

DEVELOPMENT OPPORTUNITY STUDY
EASTERN HILLSIDES, CHILLIWACK, BC

CITY OF CHILLIWACK

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EXECUTIVE SUMMARY

The purpose of this report is to provide The City of Chilliwack with a market based forecast for absorption of residential units in the Eastern Hillside. This forecast is based on both population forecasts, which form the basis of new home housing sales, and the estimated price point of new homes in the Eastern Hillside.

- The population growth scenarios used assume annual growth rates of 1.72% and 2.03% over the next 25 years. The lower growth rate is considered the Base Case scenario. The high growth scenario would be possible if housing prices in the western Lower Mainland accelerated driving population eastwards seeking more affordable housing and the Regional economy became stronger and created more employment in Chilliwack and Abbotsford.
- Financial analyses undertaken by GPRA have examined what new home prices would be in Cells 4, 5 and 6 in the Eastern Hillside given land acquisition costs, infrastructure costs, density of development, lot and home sizes, size of townhouse units, varying quality of construction and developers achieving a 15% profit on cost. The analyses determined:
 - On average the majority of single-family homes will likely be priced between \$530,000 and \$700,000 (some developers may pursue lower or higher cost and priced homes).
 - Similarly, it is expected that the majority of townhomes could be priced between \$380,000 and \$515,000 (some developers may pursue lower or higher cost and priced units).
- Demand for new homes in the Eastern Hillside was informed by historical absorption in Promontory, which averaged 16% of total housing starts in Chilliwack. The scenarios included:
 - Low demand, with an average of 42-47 units sold per year, with absorption taking 48-53 years.
 - Medium demand, with an average of 55-65 units sold per year, with absorption taking 34-40 years.
 - High demand, with an average of 72-85 units sold per year, with absorption taking 26-31 years.
 - The medium demand scenario combined with the low population growth scenario is believed to be the most likely growth scenario for the Eastern Hillside.
- While it is believed that absorption of the Eastern Hillside would be completed within 34-40 years, there are circumstances under which the high demand scenario could evolve and shorten the absorption period to between 26 and 31 years. More specifically, this could occur in a stronger than expected economy, lower interconnecting road costs (re Cell 5), a greater movement of seniors with equity to Chilliwack seeking affordable large lot single-family homes, momentum from completing the Falls development, and a growing perception in the Chilliwack housing market towards the desirability of living in the Eastern Hillside.

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1.0 INTRODUCTION

With the assistance of Urban Systems Ltd. (USL), the City has prepared the Eastern Hillside Development Plan which outlines the City's aspirations for development of the Eastern Hillside – land use, type and density of development, infrastructure costs and amenities.

G.P. Rollo & Associates (GPRA) has been retained by the City of Chilliwack to prepare a Development Opportunity Study to refine the Plan by providing an understanding of the market and financial characteristics as well as potential absorption for the Eastern Hillside by:

- 1) Determining the nature, magnitude and timing of demand for single and multiple family housing on the Eastern Hillside.
- 2) Identifying the costs of providing Eastern Hillside housing and its impact on housing demand.
- 3) Commenting on the viability of development and potential infrastructure funding mechanisms.

Towards these ends, GPRA has undertaken the following steps in completing this Development Opportunity Study.

- 1) Prepared a City wide population and housing forecast for single and multiple family housing.
- 2) Refined the housing forecast to describe the nature of demand by affordability, i.e. what households of varying income and equity could afford to pay to acquire housing in the City.
- 3) Determined the cost of developers providing single and multiple family housing of varying size and quality in the Eastern Hillside.
 - a) Used a case study approach to illustrate the costs of developing single family and townhouse development in Development Cells 4, 5 and 6.
 - b) Illustrated housing affordability of Eastern Hillside housing for households being able to afford to provide 20% to 50% of housing costs by equity, the remainder being financed.
 - c) Incorporated infrastructure funding by DCC's and costs to be borne directly by developers.
- 4) Described the proportion of City wide housing demand that could afford Eastern Hillside housing.
- 5) Commented on the likely market share of City wide housing demand that could emerge in the Eastern Hillside.
- 6) Described the potential absorption period for the development of approximately 2,300 new units, with the roughly 500 existing units would bring the Eastern Hillside to a total of 2,822 units and a population of approximately 6,400.

2.0 ASSUMPTIONS & LIMITING CONDITIONS

This Development Opportunity Study governed by the following assumptions and limiting conditions:

- 1) GPRA has prepared a City population forecast by giving consideration to Provincial and City population forecasts and our views as to how the attraction of Chilliwack as a place to live and work will change in the future. More specifically, we have presented low and high population forecasts that describe the range of population growth that we believe could characterize the growth of the City over the next 30+ years.
- 2) The costs of providing servicing infrastructure have been provided by the City and Urban Systems Ltd.:
 - a) The City has provided Development Cost Charges (DCC's) for many of the major off-site servicing costs except inter-connecting roads between development cells.
 - b) Urban Systems Ltd. (USL) has provided costs of interconnecting roads and on-site servicing costs for single family and townhouse developments.
- 3) Assumptions regarding development or soft costs are market derived as determined by GPRA.
- 4) Density of development is based on the new Eastern Hillside Plan, USL's Servicing Update Report and subdivision concepts for select development cells, plus GPRA's views regarding densities required to expand housing affordability and increase Eastern Hillside's market share of total City housing demand. The new Eastern Hillside Plan proposes total build out in the Eastern Hillside to be 2,822 units, which includes an estimated 500 units already developed, leaving 2,300 units to be developed. The build out population in the Eastern Hillside is forecasted to be close to 6,400.
- 5) While the City will fund the majority of offsite infrastructure costs through DCC's, developers will have to pay for interconnecting costs themselves. These costs are substantial and will require first phase developers of Cells 5 and 6 to pay costs up front through loans and future development they will undertake and latecomer agreements (there is a 15 year time limit to latecomer agreements).
 - a) For the purposes of the financial analyses undertaken in this Study GPRA has assumed that developers could fund interconnecting costs through loans.
 - b) While this approach may be difficult to implement, the availability of a long term financing solution has been assumed to illustrate the impact of long term financing strategies on the cost of housing and subsequent affordability of Eastern Hillside housing.

- c) GPRA will comment on developers' ability to pay for interconnecting road costs with limited annual housing demand and a long absorption period.
- 6) GPRA has relied primarily on a "market demand" rather than a planning focus or approach to forecasting future housing demand for the Eastern Hillside.
- 7) GPRA has employed a case study approach to examine the economics of development, housing costs and required price points for the Eastern Hillside. These cases are drawn from proposed development envisaged in Cells 4, 5 and 6 of the Eastern Hillside Development Plan.
- 8) No responsibility is assumed for legal matters, questions of survey and opinions of title.
- 9) Statements contained within this study which involve matters of opinion, whether or not identified as such, are intended as opinion only, and not as representations of fact.

This report has been prepared to facilitate public discussion regarding the future of the Eastern Hillside. Forecasts and opinions contained in the report are based upon GPRA's perception of economic and market forces that could evolve over the 40 year forecast period. Other assumptions including the current cost of providing municipal services and home construction costs could change significantly based upon factors unknown at this time. Accordingly, the City of Chilliwack, investors, developers, realtors, and others with an interest in the Eastern Hillside cannot rely on the information contained in this report. Rather those with an interest in the Eastern Hillside must base their decisions on their own due diligence, and not on the findings in this report.

3.0 POPULATION AND HOUSING DEMAND

This preliminary overview reviews initial findings of the potential housing demand by structure type (townhouse, apartment and single family) for the Eastern Hillside neighbourhood of Chilliwack.

Housing demand is primarily driven by two factors: the growth or decline in the market area population, and the changing age structure of the population.

3.1 POPULATION FORECASTS

GPRA has produced two population forecasts for The City of Chilliwack, using the BC Stats forecasts as a base. It is believed that the BC Stats forecasts are conservative, so the forecasts used in this report employ a slightly higher rate of growth. Population projections were divided on an age cohort basis to determine which population age segments will grow and decline.

Having population data categorized and projected by age cohort is important as each age group exhibits different preferences in the housing market.

Population Forecasts Scenarios					
	BC STATS*	BASE PROJECTION		HIGH GROWTH	
	Avg. Annual Growth Rates	Pop.	Annual % Growth	Pop.	Annual % Growth
2012	-	83,445		83,445	
2020	1.61%	98,383	2.08%	101,751	2.51%
2030	1.28%	115,319	1.50%	123,644	1.67%
2040	1.09%	132,308	1.40%	144,614	1.62%
2050		151,593	1.36%	170,056	1.61%

Note: BC STATS projections are for Chilliwack Local Health Area which includes areas outside of The City of Chilliwack.

BC Stats forecasts population growth in the Chilliwack Local Health Area, which is larger than The City of Chilliwack. The growth forecast by BC Stats is typically on the conservative side, so our base case projection forecasts slightly higher growth rates than those forecasted for the Chilliwack Health Area. It should also be noted that the BC Stats forecasts include rural areas surrounding Chilliwack that will likely grow more slowly than the urban areas.

Between 2000 and 2010 Chilliwack averaged annual growth of 1.9%, and between 1990 and 1999 the average annual growth rate was 2.8%.

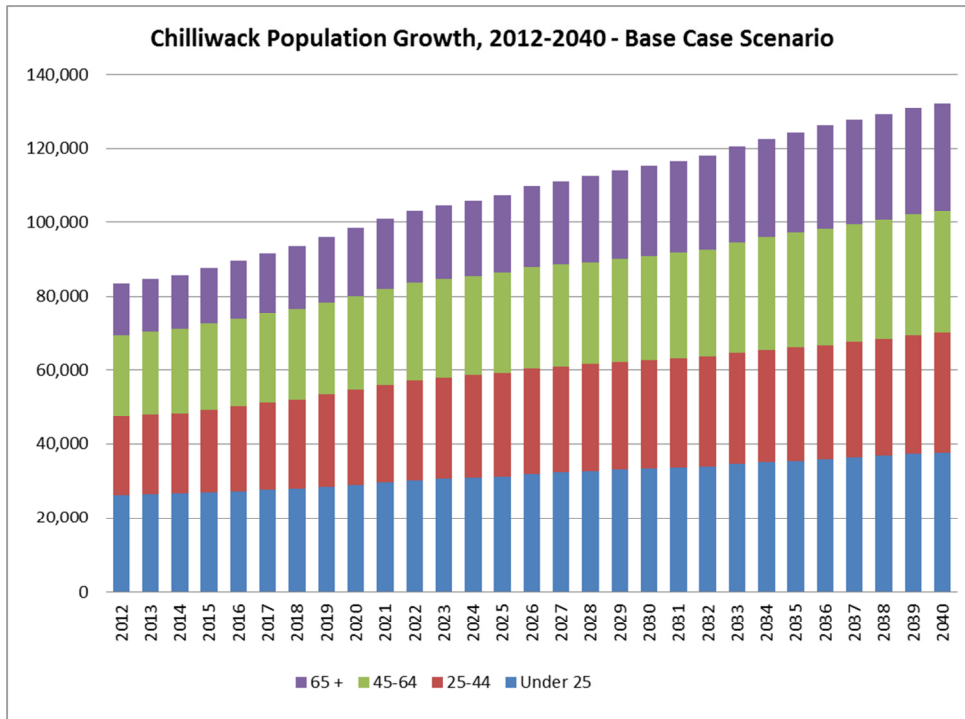
Factors that might move Chilliwack from the Base Case scenario into the High Growth scenario include:

- High housing values remain in the Metro region, forcing more of the regional population east looking for affordable housing.
- Retirees or others looking to downsize and capitalize on some of the equity in their homes will increasingly look to areas like Chilliwack with its less expensive housing.

- Demand for affordable industrial land has moved an increasing share of the regions jobs into the Abbotsford / Chilliwack area. Should this trend increase, a larger share of the regional population will look to Chilliwack as a place to live.

Our base case population growth rates see The City of Chilliwack maintain growth rates slightly higher than those forecast by BC Stats, and predict a population close to 132,000 by 2040.

The High Growth Scenario assumes a population of 145,000 by 2040 as a comparison to understand what impact continued strong growth would have on the Eastern Hillside.



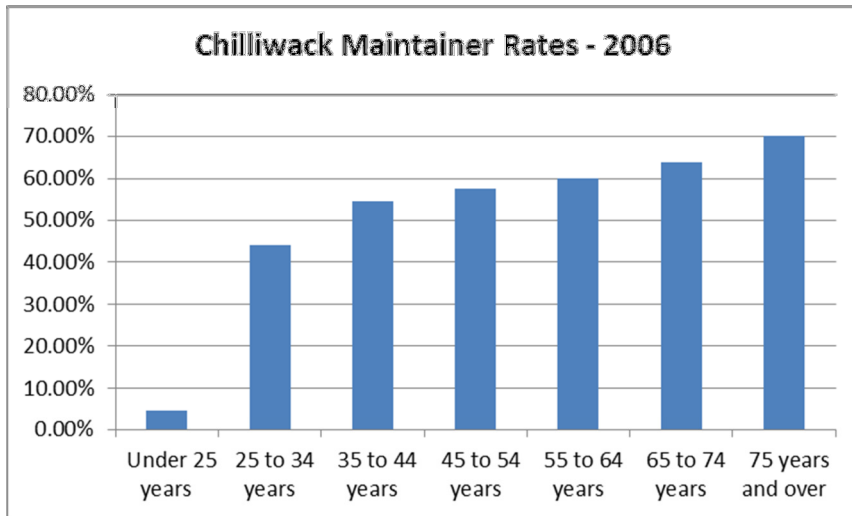
The above chart displays the Base Case Scenario population growth rate by age cohort. The chart highlights the forecasted aging population in Chilliwack. Forecasting population growth rate by age is critical in forecasting housing demand since housing ownership changes over time.

3.2 HOUSING DEMAND

The age structure of a population has significant implications for future housing demand due to the distinct lifecycle pattern of household maintainer rates.¹

Household maintainer rates tend to increase with age, which means that an older population will demand more housing units than a younger population of equal size.

Maintainer rates for Chilliwack in 2006 are displayed below:



Maintainer rates provided by Statistics Canada also provide the types of housing by age cohort. For example, young adults and seniors are more likely to live in an apartment while people in their 40's are more likely to live in a single family home.

The breakdown of types of housing demanded in Chilliwack is not expected to remain the same over the next 20+ years. For this reason, it was assumed that over the course of the forecast period, the maintainer rates in Chilliwack would gradually become more similar to maintainer rates in Abbotsford, where multi-family units are currently more common.

¹ A 'household maintainer' is the person regarded to be primarily responsible for the financial support of the household. By dividing the total number of people of a specific age who are household maintainers by the total number of people of that age group in the population determines the household maintainer rate for that age group.

The two population growth scenarios used for this study result in the following housing forecasts for Chilliwack as a whole.

Low Population Growth Scenario

- From 2012 to 2040 an average of 805 new units per year is assumed. This would include:
 - 383 new single family homes per year on average
 - 200 apartments per year on average
 - 222 new townhomes per year on average

High Population Growth Scenario

- From 2012 to 2040 an average of 981 new units per year is assumed. This would include:
 - 484 new single family homes per year on average
 - 237 apartments per year on average
 - 260 new townhomes per year on average

The housing demand forecast predicts an increasing share of multifamily units, as land for single family development is expected to become more difficult to find over the next 20 years and Chilliwack becomes a more dense community.

3.3 HOUSING MARKET REVIEW

Over the past four years in Chilliwack there has been an average of 1,130 sales per year, with 2011 (year-end April 2012) recording the highest number of sales in the past four years with over 1,500 sales.

The following table highlights the average sales values for detached and attached properties in Chilliwack. The table indicates that values have almost completely rebounded to 2008 values.

It should be noted that this table only follows sales listed on MLS, which does not often include sales values of new homes which are sold directly from the developer.

Chilliwack Sales Values		
	Detached Average Sales Vales	Attached Average Sales Values
2011	352,000	219,857
2010	331,000	217,002
2009	343,000	193,616
2008	355,000	222,543
<i>Notes: April year end</i>		

An indication of the strength of the market is the number of sales over \$400,000. In 2011 almost 25% of all detached sales were over \$400,000, while only 14% of sales were over \$400,000 in 2010, and 18% in both 2008 and 2009.

- Over the past year there were approximately 970 sales of detached homes within Chilliwack, with approximately 240 units selling for values over \$400,000 and 35 homes over \$600,000.
- The year before last, year-end April 2011, there were 57 sales of single-family homes over \$400,000 and 20 over \$600,000.

These higher value single family homes are purchased in a number of different neighbourhoods in Chilliwack. East Chilliwack, Fairfield Island, Chilliwack Mountain, Watson-Promontory, as well as the Eastern Hillside have all had multiple sales over \$600,000 in recent years.

There are significantly fewer sales of attached units over \$400,000, with fewer than 10 attached units per year selling for \$400,000 for each of the past four years.

Since 2009 there have been approximately 65 sales of detached homes in the Eastern Hillside reported in MLS. These homes have sold for an average value of \$475,000.

In Chilliwack as a whole, recent sales over MLS of single family homes built in 2011 or after have averaged \$368,000.

3.4 SECONDARY HOME MARKET

With The Falls Golf Course acting as an amenity, it has been discussed that the Eastern Hillside has the potential to attract a component of the secondary home or resort market from Metro Vancouver.

Within the past two years secondary home prices within comfortable driving distance from Metro Vancouver have been going down, with prices in the Okanagan Valley, Whistler, and Vancouver Island all reporting decreases. The reduction in prices in traditional secondary home markets will reduce demand for secondary homes, particularly for single family homes, in the Eastern Hillside.

The proximity of the Eastern Hillside to Metro Vancouver may also reduce secondary home demand in the Eastern Fraser Valley and Eastern Hillside. Avid golfers who enjoy The Falls Golf Course could easily play the course and drive home in one day, reducing the need for a residence or hotel room in the area.

Without studying the issue, it is believed that either a small traditional hotel or one based on fractional ownership interests would not be viable in the Eastern Hillside. The Eastern Hillside are too far away from Chilliwack to draw consistent hotel demand. Fractional resort investments based on owner and hotel use have fallen out of favour in the BC market and are generally considered as poor investments with great potential for creating financial losses for investors even in the best of destination resort areas, let alone the Eastern Hillside.

4.0 FINANCIAL ANALYSIS

GPRA has undertaken financial analyses to describe the nature of the development opportunity for housing on the Eastern Hillside. More specifically, GPRA has estimated developer costs to construct single and multiple family housing of varying density, single family lot size, house size and quality plus varying townhouse sizes and quality of development².

The conclusions from these analyses inform further examination of:

- 1) The development community's ability to pay for infrastructure not included in City DCC's. This in turn impacts the cost of housing and the number of potential purchasers with the income and equity to consider purchasing Eastern Hillside housing.
- 2) The potential market share of eligible buyers likely to consider purchasing Eastern Hillside housing.
- 3) The magnitude and timing of future demand for Eastern Hillside housing.

These financial analyses have been undertaken using a case study approach investigating the costs of developing single family and townhouse units and, for illustrative purposes, illustrate household income given down payments varying between 20% and 50% of housing in development Pods 4, 5 and 6.

4.1 CASE STUDY ASSUMPTIONS

The nature of development, infrastructure and housing cost assumptions are as follows.

- 1) It is assumed that developers will strive to develop housing with the widest possible market appeal by emphasising affordability to as many households as possible. This will be done by offering:
 - a) Single family homes on varying lot sizes, with smaller and larger homes with varying quality of construction.
 - b) Townhomes at an assumed 18 units per acre, with unit sizes of varying size and quality of construction.
- 2) For Cell 4: a 10 acre site developed at 6 units to the gross acre, 4,500 sq.ft. lots and homes of an average 2,000 sq.ft. Lower quality with hard construction costs of \$115 per sq.ft. and higher quality with hard construction costs of \$135 per sq.ft.
- 3) For Cells 5 and 6:
 - a) **Single family case studies:** 10 acre case studies, development at 4 units per gross acre, homes of 2,250 to 2,500 sq.ft. Lower end homes are deemed to be 2,250 sq.ft. with hard construction costs of \$120 per sq.ft. and higher end homes are deemed to be 2,500 sq.ft. with hard construction costs of \$135 per sq.ft. Additional development or soft costs are market determined.

² Quality of development is determined by cost of construction. Single family house hard construction costs are assumed to generally vary between \$115 and \$135 per sq.ft. of gross building area with townhouse costs varying between \$110 and \$125 per sq.ft. of gross building area.

- b) **Townhome case studies:** 3 acre development sites, development at 18 units per developable acre and average unit sizes varying from 1,500 to 1,800 sq.ft. Lower end units assumed to be 1,500 sq.ft. with hard construction costs of \$110 per sq.ft. and higher end units at 1,800 sq.ft. and hard construction costs of \$125 per sq.ft. Again, additional development or soft costs are market determined.

Infrastructure cost and financing assumptions:

- 1) City-wide DCC will fund most of the off-site infrastructure including improvements, roads, and all utilities.
- 2) Some location specific "offsite" road improvements will remain to be the responsibility of concerned developers. But in light of their relatively minor scale, they are excluded from the calculations of this market study.
- 3) With regards to inter-connecting road costs, land acquisition is assumed through developer dedication of lands.
- 4) All water, sewers reservoirs and pump stations that are not identified as part of the community-wide system and not funded by DCC, they will be considered as "onsite" improvements and their costs will be assigned to the benefiting developers / owners.
- 5) Single family DCC's = \$23,121.45 per lot
- 6) Townhouse DCC's = \$16,864.27 per unit

Infrastructure costs borne directly by developers includes:

- 1) Inter-connecting road costs include:
 - a) The extension of Allan Road to Cell 5 has been estimated to cost \$12,716,000³. However, estimates range as low as \$6,886,000⁴ million. Either way, the total cost of this improvement is assumed to be split between all 628 Cell 5 units forecasted (total estimated by USL). Assuming inter-connecting road costs of \$12,716,000 for Cell 5, the estimated cost per unit financed over 16 years is estimated to be \$32,176 per unit. Assuming a lower cost of \$6,886,000, per unit cost is \$15,840. The financial analyses undertaken in these case studies employ higher costs of \$12,716,000.
 - b) Improvements to Nixon Road will cost \$1,058,000 which will be split between all 562 Cell 6 units (total estimated by USL). Estimated cost per unit financed over 14 years estimated to develop Cell 6 at 6% = \$2,950.
- 2) In addition to interconnecting roads, onsite servicing costs estimated to be \$75,000 per unit for single family homes and \$45,000 per unit for townhomes. These onsite costs include site preparation, internal roads, curb, gutter, lighting, etc.

³ Includes inter-connecting road land acquisition, infrastructure and 10% soft costs.

⁴ Includes inter-connecting road land acquisition, infrastructure and 10% soft costs.

Land acquisition costs are assumed to be:

- 1) Eastern Hillside, Pod 4 - \$110,000 per acre
- 2) Eastern Hillside, Pods 5 and 6 - \$90,000 per acre

Developer profit requirements are 15% of project cost.

4.2 DEVELOPER PROFORMA ANALYSES

The accompanying Table "Proforma Analyses, Eastern Hillside Housing (per unit basis) illustrates a derivation of per unit house prices for Eastern Hillside housing. Sales prices (purchase prices) have been determined by a developer acquiring a site (the test case sites), constructing interconnecting roads and on-site services, building single and multiple family housing and realizing a 15% profit on project cost.

Proforma Analyses, Eastern Hillside Housing (per unit basis)						
Single Family Housing						
	Cell 4	Cell 4	Cell 5	Cell 5	Cell 6	Cell 6
Revenues	<u>Lower End(*)</u>	<u>Higher End(*)</u>	<u>Lower End</u>	<u>Higher End</u>	<u>Lower End</u>	<u>Higher End</u>
House Sales Price	529,941	636,953	644,757	693,543	595,600	700,195
Less Commissions+Closing Costs	<u>16,315</u>	<u>19,525</u>	<u>19,968</u>	<u>21,431</u>	<u>18,493</u>	<u>21,631</u>
Equals Net Revenue from Sales	513,626	617,428	624,790	672,112	577,107	678,564
Project Costs						
Land	19,917	19,917	24,775	24,775	24,775	24,775
Hard Construction Costs	324,275	401,713	400,104	437,194	366,319	441,766
Development (soft) Costs	78,751	87,150	89,547	91,610	83,921	92,371
Interest	<u>23,689</u>	<u>28,114</u>	<u>28,870</u>	<u>30,866</u>	<u>26,817</u>	<u>31,144</u>
Total Costs	446,632	536,894	543,295	584,445	501,832	590,056
Profit						
Profit, \$'s	66,995	80,534	81,494	87,667	75,275	88,508
Profit, %	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%

(*) Lower end units refers to smaller homes (2,000 sf) with lower construction costs (\$140 per sf), higher end units are larger homes (2,250 to 2,500 sf) with higher hard construction costs (\$160 per sq.ft.).

Townhouse Development				
	Cell 5	Cell 5	Cell 6	Cell 6
Revenues	<u>Lower End</u>	<u>Higher End</u>	<u>Lower End</u>	<u>Higher End</u>
Unit Sales Price	421,895	514,512	379,322	471,939
Less Commissions+Closing Costs	<u>13,120</u>	<u>15,898</u>	<u>11,843</u>	<u>14,621</u>
Equals Net Revenue from Sales	408,775	498,614	367,479	457,318
Project Costs				
Land	6,452	6,452	6,452	6,452
Hard Construction Costs	254,868	317,868	225,655	288,655
Development (soft) Costs	77,717	89,355	72,621	84,259
Interest	<u>16,420</u>	<u>19,903</u>	<u>14,819</u>	<u>18,302</u>
Total Costs	355,457	433,577	319,547	397,668
Profit				
Profit, \$'s	53,318	65,037	47,932	59,650
Profit, %	15.00%	15.00%	15.00%	15.00%

(*) Lower end units refers to smaller units (1500 sf) with lower construction costs (\$130 per sf), higher end units are larger (1,800 sf) with higher hard construction costs (\$150 per sq.ft.).

Source: GPRA

Highlights of these developer proforma analyses are:

- 1) For single family housing:
 - a) Developers will widen market appeal with variable sized lots, small vs. larger homes and varying quality as discussed above. This decreases income requirements and widens size of market for the Eastern Hillside providing developers significantly larger opportunities than only pursuing very high end homes for which there is a very small and volatile market. Producing more affordable housing is in the interests of both developers and housing consumers and will result in greater interest from buyers.
 - b) Wide Range of Cost of Eastern Hillside housing:
 - GPRA's analyses indicates that the majority of single family house prices will range from approximately \$530,000 to \$700,000. This range is due to smaller and larger lots, smaller and larger house sizes, lower and higher quality of construction and location in Cells 4, 5 or 6. However it is acknowledged that some builders will look at higher price points, while some developers could achieve lower construction costs due to more easily developable sites or efficiencies in construction.
 - Cell 5 home prices, for example, are higher due to having to absorb the high cost of inter-connecting roads. It would be in developer's interests to be able to offer even more affordable housing and it is expected that some will do so. Pursuing lower cost housing alternatives will result in a higher proportion of the Chilliwack market able to afford such housing to consider the Eastern Hillside as an attractive place to live. Additional units in Cell 5 would also help to spread the costs of the inter-connecting roads.
 - GPRA's analyses indicates that townhome prices could range from approximately \$380,000 to \$515,000 – with variation due to size of unit, quality of construction and location in Cells 5 versus 6. Cell 5 unit costs are higher than Cell 6 unit costs due to the higher cost of inter-connecting roads to Cell 5. On the whole, it is expected that non-Hillside townhouse prices in other parts of Chilliwack will be lower than Eastern Hillside prices and this will restrict the demand for Hillside units as lower price and proximity to commercial, cultural and recreational amenities available in these other locations is a driving force in the market. However, as the experience of Promontory has shown, there is still a market for more affordable townhome projects in a mountain or hillside environment and GPRA expects such a demand will exist on the Eastern Hillside.

d) Affordability and Income Requirements

- Household income required to purchase Eastern Hillside housing assuming illustrative 20% to 50% down-payments are illustrated in the following table “Housing Costs and Income Requirements, Eastern Hillside Housing. These are aggressive down-payment assumptions presented in order to illustrate the circumstances under which the affordability of Eastern Hillside could be enhanced.

Housing Costs and Illustrative Income Requirements
Eastern Hillside Housing

<u>Townhouses</u>	<u>Unit Price</u>	<u>Income</u> <u>20% DP</u>	<u>Income</u> <u>50% DP</u>
Pod6 TH lower end	379,322	80,773	57,778
Pod5 TH lower end	421,895	88,798	63,222
Pod6 TH higher end	471,939	98,231	69,621
Pod5 TH higher end	498,614	106,256	75,065

<u>Single Family Homes</u>	<u>Unit Price</u>	<u>Income</u> <u>20% DP</u>	<u>Income</u> <u>50% DP</u>
Pod4 SF lower end	529,941	103,679	71,734
Pod6 SF lower end	595,600	115,376	91,800
Pod5 SF lower end	644,757	124,133	85,266
Pod4 SF higher end	636,953	122,743	84,346
Pod5 SF higher end	693,543	132,824	91,016
Pod6 SF higher end	700,195	134,009	91,800

Source: GPRA

- Single and townhome prices are derived from the developer proforma analyses above.
- Income requirements are presented for households being able to pay 20% versus 50% down payments and financing the remainder with mortgage financing.
- Income requirements for townhomes
 - Household income with 20% down payments range between approximately \$81,000 and \$106,000.
 - Household income requirements with 50% down-payments are much lower and range between approximately \$58,000 and \$75,000.
- Income requirements for single family homes
 - Household income with 20% down payments range between approximately \$104,000 and \$134,000.
 - Household income requirements with 50% down payments are lower and range between approximately \$72,000 and \$92,000.

e) Developer Issues Funding Inter-Connecting Roads

- As described previously, major Eastern Hillside infrastructure is to be funded through City DCC’s with developers having to pay

for inter-connecting roads and on-site servicing costs. The costs of paying for inter-connecting roads may be problematic for the development community, i.e. for the first developers of Cells 5 and 6 who have to fund these costs through borrowing and then pay off the loans from their future lot sales plus late-comer agreements.

- GPRA's developer proforma analyses hypothetically assume that the costs of paying for inter-connecting roads can be financed by a developer over absorption periods of 16 and 14 years for Cells 5 and 6 respectively. Realistically, however, the developers of the first stage of development cannot be expected to bear the entire burden of costs for Cell 5's road. Estimates for inter-connecting road costs range between \$6,886,000 and \$11,716,000. The first developer of Cell 5, who would be responsible for paying for inter-connecting road costs, may not be able to obtain and carry such a large debt with low absorption and the prospect of not being able to recover all costs by late comer agreements. The burden and risks are very high.

4.3 IMPLICATIONS FOR EASTERN HILLSIDES

These financial analyses have major implications for developers, households considering an Eastern Hillside location and the City of Chilliwack.

- 1) To create viable development, developers will have an interest in expanding market appeal as much as possible by emphasising affordability rather than focusing on higher cost and exclusive housing. As demonstrated with existing housing in Cell 5, the demand for higher end single family housing is very volatile and not as viable as developers envisaged it would be. Soft and volatile market conditions are likely to dominate the Chilliwack and Eastern Hillside market for several years and developers will struggle to overcome these adverse conditions by creating more affordable housing for the more stable, larger housing market dominated by lower incomes. Refer to the following Section 5.2 to view the size of demand by income levels and housing prices to see the much larger potential market for developers to draw from as opposed to pursuing higher end and exclusive hillside housing.
- 2) In spite of the relative lack of community amenities and shopping normally associated with townhome development, GPRA believes there will be demand for townhomes on the Eastern Hillside. Townhouse development in the Promontory area demonstrates past interest in a hillside location for townhomes. Experience in the City and District of North Vancouver plus the District of West Vancouver also that shows buyer interest in a hillside location for its locational and environmental appeal can outweigh the need for nearby commercial and community amenities which can readily be accessed by car.
- 3) As discussed above, development of Cell 5 may possibly be stalled due to the high costs for interconnecting road, where estimates range between \$6,886,000 and \$12,716,000.

5.0 DEVELOPMENT POTENTIAL, EASTERN HILLSIDES

5.1 DEMAND BY NEIGHBOURHOOD

Demand for new units in Chilliwack as a whole was summarized in Section 3.2. Following this City wide analysis, GPRA has estimated the market share or percent of City wide demand that could occur in the Eastern Hillside.

Based on the City of Chilliwack's plans for growth, it is assumed that the vast majority of new development would occur in Chilliwack Proper or the Sardis-Vedder area of Chilliwack. These are the two areas where the majority of multi-family development and densification are expected to occur.

City of Chilliwack Planning has suggested a preference for approximately 84% of new housing development to occur within Sardis-Vedder and central Chilliwack. This goal is based on the City's need to achieve an efficient sustainable urban form and structure while supporting the framework of the ALR.

Therefore, outlying areas such as Promontory, Chilliwack Mountain, and the Eastern Hillside would only account for the remaining 16% of development.

Scenarios with varying percentages of total growth occurring in the Eastern Hillside will be discussed below. However the development of the Promontory provides an interesting case study in determining the rate of development in the Eastern Hillside.

Promontory Case Study

To highlight realistic percentages of Chilliwack's overall development that could occur in the Eastern Hillside it is appropriate to look at the example of Promontory. Development of Promontory started in 1993 / 1994; however, sales were slow in the initial years due to a housing market downturn in 1995 and 1996.

In 2001 over 70 units were developed, and development increased through to 2007 when 249 units were developed. As of 2011 there were an estimated 2,400 housing units in Promontory, similar to the total number of units that are forecast for the Eastern Hillside.

From 1999 until 2011 the number of new homes in Promontory as a percentage of all new development in Chilliwack ranged from 10% in 1999 up to 24% of all new homes in 2009. Between 1999 and 2011 Promontory has accounted for an average of 16% of annual housing development in the City of Chilliwack.

It can be expected that the Eastern Hillside would likely realize a smaller share than Promontory due to the distance of the Eastern Hillside to Chilliwack, the lack of sites for adjacent amenities to serve the area, and the costs involved with developing some of the areas within the Eastern Hillside.

5.2 AFFORDABILITY POTENTIAL

The financial analysis of Section 4 was created to determine what housing prices could be for new homes in the Eastern Hillside. The value of new homes will

indicate what level of incomes will be required to purchase a home in the Eastern Hillside, which will be used to forecast who potential buyers or target markets could be.

The following tables are based on the BASE CASE population growth scenario and indicate the estimated number of buyers for new homes at various price levels that could exist in the overall City of Chilliwack housing market between 2011 and 2044. The lower the price point developers can achieve in the Eastern Hillside the faster absorption can be expected.

The highlighted rows in the table below indicate the estimated price points for the majority of single-family homes and townhomes in the Eastern Hillside.

Homes at the lowest price points in the Eastern Hillside will likely be able to attract families with an income between \$90,000 and \$124,999 based on the lower construction costs.

SINGLE FAMILY HOME DEMAND BY PRICE						
SUMMARY						
	Family Income Range	Average Equity	Total Units	Equity Adjusted Price Range	Units per Year	
2011-2014	\$0-59,999	\$20,000	172	57	\$0	\$278,000
	\$60,000-89,999	\$80,600	364	121	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	195	65	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	154	51	\$664,000	\$815,000
	\$150,000+	\$200,000	119	40	\$815,000	\$1,437,000
2015-2019	\$30,000-59,999	\$40,800	359	72	\$0	\$278,000
	\$60,000-89,999	\$80,600	777	155	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	443	89	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	371	74	\$664,000	\$815,000
	\$150,000+	\$200,000	301	60	\$815,000	\$1,437,000
2020-2024	\$30,000-59,999	\$40,800	461	92	\$0	\$278,000
	\$60,000-89,999	\$80,600	922	184	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	407	81	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	260	52	\$664,000	\$815,000
	\$150,000+	\$200,000	147	29	\$815,000	\$1,437,000
2025-2029	\$30,000-59,999	\$40,800	439	88	\$0	\$278,000
	\$60,000-89,999	\$80,600	861	172	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	356	71	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	215	43	\$664,000	\$815,000
	\$150,000+	\$200,000	118	24	\$815,000	\$1,437,000
2030-2034	\$30,000-59,999	\$40,800	328	66	\$0	\$278,000
	\$60,000-89,999	\$80,600	680	136	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	339	68	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	243	49	\$664,000	\$815,000
	\$150,000+	\$200,000	164	33	\$815,000	\$1,437,000
2035-2039	\$30,000-59,999	\$40,800	308	62	\$0	\$278,000
	\$60,000-89,999	\$80,600	643	129	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	327	65	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	235	47	\$664,000	\$815,000
	\$150,000+	\$200,000	154	31	\$815,000	\$1,437,000
2040-2044	\$30,000-59,999	\$40,800	312	62	\$0	\$278,000
	\$60,000-89,999	\$80,600	651	130	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	330	66	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	234	47	\$664,000	\$815,000
	\$150,000+	\$200,000	148	30	\$815,000	\$1,437,000
2045-2049	\$30,000-59,999	\$40,800	350	70	\$0	\$278,000
	\$60,000-89,999	\$80,600	729	146	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	369	74	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	262	52	\$664,000	\$815,000
	\$150,000+	\$200,000	165	33	\$815,000	\$1,437,000

The above table displays what the estimated demand for single family homes will be by price point based on forecasted Base Case population growth to 2049. Prices and incomes are expressed in constant 2012 dollars. Equity availability has been based upon Statistics Canada and CMHC data for Canada and BC.

The tables in this section are separate from the equity requirement assumptions employed in Section 4.2 where a 20% to 50% down-payments range was used simply to illustrate the varying degrees of equity and household incomes and they impact housing affordability. In forecasting demand for the Eastern Hillside GPRAs has employed the more conservative approach to percentage equity and assumed an average of approximately 20% to 30%.

While some developers may be able to achieve lower prices, the financial analysis in Section 4 suggests home prices in the Eastern Hillside could be as low as \$530,000 implying that some households in the income range of \$90,000 to \$124,999 and all those with a higher income would form the market for single family homes in the Eastern Hillside.

- Assuming 60% of households in the \$90,000 to \$124,999 income range could afford a home at \$530,000; the total annual demand in Chilliwack for new homes in the established price range in the Eastern Hillside would average almost 140 per year and would range between 120 and 200 per year until 2049.

Given the range of incomes that could afford a single-family home in the Eastern Hillside, it is expected that households could include families with two working parents, or potentially older couples who have built up some equity. Some residents currently found in the Promontory would likely be attracted to the larger lot sizes in the Eastern Hillside.

TOWNHOMES UNIT DEMAND BY PRICE						
SUMMARY						
	Range	Equity Adjusted Price Range				
		Average Equity	Total Units	Units per Year		
2011-2014	\$30,000-59,999	\$20,000	97	32	\$0	\$278,000
	\$60,000-89,999	\$80,600	206	69	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	110	37	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	86	29	\$664,000	\$815,000
	\$150,000+	\$200,000	66	22	\$815,000	\$1,437,000
2014-2019	\$30,000-59,999	\$40,800	224	45	\$0	\$278,000
	\$60,000-89,999	\$80,600	474	95	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	253	51	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	197	39	\$664,000	\$815,000
	\$150,000+	\$200,000	151	30	\$815,000	\$1,437,000
2019-2024	\$30,000-59,999	\$40,800	221	44	\$0	\$278,000
	\$60,000-89,999	\$80,600	466	93	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	246	49	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	190	38	\$664,000	\$815,000
	\$150,000+	\$200,000	144	29	\$815,000	\$1,437,000
2024-2029	\$30,000-59,999	\$40,800	215	43	\$0	\$278,000
	\$60,000-89,999	\$80,600	452	90	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	236	47	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	180	36	\$664,000	\$815,000
	\$150,000+	\$200,000	136	27	\$815,000	\$1,437,000
2029-2035	\$30,000-59,999	\$40,800	268	45	\$0	\$278,000
	\$60,000-89,999	\$80,600	570	95	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	309	52	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	249	41	\$664,000	\$815,000
	\$150,000+	\$200,000	203	34	\$815,000	\$1,437,000
2029-2035	\$30,000-59,999	\$40,800	243	41	\$0	\$278,000
	\$60,000-89,999	\$80,600	512	85	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	260	43	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	164	27	\$664,000	\$815,000
	\$150,000+	\$200,000	95	16	\$815,000	\$1,437,000
2040-2044	\$30,000-59,999	\$40,800	274	46	\$0	\$278,000
	\$60,000-89,999	\$80,600	577	96	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	292	49	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	182	30	\$664,000	\$815,000
	\$150,000+	\$200,000	102	17	\$815,000	\$1,437,000
2045-2049	\$30,000-59,999	\$40,800	303	50	\$0	\$278,000
	\$60,000-89,999	\$80,600	637	106	\$278,000	\$457,000
	\$90,000-124,999	\$120,400	322	54	\$457,000	\$664,000
	\$125,000-149,999	\$160,200	201	34	\$664,000	\$815,000
	\$150,000+	\$200,000	113	19	\$815,000	\$1,437,000

The above table displays what the estimated demand for townhomes will be by price point up to 2049. Prices and incomes are expressed in constant 2012 dollars.

- The size of the buyer pool for townhomes ranging in price between \$380,000 and \$500,000 price range is expected to result in demand for between 80 and 120 units per year until 2049. This income range is highlighted in the above table. It is assumed that 60% of families in the \$60,000 to \$89,999 income bracket could afford a townhome of \$380,000.

If developers in the Eastern Hillside produce a mix of townhome types, including some higher priced units over \$815,000, the potential annual buyer pool could increase to range between 130 and 180 new buyers per year.

Townhomes in the Eastern Hillside will appeal to those with lower family incomes, and are expected to attract young families or retiring couples looking to downsize would likely be the principle buyers. However, developers could choose to produce more expensive townhomes to go after households with higher incomes.

5.3 DEVELOPMENT SCENARIOS IN THE EASTERN HILLSIDES

In order to test the potential absorption of the Eastern Hillside 6 different scenarios were examined. These scenarios were based on two different population growth rates, described in Section 3.1 of this report, and Low, Medium and High rates of development in the Eastern Hillside.

These scenarios produced the following absorption range:

Eastern Hillside Absorption Forecast Scenarios						
Varying ranges of Chilliwack New Home Market Share						
	Low Market Share (High of 6% Share)		Medium Market Share (High of 9% Share)		High Market Share (High of 12%)	
	Years until Build-out	Avg. Units Per year	Years until Build-out	Avg. Units Per year	Years until Build-out	Avg. Units Per year
Low Pop Growth	48	47	37	61	30	75
High Pop Growth	42	54	31	73	25	89

As stated earlier, this forecast assumes an Eastern Hillside build-out of approximately 2,820 units and a population of roughly 6,400 based on the USL Servicing Update Report. There are an estimated 500 units already developed in the area implying 2,320 new units. Each of the above scenarios involves building 2,320 new units (differences in total units for each scenario due to rounding).

According to these assumptions, build-out of the Eastern Hillside would occur between 26 to 53 years. The number of units developed per year ranges between an average of 41 as a low and 67 as a high.

- The low market share, low population growth scenario assumed the Eastern Hillside would achieve a maximum share of 6% of residential development in Chilliwack.
 - This scenario would assume slow demand in the Eastern Hillside. Slow demand could stem from concerns over the distance from Chilliwack, issues developing inter-connecting roads, etc.
 - Assuming 80% of new units are single-family homes, this would result in 34 single-family homes developed per year under the Base Case population forecast.
 - Within the determined affordable price range the Eastern Hillside would have to attract between 20% and 30%, or an annual average of 25%, of new homes purchased in Chilliwack that are priced \$530,000 and higher.

- The medium market share, low population growth scenario assumed the Eastern Hillside would achieve a maximum share of 9% of residential development in Chilliwack.
 - This is believed to be the most likely scenario.
 - Assuming 80% of new units are single family homes, this would result in 44 single-family homes developed per year under the Base Case population forecast.
 - Within the determined affordable price range the Eastern Hillside would have to attract between 25% and 40%, or an annual average of 35%, of new homes purchased in Chilliwack that are priced \$530,000 and higher.

- The High scenario assumed the Eastern Hillside would achieve a maximum share of 12% of residential development in Chilliwack
 - This scenario is seen as less likely given the high percentage of homes required from the single family price point. This high rate of absorption might be more probable with a higher proportion of townhomes, or if greater number of lower cost single-family homes are developed. An increased proportion of high income earning families moving to Chilliwack could also make this scenario more likely.
 - Assuming 80% of new units are single-family homes this would result in 58 single-family homes developed per year under the Base Case population forecast.
 - Within the determined affordable price range the Eastern Hillside would have to attract annually between 30% and 50%, or an annual average of just over 43%, of new homes purchased in Chilliwack that are priced \$530,000 and up.

- For each of the Low, Medium and High scenarios, if the cost of interconnecting roads for Cell 5 was the lower \$6,886,000, rather than the \$12,716 million assumed in this Study, the resulting lower housing costs (approximately \$20,000 per unit less) could increase the demand pool for Eastern Hillside housing and decrease the absorption period by perhaps 2-3 years.

5.4 QUALITATIVE IMPACTS ON ABSORPTION

Other factors beyond price will have an important impact on absorption in the Eastern Hillside, including:

- Buyers looking for large lots will likely look at the available product within the Eastern Hillside. It has been suggested by Chilliwack market observers that larger lots will be increasingly rare in the Chilliwack area, and the size of the lots available in Promontory has been an issue with many buyers.
 - There is the potential that seniors with equity might be attracted to the large lots in the Eastern Hillside.
- The foreclosure of The Falls has reportedly had a chill on development in the area. Once the new owner of The Falls establishes a new plan and begins development, it is expected that project could have a catalytic impact on sales elsewhere in the Eastern Hillside.
- The psychological impact of Marble Hill was cited by a number of brokers as a reason for slow sales elsewhere in the Eastern Hillside.
 - Once buyers understand that other areas in the Eastern Hillside do not suffer from the same geotechnical issues as Marble Hill, interest in the area can be assumed to increase.
- Some developers have underestimated the costs involved in developing the Eastern Hillside leading to reduced profit margins or losses which has slowed development in the area.
 - Once new developments are proven successful in the Eastern Hillside more developers will become interested in the area.
- Clarity on the distribution of costs to be borne by developers will likely increase interest in the area. Prior to The City of Chilliwack confirming that DCC's would cover most major offsite infrastructure costs in the Eastern Hillside there was a great deal of uncertainty to the construction costs involved for developers.
- The lack of commercial space and community amenities in the nearby area will be an issue for some buyers.
 - It is understood that through the receivership process of The Falls, Ernst & Young will be looking at the highest and best use for the site. If a small piece of commercial component is developed at the site it would likely attract more buyers to the area.
- Beyond Cells 4 and 6 there may be issues opening up other Cells for development. Cell 5 will require an expensive upgrade to Allan Road, while Cells 12 and 13 will also require new roads which could potential delay the availability of new product.

6.0 CONCLUSIONS

This report is intended to provide a market based estimate of the absorption period required for the Eastern Hillside neighbourhood in Chilliwack.

Ultimately it is estimated that the Eastern Hillside could take between 34 and 40 years to build out. This is based on the Medium Absorption scenario where the maximum share of City new home sales the Eastern Hillside could achieve is 8%. By way of an example, the Promontory averaged 16% share of new home sales in Chilliwack between 1999 and 2011.

However, this analysis involves a number of assumptions, and there are many possible circumstances that could lead to a shorter absorption period for the Eastern Hillside. Some factors that could speed up development in the Eastern Hillside include:

- Population growth rate in Chilliwack above 1.72% - which was the average growth rate assumed in the Base Case scenario.
- An increased share of new home sales in Chilliwack, i.e. greater than an 8% market share.
- An improved economy in Lower Mainland. Higher incomes in the region will increase demand for product in the Eastern Hillside.
- An improved economy in Chilliwack relative to other jurisdictions in the region. If the recent trend of job and population growth accelerates its eastern movement, there will be increased demand for the Eastern Hillside.
- A successful development of The Falls and a return to vibrancy at The Falls Golf Course. The foreclosure of The Falls has led to chill regarding other developments in the Eastern Hillside. Once development of The Falls begins again it could act as a catalyst for other projects in the area.

This report should provide The City of Chilliwack an understanding of the number of factors involved with forecasting the absorption rate in the Eastern Hillside, and the findings of this report should help The City of Chilliwack determine whether development of the area is on track.

Any significant changes to the overall Eastern Hillside Plan could also have an impact on absorption, and in either case a review of the findings of this report would be recommended.