am-9am	9
Buy Low Foods	10:00am-12:30pm	34
Blackpool Hall	1:00pm – 2:00pm	0
Evergreen Acres	3:00pm – 4:00pm	8

## Clearwater and Area Transit Service Review

Some key feedback from the open houses included:

- the proposed transit network being easier to understand;
- strong support for the 2 Blackpool / Mountainview and 3 Clearwater Loop routing proposals and the On Request service proposal to Wyndhaven, Sunshine Valley, and Lower Blackpool;
- Evergreen Acres residents strongly supportive of the Clearwater Loop routing and schedule proposals; and
- limited support for the Vavenby routing simplification proposal<sup>9</sup>.

### 4.22 On-Board and handyDART Surveys

Phase 2 public consultation also included a handyDART survey and an on-board survey.

#### **handyDART Survey**

Of the ten active handyDART users in Clearwater, four completed the handyDART survey. The results provided key information relating to the handyDART schedule.

#### **On-Board Survey**

The on-board survey was distributed by bus drivers to riders, and ten completed surveys were returned. In general, responses from the on-board survey reflect that the current transit system seems to meet the needs of riders currently using the system reasonably well, and those respondents would like to see minimal changes.

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<sup>9</sup> Based on community feedback, the proposed simplifications to the Vavenby routing between Vavenby and Buy Low Foods in Clearwater were removed from Service Option #1. Appendix F includes a map of the Vavenby routing simplification proposal.

## 5.0 Service Options

Based on the analysis of existing and future community demographics and land use, existing transit service and feedback from the public engagement process, the following options are presented to guide investment in the system to continue to improve its effectiveness and community benefit. Costs for these options are based on the 2016/17 Annual Operating Agreement, and actual costs may vary depending on confirmed budget figures and finalization of operating details at the time of implementation.

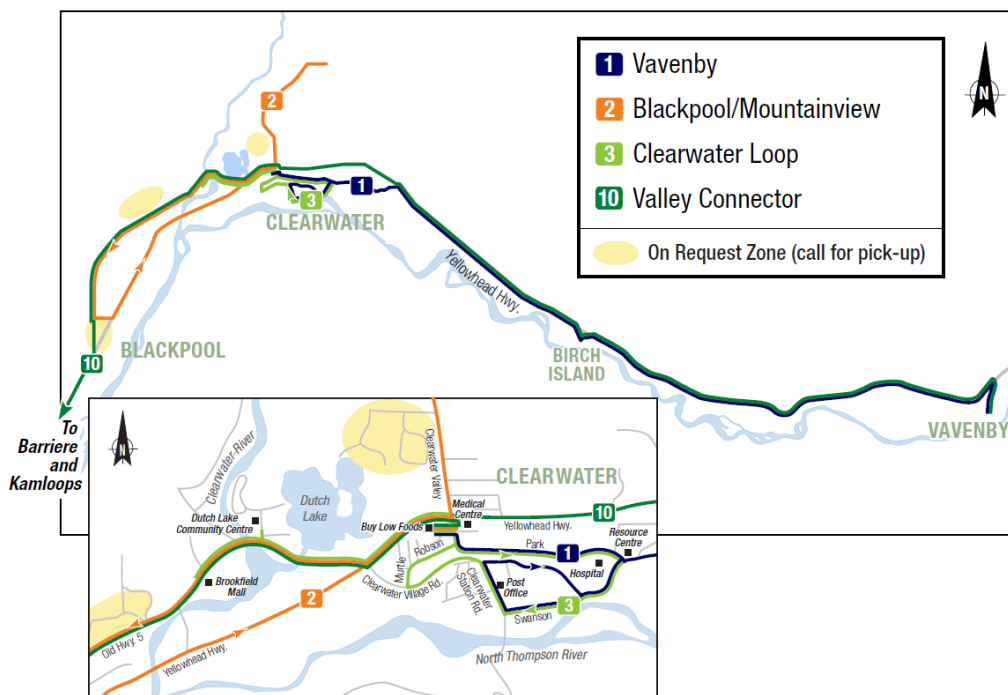
### Service Option #1: Restructure the Clearwater and Area Transit System

#### Description

This service option proposes several changes to the current transit system including<sup>10</sup>:

- simplifying the routing variations serving Blackpool into one consistent route (Figure 6);
- reallocating noon service to Mountainview and Greer to provide On Request Service to Wyndhaven, Sunshine Valley, and lower Blackpool;
- integrating the Clearwater Community Loop into the transit system and streamlining it to focus on the key destinations and higher ridership areas; and
- including additional running time on key trips facing on-time performance issues.

Figure 6 - Proposed Clearwater and Area Transit System Map



<sup>10</sup> See Appendix A for a detailed description of the proposed routing options.

**Rationale**

There are a number of underlying reasons to support these proposed changes:

- The complexity of the current routing variations makes it challenging for new riders to understand the transit system and for current users to use it in new ways (section 3.3.1)<sup>11</sup>.
- Several areas served by the original Clearwater Community Loop routing received very low ridership, and would be better suited to On Request Service (section 3.4.2).
- Lack of schedule integration between the Clearwater Community Loop and the rest of the system resulted in service overlaps on the 12:00pm and 1:00pm trips (3.4.2).

**Benefits**

This proposed service option provides a number of benefits:

- a more consistent, easier to understand transit system;
- more frequent service to the key destinations and higher ridership areas within Clearwater;
- integration between the Clearwater Community Loop and the other routes in the system; and
- a more reliable system with fewer on-time performance issues.

**Further Considerations**

This service option utilizes the agreed upon expansion funding from the 17/18 Expansion Memorandum of Understanding (MOU) for continuing the Clearwater Community Loop (Table 13).

**Table 13 – Service Hours and Net Municipal Cost Estimates for Service Option #1**

Expansion Option	Description	Annual Hours	Net Municipal Share of Costs
Restructure the Clearwater and Area Transit System	Expansion funding required for implementing a streamlined and integrated Clearwater Community Loop and altering running times on key trips to improve on-time performance.	590 <sup>12</sup>	\$15,050

<sup>11</sup> There are tradeoffs between route consistency, service efficiency, and meeting the mobility needs of a diverse set of customers. One of the key goals of this original service option was to improve routing consistency (to make it easier to understand the transit system), but some variation is still included in this service option in order to meet the dynamic needs of current customers within the limited resources currently available.

<sup>12</sup> These hours represent the agreed upon expansion (within the 17/18 Expansion MOU) for continuing the Clearwater Community Loop

## 6.0 Supporting Actions

The following priority actions support or are in addition to the transit service options presented in Section 5.0, and are based on key themes from public consultation and BC Transit Best Practices.

### Supporting Action #1: Utilize BC Transit's Development Referral Program

When new development projects arise, the District of Clearwater may find it helpful to use BC Transit's development referral service, which enables local governments to send larger-scale development or rezoning proposals to BC Transit for comment. As part of this referral process, BC Transit reviews the proposal and provides local government with comments on how the proposed development fits with the existing transit network, the outlook for future transit service to the development area, and comments on pedestrian links or transit amenities that would make the development more transit-friendly.

Development referrals can be sent to [developmentreferrals@bctransit.com](mailto:developmentreferrals@bctransit.com). *Appendix C* shows a sample BC Transit development referral response.

### Supporting Action #2: Integrate Fare Review recommendations with Service Review

The Clearwater and Area's Transit Fares have not changed since the system was implemented in April 1998. A Fare Review was conducted in tandem with this Service Review, and the Fare Review report can be found in *Appendix E*. The recommendations within the Fare Review were designed to simplify the fare structure and increase customer understanding.

### Supporting Action #3: Improve transit infrastructure and information at key transit stops

Improving the available infrastructure at key stops can raise the profile of transit within a community while improving customer comfort and satisfaction. Some of the current transit shelters and benches are located in areas with minimal or no transit ridership, and could be relocated to improve their usage and value to the system.

Providing basic transit system information (e.g. Riders Guide or route map and bus arrival times) at key stops can help reduce potential barriers to taking transit, and can make the system more approachable for new riders or for current riders seeking to use the system in new ways (Figure 7). At a minimum, schedule information should be posted at key stops including Buy Low Foods, Brookfield Mall, Vavenby Store, the Dutch Lake Community Centre, Dee’s store, Blackpool Hall, and Evergreen Acres.

Figure 7 – Bus Stop Schedule Example





#### **Supporting Action #4: Simplify the presentation of the transit system within the Rider's Guide**

The local operating company does not currently distribute the BC Transit Rider's Guide given the difficulty of legibly presenting the complexity of current routing variations on a map. Improving and simplifying the presentation of the transit system within the Rider's Guide can help reduce the barriers to taking transit. This would make it easier for both current and new riders to understand how to use the system.

#### **Supporting Action #5: Alter Electronic Destination Bus Signs by Route**

The electronic destination sign at the front of the bus currently displays 'shuttle bus' all day during operation (including during handyDART operation) which is confusing for customers and does not assist with system clarity. Once a revised and simplified network is implemented, altering the electronic bus sign by route, direction, and type of service (ex. handyDART) would improve system clarity for riders.

#### **Supporting Action #6: Ensure bicycle rack access on buses for customers**

The Clearwater and Area transit fleet currently includes two ARBOC's and one Mercedes Sprinter vehicle. The ARBOC's currently have bicycle racks, but the Mercedes Sprinter vehicle does not. Through the on-board survey, several customers expressed concern over not knowing ahead of time if a bike rack will be available on any given trip. BC Transit will continue to explore ways of ensuring the fleet is fully bike rack accessible.

#### **Supporting Action #7: Adopt Service Standards and Performance Guidelines**

BC Transit is in the process of developing a set of transit Service Standards and Performance Guidelines (SSPG) for communities of Clearwater's size as a way of benchmarking and optimizing transit system performance. When these Service Standards and Performance Guidelines are completed, it is recommended that the District of Clearwater adopt them to guide future transit service expansion and optimization.

#### **Supporting Action #8: Review and update how ridership data is collected**

As part of implementing Service Option #1, there is the opportunity to work with the Local Operating Company to improve the quality and detail of the ridership information available in order to better track system performance moving forward. For example, if the system routing were simplified (Service Option #1), collecting ridership by route would provide disaggregate data capable of better informing system optimization in the future.

## **7.0 Conclusions**

### **7.1 Future Considerations**

The service options and supporting actions identified in this Service Review have been developed in collaboration with current transit riders, the public, District of Clearwater staff, and local operating company staff. This collaboration will continue in the implementation and evaluation of these options, as well as the general operation of the system.

### **7.2 Recommendations**

It is recommended that the District of Clearwater:

- **receive this report for information and provide comment; and**
- **direct staff to work with BC Transit to implement Service Option #1 and the Fare Review proposal for Spring 2017.**

## 8.0 Appendices

### Appendix A - Detailed Route Change Proposal Descriptions

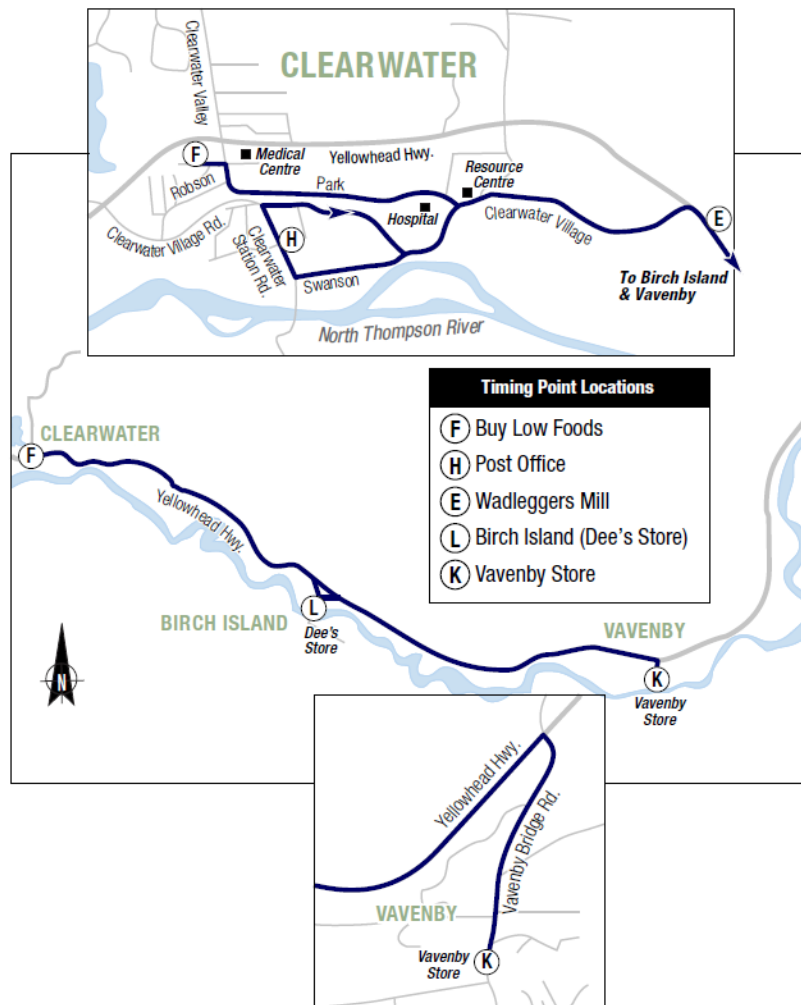
#### 1 Vavenby

**Change Overview:** This route is used primarily for Vavenby and Birch Island area residents to access jobs and services within Clearwater. Based on community feedback, the proposed Vavenby route streamlining between Vavenby and Buy Low Foods in Clearwater were removed (see Appendix F). Service to Brookfield Mall and Greer and Mountainview will be provided on the 2 Blackpool routing proposal (which would operate after every 1 Vavenby trip).

**Key Benefits to Change:**

- Creates consistency in routing presentation to improve system legibility
- Integrated with Clearwater Community Loop and Blackpool route

Figure 8 - 1 Vavenby Proposed Routing



**Stopping Procedures**

The route will service all existing local stops.

**Service Design Guide**

The service design guide below is for reference only; it describes approximate frequency for the route in number of trips. Final frequency and times will be confirmed through the detailed scheduling process.

	<b>Weekday</b>		
	<b>AM</b>	<b>Midday</b>	<b>PM</b>
Vavenby	1 trip	1 trip	1 trip

**Destination Signs**

<b>Route</b>	<b>Sign</b>
1	1 Vavenby

## 2 Blackpool

**Change Overview:** This route is primarily used for Blackpool and Greer / Mountainview residents to access services within Clearwater. Under this proposal, the Blackpool route will change from three different routing variations to one. Additionally, the revised route will provide on-demand service to the Wyndhaven, Sunshine Valley, and Lower Blackpool areas. The portion of the current Blackpool route that distributes transit users through lower Clearwater (ex. Evergreen Acres, Hospital, and Post Office) will be provided on the Clearwater Community Loop (which will operate after 2 Blackpool trips).

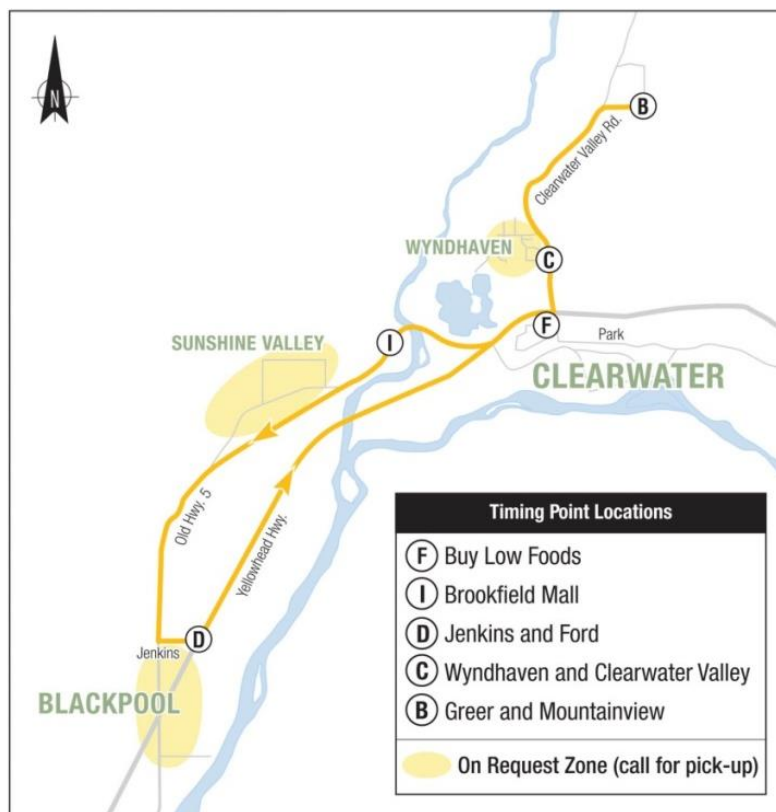
### Key Benefits to Change:

- Creates consistency in routing to improve system legibility etc.
- Integrated with Clearwater Community Loop and Vavenby route
- On Request Service better utilizes system resources to provide more transit service to the higher ridership parts of the community

### Infrastructure Requirements:

There will be some minor bus stop infrastructure and signage changes required for the implementation of this service. These required changes will be detailed within the Implementation Memorandum of Understanding.

Figure 9 - 2 Blackpool Proposed Routing



**Stopping Procedures**

The new route will service all existing local stops.

**Service Design Guide**

The service design guide below is for reference only; it describes approximate frequency for the route in number of trips. Final frequency and times will be confirmed through the detailed scheduling process.

	<b>Weekday</b>		
	<b>AM</b>	<b>Midday</b>	<b>PM</b>
Blackpool	1 trip	1 trip	1 trip
Mountainview & Greer	1 trip	-	1 trip

**Destination Signs**

<b>Route</b>	<b>Sign</b>
2	2 Blackpool

### 3 Clearwater Community Loop

**Change Overview:** This route is primarily used to provide mobility to transit users throughout Clearwater. Under the proposal, this route would be streamlined from the original pilot routing and focus service on the key ridership portions of the community.

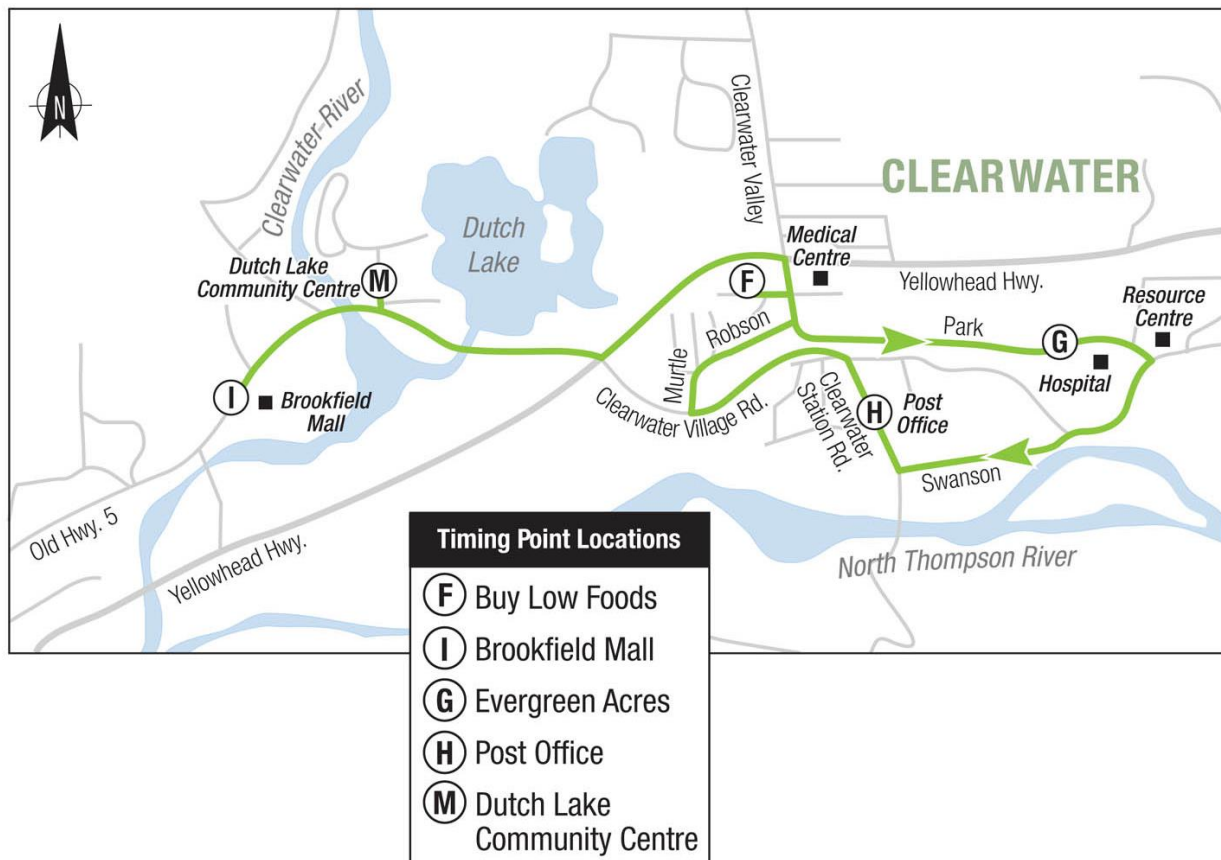
**Key Benefits to Change:**

- Streamlined routing allows for more transit frequency to the higher ridership portions of the community at the same cost
- Integration with the 1 Vavenby and 2 Blackpool routes improves system legibility
- Service to Wyndhaven and Sunshine Valley neighbourhoods would be provided with By Request Service on the Route 2 Blackpool, which provides a level of service commensurate with the ridership from these neighbourhoods

**Infrastructure Requirements:**

There will be some minor bus stop infrastructure and signage changes required for the implementation of this service. These required changes will be detailed within the Implementation Memorandum of Understanding.

Figure 10 - 3 Clearwater Loop Proposed Routing



## Clearwater and Area Transit Service Review

### Stopping Procedures

The new route will service all existing local stops.

### Service Design Guide

The service design guide below is for reference only; it describes approximate frequency for the route in number of trips. Final frequency and times will be confirmed through the detailed scheduling process.

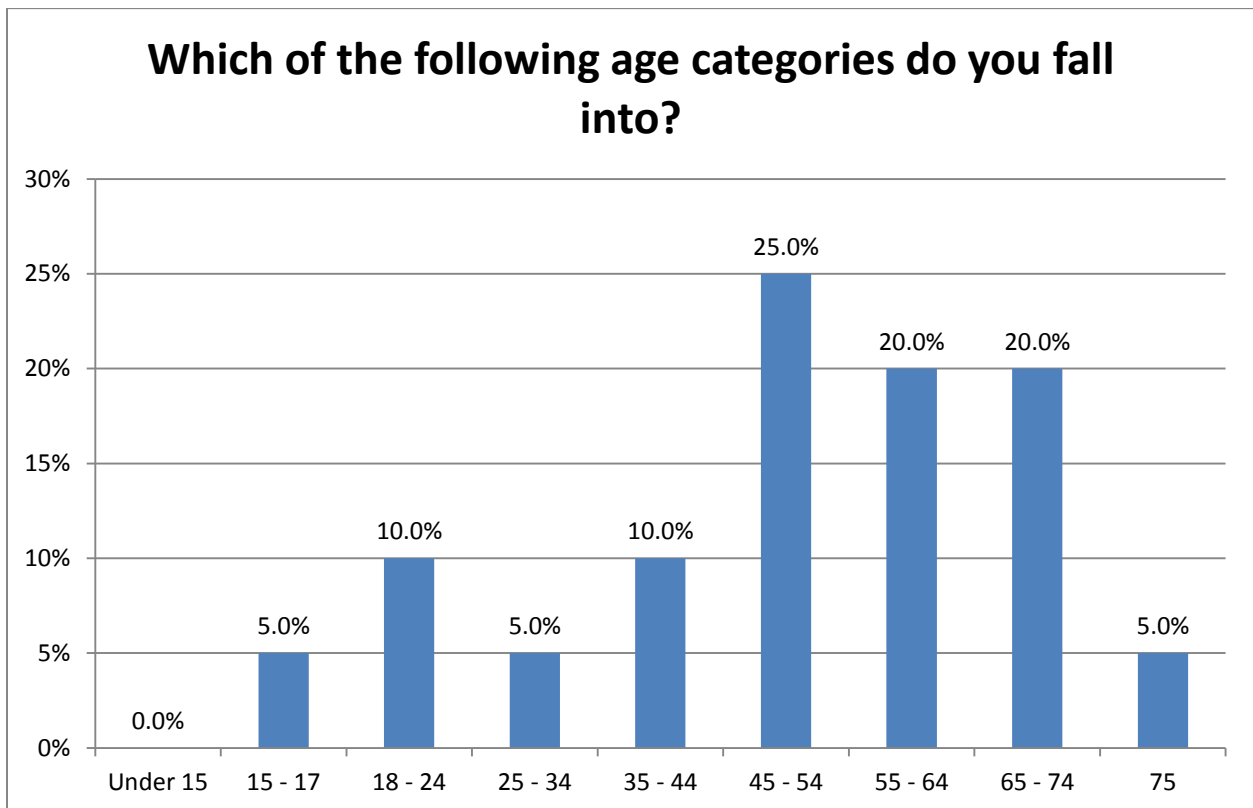
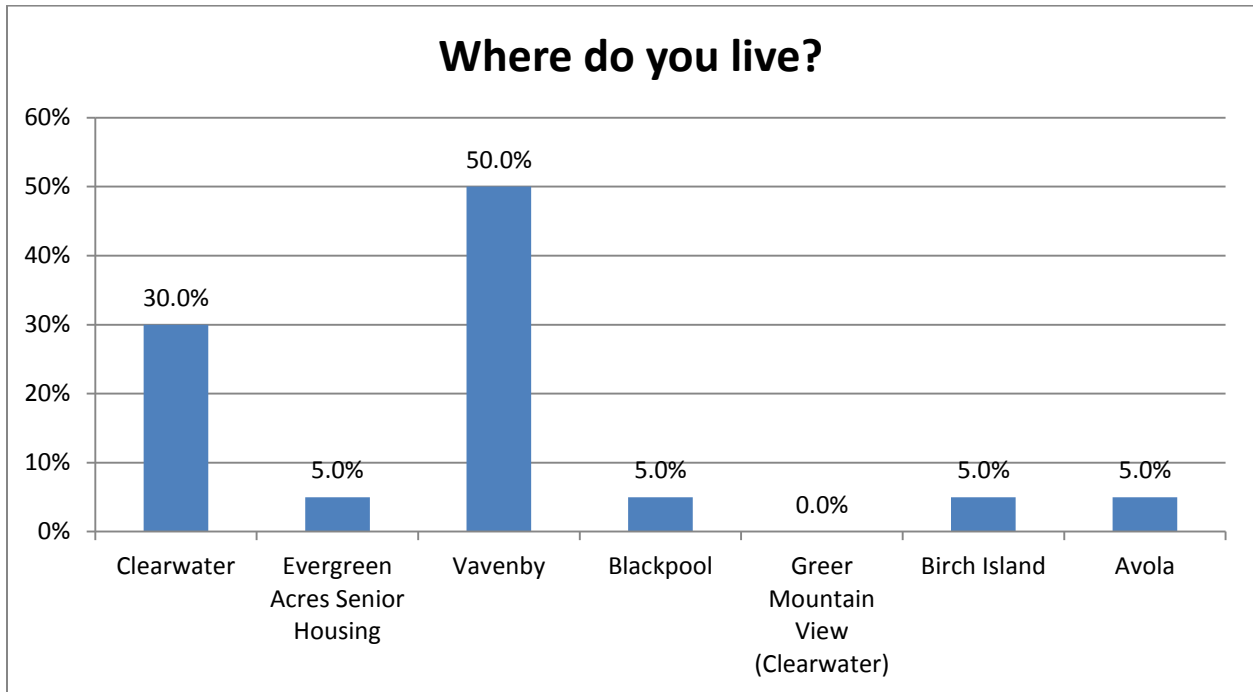
	<b>Weekday</b>
Tues, Thurs	3 trips
Mon, Wed, Fri	5 trips

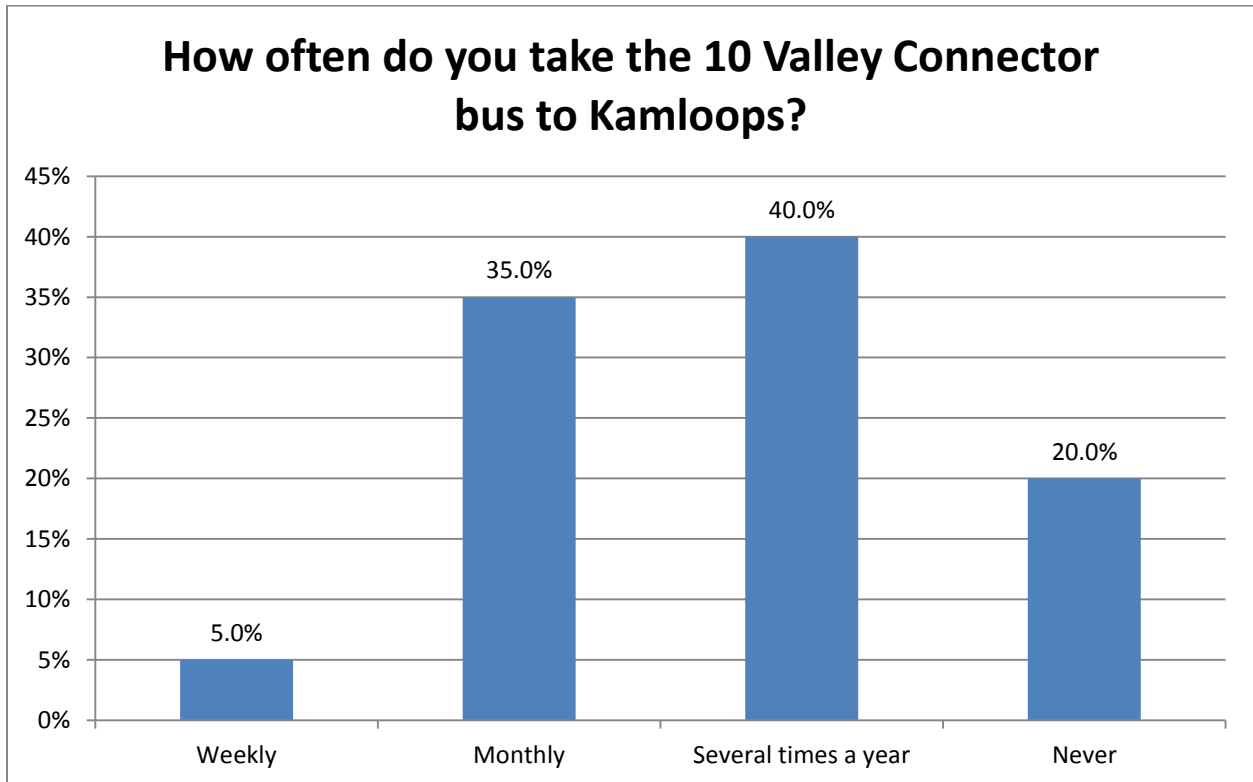
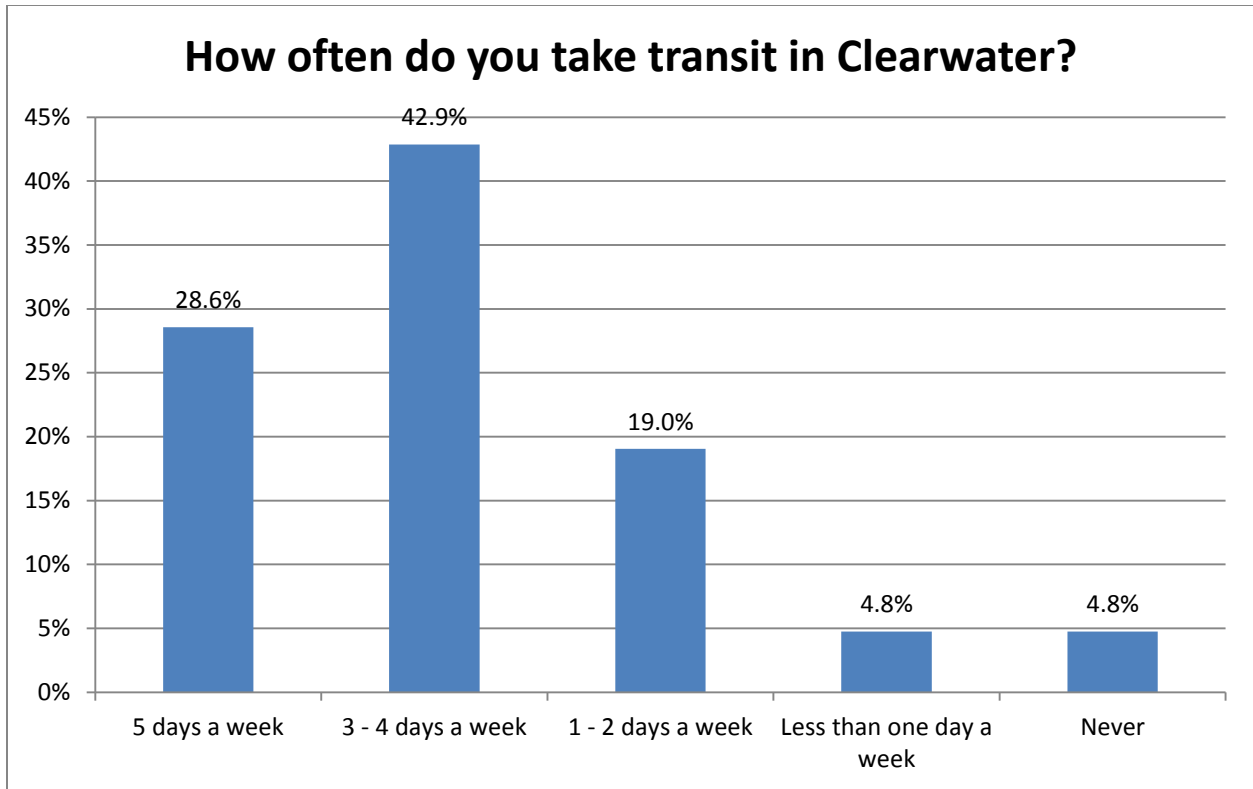
### Destination Signs

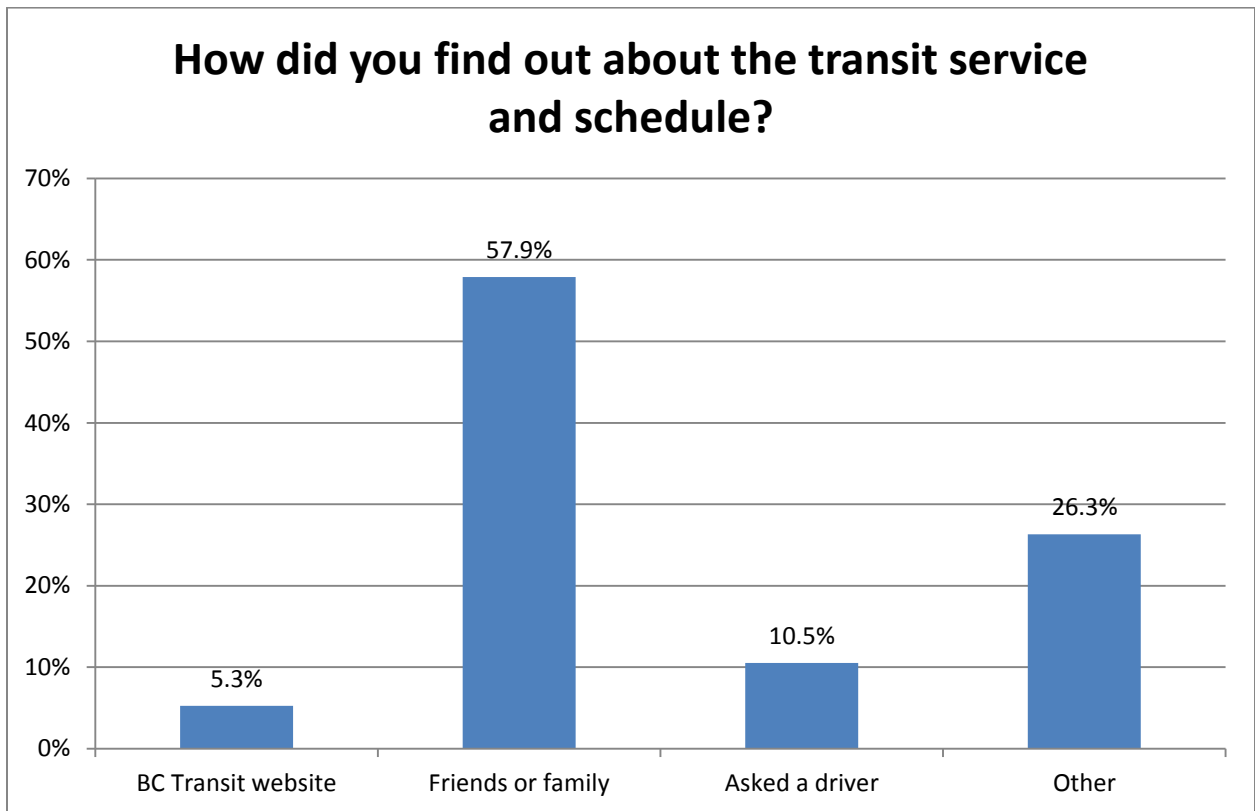
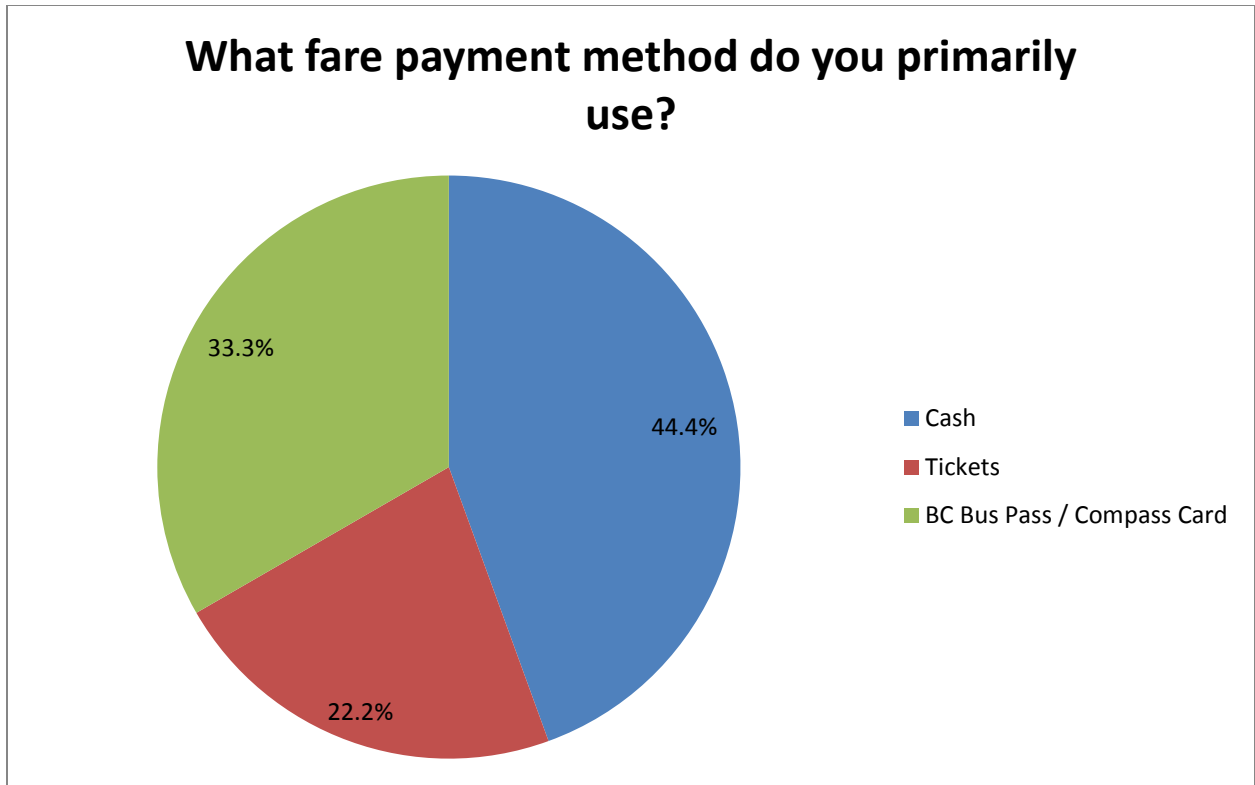
<b>Route</b>	<b>Sign</b>
3	3 Clearwater Loop

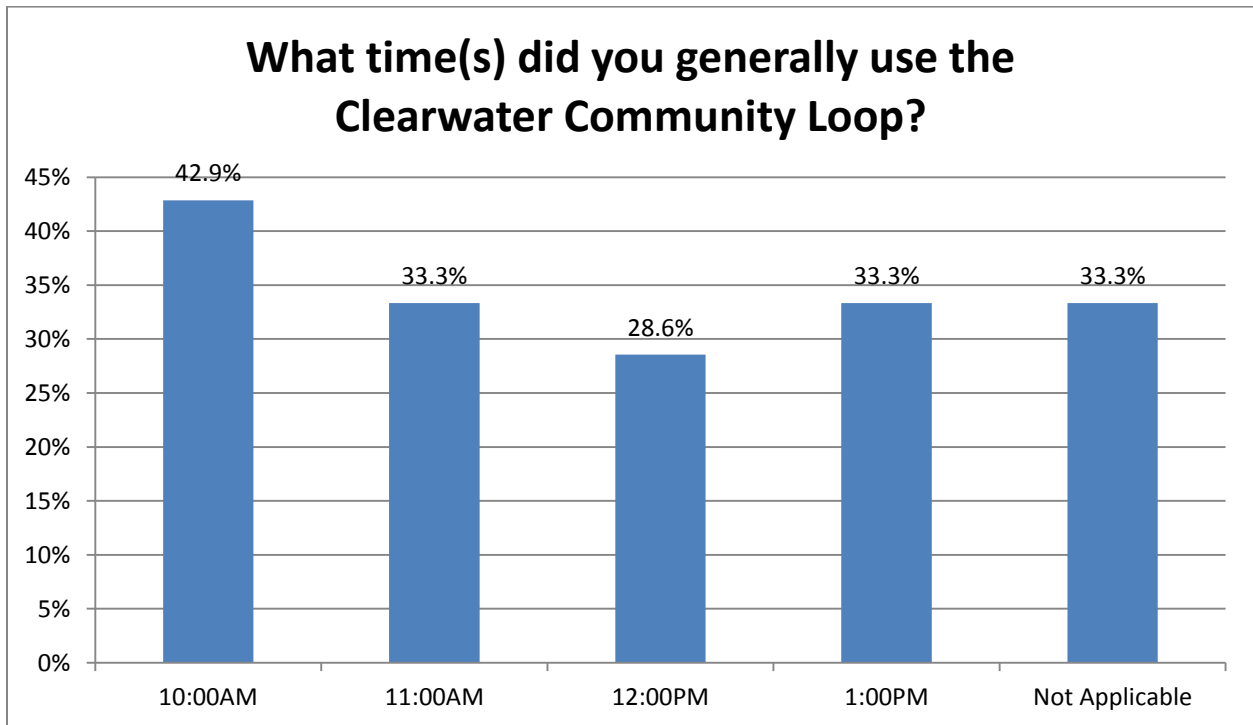
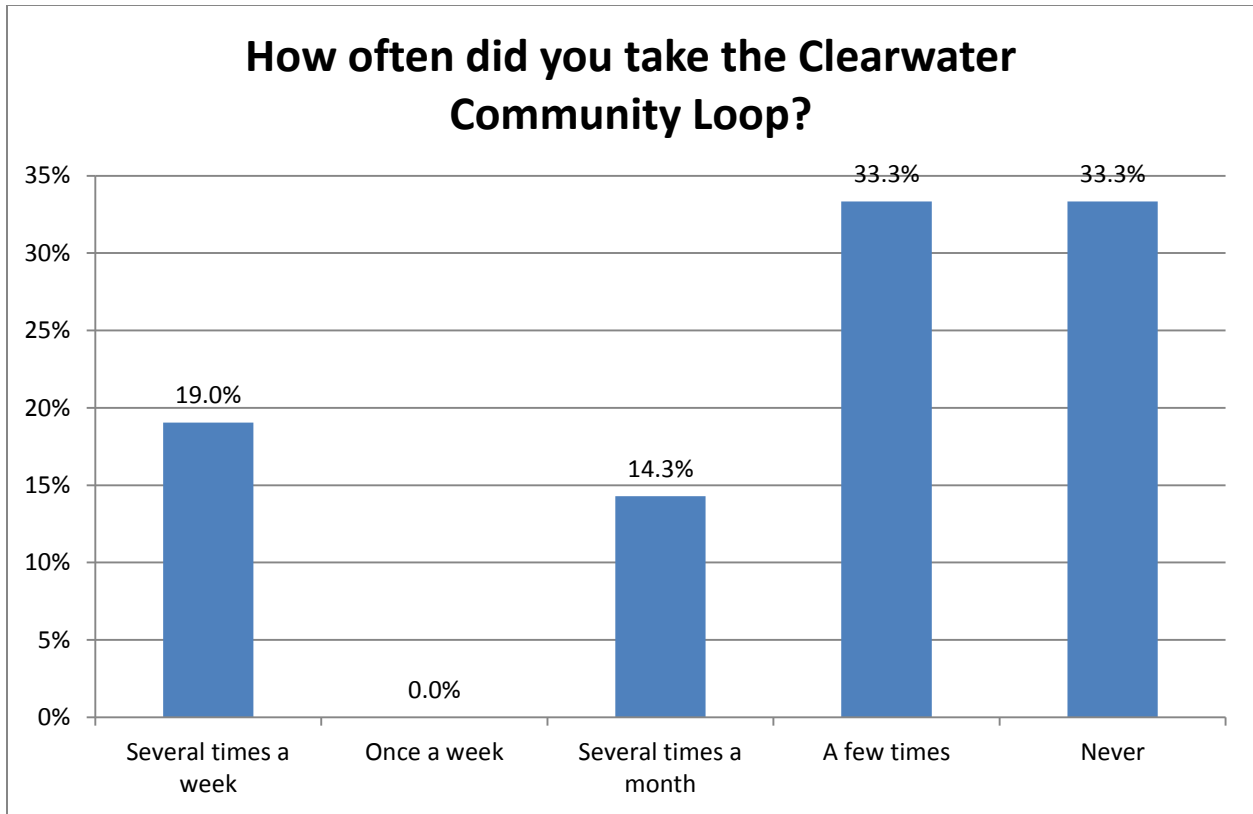


### Appendix B – Phase 1 Consultation On-Board Survey Results









## Appendix C - Development Referral Example

### Development Referral Response

December 22, 2016

### Project No. SO62 (Subdivision 580049)

#### Development Location:

*Lots 2 & 3, District Lot 211, Plan EPP21848, Lillooet Land District*

Located at 1835 Highway 99

**Local Government:** Village of Pemberton

**Transit System:** Pemberton Valley Transit

#### Overall Transit Impact

The proposed site:

- Lies approximately 1 km from Portage Road, on which two Pemberton Valley Transit routes regularly operate (Route 99 Commuter between Pemberton and Whistler, and Route 100 Pemberton Local). While there is an existing bus stop located on Portage Road directly adjacent to the access road (Pemberton Farm Road East) for this development, under the current situation, public transit is likely beyond walking distance for the majority of new transit customers from the development.
- The Hillside development area was included in the Sea to Sky Transit Future Plan as an area for consideration for local transit expansion in the medium- to long-term future.

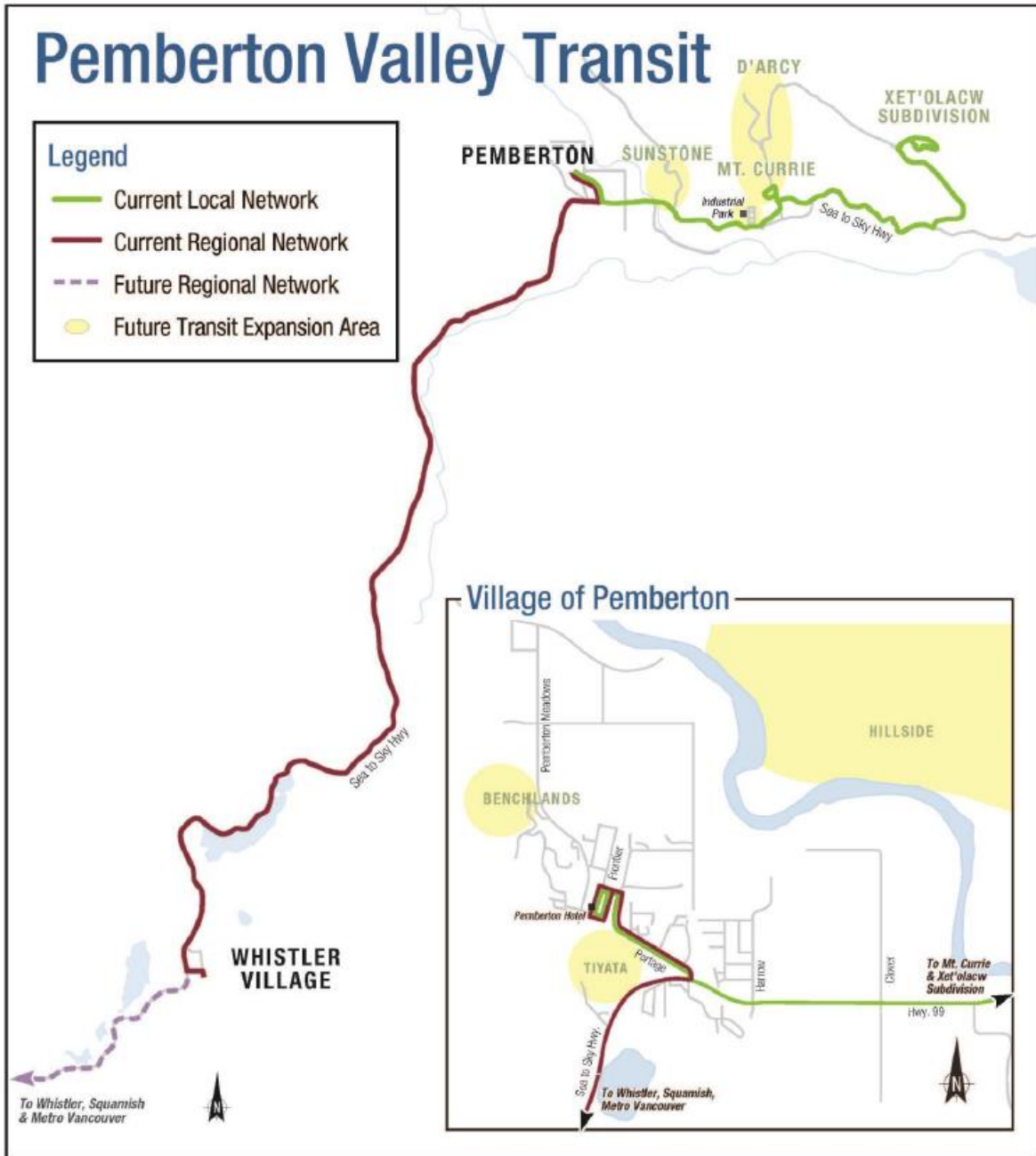
#### Land Use

- This development is a phased approach. The Phase One subdivision under application comprises a 44-single-family lot Bare Land Strata with one additional common property lot for community park purposes.

#### Bus Stops and Stations

- This proposed development has the potential to be a trip generator. To accommodate this, BC Transit recommends that adequate pedestrian infrastructure be installed in the new development to allow customers to easily walk between their homes and the bus stops located on Portage Road.
- If the Village of Pemberton would like to see this area directly served by transit at some point in the future (as outlined in the Sea to Sky Transit Future Plan), it is important that the road configurations be designed to allow for a bus to safely maneuver in the development and also to consider the location of bus stops. This is identified in the map on the following page.

**Map:** Pemberton Valley Transit System from the Sea to Sky Transit Future Plan. The Hillside development is identified as a possible area for transit expansion at some point in the future.

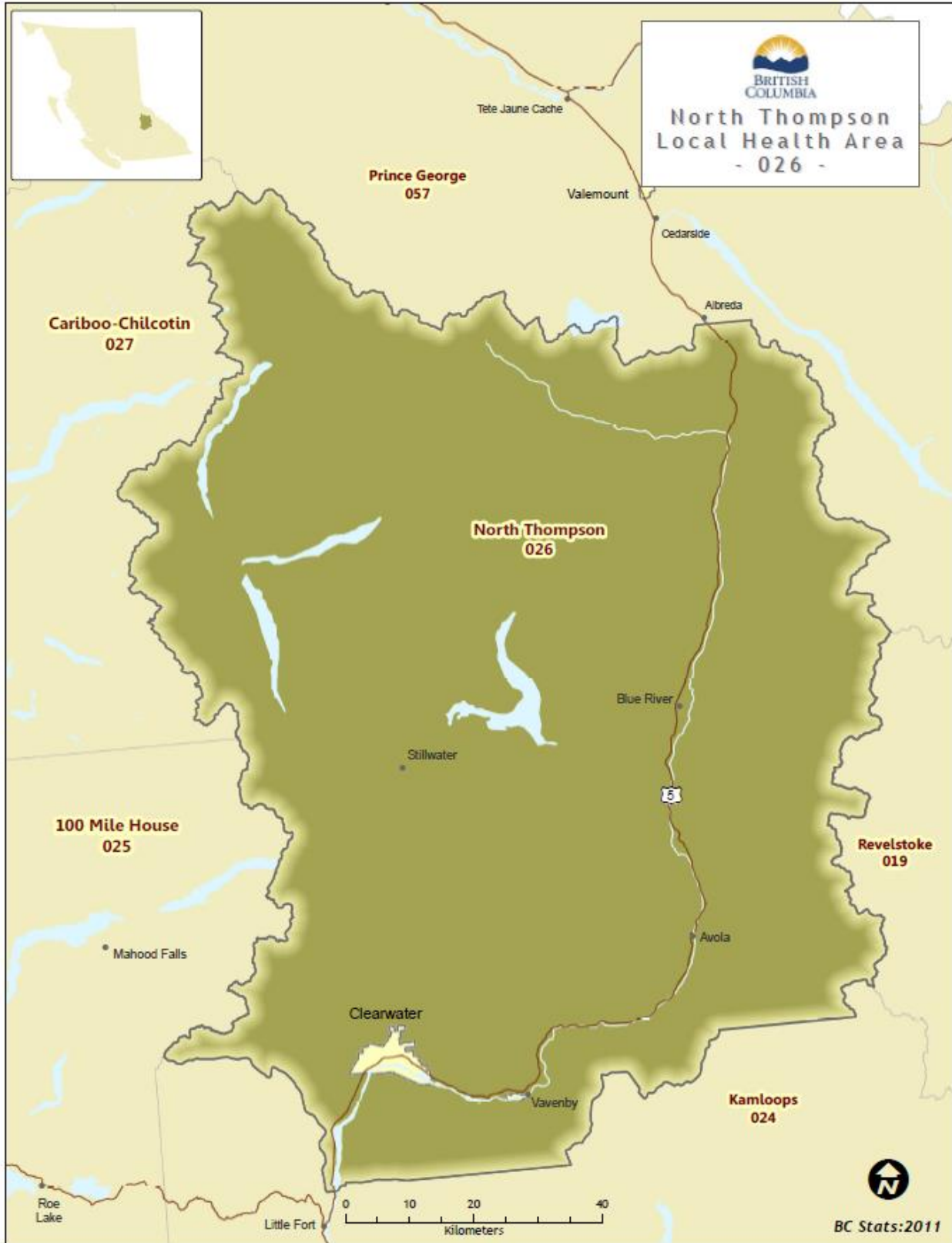


### **BC Transit Level of Support**

BC Transit has no objection to the proposed development. From a transit perspective, the key things that should be considered to encourage transit ridership in this neighbourhood are as follows:

- 1. Consider introducing sidewalk infrastructure in the new development to ensure pedestrians can safely travel between Portage Road and their homes.**
- 2. If the Village of Pemberton would like to see this area directly served by transit at some point in the future (as outlined in the Sea to Sky Transit Future Plan), it is important that the road configurations be designed to allow for a bus to safely maneuver in the development and also to consider the location of bus stops.**

### Appendix D – North Thompson Local Health Area Map





## Appendix E – Fare Review

### Overview

BC Transit has prepared this report for the District of Clearwater and proposes a new fare structure. This proposal reflects BC Transit’s fare strategy, which is to create a simple, easily understandable fare structure that will increase ridership and fare revenue, is more cost-effective to administer, and is compatible with future fare collection technology.

### Current Fares

The following table outlines the current fare structure in Clearwater. This fare structure was implemented in April 1998.

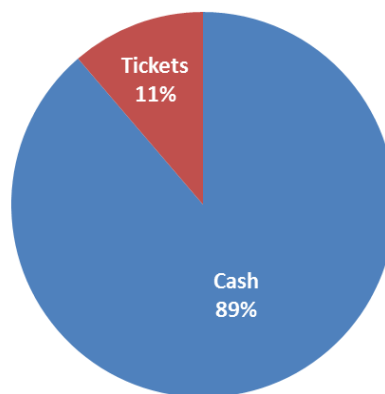
**Table 1: Current Fare Structure**

Fare Product	Audience	Current Fare		
		Zone 1	Zone 2	Zone 3
Cash	All passengers	\$1.50	\$2.00	\$2.50
Tickets (10)	All passengers	\$13.50	\$18.00	\$22.50

### Fare Revenue Composition

Fare revenue in 2015/16 (excluding BC Bus Pass) was \$22,857. The chart below indicates how this revenue was divided by fare type:

**Figure 1: Revenue by Fare Type**



This chart shows that cash is the predominant fare type, and so any changes made to the cash fare will have the biggest overall revenue. No information regarding revenue or ridership by zone is available to determine.

## Proposed Fare Structure

The following fare structure was developed with the objective to maximize revenue and ridership within the Clearwater & Area Transit System. It was also designed to simplify the fare structure, increasing customer understanding and being more compatible with future fare collection technology.

**Table 2: Proposed Fare Structure**

Fare Product	Audience	Current Fare			Proposed Fares
		Zone 1	Zone 2	Zone 3	
Cash	All passengers	\$1.50	\$2.00	\$2.50	\$2.00
Tickets (10)	All passengers	\$13.50	\$18.00	\$22.50	\$18.00

No changes are recommended to the service to Kamloops.

Assuming an even split in ridership between the three zones, this new structure will be revenue neutral.

## Recommendations

It is recommended that the District of Clearwater:

1. Receive this report as information
2. Approve the proposed fare structure
3. Direct staff to work with BC Transit to implement the fare change

## Appendix F: 1 Vavenby Proposal

(Removed from Service Option #1)

### 1 Vavenby

- Combine routes 1, 3 and 5 into one simplified schedule and route
- Additional time in the schedule to improve schedule reliability

