

**Third Annual
Socio-Economic Monitoring Report
Waneta Expansion Project**

January 1 to December 31, 2013

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1. Introduction

The Waneta Expansion Project (WAX) will result in the construction of a second powerhouse downstream of the Waneta Dam on the Pend d'Oreille River south of Trail, B.C. The expansion project will share the existing dam's hydraulic head and generate power from flow that would otherwise be spilled. The project is jointly owned by Fortis BC (51%), Columbia Power Corporation (32.5%) and Columbia Basin Trust (16.5%).

Columbia Power, acting as project manager on behalf of the owner's group, received a Project Approval Certificate (EAC) from the provincial Environmental Assessment Office, which authorized WAX to proceed. One of the commitments identified in the EAC was for Columbia Power to retain a Socio-Economic Monitor to "monitor, analyze and report on project-related socio-economic impacts". Additionally, Columbia Power was directed to form a community-based committee to support effective management of the socio-economic impacts.

In the fall of 2010, Columbia Power hired consultant Cathy Scott-May to be the Socio-Economic Monitor and formed the Community Impact Management Committee, which is a diverse group of local stakeholders who meet regularly to review WAX progress and discuss any associated community issues.

This report is the third annual socio-economic monitoring report produced for WAX.

1.1 Purpose and Scope of the Socio-Economic Monitoring Program

The goal of the socio-economic monitoring program is to provide an independent assessment of the measurable socio-economic impacts (both positive and negative) that can be attributed to WAX, along with interpretation of anecdotal indicators, in order to:

- measure and report on impacts to support management of WAX;
- facilitate communication between community stakeholders, government agencies and Columbia Power concerning impact management issues, and;
- document the effectiveness of efforts to minimize negative impacts and maximize project benefits to the region.

The scope of the socio-economic monitoring program is determined by the monitoring requirements outlined in the EAC. It is important to note that through the environmental assessment review process, potential impacts (both positive and negative) were identified and, based on the issuance of the EAC, such impacts were accepted. Hence, the socio-economic monitoring program seeks to ensure that real impacts are consistent with the projected impacts and whether or not strategies to mitigate negative impacts are effective in ensuring such impacts remain within the projected range. Unanticipated issues or impacts that are brought to the attention of the Socio-Economic Monitor are first assessed to determine if they can reasonably be assumed to have a direct relationship with the Project. If so, they are included in the formal monitoring reports.

Finally, the Socio-Economic Monitor is not responsible for First Nations concerns as Columbia Power deals directly with First Nations representatives. Columbia Power has engaged a separate consultant to conduct the environmental monitoring program for the project.

1.2 Geographic Scope

The geographic scope for measurement of most impact indicators has been a 100km radius from the WAX project site, but limited to within Canada. Therefore, the definition of the “local” scope of the project includes Castlegar, Nelson, Trail and all smaller communities and rural areas in that general area. In some cases, data sets from statistical sources do not align with this geographic scope, in which case the information that best fits the preferred geographic scale is used.

1.3 Roles and Responsibilities of the Socio-Economic Monitor

The Socio-Economic Monitor is responsible for designing the monitoring program, including defining what information needs to be collected and how, as well as how the information will be used to report on impacts of the project. Following review of the proposed design with Columbia Power and the CIMC, the Socio-Economic Monitor is responsible for implementing the monitoring program, including collecting and analyzing the necessary information, writing the reports and presenting the reports to the CIMC. The Socio-Economic Monitor also responds to questions, incidents or concerns from the public as may be required.

To ensure the socio-economic monitoring process maintains the necessary credibility within the broader community, the Socio-Economic Monitor is independent of Columbia Power and its committees. However, through their positions as elected officials and/or community representatives, the CIMC is accountable to the community, just as Columbia Power has a corporate responsibility to, and relationship with, those same broader interests. As a result, the Socio-Economic Monitor works co-operatively with all parties to serve the interests of the region and its communities.

2. Methodology

2.1 Data Collection

A socio-economic measurement framework was developed for monitoring the impacts of construction activities. The framework includes both direct and indirect indicators, which were reviewed with the CIMC prior to initiating the socio-economic monitoring program. The indicators include:

Direct Indicators

- Project Employment
- Local Employment
- Equity Employment
- Project Occupations
- Project Wage Income
- Regional Project Expenditures
- Medical Aid

Indirect Indicators

- Residential Vacancies²
- Hotel/Motel Vacancy
- Daycare Wait Lists
- School Enrolment
- Recreation Services
- Population
- Traffic Safety
- Border Services
- Other Community Concerns

² Residential vacancy rates are defined in this case as multi-family building rental vacancies. Single detached housing and trailer home rentals are not included.

With respect to data collection for the direct indicators, the employment-related information is associated with all unionized workers who are employed on-site, local management and engineers employed by the prime contractor, SNC-Lavalin, as well as Columbia Power’s managers and engineers. Data on non-local management and engineers employed by SNC-Lavalin who may be contributing to WAX is unavailable.

Columbia Hydro Constructors (CHC) tracks information about on-site union employees. Columbia Power has contracted CHC to provide the Socio-Economic Monitor with the necessary data summaries to meet the monitoring requirements outlined in the EAC. The Socio-Economic Monitor may request additional information from SNC-Lavalin and Columbia Power, which they may provide at their discretion.

Data collection for the indirect indicators relies on statistical information from various government sources, informal telephone interviews, direct contact with stakeholders, and general observation and knowledge.

2.2 Comparison with the Base Case

The socio-economic monitoring framework forms the base case, or starting point, for the monitoring program. The base case reflects the anticipated impacts (both positive and negative) identified by Columbia Power through the planning stages for WAX. Many of the anticipated impacts are outlined in the EAC. Additionally, the base case draws on other relevant project-related documents that outline commitments or projections by Columbia Power regarding socio-economic issues.

The indicators are compared with base case information in order to determine if WAX is conforming to established targets and to make observations as to overall performance relative to socio-economic considerations. The base case information for each indicator is as follows:

Indicator	Base Case
Project Employment	<ul style="list-style-type: none"> • 680 Person Years of Employment for the total course of construction (Columbia Power submission to the EAO) • 233 Person Years of Employment for Year 3 and 792 for the total project (SNC-Lavalin projection)³
Local Employment	<ul style="list-style-type: none"> • 75% of the WAX labour force are local (Columbia Power submission to the EAO) • 50% of the managers and engineers are local (Columbia Power submission to the EAO)
Equity Employment	<ul style="list-style-type: none"> • 10% of employment for women, visible minorities and persons with disabilities (Columbia Power submission to the EAO)

³ The SNC-Lavalin projection was created for their own planning purposes and not with the explicit intent of providing a baseline for monitoring employment over the course of construction. As a result, SNC-Lavalin cannot and will not be held to account for realizing the person years of employment target. The projection will, instead, be used as general information in combination with other data regarding employment.

- 5% of the total project workforce for First Nations (Columbia Power submission to the EAO)

Indicator	Base Case
Project Occupations	<ul style="list-style-type: none"> • Projection developed by SNC-Lavalin⁴ • Number of apprenticeships from the Collective Agreement
Project Wage Income	\$101.1 million for total course of construction; no projection by year. (Background documents from Columbia Power)
Regional Project Expenditures	\$78.1 million in additional household income resulting from supplier industry impacts over the total course of construction (Background documents from Columbia Power)
Injuries	Workers' Compensation Board standards for similar projects
Hotel Vacancy	Vacancy rates as reported by hotel managers
Daycare Wait Lists	Wait list numbers as reported from daycare managers
School Enrolment	School enrolment from previous year
Population	Population from previous years
Residential Vacancy	Vacancy from previous years
Traffic Safety	Commitments in Traffic Safety Plan, incidents reported to CIMC
Border Service	Significant change from previous year

2.3 Reporting

The Socio-Economic Monitor produces three types of reports: monthly, quarterly and annual. The monthly reports provide a snapshot in time as to the direct impacts of WAX. The quarterly reports focus on overall trends relative to the direct indicators for the respective three-month period. The annual report summarizes the data collected for each indicator for the respective 12-month period and compares the results to the base case projections and commitments. The annual report also summarizes how Columbia Power and ASL-JV have responded to

⁴ The SNC-Lavalin projection was created for their own planning purposes and not with the explicit intent of providing a baseline for monitoring project occupations over the course of construction. As a result, SNC-Lavalin cannot and will not be held to account for realizing the person years of employment target. The projection will, instead, be used as general information.

information received over the course of the previous year, for example incidents, questions or concerns reported by the public to Columbia Power, ASL-JV, CIMC members and/or the Socio-Economic Monitor.

3. Summary of Third Year Impacts

The following report covers the socio-economic impacts of WAX construction from the period of January 1, 2013 to December 31, 2013 and represents the Third Annual Socio-Economic Monitoring report to be developed for the project.

The total Person Days (PDs)⁵ of employment for the third year of WAX was 93,967, with total Person Years (PYs) of employment being 392. These numbers include all unionized workers onsite as well local management and engineers for the prime contractor, SNC-Lavalin, along with Columbia Power's management and engineers. The numbers do not include non-local SNC-Lavalin management and engineers who may be contributing to the project as that information is not available. The actual PYs significantly exceeded the projected target; however, the target did not include Columbia Power management and engineers. While employment levels for management and engineers generally remained constant, CHC employment peaked in June, fell sharply during the summer and then steadily climbed during the fall.

CHC workforce averaged 69% of PDs of employment for local hires during Year 3, which is a decrease from the average of 82% in Year 1 and 76% in Year 2. The target for local hire is 75%. The contractor reported shortages of specific trades, resulting in the need to recruit from other areas.

Equity employment for CHC employees, which comprises workers who voluntarily declare themselves to be women, a visible minority and/or disabled, averaged 10% for Year 3, which matched the target. Aboriginal workers averaged 7% of the total workforce for Year 3, which exceeded the target of 5%.

Over the course of Year 3, Carpenters, Labourers, Boilermakers, Ironworkers, Office/Technical and Electrical were the main occupations required. Other occupations accounted for less than 5% of the workforce. The average number of apprentices onsite grew steadily, peaking in November at 51. The largest number of apprentices were carpenters. CHC has reported that the requirements for apprentices outlined in the collective agreement have been met throughout Year 3.

The total employment income for Year 3 was \$26,293,320. There were no annual projections created for wage income. As a result, it will not be possible to compare actual to projected income until completion of WAX. With respect to CHC workers, the total income earned by local residents was \$20,929,899 for 2013, which was 69% of the total employment income earned by CHC workers.

Health and safety reporting changed during 2013 to reflect the more detailed reporting being undertaken by the contractor. There was one lost time incident, which resulted in one day of lost time. The resulting lost time incident rate was 0.19 for 2013, which closely matched or was less

⁵ A person day equates to one person working a full 8 hour day. A person year is calculated by the total number of hours worked compared to a standard for person year (2080).

than the rate for similar construction projects. There were six new modified work cases and one ongoing case reported in 2013, resulting in 207 modified work days. Six of the seven modified work day cases closed during 2013. Of the 30 disputed incidents, 14 have been resolved. None of the disputed cases involved lost time injuries. WorkSafeBC adjudicates disputes and, on average, takes 1.5 years to resolve a case.

Total regional procurement expenditures up to December 31, 2013 were approximately \$177 million. This figure represents all expenditures from the project start-up, which began in October of 2010. The total regional expenditures during 2013 were approximately \$52 million. The available regional expenditures data does not provide details on what types of goods and services were purchased, hence it is not possible to determine what portion of the regional expenditures might relate to sub-contractor services and additional household income. As a result, it is not possible to determine if the projected additional household income is being realized.

The demand for housing from WAX employees moving into the area appears to have been limited and not exceeded supply. Furthermore, WAX appears to have helped stabilize demand for hotel accommodation as some establishments report that business associated with WAX has been required to maintain the level of activity of a few years ago.

During 2013, new and expanded day cares increased the local capacity and reduced waitlists. School enrollments continued to decline in both School District 20 and 8. The WAX workforce has a large percentage of local hires and is recognized as including a high percentage of older workers. Hence, if some in-migration may have contributed to demands for day care, the impacts are likely to be relatively small. While in-migration has not been a significant factor in reversing the declining school enrollment, the project may have allowed some families to remain in the area, thus the project may have helped to ameliorate the decline.

It is reasonable to suggest that WAX is having some positive impacts on revenue associated with recreation services, but the extent of the impact cannot be known. The increased demand is not exceeding the ability of the recreation facilities to provide services.

Given the relatively small size of WAX compared to the overall economy and the high percentage of local hiring, it is unlikely that WAX has significantly contributed to changes in population. It is likely that the project is helping to retain people who might have otherwise left the area, even if temporarily, and so likely has positively contributed to the stability of the population.

Border Services has reported no noticeable impact on traffic volume through the Waneta border crossing as a result of WAX. A small number of traffic safety concerns were raised through discussions of the CIMC; the responses taken by Columbia Power and/or the joint venture partnership are documented. Updates on the transmission line, Fort Shepherd Fish Compensation Program and the community park are also documented.

4. Direct Project Impacts

4.1 Project Employment

The PDs and PYs of employment for the third year of WAX were:

Table 1: Total Employment Year 3

Employee Category	Person Days of Employment for 2013	Person Years of Employment for 2013
CHC workers	87,562	337
Local management and engineers	14,281	55
Total	93,967	392

The projections for project employment were:

- 680 Person Years of Employment for the course of construction (Columbia Power submission to the EAO)
- 330 Person Years of Employment for Year 3 and 792 for the total project (SNC-Lavalin projection⁶)

It is too early to determine if the overall projections for the full course of project employment are accurate. In Year 3, the actual project employment was 19% higher than the SNC-Lavalin projected employment. However, the projection was for only CHC workers and SNC-Lavalin managers and engineers. The actual project employment includes CHC workers as well as both Columbia Power and local SNC-Lavalin managers and engineers, but not non-local SNC-Lavalin staff as such data is unavailable.

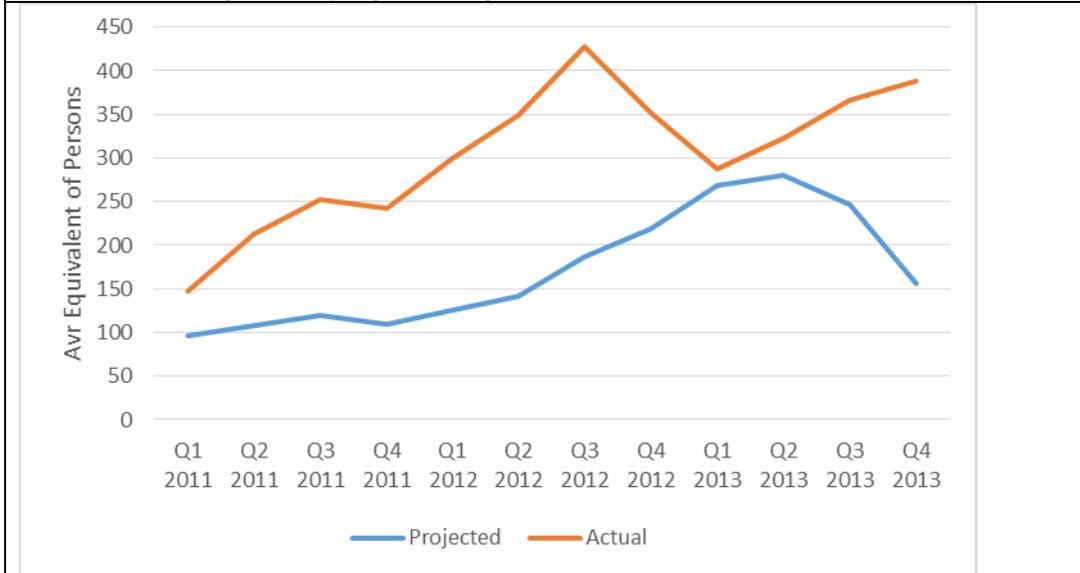
The total project employment increased 67% between Years 1 and 2 and 11% between Years 2 and 3. The employment levels for Columbia Power and local SNC-Lavalin managers and engineers remained basically stable over the three year period, thus the basis for the increase was due to higher levels of employment for CHC workers.

In comparing the projected and actual trends, as outlined in Figure 1, the shape of the curves are generally consistent. The sharp peak in the third quarter of Year 2 is partly attributed to

⁶ The SNC-Lavalin projection was created for their own planning purposes and not with the explicit intent of providing a baseline for monitoring employment over the course of construction. As a result, SNC-Lavalin cannot and will not be held to account for realizing the person years of employment target. The projection is, instead, being used as general information in combination with other data regarding employment.

August having three pay periods rather than the standard two, however there were also three pay periods during August of 2013.

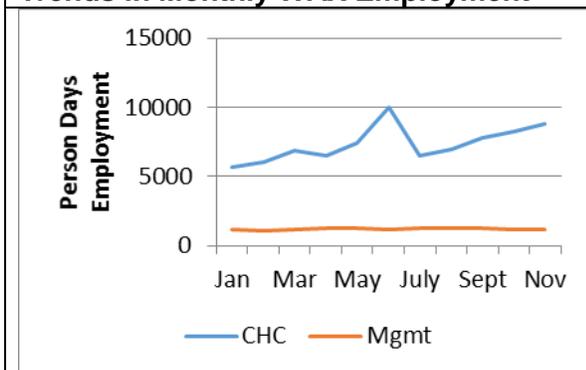
Figure 1
Actual and Projected Employment by Quarter: Years 1, 2 and 3



Source: SNC-Lavalin, Columbia Power, CHC

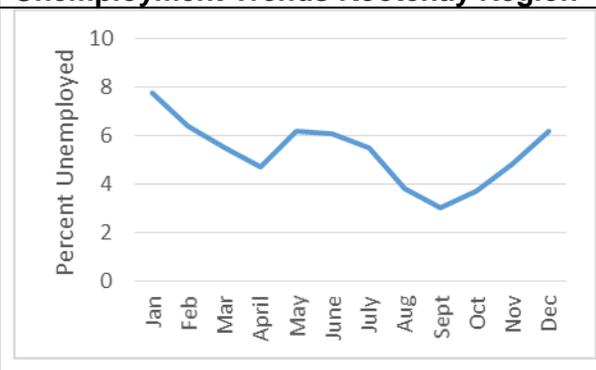
During Year 3 of construction activities, employment levels for local managers and engineers generally remained constant while CHC workers climbed to a peak in the spring, fell sharply during the summer months but climbed steadily through the fall. As shown in Figure 3, the unemployment rate for the Kootenay region does not correlate with WAX employment, showing that the project does not significantly impact the regional trend. WAX is likely more significant in terms of more localized employment trends.

Figure 2
Trends in Monthly WAX Employment



Source: SNC-Lavalin, COLUMBIA POWER, CHC

Figure 3
Unemployment Trends Kootenay Region



Source : BC Statistics

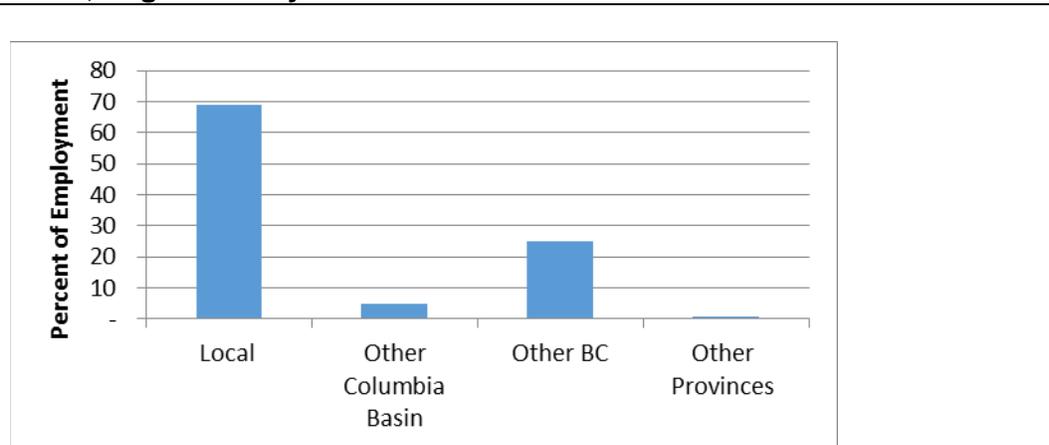
4.2 Local Employment

Columbia Power projected that 75% of the CHC workforce would be local, meaning residing within 100 kilometres of the project. The actual CHC workforce averaged 69% of the PDs of employment for local hires during Year 3, which is a decrease from the average of 82% in Year 1 and 76% in Year 2. As shown in Figure 4, workers from other parts of BC were the second highest percentage of the CHC workforce with less than 10% coming from other parts of the Columbia Basin.

The contractor reported shortages of specific trades, which resulted in the need to recruit from outside the local area.

Columbia Power also projected that 50% of managers and engineers would be local. As data on non-local managers and engineers is unavailable, it is not possible to ascertain if the target was met during Year 3.

Figure 4
Percentage of Person Days of Employment for CHC Workers for Year 3:
Local, Region and by Province



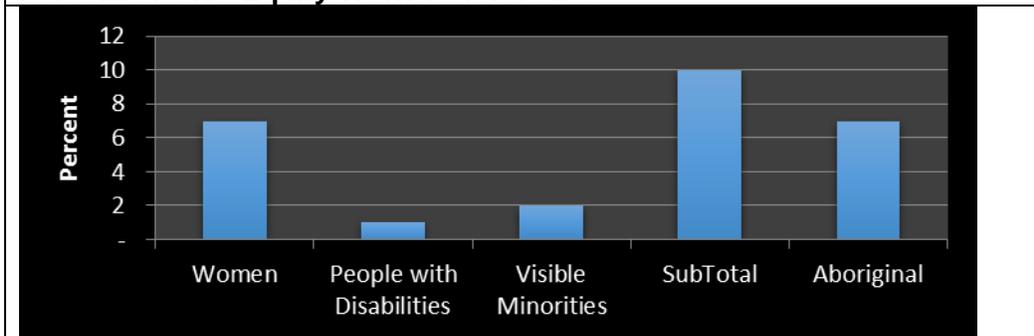
Source: CHC

4.3 Equity Employment

Equity employment for CHC employees, which comprises workers who voluntarily declare themselves to be women, a visible minority and/or disabled, averaged 10% for Year 3. Columbia Power defined a target for all equity employees of 10%. Women accounted for 7% of the total employment during Year 3, whereas members of visible minorities were 2% and people with disabilities were 1%. There were no targets defined for these specific categories of equity workers.

The second category is those who identify themselves as First Nations. It is recognized that First Nations is a legally defined term and, as there are no means to validate that all self-declared First Nations employees meet the requirements, the socio-economic monitoring program reports on employees of aboriginal ancestry. CHC employees of aboriginal ancestry averaged 7% for Year 3, which exceeds the Columbia Power target of 5%.

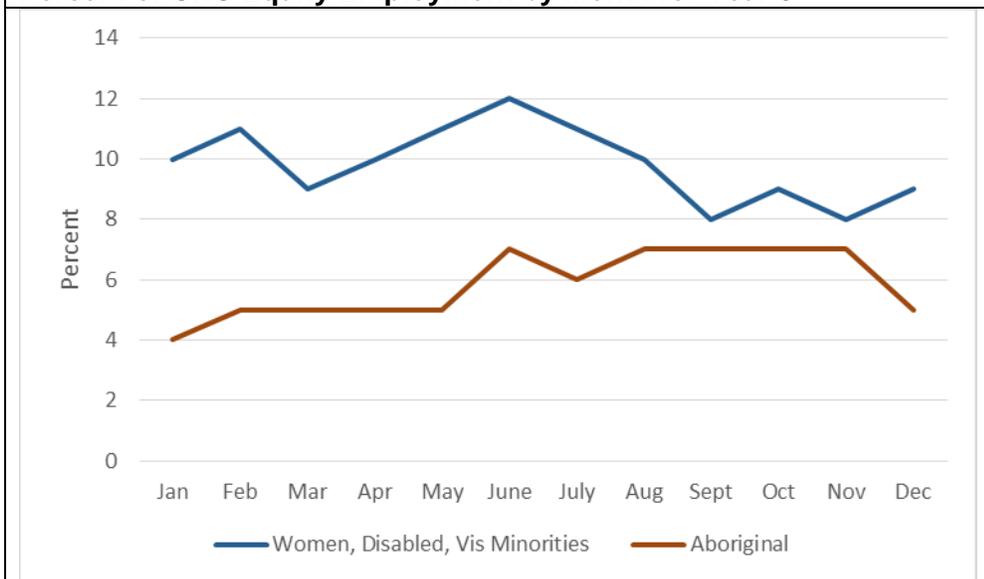
Figure 5
Percent of CHC Equity Workers for Year 3



Source: CHC

The percentage of the workforce that self-identified as women, people with disabilities and visible minorities was generally at or above the equity target up to August, then fell below the target for the remainder of the year. With the exception of January, the target for aboriginal workers was met or exceeded throughout Year 3.

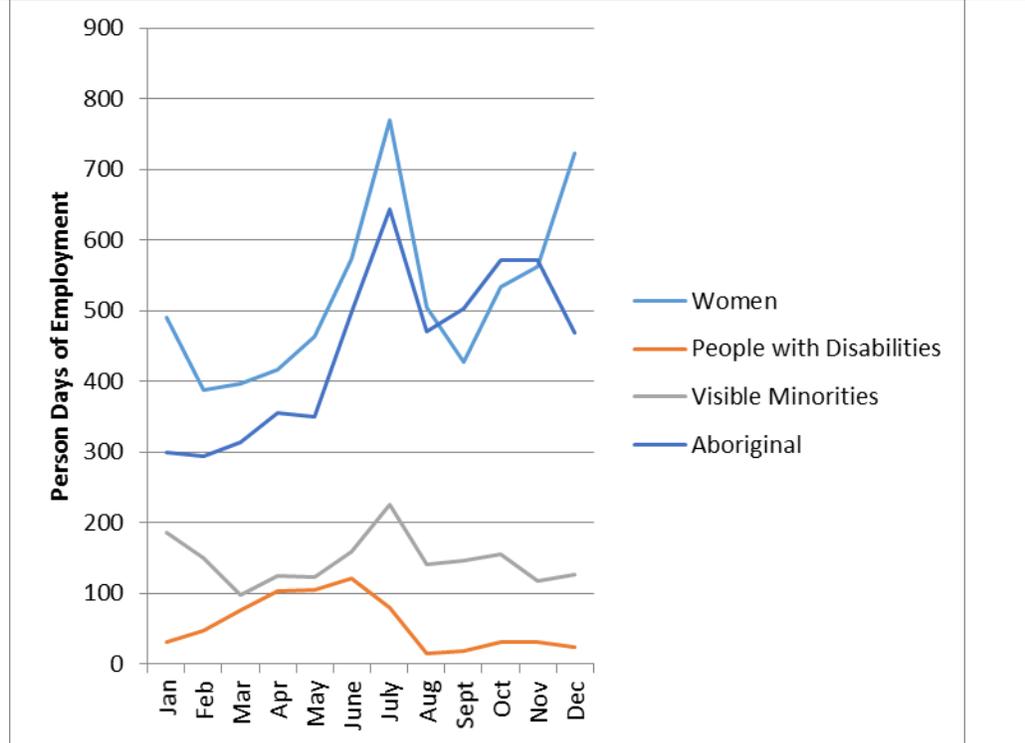
Figure 6
Percent of CHC Equity Employment by Month for Year 3



Source: CHC

The trends for equity workers show some correlation between women, aboriginal workers and visible minorities, which could indicate that some of the workers are members of two or more categories.

Figure 7
Trends for Equity CHC Workers throughout Year 3

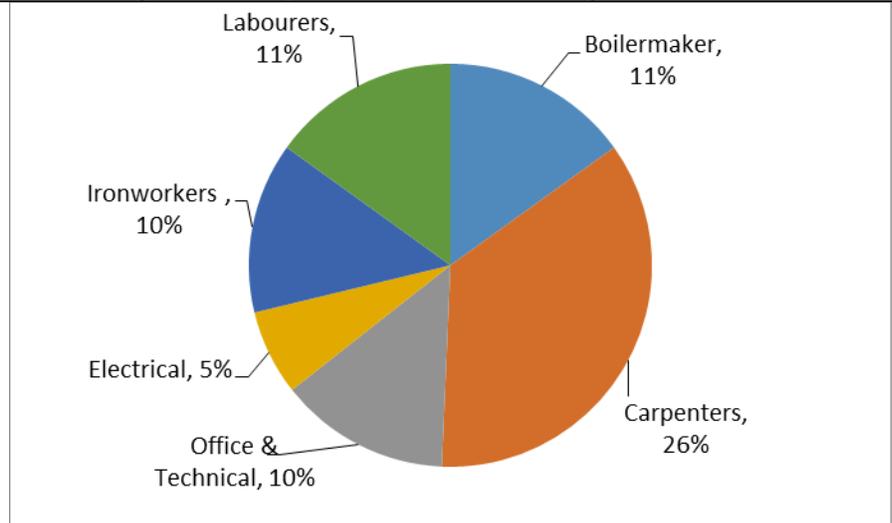


Source: CHC

4.4 Occupations

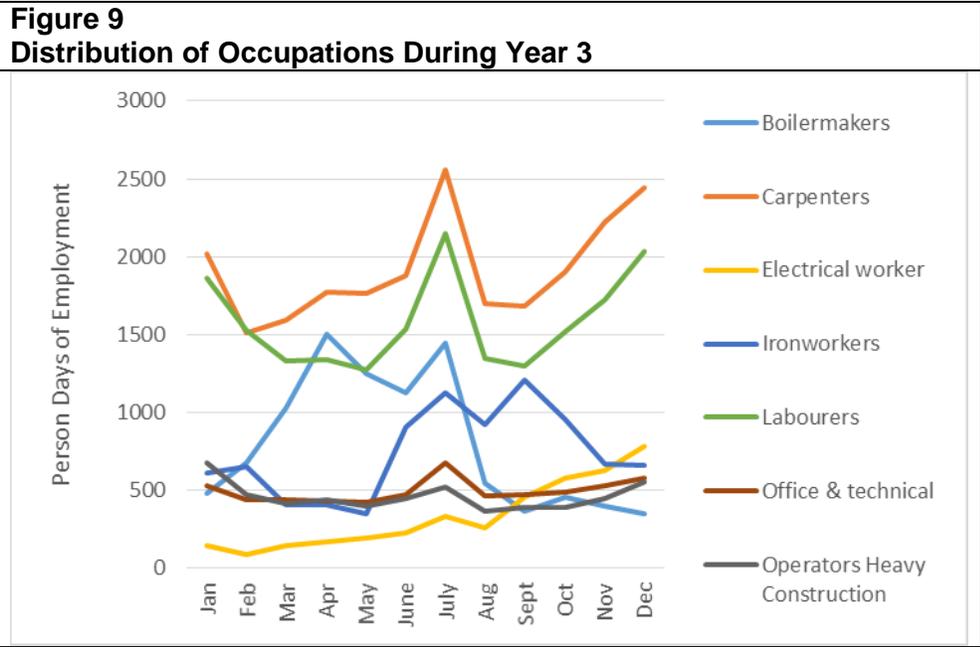
Over the course of Year 3, Carpenters, Labourers, Boilermakers, Ironworkers, Office/Technical and Electrical were the main occupations required. Other occupations accounted for less than 5% of the workforce.

Figure 8
Percentage of Occupations: Actual Average over Year 3



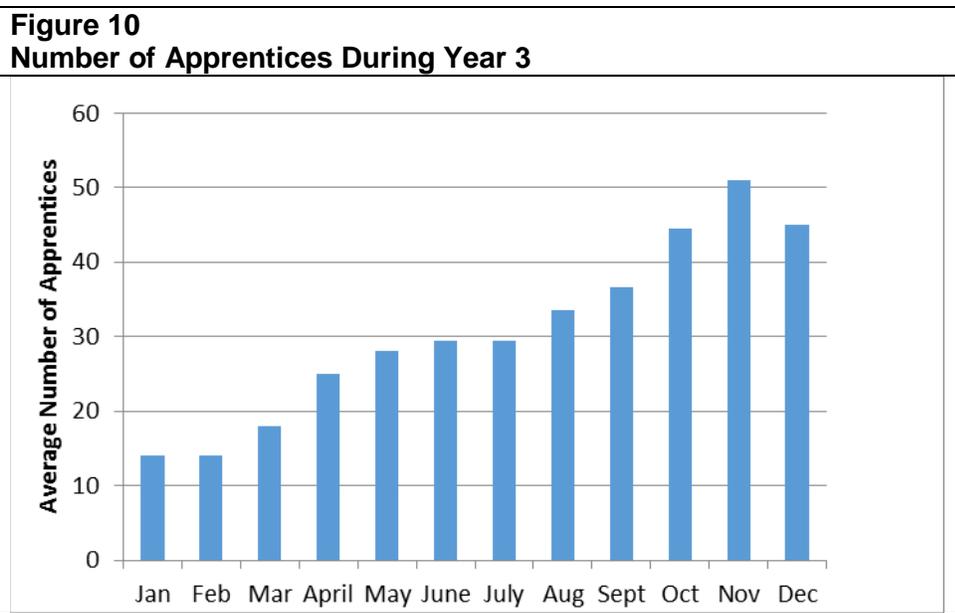
Source: CHC

There was a particularly strong spike in the participation of Labourers and Carpenters during July, with Boilermakers strong from April through July and Ironworkers in demand from July to September. The trends for the other key occupations were fairly consistent throughout Year 3.



Source: CHC

The average number of apprentices onsite grew steadily, peaking in November at 51. CHC has reported that the requirements for apprentices outlined in the collective agreement have been met throughout Year 3.



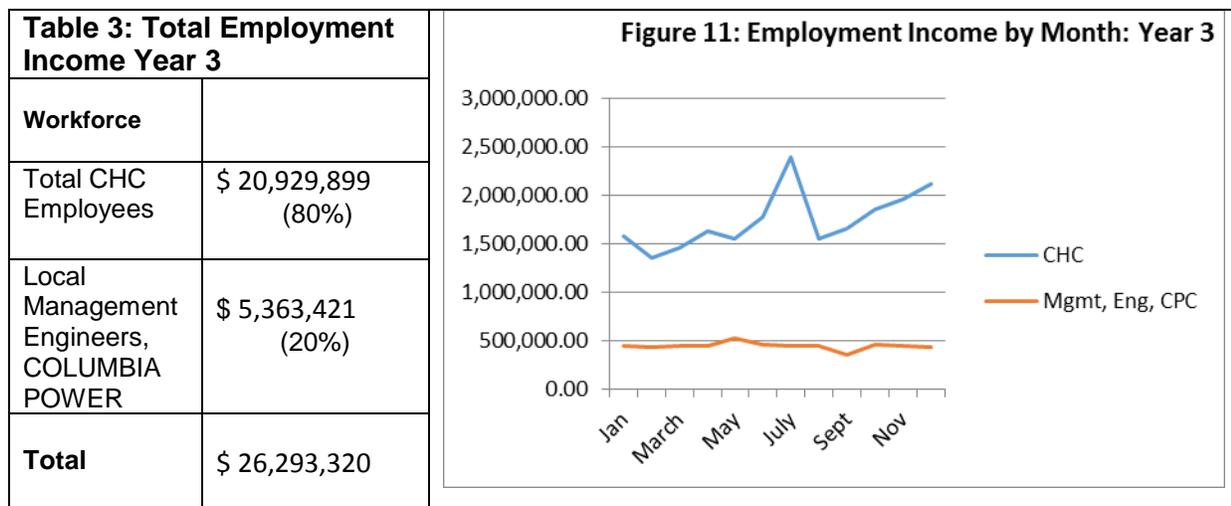
Source: CHC

Table 2 Number of Apprentices Year 3	
Apprentice Type	Number⁷ onsite throughout Year 3
Carpenters	8-17
Electricians	1-10
Millwrights	1-9
Boilermakers	2-8
Ironworkers	1-8
Sheetmetal	1-5
Painters	1-4
Pipefitters	1-3

4.5 Project Employment Income

Columbia Power projected total income resulting from WAX to be \$101.1 million, but this was for the four and half years of construction. There were no annual projections created for wage income. As a result, it is not possible to compare actual to projected income until completion of WAX.

The total employment income for Year 3 was \$26,293,320, which was up from \$23,452,243 in Year 2 and \$14,890,825 in Year 1. The wages earned by CHC employees in Year 3 was 80% of total employment income. The share of wages for CHC employees has increased steadily from 66% in Year 1 and 77% in Year 2. The amount earned by local managers, engineers and Columbia Power staff remained fairly constant between Years 1, 2 and 3, although their percentage of the overall employment income decreased as the amount earned by CHC employees increased. The monthly percentages for CHC workers peaked in the summer of 2013.



⁷ CHC reports on the number of apprentices onsite, not Person Days of Employment.

With respect to CHC workers, the total income earned by local residents was \$14,367,168.00, which was up from \$13,560,471.78 in Year 2 and \$8,102,429.23 in Year 1. In terms of CHC workers, local employment income averaged 69%, which was down from 75% in Year 2 and 81% in Year 1.

Table 4: CHC Employment Income by Region for Year 3

Location	Total Wages	Percent
Total Local	\$14,367,167.84	69%
Other Columbia Basin	\$992,772.41	5%
Other BC	\$5,440,088.74	26%
Other Provinces	\$129,873.08	1%
Total	\$20,929,898.86	100%

Source: CHC

4.6 Health and Safety Reporting

Reporting on health and safety was changed during Year 3 to reflect the more detailed incident reporting that the contractor was undertaking.

Categories of Health and Safety Reporting

A First Aid incident is defined as a minor occupational injury, which after a single first aid treatment and subsequent observation allows the worker to return to normal duties on the same day or at the start of the next scheduled shift. First Aid treatment may be delivered onsite or offsite, including at a hospital.

A Medical Aid incident is any occupational injury requiring medical intervention by a doctor (or equivalent) on or off site that allows the worker to return to normal duties on the same day or at the start of the next scheduled shift.

Modified Work Days are the number of days when a worker abstains from their regular duties and performs alternate duties because of a Modified Work Incident. Only days the employee would have normally worked are counted.

Lost Time Injuries result in at least one full day absent from work beyond the day or shift it occurred (does not include time travelling off site for injury diagnosis or treatment).

Health and safety reporting only includes incidents for which the definition of the type of incident has been agreed to by both the employer and affected employee. The total number of incidents for 2013 include:

Table 5 Health and Safety Incidents Year 3	
First Aid Incidents	103
Medical Aid incidents	7
New Modified Work Cases	6
Ongoing Modified Work Cases from 2012	1
Modified Work Cases Closed during 2013	6
Total Number of Modified Work Case Days	207
Lost Time Injury	1
Lost Time Days	1

Source: Columbia Power

There have been, and are, health and safety incidents under dispute. A total of 30 incidents have been under dispute, of which 14 remain unresolved. WorkSafeBC adjudicates disputes. Once a dispute has been resolved, then the incident gets incorporated into the health and safety reporting. On average it takes 1.5 years to resolve disputed claims. None of the disputed claims involved lost time injuries; most (approximately 90%) were late reports, which means the claims were not made at the time of the incident and involve requests for follow-up medical treatment.

Columbia Power reported a lost time injury rate of 0.19. To understand the relative significance of this statistic, a comparison of rates from similar construction projects is provided. WorkSafeBC maintains lost time injury rate statistics for various sectors and sub-sectors. WorkSafeBC statistics are not available for 2013.

Table 6 Injury Rate Comparison to WorkSafeBC Averages Year 3		
Year	Lost Time Injury Rate	
	Heavy Construction (Structural Concrete Reservoir, Dams, etc.)	Heavy Construction (General)
2012	0	4
2011	0	3
2010	<0.5	4
2009	5.5	5
2008	6.8	8
2007	13.7	

Source: WorkSafeBC

There are a very small number of similar projects being undertaken around the province; hence the injury rates for Heavy Construction (Structural Concrete, Reservoir, Dams) generally refer to one or two injuries per year.

Another useful comparison is to the construction of the Brilliant Expansion Project, which took place between 2003-2007. Over the course of that project, there were 51 lost time injuries, which reflected an injury rate of 5.2 per PY of employment.

4.7 Regional Contractor Expenditures

Total regional procurement expenditures up to the end of 2013 were approximately \$177 million. This figure represents all expenditures from the project startup, which was in October of 2010; therefore, the figure represents slightly more than the three year period of 2011 and 2013.

A review of regional contractor expenditures reporting at the close of 2013 identified discrepancies in data provided to data to support the socio-economic monitoring program. Some items that should have been part of the quarterly reporting were not included and some subcontractors had included CHC wages, which have already been accounted for in project employment reporting. As a result, the total regional contractor expenditures up to December 31, 2013 have been revised to \$177 million, which represents a 5% decrease from the original report on overall expenditures.

Revised data for each quarter from the start of the project is unavailable. The adjustment was relatively small and, therefore, the work required to re-calculate the expenditures from the start of the project was deemed to be unwarranted. Hence, Table 7 reports the adjustment entirely within the fourth quarter of Year 3, and, therefore, reflects an artificially low amount of expenditures for this quarter. The contractor reported that their regional expenditures for the remainder of the project will be lower than previous quarters as the civil portion of the project winds down.

Year 1	First Quarter (includes expenditures from October 2010 until March 2011)	\$8.8 million
	Second Quarter	\$28.2 million
	Third Quarter	\$21.0 million
	Fourth Quarter	\$14.0 million
Year 2	First Quarter	\$12.0 million
	Second Quarter	\$10.0 million
	Third Quarter	\$21.0 million
	Fourth Quarter	\$10.0 million
Year 3	First Quarter	\$19.0 million
	Second Quarter	\$17.0 million
	Third Quarter	\$11.0 million
	Fourth Quarter	\$5.0 million
Total to Date		\$177.0 million

Source: SNC-Lavalin

In background documents prepared for Columbia Power (not submitted as part of the application for a EAC), it was projected that WAX would result in \$78.1 million in additional household income resulting from supplier industry impacts over the total course of construction.

The available regional expenditures data does not provide details on what types of goods and services were purchased, hence it is not possible to determine what portion of the regional expenditures might relate to sub-contractor services and additional household income. Additionally, postal codes are used to identify companies that are based in the local area. It is not possible to determine if all the locally-based companies use only local labour or materials sourced from local suppliers in the goods and services they provide to WAX. As a result, the regional expenditures data provides only a general indication of potential local benefits of WAX; more detailed data would be required to assess the degree to which the projected additional household income will be realized and the extent to which local businesses are directly benefitting from the project.

5. Indirect Project Impacts

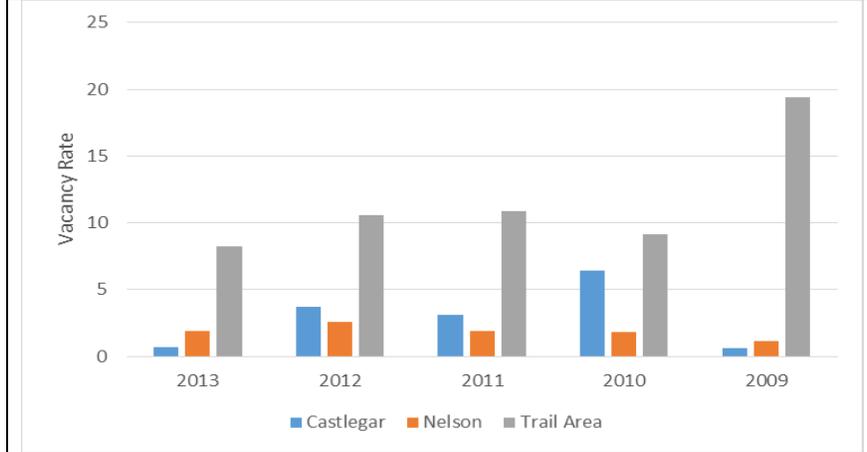
5.1 Housing

The data on local hires does not differentiate between workers who were already living in the area compared to those who have moved into the area and now have a local address as a result of renting or purchasing accommodation. Hence, it is difficult to state that the high percentage of local hires means the project is having little impact on the local housing market.

Anecdotally, local realtors report that there were very few home sales that could be attributed to employees of WAX, rather the majority of enquiries are from WAX employees interested in rental properties.

The residential vacancy rate for housing that is purposefully built for rental (apartments and row housing) decreased slightly in Trail from 2012 to 2013 (10.6 to 8.2) with a significant reduction from the four year high in 2009 of 19.4. Castlegar dropped from 3.7 in 2012 to 0.7 in 2013, which is only slightly higher than the 5-year low of 0.6 in 2009. Nelson's rate returned to the 2011 level of 1.9, coming down from the increase in 2012 of 2.6. According to the Canada Mortgage and Housing Corporation (CMHC) and local reality staff, the higher vacancy rate in Trail is because the available rental units are generally older and do not meet the needs or interests of the workforce, hence it has been suggested that WAX employees have sought accommodation at the ski hill in Rossland and other locations in the surrounding areas.

Figure 12
Vacancy Rates for Apartments and Row Houses



Source: CMHC

The other source of rental properties, which is not included in the CMHC statistics, is single detached houses that may be rented while the owners are waiting for the property to be sold. Local reality staff reports that people from WAX who are enquiring about rentals are generally not interested in single detached housing with the preference being for condos. A number of WAX employees are known to be renting condos at Red Mountain Resort.

5.2 Motel/Hotel Vacancy

Most hotels in the area reported a decrease in business from 2010 to 2011, a modest increase from 2011 to 2012, with those levels of occupancy continuing in 2013.

In the Greater Trail area, businesses reported that people associated with WAX are known to have stayed at their facilities. The level of business associated with WAX was described as “significant” and generally consistent over the three years of construction to date. It was further suggested that business was generally declining over the past few years so that WAX has filled rooms that would have otherwise been empty, thus allowing some hotels to maintain a consistent level of activity. Hotels in the Castlegar area reported periodic or little impact from the project.

5.3 Daycare Wait Lists

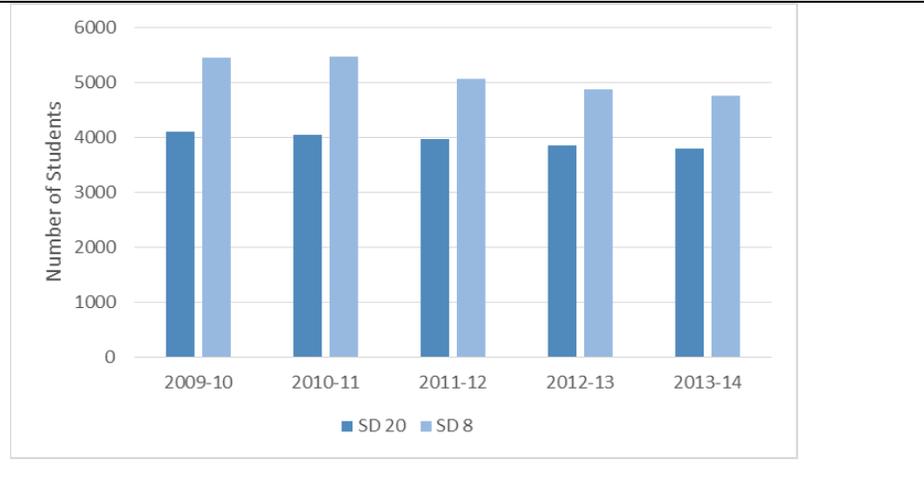
During 2013, some additional capacity, in the form of new and/or expanded daycares, has been realized in the Trail area. As a result, while there are still waitlists, they are shorter than previous years. Although staff report requests from families who are moving into the area, they do not know if any of the families are affiliated with WAX.

5.4 School Enrollment

Enrollment in public schools within School District #20, which includes the communities of Trail and Castlegar, declined by 72 students from the 2012/13 to 2013/14 school years. School District #8 experienced a decrease of 118 students for the same period. It is unknown if WAX had a significant impact on reducing the overall decline in enrollment for SD#20, but it is reasonable to assume that it may have positively contributed to the situation to some degree,

whether by attracting new families into the area or enabling local families to remain. However, as the WAX workforce is recognized to include a high percentage of older workers, the project's impact on school enrollment is likely to be minimal.

Figure 13
Trend in School Enrollment



Source: School Districts 8 and 20

5.5 Recreation Services

One of the clearest indicators of any change in demand for recreation services that might be attributed to WAX is the use of the Trail Aquatic Centre. The facility draws users from the Greater Trail area and beyond, whereas other recreation services, such as day camps for young children, are offered in numerous communities. Each client/family that accesses the facility pays an individual fee, which contrasts with other facilities, such as the arena which is most frequently booked by groups. Additionally, the aquatics center has a separate fee structure for local residents; hence, staff engage users in discussions about their residency.

Use of the facility declined significantly during 2008-09 when a new fee structure was first introduced. Revenues have increased modestly each subsequent year with a 12% increase between 2010 and 2011, which staff largely attribute to reconfiguration of local government contributions. From 2012-2013, staff reported a 6% increase in revenue. As local government contributions were stable during this time, the increased revenue is entirely attributable to increased use of the facility. Anecdotally, staff reported that 2013 was the busiest year in recent memory. Staff do not collect data that could be used to determine if and how the project is impacting revenues for the facility.

Overall, it is reasonable to suggest that WAX is having some positive impacts on revenue associated with recreation services, but the extent of the impact is unknown. While there is little evidence to suggest that the project is resulting in many new families moving into the area, it is likely that the project is strengthening the ability of tradespeople to remain in the area and suppliers to maintain their current employment levels. It logically follows that this would contribute to the strong demand for recreation services. As the demand is not exceeding the ability of the facilities to provide the services, overall this is a positive impact.

5.6 Population

The BC Statistics population estimates indicate no change in population for the Regional District of Kootenay Boundary between 2012-2013. This continues a pattern of very little change over the past five years. A slight increase of 0.3% has been estimated for the Regional District of Central Kootenay, which continues a pattern of minor increases each year for the past five years.

Given the relatively small size of WAX compared to the overall economy and the high percentage of local hiring, it is unlikely that WAX has significantly contributed to changes in population. The impact of the project more likely relates to retaining people who might have otherwise left the area, even if temporarily, and so likely it has positively contributed to the stability of the population.

5.7 Traffic Safety

In accordance with requirements in the EAC, a traffic safety management plan has been developed that outlines commitments for addressing impacts of WAX. The plan has been developed in consultation with the Ministry of Transportation and Infrastructure (MOTI). As WAX will not be using three of the sites that were originally included as part of project plan, these areas have been removed from the Traffic Safety Plan.

A key component of the traffic safety plan is that the Waneta-Nelway Road between Hwy 22A and the 7 Mile Road has been closed for the duration of construction of the Waneta Expansion Project. Safety procedures are in place to ensure the road can be reopened in a timely manner in case an emergency closes the 7 Mile Dam Road or there is another urgent need. Access is being maintained to the Waneta Cemetery.

The socio-economic monitoring program is not involved in WAX commitments that relate to MOTI standards or other aspects that MOTI would define and monitor. Rather, the socio-economic monitoring program reports on traffic issues raised by residents via the CIMC and/or reported directly to the RCMP, Columbia Power and/or the socio-economic monitor.

During the first quarter of 2013, there was a vehicle accident involving one of the trucks working on the Fort Shepherd compensation project, which is a requirement under project approval provided by the Environmental Assessment Office, but is managed as a separate project. There were no injuries associated with the accident.

Cyclists reported above normal amounts of rock on the road resulting from hauling material from the Fort Shepherd site. The lead contractor for the project, Quantam Murray, worked with SNC-Lavalin to address the situation.

5.8 Border Services

The Border Service reported no significant change in traffic through the Waneta border crossing as a result of WAX. While statistics were not provided, border staff are notified when traffic volumes change by more than 10% from previous years. Staff stated that they had not been notified that such a change had occurred for any months during 2013.

5.9 Other Community Concerns

The following is an overview of related issues that were discussed with the CIMC and Socio-Economic Monitor.

Fort Shepherd Compensation Program

Rob Dunsmore of FortisBC reported that WAX will result in a slight increase in flow fluctuations in the area of the confluence of the Pend d'Oreille and Columbia Rivers. As a result, the Environmental Assessment Office required that the owners undertake a compensation program aimed at increasing the shallow water habitat for fish (species other than white sturgeon). The project will reduce fish stranding, which currently happens at the site when water levels are reduced.

The fish compensation project was successfully completed in the fall of 2013.

Transmission Line

Work on the transmission line began in 2013. The route for the new transmission line runs from the new powerhouse up the Seven Mile Road where it then parallels the existing BC Hydro right of way. BC Hydro designed the new transmission line. As of November, 2013, all poles were up with stringing of the lines 60% complete. The project is expected to be fully completed in early 2014.

Community Park

The owners have committed to develop a legacy park immediately across the bridge from the project site, subject to support from the land owners and the Regional District of Kootenay Boundary. This commitment was made as part of the process to apply for project approval from the Environmental Assessment Office. Columbia Power is working with the CIMC to seek input on how to develop the park.