**REGIONAL DISTRICT OF NANAIMO**

**COMMITTEE OF THE WHOLE**
**TUESDAY, APRIL 14, 2015**
**7:10 PM**

***(RDN Board Chambers)***

**A G E N D A**

**PAGES**

**CALL TO ORDER**

**DELEGATIONS**

5-85 **Dr. Paul Hasselback, Island Health,** re Presentation on the Local Health Area Profiles for the Nanaimo Area.

86 **Gail Adrienne and Paul Chapman, Nanaimo and Area Land Trust,** re Nanaimo River Watershed Roundtable.

**MINUTES**

87-93 Minutes of the Regular Committee of the Whole meeting held Tuesday, March 10, 2015.

**BUSINESS ARISING FROM THE MINUTES**

**COMMUNICATIONS/CORRESPONDENCE**

94 **Ken Cossey, Snuneymuxw First Nation,** re Appointment to the Liquid Waste Management Plan Monitoring Committee.

95-97 **Laurie Gourlay, Vancouver Island & Coast Conservation Society,** re World Water Day Request re Cassidy Aquifer.

98-107 **Gary Fribance, Third Crossing Society,** re Request for Letter of Support in Principle.

108 **Norman Abbey, Neighbours of Nob Hill Society,** re Support for the Rail Trail Extension.

109 **UBCM,** re Rural Advisory Council Announced.

110-113 **UBCM,** re Deadline Approaching for Urban Deer Recommendations.

**FINANCE**

114-121 2015 Gas Tax Transfer and Community Works Fund Project Update.

**REGIONAL AND COMMUNITY UTILITIES**

**WASTEWATER**

122-124 FCPCC Trickling Filter Roof Replacement Project Award.

125-127 SepticSmart Education Program Progress Report.

**STRATEGIC AND COMMUNITY DEVELOPMENT**

**ENERGY AND SUSTAINABILITY**

128-130 Community Works Fund Contribution – Arrowsmith Agricultural Association.

**ADVISORY AND SELECT COMMITTEE, AND COMMISSION**

**Agricultural Advisory Committee**

131-132 Minutes of the Agricultural Advisory Committee meeting held Friday, March 27, 2015 (for information).

**District 69 Recreation Commission**

133-137 Minutes of the District 69 Recreation Commission meeting held Thursday, March 19, 2015 (for information).

138-140 **Grant Approvals**

1. *That the following District 69 Youth Recreation Grant Applications be approved:*

| **Youth Organization** | **Funding** |
|---|---|
| 893 Beaufort Squadron- training activities | $2,500 |
| Ballenas Secondary School - Dry Grad | $1,200 |
| Errington War Memorial Hall Association- Intercultural Music Project | $1,100 |
| The Nature Trust of BC- Brant Wildlife Festival/Youth Photo Exhibit | $700 |
| Oceanside Minor Lacrosse Association- Shark Attack Tournament | $2,500 |
| **Total** | **$8,000** |

2. *That the following District 69 Community Recreation Grant applications be approved:*

| **Community Organization** | **Funding** |
|---|---|
| Arrowsmith Community Recreation Association- Coombs Community Picnic | $529 |
| Corcan Meadowood Residents Association- Canada Day event | $2,350 |
| Errington Elementary School PAC- grade 3 swim program | $2,500 |
| Errington Elementary School- Tribune Bay subsidies for low- income families | $2,500 |
| Errington Therapeutic Riding Association - program expenses horses and arena & insurance | $1,000 |
| Oceanside Elementary School PAC- new playground construction | $2,500 |
| Town of Qualicum Beach- Select Committee on Beach Day Celebrations | $1,500 |
| **Total** | **$12,879** |

**ADDENDUM**

**BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS**

**NEW BUSINESS**

**Board Procedure Bylaw**

*At the March 10, 2015 Committee of the Whole meeting, Director Veenhof advised that he would be bringing the following motion to the April 14, 2015 Committee of the Whole Agenda:*

*That staff be directed to open the Board Procedure Bylaw for staff and Director review.*

**Southern Community Economic Development Funding Agreement.**

*At the March 24, 2015 Board Meeting, Director Houle advised that he would be bringing the following motion to the April 14, 2015 Committee of the Whole Agenda:*

*That staff be directed to prepare a report on the implications of Electoral Areas 'A', 'B', and 'C' withdrawing from the Southern Community Economic Development Funding Agreement.*

**Liquid Waste Management Plan Monitoring Committee**

*(Chair to confirm appointment of Directors to committee.)*

**IN CAMERA**

*That pursuant to Sections 90(1)(a), (c), and (f) of the Community Charter the Committee proceed to an In Camera Meeting for discussions related to Board appointments, labour relations, and law enforcement.*

**ADJOURNMENT**

**RE: Presentation on the Local Health Area Profiles for the Nanaimo Area**

**From:** Lawson, Christal
**Sent:** Friday, January 30, 2015 11:14 AM
**To:** corpsrv
**Subject:** Delegation - RDN

I would like to submit a delegation for Dr. Hasselback to appear at a RDN Board Meeting to make his annual presentation on the Local Health Area Profiles for the Nanaimo area.

I am interested in the April 14, 2015 Committee of the Whole Meeting date.

Thanks,

**Christal Lawson**
MHO Administrative Assistant
Island Health, Central
3rd Floor, 6475 Metral Drive
Nanaimo, BC V9T 2L9
**Tel: 250.739.6304**
**Fax: 250.755.3372**
**Email: christal.lawson@viha.ca**

# Local Health Area Profiles Interpretation Guide 2013

Prepared by Planning and Community Engagement
Island Health
February 2015

This Interpretation Guide is intended to be read with the LHA Profiles.

These profiles are not intended to be used for detailed planning or analysis. As they are updated on an annual basis, there may be more current data available. If you are intending to use these profiles for health planning purposes, or if you have questions or notice a discrepancy, please contact Melanie Rusch (Melanie.Rusch@viha.ca).

Please note: This Guide accompanies the 2012 profiles.

These profiles are intended to shed some light on community health including the many factors that contribute to and detract from health such as economic status, child development, education, housing, justice, social support and health services. Successful improvements in health can only come about with the involvement of an entire community. Partnering of community organizations, all levels of government, and community members, is essential. Island Health can be a participant in such partnerships, but does not necessarily play a primary role in addressing these issues.

# Table of Contents

# Overview

This guide was created as an accompaniment to the Local Health Area (LHA) Profiles prepared by Island Health's Planning and Community Engagement Department. These profiles are intended to provide an overview of the health status and an insight into the health needs of Island Health's LHAs.

## Format

This guide follows a similar format to the LHA profiles. Each group of indicators is provided with a header explaining the overall health significance of those indicators. The indicators themselves are presented in table form where applicable, with a definition of the term drawn from the data source, an interpretation given to show the significance of the indicator to individual or community health status, and the source of the definition with a link to the appropriate webpage.

Each interpretation is also provided with a **high** and **low** aid. Where possible, statistics in the LHA profile are provided in comparison to the Island Health and British Columbia (BC) averages. The high/low aids are intended to indicate what the direction of variance means for a specific indicator in comparison to the Island Health and BC averages.

Examples: "**High**: Children are more vulnerable" indicates that if the levels of the LHA are higher than Island Health/BC averages, children in that area are more vulnerable than those in Island Health/BC. "**Low**: Fewer people are receiving employment insurance" indicates that if the levels of the LHA are lower than the Island Health/BC average, fewer people in that area are receiving employment insurance than the Island Health/BC average. Depending on the indicator, high and low can be reversed: i.e. high can be good (such as labour force participation rate) or bad (serious juvenile crime rate).

Terms which are underlined are defined in the glossary at the end of this document.

Some indicators measure health status, while others measure the vulnerability of individuals and/or populations. Although people who are vulnerable will not necessarily have more health problems, when they do, they are more likely to experience a greater impact.

# 1 Highlights

This section contains the highlights from individual indicator groups. It is intended to give a quick and convenient overview of some of the most pertinent statistics for the LHA.

# 2 Geography

Island Health provides care to a diverse geographic range covering the entirety of Vancouver Island, the Gulf Islands, the Discovery Islands, and a portion of the mainland from north of Powell River to south of Rivers Inlet. The communities it provides service to range from urban centres like Victoria and Nanaimo to rural/remote areas such as Kingcome, Gilford and Tahsis. It has long been known that there is a connection between geographic location and health status: those living in rural locations often fare more poorly in health status than those in urban areas.[1]

In order to facilitate health care planning and delivery, Island Health is divided into 14 LHAs (Figure 1).

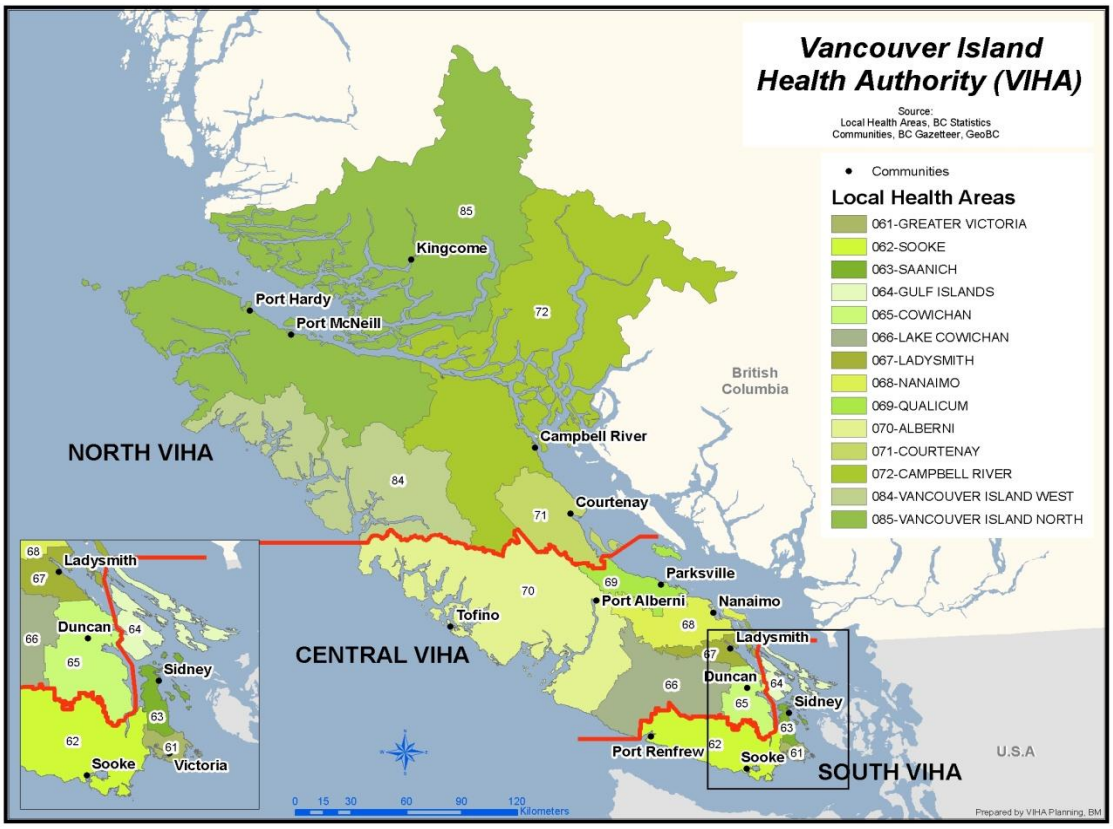
## 2.1 Location Description

Describes where the LHA is located, its size, and the communities it contains.

## 2.2 Transportation

According to the Canadian Institute for Health Information (CIHI), "Access to prevention, early detection, treatment or support services… make good health status even more difficult to achieve in rural or remote areas… People living in rural communities generally need to travel longer distances, and often on more dangerous roads, for work, shopping and other reasons."[2]

**Figure 1: The Vancouver Island Health Authority by Heath Service Delivery Area and Local Health Area**



# 3 Demographics

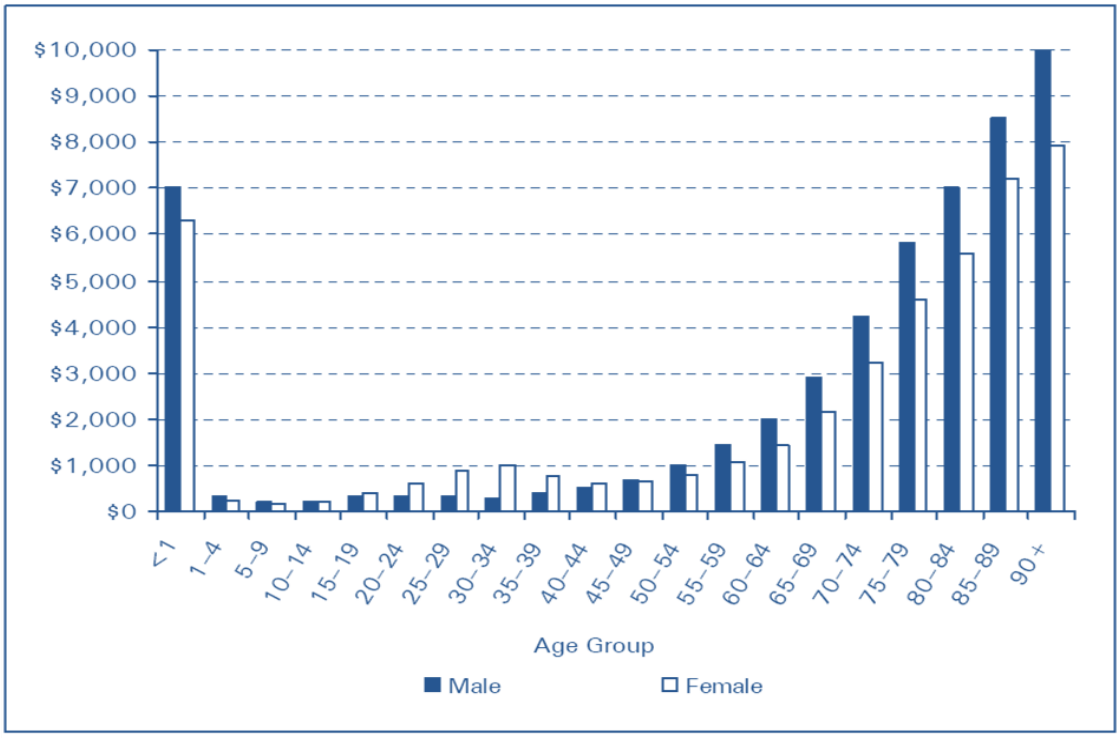
Demographics are often the first indicators to consider when evaluating a population and their health needs. The changing characteristics of a population, such as age and size, have a considerable impact on its health needs. A community with an elderly population, for example, will likely require more health care services overall relative to a community of similar size with a younger population.

As people grow older, they require more health services. On average the need, and the cost, of these services rise dramatically with age (Figure 2). Demographic profiles are one of the tools used to plan health care services.

Those LHAs with relatively small populations are affected by the small number problem. Due to the small denominator, even minor changes in the numerator can appear more significant than they may be. For example, one or two infant deaths in a small community will result in a higher infant mortality rate compared to a larger community which experiences more deaths. Similarly, an increase of one death in the small community from one year to the next could raise the mortality rate significantly.

Also of note, changing data definitions may result in an apparently significant change between reports from two different years. As far as possible, the profiles will attempt to flag where data definitions have changed between the latest profile and previous ones.

**Figure 2: Provincial/Territorial Government Health Expenditure per Capita by Age and Sex, Canada, 2007**[3]




As well as the overall demographic trends, it is also important that we consider subpopulations, especially vulnerable populations such as those of Aboriginal status.[i]

[i] Refers to those persons who self identified with at least one Aboriginal group (North American Indian, Métis or Inuit, and/or those who reported being a Treaty Indian or a Registered Indian, as defined by the Indian Act of Canada, and/or those who reported they were members of an Indian band or First Nation.

Within Island Health, there are 49 First Nations groups[4] distinct from one another in relation to their location and environment (urban, rural, and remote) with unique cultures, traditions and language. Aboriginal people experience gaps in their health outcomes as a result of a multitude of factors.[5]

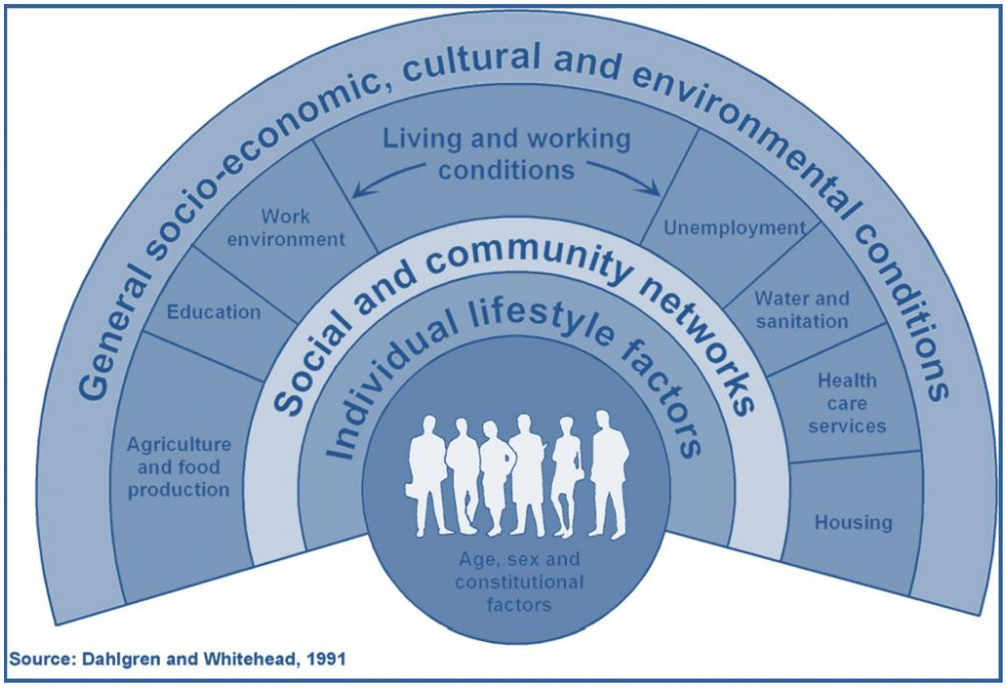
When considering the Aboriginal population data it is important to remember that Aboriginal self-identification patterns and census participation have changed over time and may have caused an inaccurate representation of change in Aboriginal populations.[6]

# 4 Social Determinants of Health

Access to adequate income, affordable housing, healthy food, education, early childhood development, healthy work environment and recreational opportunities influence our ability to make healthy choices and ultimately the state of our physical and mental health as well as life expectancy (Figure 3). In part, health inequities arise as the result of a concentration of risk factors within disadvantaged populations including the social conditions in which people live and work.[7] Commonly these determinants are grouped together as factors which contribute to socio-economic status (SES).

Relationships between social inequities and health outcomes are causal and bi-directional. Populations living in poorer social conditions generally have higher rates of chronic disease and through periods of ill health, individuals with chronic disease can lose the security of adequate income and social supports.[8]

**Figure 3: The Determinants of Health[9]**




Owing to small numbers concerns in VI West, BC Statistics combines that LHA's Social Determinants of Health indicators with those of Campbell River. This reduces the extreme variation that can be caused in rates and percentages when the denominator is very small. BC Statistics was able to provide some of these indicators for Campbell River and VI West individually, and all data coming from the census or other sources was available for the two LHAs separately, however there are some indicators without data. The amalgamated indicators have also been provided in these two profiles to help bridge these gaps. For this reason, the Campbell River and VI West profiles have a slightly different appearance.

## 4.1 Economic Wellbeing

Sufficient income improves access to adequate housing, nutritious foods, safe communities and participation in recreational, educational and cultural opportunities as well as other essentials for a healthy life. Inadequate income limits the security of these basic living conditions for individuals and families and that insecurity can create tremendous stress which also contributes to ill health.[10] It is one of the key factors affecting health vulnerability. In 2007, Canadians in the lowest income group were twice as likely as those in the highest income group to report their health to be worse than the previous year (22% vs. 11% for women; 19% vs. 9% for men).[11] In general, areas with greater levels of affluence will experience better than average health, while areas with lower levels will experience worse than average health.

Note: The indicator used to record family income is the median, rather than the average. The median was chosen in order to avoid disproportionate influence from extreme outliers which in small samples can often skew data and prove misrepresentative.

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Median Family Income | Median family income from all sources in 2010. The middle point of all the income reported for income in families. | Income is profoundly related to the health status of the population. It is a critical predictor of health status.<br>**High**: Families have higher income<br>**Low**: Families have lower income | Statistics Canada, NHS 2011 |
| Lone-Parent Family Income | Average family income of lone parent economic families in 2010. | This group is vulnerable in terms of income, and therefore health.<br>**High**: Families have higher income<br>**Low**: Families have lower income | Statistics Canada, NHS 2011 |
| Couple Economic Family Income | Average family income of couple economic families reported in 2010. | This group is more likely to have a stable, higher income. This reflects positively on the health of this group<br>**High**: Families have higher income<br>**Low**: Families have lower income | Statistics Canada, NHS 2011 |
| Low Income Persons | Percentage of economic families or persons not in economic families who spend 20% more of their after-tax income than average on food, shelter and clothing. | This group suffers from greater health vulnerability.<br>**High**: Higher rates of low-income families<br>**Low**: Lower rates of low-income families | Statistics Canada, NHS 2011 |
| Income Assistance | Percent of population aged 0 to 64 receiving income assistance from a provincial program. Program giving monetary aid to those in the Temporary Assistance category under the BC Employment and Assistance program | This group suffers from greater health vulnerability.<br>**High**: More people are receiving income assistance<br>**Low**: Fewer people are receiving income assistance. | BC Stats, 2012 Socioeconomic Profiles |
| Employment Insurance | Percent of population 15+ on employment insurance. A program of Human Resources Development, it provides temporary financial help to unemployed Canadians. Persons must contribute to the plan and qualify under the rules. | This group suffers from greater health vulnerability.<br>**High**: More people are receiving employment insurance<br>**Low**: Fewer people are receiving employment insurance | BC Stats, 2012 Socioeconomic Profiles |

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Low Income Seniors* | Percent of persons 65 years of age and over that were below the Statistics Canada Low Income Cut-off Point before tax in 2005. | This group is highly vulnerable, and on average require more health care services.<br>**High**: More low-income seniors<br>**Low**: Fewer low-income seniors | Statistics Canada, NHS 2011 |
| Labour force Participation Rate | Percent of Population aged 25 and over that are participating in the labour force | These figures can be used to determine unemployment, which is a predictor of health vulnerability<br>**High**: More people are participating in the labour force<br>**Low**: Fewer people are participating in the labour force | Statistics Canada, NHS 2011 |
| Unemployment rate | Percent of population aged 25 and over, excluding institutional residents | Indicative of greater or poorer health vulnerability<br>**High**: More people are unemployed<br>**Low**: Fewer people are unemployed | Statistics Canada, NHS 2011 |
| Highest Income Households | Percent of private households earning more than $80,000 | This group is one of the least vulnerable groups in society in terms of health outcomes.<br>**High**: More high-income families<br>**Low**: Fewer high-income families | Statistics Canada, NHS 2011 |
| Lowest Income Households | Percent of private households earning less than $20,000. | This group is one of the most vulnerable groups in society in terms of health outcomes.<br>**High**: More low-income families<br>**Low**: Fewer high-income families | Statistics Canada, NHS 2011 |

*Low Income Cut-off Point: Point used to analyze low income in a population. Usually considered as families spending more than 64% of their after tax income on food, shelter, and clothing (BC stats).

## 4.2 Education

There is a strong correlation between level of education and health outcomes. There is clear evidence that those who graduate from high school typically experience better health than non graduates.[12] Education is often considered a key measure or predictor of SES and health. In Canada (using Statistics Canada's National Population Health Survey [NPHS] data), self-rated health status was found to increase with level of education (elementary to secondary to university), while self-reported chronic conditions generally decreased as education increased.[13]

Some indicators in the following section are from the Human Early Learning Partnership Data/Methodology (HELP). HELP is a research initiative based out of the University of British Columbia that works with schools and communities in BC to research and analyse the long-term effects of young children's environments on their brain development and learning. HELP uses a longitudinal research approach to advance scientific understanding of the importance of early child development as a determinant of long-term health outcomes.

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Preschool Language Development Vulnerability | Percent of Kindergarten children rated as vulnerable for language and cognitive development (problems in reading, writing, and numeracy) | Early development skills are critical predictors of school achievement and social/emotional health. Educational achievement is a predictor of long-term health outcomes.<br>**High**: Children are more vulnerable<br>**Low**: Children are less vulnerable | Human Early Learning Partnership |
| Preschool Communication Skills Vulnerability | Percent of kindergarten children rated as vulnerable in communication and general knowledge skills | Early development skills are critical predictors of school achievement and social/emotional health. Educational achievement is a predictor of long-term health outcomes.<br>**High**: Children are more vulnerable<br>**Low**: Children are less vulnerable | Human Early Learning Partnership |
| Grade 4 & 7 Below Standard in Reading | Percent of students scoring below standards on standardized test in reading. | Reading skills are an important measure of a child's school achievement and social/emotional health. Educational achievement is a predictor of long-term health outcomes.<br>**High**: Children are faring worse<br>**Low**: Children are faring better | BC Stats, 2012 Socioeconomic Profiles |
| Grade 4 & 7 Below Standard in Writing | Percent of students scoring below standards on standardized tests in writing. | Writing skills are an important measure of a child's school achievement and social/emotional health. Educational achievement is a predictor of long-term health outcomes.<br>**High**: Children are faring worse<br>**Low**: Children are faring better | BC Stats, 2012 Socioeconomic Profiles |
| Grade 10 English Exam Completion Rate | Percent of students who did write or pass Grade 10 provincial English exam. | English skills are an important measure of a youth's school achievement and social/emotional health. Educational achievement is a predictor of long-term health outcomes.<br>**High**: Children are faring better<br>**Low**: Children are faring worse | BC Stats, 2012 Socioeconomic Profiles |

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| 18 Year Olds who Graduated | Percent of 18 year olds who did graduate high school | Educational achievement is a predictor of long-term health outcomes. High school graduates experience on average better health than non-graduates.<br>**High**: Children are faring better<br>**Low**: Children are faring worse | BC Stats, 2012 Socioeconomic Profiles |
| Adults with High School Certificate* | Percent of Population aged 25 to 64 with high school certificate or equivalent | Educational achievement is a predictor of long-term health outcomes. High school graduates experience on average better health than non-graduates.<br>**High**: Adults are better educated<br>**Low**: Adults are less well educated | Statistics Canada, NHS 2011 |
| Post Secondary Education | Percent of Population 25 to 64 with trades certificate or diploma, college and other non-university certificates or diplomas and university undergraduate certificates. | Educational achievement is a predictor of long-term health outcomes. University graduates experience on average better health than non-graduates.<br>**High**: Adults are better educated<br>**Low**: Adults are less well educated. | Statistics Canada, NHS 2011 |

* High School Certificate: A certificate demonstrating a high school level of attainment which is alternative to obtaining a British Columbia Certificate of Graduation. There exist multiple options, namely a British Columbia Adult Graduation Diploma, General Educational Development (GED) Secondary Equivalency Certificate, Adult Basic Education (ABE) Provincial Diploma, and letters of assessment. (http://www.bced.gov.bc.ca/reporting/glossary.php)

## 4.3 Housing

Housing can have both direct and long term impacts on health. Individuals living in substandard housing (e.g. old, cramped, insufficiently insulated or ventilated housing) are more likely to have poorer health than those living in satisfactory housing. On average, when people spend excessive amounts of income on housing, fewer resources are available for other health essentials, especially if they also have an inadequate income. Studies suggest affordable housing improves health outcomes by freeing up resources for food and other essentials. It also reduces stress, exposure to allergens, neurotoxins and other dangers as well as provides the stability that enables patients with chronic diseases to access and maintain the level of care they need.[14]

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Multiple-Family Households | Percent of private households with multiple families. | This group may face greater health vulnerability due to living in close quarters, (e.g. disease transmission) Also may have more support networks such as child-care etc.<br>**High**: More multiple-family households<br>**Low**: Fewer multiple-family households | Statistics Canada, Census 2011 |
| Crowded Households | Percent of private households with 6 or more persons living inside them | This group may face greater health vulnerability due to living in close quarters, (e.g. disease transmission) Also may have more support networks such as child-care etc.<br>**High**: More crowded households<br>**Low**: Fewer crowded households | Statistics Canada, Census 2011 |
| Older Housing | Percent of dwellings built prior to 1960. | Buildings built prior to 1960, especially if not updated, carry health risks (e.g. asbestos, mould, etc.).<br>**High**: More older housing units<br>**Low**: Fewer older housing units | Statistics Canada, NHS 2011 |
| Dwelling Needing Major Repair | Percent of dwellings rated as needing major repairs by renter or owner. | These buildings carry health risks (e.g. structural integrity, asbestos). They may also indicate financial and health vulnerability.<br>**High**: More dwellings in need of repairs<br>**Low**: Fewer dwellings in need of repairs | Statistics Canada, NHS 2011 |
| Home Ownership Costs | Percent of home owners spending more than 30% of income on housing. | May not have the financial "safety net" in case of emergency and may impact ability to make healthy lifestyle choices. It is a predictor of health and financial vulnerability.<br>**High**: Higher home ownership costs<br>**Low**: Lower home ownership costs | Statistics Canada, NHS 2011 |
| Gross Major Monthly Payment | Average gross major monthly payment of owner-occupied private non-farm, non-reserve dwellings | Should be viewed in conjunction with income indicator. Provides additional context to homeowner costs.<br>**High**: Monthly payments are higher<br>**Low**: Monthly payments are lower | Statistics Canada, NHS 2011 |

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Housing Rental Costs | Percent of renters spending more than 30% of income on rent. | Impact ability to make healthy lifestyle choices. It is a predictor of health and financial vulnerability.<br>**High**: Higher housing rental costs<br>**Low**: Lower housing rental costs | Statistics Canada, NHS 2011 |
| Average Gross Rent | Average gross rent of tenant-occupied private non-farm, non-reserve dwellings | Should be viewed in conjunction with income indicator. Provides additional context to rental costs.<br>**High**: More rent is paid<br>**Low**: Less rent is paid | Statistics Canada, NHS 2011 |

## 4.4 Social Support

Support from families, friends and communities is associated with better health. Such social support networks could be very important in helping people solve problems and deal with adversity, as well as in maintaining a sense of mastery and control over life circumstances. The caring and respect that occurs in social relationships, and the resulting sense of satisfaction and well-being, seem to act as a buffer against health problems.[15] While social isolation tends to increase as people age, other factors play a role, including: poor health, disabilities, gender, loss of a spouse, living alone, reduced social networks, transportation barriers, place of residence, distrust of others, poverty and low self-esteem. Factors affecting one person may not affect another in the same way. For instance, living alone does not necessarily mean someone is lonely or unsupported. Moreover, individuals who have fewer social contacts as they age may not necessarily feel dissatisfied or lonely. Research suggests that the quality of social contacts is more strongly associated with well-being than the quantity.[16]

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Seniors Living Alone | Percent of persons aged 65 and over that are not in census families and are living alone. | A lack of social support in the home intensifies the greater vulnerability of seniors.<br>**High**: More seniors living alone<br>**Low**: Fewer seniors living alone | Statistics Canada, Census 2011 |
| Adults Living Alone | Percent of persons in private households that are not in census families and are living alone. | Adults living alone may face more vulnerability in times of illness or need.<br>**High**: More adults living alone<br>**Low**: Fewer adults living alone | Statistics Canada, Census 2011 |
| Male Lone-Parent Families | Percent of census families in private households that are male lone-parent families. Households where the father is the sole present parent, main caregiver and breadwinner. | Male lone-parent families may experience more challenges with healthy living for self and children. May also be more vulnerable in terms of income.<br>**High**: More male lone-parent families<br>**Low**: Fewer male lone-parent families | Statistics Canada, Census 2011 |
| Female Lone-Parent Families | Percent of census families in private households that are female lone-parent families. Households where the mother is the sole present parent, main caregiver and breadwinner | Female lone-parent families may experience more challenges with healthy living for self and children. May also be more vulnerable in terms of income.<br>**High**: More female lone-parent families<br>**Low**: Fewer female lone-parent families | Statistics Canada, Census 2011 |
| Lone-Parent Families | Percent of families in private households that are lone-parent families. | Lone-parent families may experience more challenges with healthy living for self and children. May also be more vulnerable in terms of income.<br>**High**: More lone-parent families<br>**Low**: Fewer lone-parent families | Statistics Canada, Census 2011 |
| Widowed | Percent of population aged 15 and over that are widowed due to the death of a spouse. | Widowed individuals may face more vulnerability in times of illness or need.<br>**High**: More widowed individuals<br>**Low**: Fewer widowed individuals | Statistics Canada, Census 2011 |

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Separated or Divorced | Percent of population aged 15 and over that are or were legally married but are separated or since divorced. | Separated or divorced individuals may face more vulnerability in times of illness or need.<br>**High**: More separated or divorced individuals<br>**Low**: Fewer separated or divorced individuals | Statistics Canada, Census 2011 |
| Common-law | Percent of the population aged 15 and over that are in a common-law relationship. Usually considered as two people living together as though they were married. | Greater levels of social support may contribute to better health.<br>**High**: More common-law relationships<br>**Low**: Fewer common-law relationships | Statistics Canada, Census 2011 |
| Married | Percent of population aged 15 and over that are legally married (not separated) | Greater levels of social support may contribute to better health.<br>**High**: More married individuals<br>**Low**: Fewer married individuals | Statistics Canada, Census 2011 |
| Singles | Percent of population aged 15 and over that have never legally married. | Singles may be more vulnerable in times of illness and/or need.<br>**High**: More single individuals<br>**Low**: Fewer single individuals | Statistics Canada, Census 2011 |

## 4.5 Healthy Development (Child & Youth)

Healthy development for children and youth has a key impact on an individual's health vulnerability not just in the early years but throughout life. A number of important early childhood factors that can have long term developmental implications on health and social functioning have been identified. These include poverty, family stability and violence, social assistance dependency, residing in public housing, and related factors that reflect social conditions that affect children during their formative years[17] As childhood development has a significant impact on an individual's mental and physical health later in life, these indicators therefore show not only the health of children, but help to predict the future health of the population. Many of these indicators are also predictors of socio-economic status, and so serve to further predict not only the health of the children but the overall health of the population.

This section includes both rates and percentages. Please take care to distinguish them.

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Serious Juvenile Crime Rate | Juvenile crime rate per 1,000 population aged 12-17 (breaking and entering, crimes with weapons and assaults with serious injury). | Juvenile crime can be a predictor of long-term health due to social, educational and financial vulnerabilities.<br>**High**: Higher rate of serious juvenile crime<br>**Low**: Lower rate of serious juvenile crime | BC Stats, 2012 Socioeconomic Profiles |
| Teen Mother | Live births to mothers under 20 years of age per 1,000 live births | Will likely face more challenges with healthy living for self and child due to social, educational, and financial vulnerabilities.<br>**High**: More teen pregnancies<br>**Low**: Fewer teen pregnancies | BC Vital Statistics |
| Children on IA Living with Single Parent | Percent of children less than 15 years of age receiving income assistance (IA) and living with a single parent. | May be a predictor of low income and therefore of higher vulnerability in times of need.<br>**High**: More children living on IA with a single parent<br>**Low**: Fewer children living on IA with a single parent | BC Stats, 2012 Socioeconomic Profiles |
| Children on Income Assistance | Percent of children less than 15 years of age receiving income assistance. | Predictor of children in low income families. They may face financial barriers that could lead to long-term health outcomes.<br>**High**: More children on IA<br>**Low**: Fewer children on IA | BC Stats, 2012 Socioeconomic Profiles |
| Children in Care | Children aged 0 to 18 taken into care (e.g. foster care, specialised residences) by the provincial child care authorities. Rate per 1,000 population. | May be an indicator of broader social issues.<br>**High**: More children in care<br>**Low**: Fewer children in care | BC Stats, 2012 Socioeconomic Profiles |
| Children in Need of Protection* | Reported child abuse cases per 1,000 children aged 0 to 18 years. Defined as the physical, emotional, or sexual mistreatment of children. | Child abuse predicts financial and health vulnerability.<br>**High**: Higher levels of child abuse<br>**Low**: Lower levels of child abuse | BC Stats, 2012 Socioeconomic Profiles |

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Preschool Social Development Vulnerability* | Percent of kindergarten children rated as having problems forming friendships, accepting rules, and showing respect for adults. | Early development skills are critical predictors of school achievement and social/emotional health, and can be a predictor of long-term health outcomes.<br>**High**: Children are more vulnerable<br>**Low**: Children are less vulnerable | Human Early Learning Partnership |
| Preschool Emotional Development Vulnerability* | Percent of kindergarten children rated as having problems with aggressive behaviour, impulsivity, disobedience, and inattentiveness. | Early development skills are critical predictors of school achievement and social/emotional health, and can be a predictor of long-term health outcomes.<br>**High**: Children are more vulnerable<br>**Low**: Children are less vulnerable | Human Early Learning Partnership |

*Healthy Development: Indicators contributing toward the healthy social development of children and youth.

## 4.6 Child Health

Like Child and Youth Healthy Development, Child Health has a major impact on vulnerability both for children in their formative years and throughout their entire lives. The tie between these indicators and children's health is clear. In addition to providing information on the health of children in an area, some may also predict vulnerability not just for the child but the population and therefore provide broader information regarding the health of the community. In addition, illnesses or injuries received in childhood may have long-term impact, lowering the health status of individuals and requiring increased health services.

This section includes both rates and percentages. Please take care to distinguish them.

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Injury and Poisoning Hospitalizations | Hospitalization per 1,000 children aged 0 to 14 due to an injury or poisoning. | Indicator of a greater social issue such as lack of education or awareness.<br>**High**: More injury and poisoning hospitalization<br>**Low**: Fewer injury and poisoning hospitalizations. | BC Stats, 2012 Socioeconomic Profiles |
| Respiratory Diseases Hospitalizations | Hospitalization per 1,000 children aged 0 to 14 due to a respiratory disease. | May be an indicator of potential levels of environmental toxins, chemicals, or pollution.<br>**High**: More respiratory diseases hospitalizations<br>**Low**: Fewer respiratory disease hospitalizations | BC Stats, 2012 Socioeconomic Profiles |
| Preschool Physical Development Vulnerability | Percent of kindergarten children rated as having problems with fine and gross motor skills, daily preparedness for school, washroom skills, and handedness. | Early development skills are critical predictors of school achievement and social/emotional health, and can be a predictor of long-term health outcomes.<br>**High**: More development vulnerability<br>**Low**: Less development vulnerability | Human Early Learning Partnership |
| Maternal Smoking | Percent of pregnant women who reported smoking at any time during their current pregnancy. | Predictor of financial and health vulnerability. Maternal smoking can result in life-long health vulnerability for the infant.<br>**High**: Higher levels of maternal smoking<br>**Low**: Lower levels of maternal smoking | Perinatal Services BC |
| Infant Mortality | Deaths of children under 1 year of age per 1,000 live births. | Infant mortality is an internationally accepted indicator of population health status. It is a major contributor to life expectancy and premature mortality.<br>**High**: Higher rate of infant mortality<br>**Low**: Lower rate of infant mortality | BC Vital Statistics |
| Preterm Births | Newborns with a gestational age of less than 37 weeks per 1,000 live births. | Preterm babies have increased risk of morbidity and premature death.<br>**High**: Higher rate of preterm births<br>**Low**: Lower rate of preterm births | BC Vital Statistics |
| Low Birth Weight | Births weighing less than 2,500 grams per 1,000 births. | Predictor of lifelong health vulnerability.<br>**High**: More low-weight births<br>**Low**: Fewer low-weight births | BC Vital Statistics |

## 4.7 Crime

High crime rates are often associated with poorer health, and areas of lower socio-economic status.[18] Depending on the category of crime, it may have a direct impact on the health of individuals, for example drug offences and violent crimes. High crime rates in an area are often the result of other social issues, such as social, educational, and financial vulnerabilities. All of these factors have a high correlation with health status.

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Illicit drug deaths | Deaths per 100,000 population aged 19-64 due to drug usage. | May be an indicator of greater social, educational and financial issues.<br>**High**: More illicit drug deaths<br>**Low**: Fewer illicit drug deaths | BC Stats, 2012 Socioeconomic Profiles |
| Alcohol Sales per Capita* | Litres of alcohol sold per resident population aged 19 and older. | Depending on tourism, these numbers can sometimes be misrepresentative of an area. However, higher rates can indicate potentially excessive alcohol consumption that can have adverse effects on the health of a population.<br>**High**: More alcohol sales<br>**Low**: Fewer alcohol sales | BC Stats, 2012 Socioeconomic Profiles |
| Non-Cannabis Drug Offences | Non-cannabis drug offences per 100,000 of population. | May be an indicator of greater social, educational and financial issues.<br>**High**: More non-cannabis drug offences<br>**Low**: Fewer non-cannabis drug offences | BC Stats, 2012 Socioeconomic Profiles |
| Crime Activity to Police Ration | Number of serious crimes per police officer. | May be an indicator of greater social, educational and financial issues.<br>**High**: Greater crime to police ratio<br>**Low**: Lower crime to police ratio | BC Stats, 2012 Socioeconomic Profiles |
| Motor Vehicle Theft Rate | Motor Vehicle theft rate per 1,000 population. | May be an indicator of greater social, educational and financial issues.<br>**High**: Higher motor vehicle theft rate<br>**Low**: Lower motor vehicle theft rate | BC Stats, 2012 Socioeconomic Profiles |
| Serious Juvenile Crime Rate | Juvenile crime rate per 1,000 population aged 12 to 17 (breaking and entering, crimes with weapons and assaults with serious injury). | Juvenile crime can be a predictor of long-term health due to social, educational and financial vulnerabilities.<br>**High**: Higher serious juvenile crime rate<br>**Low**: Lower serious juvenile crime rate | BC Stats, 2012 Socioeconomic Profiles |
| Serious Crime Rate | Total violent and property crime rate per 1,000 population. | May be an indicator of greater social, educational and financial issues.<br>**High**: Higher serious crime rate<br>**Low**: Lower serious crime rate | BC Stats, 2012 Socioeconomic Profiles |

* Represents sales per resident population 19+, therefore high tourist areas will be overstated

# 5 Health Status

Health status indicators measure the health of a population and are useful in predicting and prioritizing the health care needs of the area. This includes births, deaths and morbidity.

## 5.1 Birth Statistics

Statistics based on birth events form a crucial part of the demographic profile of communities, regions, provinces, and countries. They are used to derive important indicators of health status, fertility, infant mortality, and population growth. In turn, those indicators are used for health planning, policy formulation, research, and commerce.[19]

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Elderly Gravida Rate | Any mother who was 35 years of age or older at the time of delivery of a live born infant. Rate per 1,000 live births. | Indicator of potential risk to mother and predictor of long-term health vulnerability to the infant.<br>**High**: More elderly gravidae<br>**Low**: Fewer elderly gravidae | BC Vital Statistics |
| Low Birth Weight Rate | Births weighing less than 2,500 grams per 1,000 live births. | Predictor of lifelong health vulnerability.<br>**High**: More low weight births<br>**Low**: Fewer low weight births | BC Vital Statistics |
| Infant Mortality Rate | Deaths of children under 1 year of age per 1,000 live births. | Infant mortality is an internationally accepted indicator of population health status. It is a major contributor to life expectancy and premature mortality.<br>**High**: Higher rate of infant mortality<br>**Low**: Lower rate of infant mortality | BC Vital Statistics |
| Teen Mother Rate | Live births to mothers under 20 years of age per 1,000 live births. | Will likely face more challenges with healthy living for self and child due to social, educational, and financial vulnerabilities.<br>**High**: More teen pregnancies<br>**Low**: Fewer teen pregnancies | BC Vital Statistics |
| Cesarean Rate | A delivery involving the surgical incision of the abdomen and uterine walls, per 1,000 live births. | A measure of high risk births which could be an indicator of long-term health vulnerability for mother and infant.<br>**High**: More cesareans performed<br>**Low**: Fewer aesareans performed | BC Vital Statistics |
| Preterm Birth Rate | Newborns with a gestational age of less than 37 weeks per 1,000 live births. | Preterm babies have increased risk of morbidity and premature death.<br>**High**: More preterm births<br>**Low**: Fewer preterm births | BC Vital Statistics |

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Stillbirth Rate | The complete expulsion or extraction from its mother after at least 20 weeks of pregnancy, or after attaining a weight of at least 500 grams, of a product of conception in which, after the expulsion or extraction, there is no breathing, beating of the heart, pulsation of the umbilical cord, or unmistakable movement of voluntary muscle. Rate per 1,000 births | Rate of stillbirths is an indicator of population health.<br>**High**: More stillbirths<br>**Low**: Fewer stillbirths | BC Vital Statistics |
| Live Birth Rate | Infants are considered "live" if there is:<br>(a) breathing;<br>(b) beating of the heart;<br>(c) pulsation of the umbilical cord; or<br>(d) unmistakable movement of voluntary muscle, whether or not the umbilical cord has been cut or the placenta attached.<br>Rate per 1,000 population | Higher live birth rates are typically reflective of a younger population<br>**High**: More live births<br>**Low**: Fewer live births | BC Vital Statistics |

## 5.2 Mortality Statistics

Mortality statistics play an essential role in health surveillance, planning and research. Causes of death are crucial components of health status for regional, national, and international comparisons. While other causes may have contributed to the death, mortality is recorded by the Underlying Cause of Death, defined as the condition or injury that initiated the train of events leading directly to the death.[20]

These statistics include both the standardised mortality ratio (SMR) and potential years of life lost index (PYLLI) values. The SMR is used to compare the actual number of deaths due to a certain cause to the expected number of deaths for that cause. The PYLLI is a measure of premature mortality. Both indicators are standardized and compare Island Health to BC (for example, an Island Health ratio of 1.07 indicates that Island Health is 7% higher than BC).

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Drug-induced deaths† ♈ | This category of deaths excludes unintentional injuries, homicides, and other causes that could be indirectly related to drug use. Deaths directly due to alcohol are also excluded. | May be an indicator of greater social issues.<br>**High**: More drug-induced deaths<br>**Low**: Fewer drug-induced deaths | BC Vital Statistics |
| Medically Treatable Diseases | Deaths due to disease categories which mortality could potentially have been avoided through appropriate medical intervention, such as pneumonia, appendicitis, and meningitis. | May be indicative of a greater social and public health issue.<br>**High**: More deaths from medically treatable diseases<br>**Low**: Fewer deaths from medically treatable diseases. | BC Vital Statistics |
| Circulatory System | Includes all circulatory diseases, ischemic heart disease, stroke and all other circulatory diseases. | Measure of a population's health status and could be indicative of a service change or addition.<br>**High**: More deaths from circulatory disease than expected<br>**Low**: Fewer deaths from circulatory disease than expected | BC Vital Statistics |
| Digestive System | Includes all chronic liver disease/cirrhosis. | Measure of a population's health status and could be indicative of a service change or addition.<br>**High**: More deaths from digestive disease than expected<br>**Low**: Fewer deaths from digestive disease than expected | BC Vital Statistics |
| Alcohol Related Deaths | Alcohol-related deaths include deaths where alcohol was a contributing factor (indirectly related) as well as those due to alcohol (directly related).*** | Measure of a population's health status and could be indicative of a service change or addition.<br>Predictor of health and financial vulnerability.<br>**High**: More alcohol related deaths than expected<br>**Low**: Fewer alcohol related deaths than expected | BC Vital Statistics |

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Falls | Deaths due to accidental falls. | Measures long-term success in reducing deaths due to falls. Lower death rates indicate success in fall prevention and treatment.<br>**High**: More deaths due to falls<br>**Low**: Fewer deaths due to falls | BC Vital Statistics |
| Cancer* | Cancer mortality includes colorectal, lung, breast, prostate cancer, etc.. | Measure of a population's health status and could be indicative of a service change or addition. Lower death rates may indicate success in cancer prevention, detection, and treatment.<br>**High**: More deaths from cancer<br>**Low**: Fewer deaths from cancer | BC Vital Statistics |
| Respiratory | Includes all respiratory disease, pneumonia and influenza, bronchitis/emphysema/asthma, and all other respiratory diseases. | Measure of a population's health status and could be indicative of a service change or addition. Lower death rates may indicate success in respiratory disease prevention, detection, and treatment.<br>**High**: More deaths from respiratory disease<br>**Low**: Fewer deaths from respiratory disease | BC Vital Statistics |
| Suicide† | Death resulting from suicide. | Measure of a population's health status and could be indicative of a service change or addition. May indicate long-term success in reducing suicide, a social as well as a major public health concern.<br>**High**: More deaths from suicide<br>**Low**: Fewer deaths from suicide | BC Vital Statistics |
| Motor Vehicle | Deaths resulting from Motor Vehicle Accidents. | Measures long-term success in reducing deaths due to motor vehicle accidents. Lower death rates may indicate success in motor vehicle accident prevention.<br>**High**: More deaths from motor vehicle accidents<br>**Low**: Fewer deaths from motor vehicle accidents | BC Vital Statistics |
| End/Nut/Met Diseases | Death from Endocrine, Nutritional and Metabolic Diseases and Immunity Disorders | Measure of a population's health status and could be indicative of a service change or addition. Lower death rates may indicate success in End/Nut/Met disease detection, prevention and treatment.<br>**High**: More deaths from End/Nut/Met diseases<br>**Low**: Fewer deaths from End/Nut/Met diseases | BC Vital Statistics |

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Diabetes | Death from diabetes | Measure of a population's health status and could be indicative of a service change or addition. Lower death rates may indicate success in diabetes detection, prevention and treatment.<br>**High**: More deaths from diabetes<br>**Low**: Fewer deaths from diabetes | BC Vital Statistics |
| Arteries/Arterioles/Capillaries | Death from arteries/arterioles/capillaries diseases. | Measure of a population's health status and could be indicative of a service change or addition. Lower death rates may indicate success in artery/arteriole/capillary disease detection, prevention and treatment.<br>**High**: More artery/arteriole/capillary disease deaths<br>**Low**: Fewer artery/arteriole/capillary disease deaths | BC Vital Statistics |
| Pneumonia and Influenza | Death from pneumonia and influenza | Measure of a population's health status and could be indicative of a service change or addition. Lower death rates may indicate success in pneumonia and influenza detection, prevention and treatment.<br>**High**: More pneumonia and influenza deaths<br>**Low**: Fewer pneumonia and influenza deaths | BC Vital Statistics |
| Lung Cancer* | Death from lung cancer | Measure of a population's health status and could be indicative of a service change or addition. Lower death rates may indicate success in lung cancer detection, prevention and treatment.<br>**High**: More lung cancer deaths<br>**Low**: Fewer lung cancer deaths | BC Vital Statistics |
| Ischaemic Heart Disease | Death from ischaemic heart disease | Measure of a population's health status and could be indicative of a service change or addition. Lower death rates may indicate success in ischaemic heart disease detection, prevention and treatment.<br>**High**: More ischaemic heart disease deaths<br>**Low**: Fewer ischaemic heart disease deaths | BC Vital Statistics |

| Term | Definition | Interpretation | Source |
|---|---|---|---|
| Chronic Lung Disease* | Death from chronic lung disease | Measure of a population's health status and could be indicative of a service change or addition. Lower death rates may indicate success in chronic lung disease detection, prevention and treatment.<br>**High**: More chronic lung disease deaths<br>**Low**: Fewer chronic lung disease deaths | BC Vital Statistics |
| Cerebrovascular Disease/Stroke | Death from cerebrovascular disease | Measure of a population's health status and could be indicative of a service change or addition. Lower death rates may indicate success cerebrovascular disease/stroke detection, prevention and treatment.<br>**High**: More cerebrovascular disease/stroke deaths<br>**Low**: Fewer cerebrovascular disease/stroke deaths | BC Vital Statistics |

* Lung cancer is included in this statistic, and so there is overlap between Respiratory, Lung Cancer and Chronic Lung Disease.

† Any death where the underlying cause of death is suicide by drugs will be counted as a drug induced death and a suicide.

♈ Alcohol-related and drug overdose deaths are the only cause of death categories that are not based entirely upon underlying causes of death.

## 5.3 Chronic Disease Prevalence

Life expectancies in Canada and BC increased dramatically during the past century. This increase was accompanied by an equally dramatic shift in causes of death. As mortality rates from infectious diseases dropped and people lived longer, mortality rates from chronic diseases increased as more people reached ages in which chronic diseases predominate. Most people experience some form of chronic disease.[21] According to the CCHS 4.1, 58 percent of Island Health area residents over the age of 30 reported having been diagnosed with one or more chronic conditions in 2007.[22] Chronic diseases are characterized by complex causality, multiple risk factors, a long latency period, a prolonged course of illness, functional impairment or disability, and in most cases, the unlikelihood of a cure. They can have a profound effect on the physical, emotional and mental wellbeing of individuals, often making it difficult to carry on with daily routines and relationships. They are a major contributor to the burden of ill health and premature death, and are associated with significant economic costs (both direct health care costs and lost productivity).[23]

## 5.4 Life Expectancy at Birth

This indicates the average life expectancy of infants born in the community. Life expectancy at birth is a common measure of the overall health of the population.

# 6 Health Service Utilization

Health service utilization data, like health status, provides insight into a population's health and its acute care needs by revealing a community's acute care use (i.e., visit to an acute care facility for inpatient or day procedure). Health service utilization is influenced by several factors, such as health status, demographics, physician referral patterns, patient choice, distance to care and wait lists. Utilization data does not necessarily reflect what health care services a community *needs*, but more accurately what a community is *using*. While these two concepts are interconnected, they are not identical.

These statistics show high level acute care use of an LHA by several different indicators including inpatient versus day care, medical versus surgical care, reason for stay, most common cases by case mix group (CMG) and major clinical category (MCC), alternate level of care (ALC) rate, resource intensity weight (RIW), and ambulatory case sensitive conditions (ACSC) rate.

This data looks at the most common cases for a region, the referral patterns, and bed use. It must be considered as a whole, relative to other indicators and the population demographics.

## 6.1 Hospital Admissions

This section records hospital cases† by the following categories:

| Category | Definition | Interpretation |
|---|---|---|
| Medical* | All cases which do not involve surgery – e.g. illness diagnosis, infection or illness treatment with pharmaceuticals, radiation/chemotherapy, convalescence/recovery, etc. | Medical patients on average have greater lengths of stay, and higher rates of Emergency Department admittance.[24] |
| Surgical | All cases which involve surgery. | Surgical patients often have lower lengths of stays and are typically admitted by means other than the Emergency Department. [25] |
| Maternity | All cases involving pregnancy and childbirth (grouped by major clinical category (MCC)) | High maternity rates suggest a younger population, low rates an older one. [26] |
| Psychiatric | Most cases involving mental diseases and disorders (grouped by MCC) are flagged as psychiatry cases; some of these cases, however, are flagged as medical rather than psychiatry; this is based on the cases' CMG and the patient's age group[27] | Generally reflective of the mental health of a population. Higher rates suggest greater vulnerability. Patients with mental diseases and disorders on average have high lengths of stay and a high rate of Emergency Department admittance. [28] |
| Inpatient | Patients who are admitted to a hospital or care centre and stay for at least one night. | Generally reflective of more complex cases or more invasive procedures. |
| Day | Patients who are admitted to a hospital or care centre, typically for diagnosis or treatment, but do not stay overnight. They are also known as outpatients or ambulatory patients. | Generally reflective of less complex cases or less invasive procedures. |

| Category | Definition | Interpretation |
|---|---|---|
| Case Mix Group | CMGs are a way of grouping patients with similar diagnoses and treatment requirements. CMGs are ordered within Major Clinical Categories (MCC) which identify either a body system (e.g. Respiratory System), or other specific types of clinical problems (e.g. Mental Disorders, Neonates, Burns). There are currently 20 MCCs (see appendix A) and nearly 1,000 CMGs.[29] | Used to analyze trends in a population's health needs. |
| ALC | Percentage of inpatient days where a physician (or designated other) has indicated that a patient occupying an acute care hospital bed was well enough to have been cared for elsewhere.[30] | This indicator is designed to assess the processes that ensure the placement of patients in the most appropriate care setting. It identifies the proportion of patients who are occupying acute care beds due to the unavailability of services in another more appropriate setting.[31] |
| ACSC | The Ambulatory Care Sensitive Conditions (ACSC) rate represents people with conditions where appropriate ambulatory care can prevent or reduce the need for hospital admission, who nevertheless have been admitted to hospital.[32] For example angina, diabetes, heart failure, grand mal seizures, etc. | ACSC is an indicator of admissions pratices and/or ambulatory care resources. Timely and effective ambulatory care can potentially reduce the risk of hospitalization by possibly preventing or controlling the onset of an illness or by managing the chronic condition. May be related to factors such as access to and quality of primary care, the prevalence and acuity of chronic conditions in the population, socio-economic status, and differences in community and hospital-based practice patterns. [33] |

†Hospital cases excludes newborn records.

* In the table showing total hospital cases, maternity and psychiatry cases are included as medical cases.

## 6.2 Emergency Visits

These indicators are based on LHA of residence regardless of the location of the hospital at which the patient received care. For example a person from Nanaimo receiving care at Royal Jubilee Hospital will be counted in the Nanaimo LHA profile.

| Category | Definition | Interpretation |
|---|---|---|
| Canadian Emergency Department Triage & Acuity Scale (CTAS) | A measure of severity of condition brought to the Emergency Department. 1 is the most severe and 5 the least. | A high number of 4s and 5s can be indicative of inappropriate system use for one reason or another. |
| Use by day of the week | Visits to the Emergency Department recorded by day of admittance. | Can indicate the availability of non-emergency care. If visits are higher on the weekend, it can be because often drop-in clinics are closed for those days. |
| Visits by age group per 1,000 population | Visits to the Emergency Department by 10 year cohort. | These statistics are compared to the Island Health Emergency Department utilization to indicate whether some age groups are showing inordinate Emergency Department use. |

# Glossary

Medical definitions from MediNet[34] unless otherwise cited

Alternate Level of Care: (ALC) is indicative of time spent in an inappropriate level of care, for example, a long-term residential patient occupying an intensive care bed due to lack of available residential care beds. As the majority of ALC patients take up beds of a higher level of care than they require, rather than a lower, they are inefficient and costly as well as being uncomfortable to the patients themselves who feel out of place.

Ambulatory Care Sensitive Conditions: (ACSC) represent people with conditions where appropriate ambulatory care can prevent or reduce the need for hospital admission, who nevertheless have been admitted to hospital.[35] It is therefore an indicator of admissions standards and/or ambulatory care resources.

Angina: Chest pain due to an inadequate supply of oxygen to the heart muscle. The chest pain of angine is typically severe and crushing. There is a feeling just behind the breastbone (the sternum) of pressure and suffocation.

Antepartum Disorder: Depression occurring during pregnancy.

Arrhythmia: In an arrhythmia the heartbeats may be too slow, too rapid, too irregular, or too early. Rapid arrhythmias (greater than 100 beats per minute) are called tachycardias. Slow arrhythmias (slower than 60 beats per minute) are called bradycardias. Irregular heart rhythms are called fibrillations (as in atrial fibrillation and ventricular fibrillation). When a single heartbeat occurs earlier than normal, it is called a premature contraction.

Atherosclerotic Heart Disease: A general term for the progressive narrowing and hardening of coronary arteries, due to atheroma deposition which, with time undergo calcification and ulceration.[36]

Canadian Emergency Department & Triage Acuity Scale (CTAS): Scale indicating the gravity of a patient's injuries and conditions upon arrival to an acute care setting. Level 1 is the most severe and is categorized as resuscitation. Level five is the least severe and is categorized as non urgent.[37]

Cardiac Catheter: a long, fine, tubular, flexible surgical instrument designed for passage, usually through a peripheral blood vessel, into the chambers of the heart under radiographic control[38]

Census Family: Defined as a married couple and their children; a common law relationship between two partners and their children; or a lone parent regardless of marital status living in a dwelling with at least one child. All members of the census family live in the same dwelling.[39]

Census Household

Cerebrovascular Disease: Disease of the blood vessels and, especially, the arteries that supply the brain. Cerebrovascular disease is usually caused by atherosclerosis and can lead to a stroke.

Congestive Heart Failure: Congestive heart failure (CHF) is a condition in which the heart's function as a pump is inadequate to deliver oxygen rich blood to the body.

Chronic Obstructive Pulmonary Disease: Chronic obstructive pulmonary disease (COPD) is comprised primarily of three related conditions –chronic bronchitis, chronic asthma, and emphysema. In each condition there is chronic obstruction of the flow of air through the airways and out of the lungs, and the obstruction generally is permanent and may be progressive over time.

Dementia: Significant loss of intellectual abilities such as memory capacity, severe enough to interfere with social or occupational functioning. Criteria for the diagnosis of dementia include impairment of attention, orientation, memory, judgment, language, motor and spatial skills, and function. By definition, dementia is not due to major depression or schizophrenia.

Demographics: Statistical information about characteristics of a population such as age, income, gender, ethnicity, age, educational attainment, etc.[40]

Diabetes: Diabetes mellitus is a group of metabolic diseases characterized by high blood sugar (glucose) levels, that result from defects in insulin secretion, or action, or both.

Enteritis: Crohn's disease by another name, a chronic inflammatory disease of the intestine primarily in the small and large intestines but which can occur anywhere in the digestive system between the mouth and the anus

Health Authority: Governing body with responsibility for the planning, coordination and delivery of health services in a specific region, including hospital, long term care and community services. (BC Medical Association Glossary)

Hypertension: High pressure (tension) in the arteries.

Ischaemic Heart Disease: (IHD) any of a group of acute or chronic cardiac disabilities resulting from insufficient supply of oxygenated blood to the heart.[41]

Major Clinical Category: Major Clinical Category (MCC) assignment, which represents the first step in the grouping methodology, is almost always determined by the most responsible diagnosis (MRDx). Usually, the MRDx is a

unique assignment to one MCC known as the 'home' MCC. There are some exceptions to this rule, such as diagnoses with gender edits and the assignment of cases to MCC 15. MCC 15, Newborns and Neonates, is based on age < 29 days or an entry code of newborn. A further division within this MCC is based on the weight of the baby. Although the most responsible diagnosis is defined by CIHI as 'the one diagnosis which describes the most significant condition causing a patient's stay in hospital,' this may not always be the condition for which the patient is admitted. If the diagnosis recorded as most responsible is invalid, the case is assigned to MCC 999, Ungroupable Data. [42]

Osteoarthritis: Osteoarthritis is a type of arthritis that is caused by the breakdown and eventual loss of the cartilage of one or more joints. Cartilage is a protein substance that serves as a "cushion" between the bones of the joints. Osteoarthritis is also known as degenerative arthritis

Perinatal: Pertaining to or occurring in the period shortly before, during and after birth, starting at 22 completed weeks of gestation and ending seven completed days after birth[43]

Resource Intensity Weight: (RIW) methodology is a relative resource allocation tool for estimating a hospital's inpatient-specific cases. RIW are used to standardize the expression of hospital case resource consumption, recognizing that not all patients require the same health care resources. Total resource consumption is then expressed as "weighted cases". Factors which could have an impact include: age group, comorbidity, flagged intervention, intervention events, out-of-hospital intervention.[44]

Rheumatoid Arthritis: Rheumatoid arthritis (RA) is an autoimmune disease that causes chronic inflammation of the joints. Rheumatoid arthritis can also cause inflammation of the tissue around the joints, as well as in other organs in the body.

# Appendix A: Major Clinical Categories (MCC)

| **Major Clinical Category +** | |
|---|---|
| **Code** | **Description** |
| **1** | Diseases and Disorders of the Nervous System |
| **2** | Diseases and Disorders of the Eye |
| **3** | Diseases and Disorders of Ear, Nose, Mouth and Throat |
| **4** | Diseases and Disorders of the Respiratory System |
| **5** | Diseases and Disorders of the Circulatory System |
| **6** | Diseases and Disorders of the Digestive System |
| **7** | Diseases and Disorders of the Hepatobiliary System and Pancreas |
| **8** | Diseases and Disorders of the Musculoskeletal System and Connective Tissue |
| **9** | Diseases and Disorders of the Skin, Subcutaneous Tissue, and Breast |
| **10** | Diseases and Disorders of the Endocrine System, Nutrition and Metabolism |
| **11** | Diseases and Disorders of the Kidney, Urinary Tract and Male Reproductive System |
| **12** | Diseases and Disorders of the Female Reproductive System |
| **13** | Pregnancy and Childbirth |
| **14** | Newborns and Neonates with Conditions Originating in the Perinatal Period |
| **15** | Diseases and Disorders of the Blood and Lymphatic System |
| **16** | Multisystemic or Unspecified Site Infections |
| **17** | Mental Diseases and Disorders |
| **18** | Burns |
| **19** | Significant Trauma, Injury, Poisoning and Toxic Effect of Drugs |
| **20** | Other Reasons for Hospitalization |
| **0** | Undefined/Not Coded |
| **99** | Miscellaneous CMG and Ungroupable Data |
| **NA** | Not Applicable |

Source: HealthIdeas[45]

## End Notes

[1] CIHI Rural Canadians Health Report
http://secure.cihi.ca/cihiweb/products/chapter4_rural_canadians_2006_report_e.pdf
[2] The Canadian Institute for Health Information. How Healthy Are Rural Canadians? An Assessment of Their Health Status and Health Determinants. September, 2006. http://www.phac-aspc.gc.ca/publicat/rural06/pdf/rural_canadians_2006_report_e.pdf
[3] CIHI, National Health Expenditure Trends, 1975-2009,
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[4] Ministry of Aboriginal Relations and Reconciliation, First Nations by Region,
http://www.gov.bc.ca/arr/treaty/regional.html
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# 2013
# Local Health Area Profile
# Nanaimo (68)

Prepared by Planning and Community Engagement
Island Health
December 2014

An accompanying Interpretation Guide has been created to assist with the interpretation of indicators. The Interpretation Guide should be read with the profiles.

These profiles are not intended to be used for detailed planning or analysis. As they are updated on an annual basis, there may be more current data available. If you are intending to use these profiles for health planning purposes, or if you have questions or notice a discrepancy, please contact Melanie Rusch (Melanie.Rusch@viha.ca).

# Table of Contents

# 1 Key notes

## Demographics

- On average, the population of Nanaimo is younger than that of Island Health, but older than that of BC.
- As of 2013, Nanaimo represented 14.0% (108,000 people) of the Island Health population of 771,660.
- As of 2011, 6.6% of people living in Nanaimo identified as Aboriginal[1] compared to 6.6% in Island Health and 5.4% in BC.
- The total Nanaimo population is expected to grow by 30% by 2034, while the proportion of the population over 75 is expected to grow 95%.

## Economic Wellbeing

- Nanaimo had a higher percentage of people on income assistance (3.1%) than BC (1.7%) or Island Health (1.8%).
- Nanaimo had a higher unemployment rate (9.2%) than BC (7.8%) or Island Health (7.4%).
- Nanaimo had a lower percentage of high income households (29.9%) than BC (36.3%) or Island Health (33.1%).

## Education

- A higher percentage of children in Nanaimo were below standard in reading (26.5%) and writing (20.4%) than in BC (20.5% and 14.2%) or Island Health (22.4% and 18.3%).
- A higher percentage of kindergarten children in Nanaimo were rated as vulnerable for language development (11.0%) than in BC (9.0%) or Island Health (9.7%).
- A lower percentage of kindergarten children in Nanaimo were rated as vulnerable for communication skills (11.0%) than in BC (13.7%) or Island Health (12.0%).

## Housing

- There were a lower percentage of crowded (1.7%) and multiple-family households (1.5%) in Nanaimo than in BC (3.3% and 2.9%), but a similar percentage as in Island Health (1.7% and 1.5%).
- There was a lower percentage of older housing in Nanaimo (14.7%) than in Island Health (20.2%), but a similar percentage as in BC (16.0%).
- Home ownership costs were higher in Nanaimo (23.8% spending more than 30% of income) compared to Island Health (21.1%), but were similar to BC (23.8%).

## Social Support

- Nanaimo had a higher percentage of male lone-parent families (7.5%) compared to BC (5.7%).
- There were a higher percentage of people in common law relationships in Nanaimo (10.8%) than in BC (8.6%), but a similar percentage as in Island Health (10.6%).
- There were a higher percentage of separated/divorced (11.4%) and widowed (6.6%) individuals in Nanaimo than in BC (9.4% and 5.5%), but a similar percentage as in Island Health (11.1% and 6.4%).

## Healthy Development

- There were a higher percentage of children living on income assistance with a single parent in Nanaimo (5.1%) than in BC (2.7%) or Island Health (3.3%).
- There was a higher rate of children in need of protection in Nanaimo (11.6 per 1,000 children aged 0-18) compared to BC (6.4 per 1,000), but a similar rate compared to Island Health (12.1 per 1,000).
- There was a higher rate of serious juvenile crime in Nanaimo (5.1 per 1,000 youth aged 12-17) than in BC (3.5 per 1,000) or Island Health (4.5 per 1,000).

[1] Statistics Canada, National Household Survey, 2011; refers to persons who self identified with at least one Aboriginal group (North American Indian, Métis or Inuit, and/or those who reported being a Treaty Indian or a Registered Indian, as defined by the *Indian Act* of Canada, and/or those who reported they were members of an Indian band or First Nation).

## Child Health

- There was a higher rate of maternal smoking in Nanaimo (12.3%) compared to BC (8.6%), but a similar rate compared to Island Health (11.9%).
- Nanaimo had a lower rate of children hospitalized for respiratory diseases (7.8 per 1,000 children aged 0-14) compared to BC (9.0 per 1,000) and Island Health (10.7 per 1,000).

## Crime

- There was a higher rate of non-cannabis drug offences in Nanaimo (225.3 per 100,000 people) than in BC (170.3 per 100,000) or Island Health (154.8 per 100,000).
- There was a higher motor vehicle theft rate in Nanaimo (3.2 per 1,000 people) than in Island Health (2.1 per 1,000), but a lower rate than in BC (3.6 per 1,000).
- There was a higher rate of deaths due to illicit drugs in Nanaimo (9.7 per 100,000 people) than in BC (7.7 per 100,000) or Island Health (8.5 per 100,000).

## Birth Statistics

- Nanaimo had one of the lowest rates of stillbirth in Island Health.

## Mortality Statistics

- Nanaimo was ranked 3rd for deaths due to medically treatable diseases.

## Chronic Disease Prevalence

- Nanaimo had a higher crude prevalence of asthma (11.8%) than BC (10.5%) or Island Health (11.1%).

## Hospital Admissions

- Of the 20,021 hospital cases for Nanaimo residents in 2012/13:
    - 47.5% were day cases, while 52.5% were inpatient cases;
    - 55.4% were medical cases, while 44.6% were surgical cases;
    - Digestive symptoms/signs were responsible for the most inpatient cases (328);
    - Lens extraction/insertion, typically for cataracts, was responsible for the most day cases (1,339).
    - 83% of cases were treated at Nanaimo Regional General Hospital, while 7% were at Royal Jubilee Hospital in Victoria.
- Of the 80,850 inpatient days for Nanaimo residents in 2012/13:
    - 14.9% were for an alternate level of care;
    - Mental diseases and disorders were responsible for the most patient days (14,217 or 17.6%).
- The ambulatory care sensitive conditions (ACSC) rate for Nanaimo residents is 4.8% of cases, slightly higher than the Island Health average of 4.5%; and
- The percentage of alternate level of care days (ALC) has been decreasing similar to Island Health since 2010/11.

## Emergency Department Visits

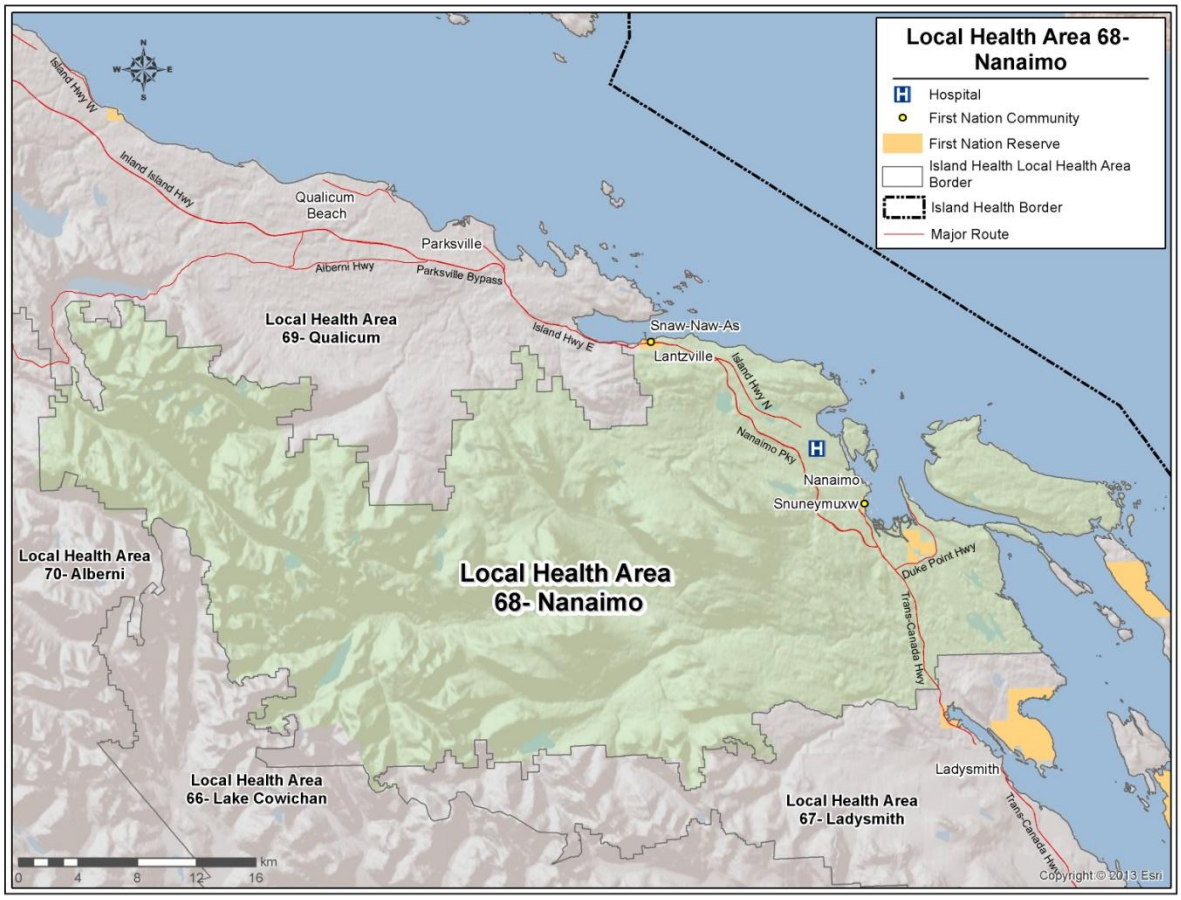
- Of the 43,369 emergency visits by Nanaimo residents in 2012/13:
    - 67% of those with known scores were CTAS[2] 1, 2 and 3, similar to Island Health;
    - 93% were at Nanaimo Regional General Hospital; and
    - 32% were for those aged over 60.
- More visits occurred on Saturday than on other days of the week; and
- Nanaimo residents had a slightly higher rate of emergency visits (402 per 1,000) compared to Island Health as a whole (369 per 1,000).

[2] Canadian Emergency Department Triage & Acuity Scale. Level 1 is the most severe and categorized as resuscitation, Level 5 is the least severe and categorized as non urgent.

# 2 Geography

## 2.1 Location Description

- Nanaimo LHA is one of 14 LHAs in Island Health and is located in Island Health's Central Health Service Delivery Area (HSDA).
- Nanaimo is in the centre of the Central HSDA on the east coast of Vancouver Island. It is 1,308 square kilometres and encompasses the communities of Nanaimo, Lantzville and Gabriola Island. It borders on four other LHAs: Courtenay, Alberni, Ladysmith and Lake Cowichan.



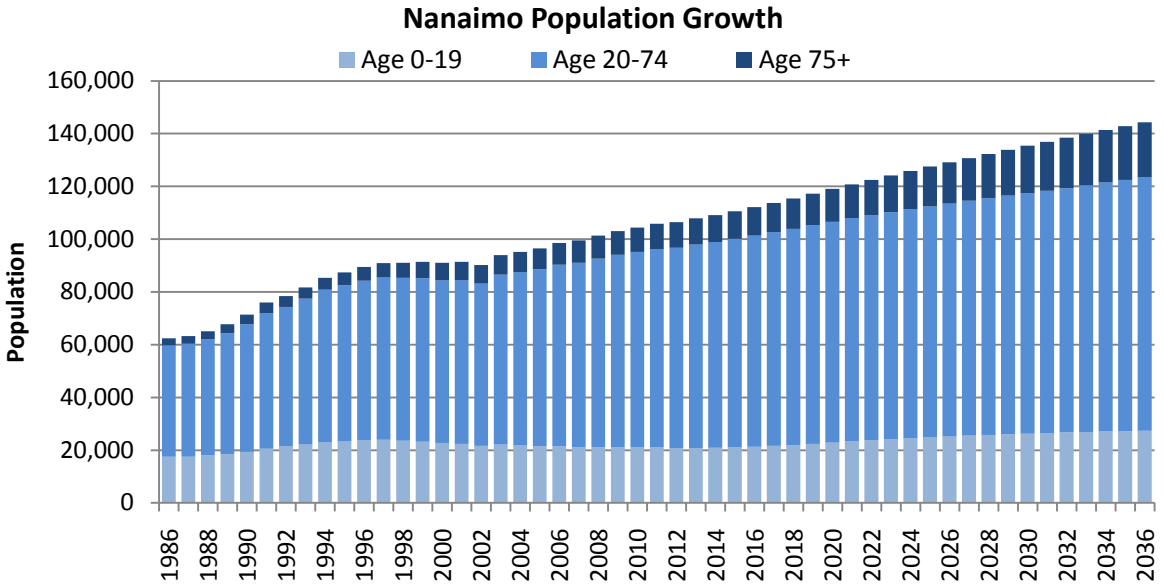

## 2.2 Transportation

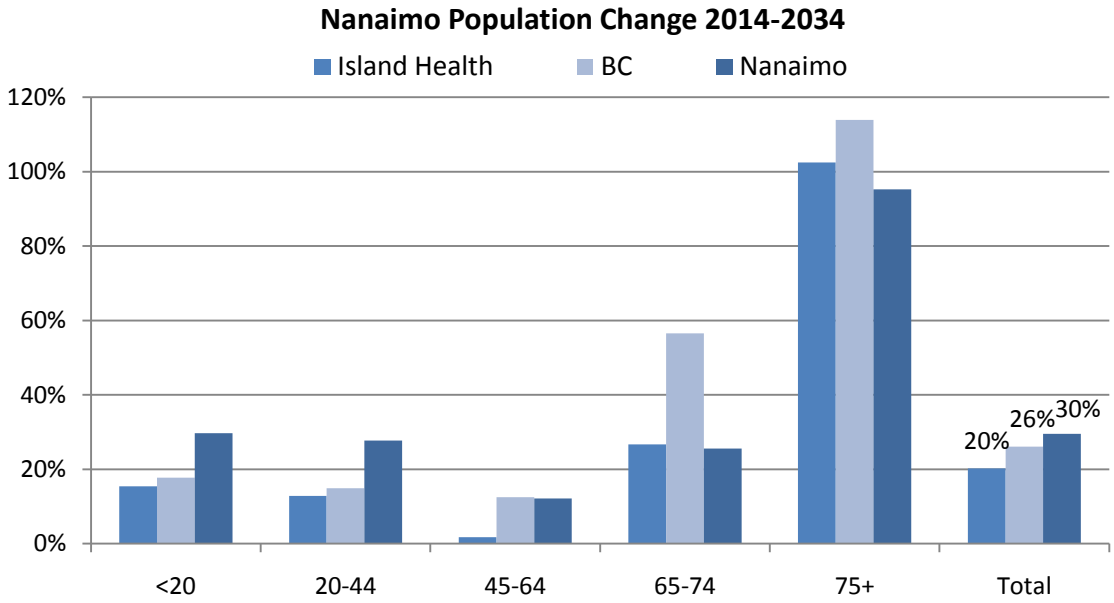
- Nanaimo is situated alongside Highway 1 and Highway 19. It is approximately one and a half hours from Victoria.
- Nanaimo has over 15 bus routes and a handyDART service. BC Ferries runs services to Tsawwassen and Horseshoe Bay.

# 3 Demographics[3]

**Key Notes:**

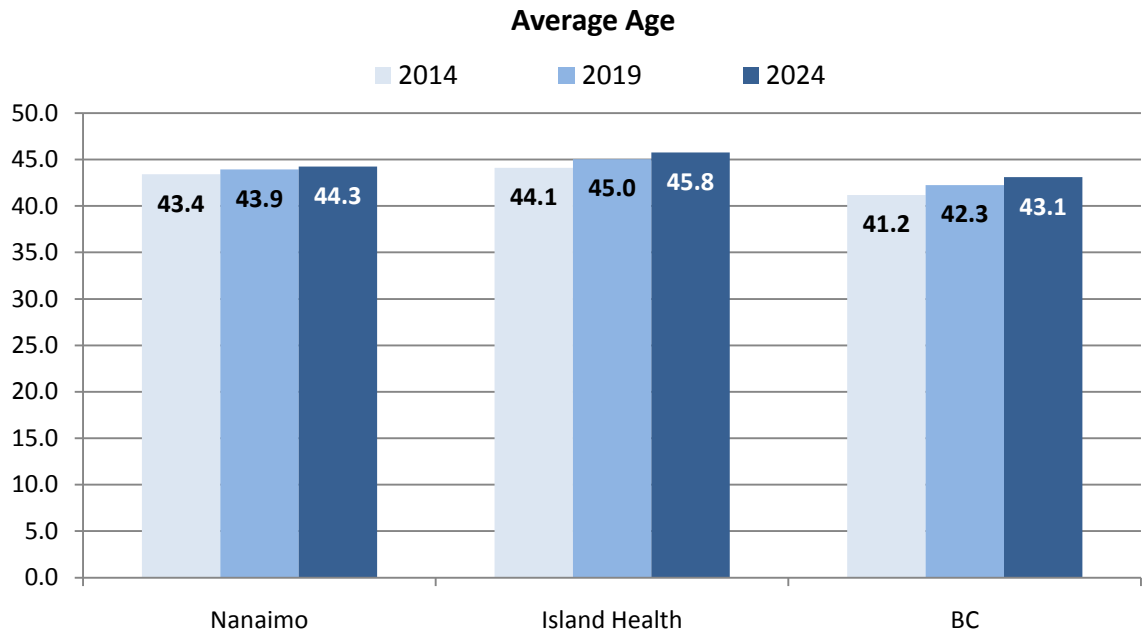
- On average, the population of Nanaimo is younger than that of Island Health, but older than that of BC.
- As of 2013, Nanaimo represented 14.0% (108,000 people) of the Island Health population of 771,660.
- As of 2011, 6.6% of people living in Nanaimo identified as Aboriginal[4] compared to 6.6% in Island Health and 5.4% in BC.
- The total Nanaimo population is expected to grow by 30% by 2034, while the proportion of the population over 75 is expected to grow 95%.



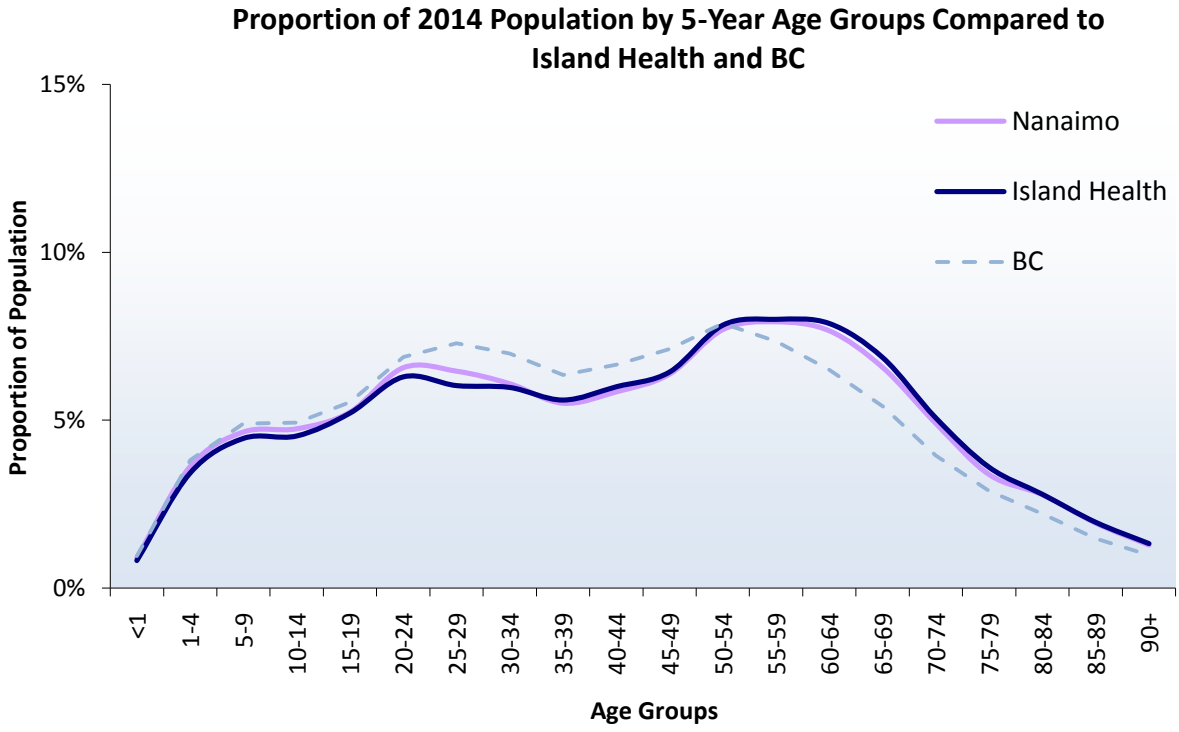

[3] Source: BC Statistics, PEOPLE 2013, unless otherwise specified.

[4] Statistics Canada, National Household Survey, 2011; refers to persons who self identified with at least one Aboriginal group (North American Indian, Métis or Inuit, and/or those who reported being a Treaty Indian or a Registered Indian, as defined by the *Indian Act* of Canada, and/or those who reported they were members of an Indian band or First Nation).




**Nanaimo's 2014 population profile is very similar to Island Health; compared to BC, it has:**

- A lower proportion of people aged 25-49; and
- A higher proportion of people aged 55+.

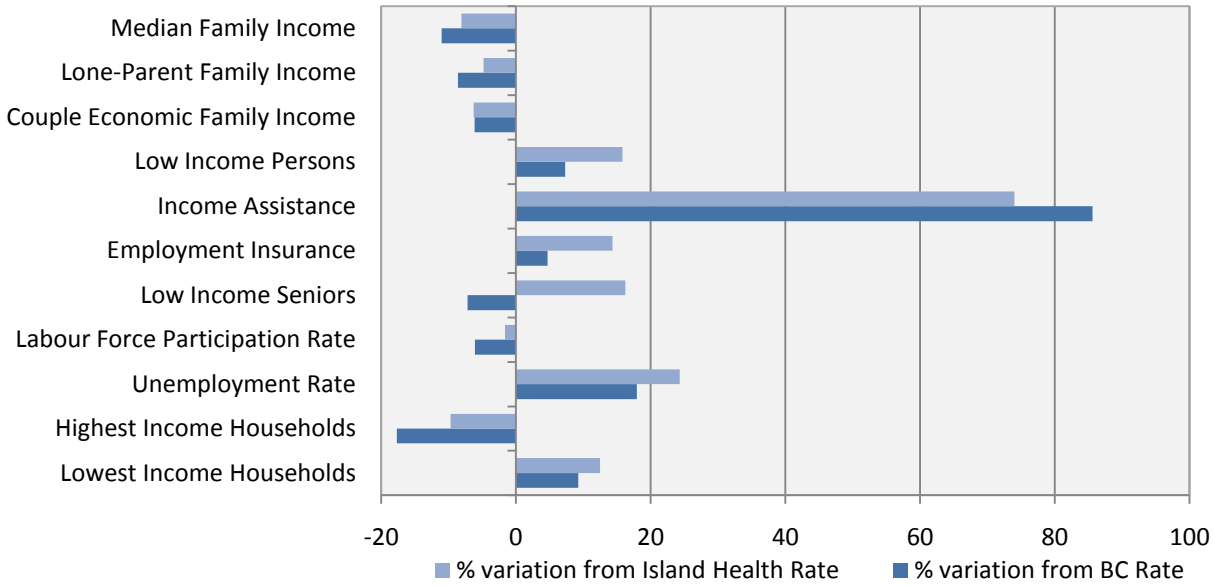


# 4 Social Determinants of Health and Wellbeing

## 4.1 Economic Wellbeing

**Key Notes:**

- Nanaimo had a higher percentage of people on income assistance (3.1%) than BC (1.7%) or Island Health (1.8%).
- Nanaimo had a higher unemployment rate (9.2%) than BC (7.8%) or Island Health (7.4%).
- Nanaimo had a lower percentage of high income households (29.9%) than BC (36.3%) or Island Health (33.1%).



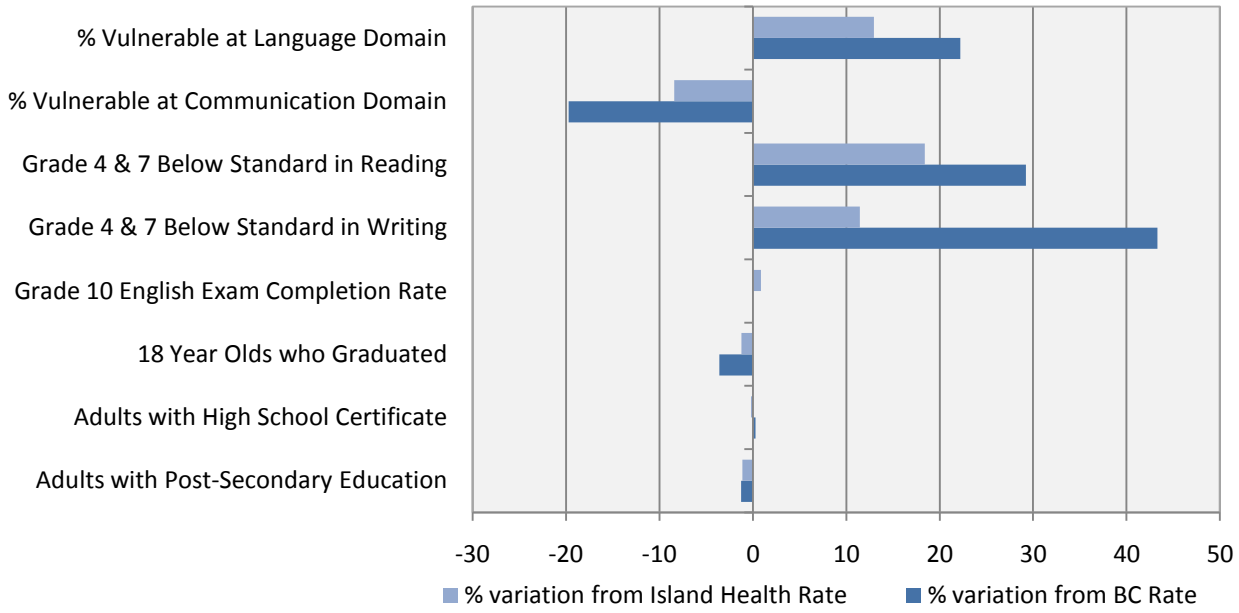

| Indicator | Definition | Nanaimo | BC | Island Health |
|---|---|---|---|---|
| Median Family Income[1] | Median family income from all sources in 2010 | $67,417 | $75,797 | $73,358 |
| Lone-Parent Family Income[1] | Average family income of lone-parent economic families in 2010 | $38,946 | $42,610 | $40,914 |
| Couple Economic Family Income[1] | Average family income of couple economic families in 2010 | $88,804 | $94,632 | $94,769 |
| Low Income Persons[1] | Prevalence (%) of low income in 2010 based on after-tax low-income measure | 17.6 | 16.4 | 15.2 |
| Income Assistance (IA)[2] | Percent of population aged 15+ receiving income assistance from provincial program | 3.1 | 1.7 | 1.8 |
| Employment Insurance[2] | Percent of population 15+ on Employment Insurance | 1.6 | 1.5 | 1.4 |
| Low Income Seniors[1] | Percent of persons 65 years of age and over that were low income in 2010 based on after-tax low-income measure | 12.9 | 13.9 | 11.1 |
| Labour Force Participation Rate[1] | Percent of population aged 25 and over that are participating in the labour force | 61.6 | 65.6 | 62.6 |
| Unemployment Rate[1] | Percent of population aged 25 and over that are unemployed | 9.2 | 7.8 | 7.4 |
| Highest Income Households[1] | Percent of private households earning >$80,000 | 29.9 | 36.3 | 33.1 |
| Lowest Income Households[1] | Percent of private households earning <$20,000 | 15.7 | 14.3 | 13.9 |

Source: [1]Statistics Canada (2011 Census); [2]BC Statistics Agency, Employment Insurance Statistics and Statistics Canada (4 Quarter Average Dec 2011-Sep 2012)

## 4.2 Education

**Key Notes:**

- A higher percentage of children in Nanaimo were below standard in reading (26.5%) and writing (20.4%) than in BC (20.5% and 14.2%) or Island Health (22.4% and 18.3%).
- A higher percentage of kindergarten children in Nanaimo were rated as vulnerable for language development (11.0%) than in BC (9.0%) or Island Health (9.7%).
- A lower percentage of kindergarten children in Nanaimo were rated as vulnerable for communication skills (11.0%) than in BC (13.7%) or Island Health (12.0%).



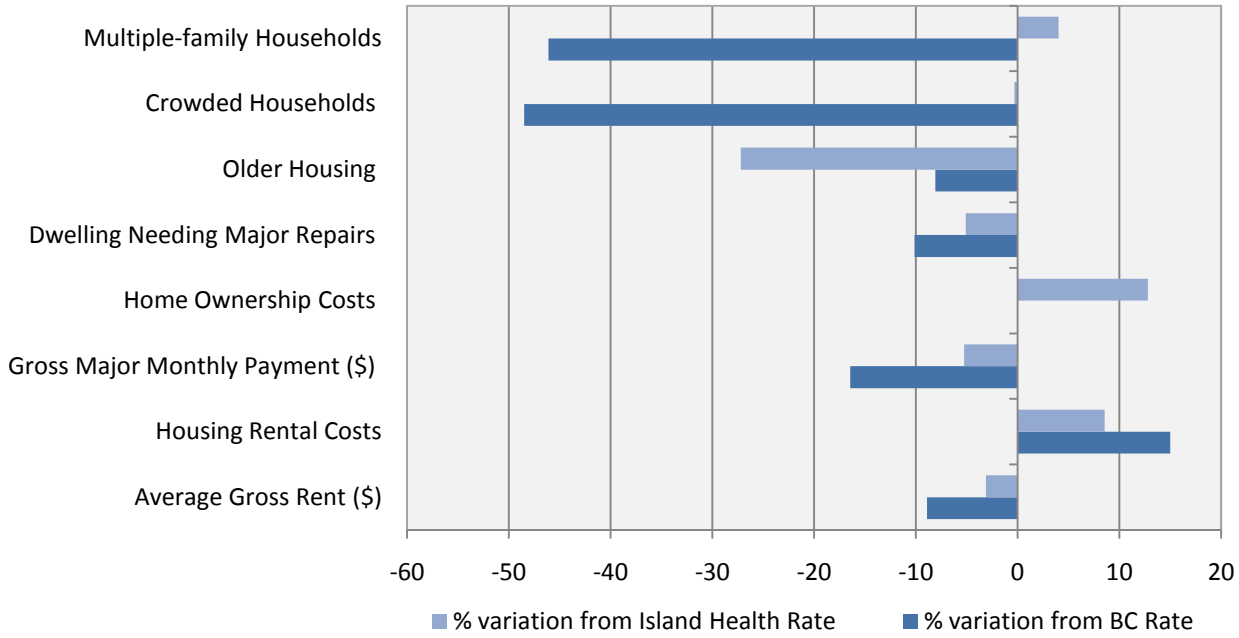

| Indicator | Definition | Nanaimo | BC | Island Health |
|---|---|---|---|---|
| Preschool Language Development Vulnerability[2] | Percent of kindergarten children rated as vulnerable for language and cognitive development (problems in reading, writing and numeracy) | 11.0 | 9.0 | 9.7 |
| Preschool Communication Skills Vulnerability[2] | Percent of kindergarten children rated as vulnerable in communication and general knowledge skills | 11.0 | 13.7 | 12.0 |
| Grade 4 & 7 Below Standard in Reading[3] | Percent of students scoring below standards on standardized test | 26.5 | 20.5 | 22.4 |
| Grade 4 & 7 Below Standard in Writing[3] | Percent of students scoring below standards on standardized test | 20.4 | 14.2 | 18.3 |
| Grade 10 English Exam Completion Rate[3] | Percent of students who did write or pass Grade 10 provincial English exam | 82.9 | 83.0 | 82.2 |
| 18 Year Olds who Graduated[3] | Percent of 18 year olds who did graduate high school | 71.2 | 73.8 | 72.1 |
| Adults with High School Certificate[1] | Percent of population aged 25 to 64 with high school certificate or equivalent | 90.2 | 89.9 | 90.3 |
| Adults with Post-Secondary Education[1] | Percent of population aged 25 to 64 with post-secondary education (apprenticeship or trades certificate or diploma, college, CEGEP or other non-university certificate or diploma, or university certificate, diploma or degree | 64.0 | 64.8 | 64.8 |

[1]Statistics Canada (2011 Census), [2]Human Early Learning Partnership (2011-2013); [3]BC Statistics Agency and Ministry of Education (2009/2010-2011/2012)

## 4.3 Housing

**Key Notes:**

- There were a lower percentage of crowded (1.7%) and multiple-family households (1.5%) in Nanaimo than in BC (3.3% and 2.9%), but a similar percentage as in Island Health (1.7% and 1.5%).
- There was a lower percentage of older housing in Nanaimo (14.7%) than in Island Health (20.2%), but a similar percentage as in BC (16.0%).
- Home ownership costs were higher in Nanaimo (23.8% spending more than 30% of income) compared to Island Health (21.1%), but similar to BC (23.8%).



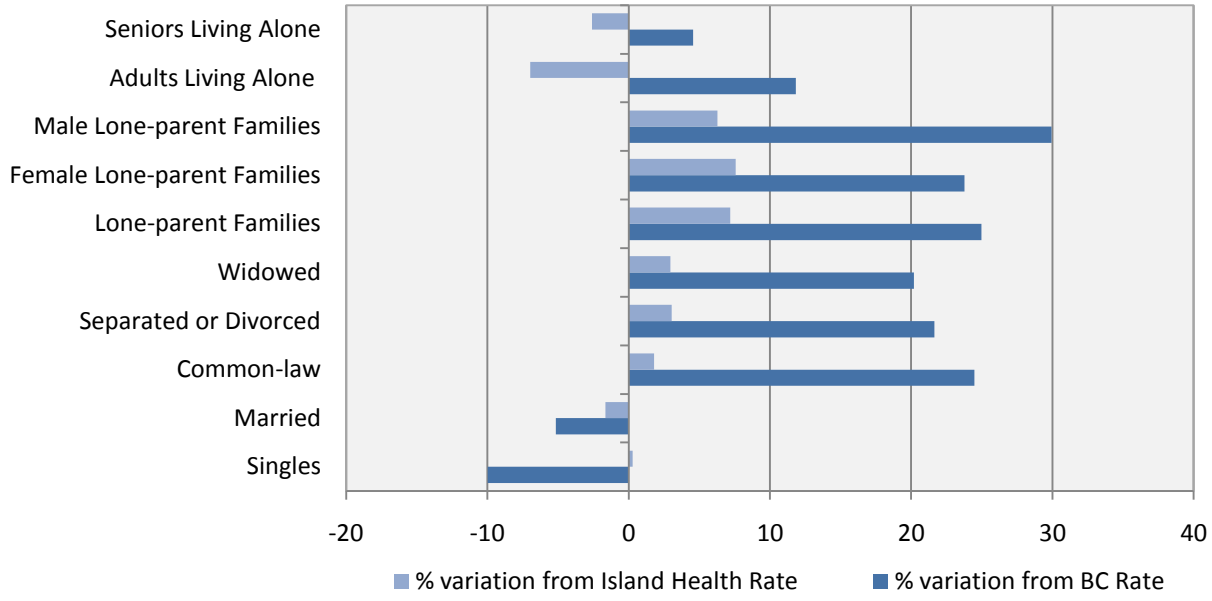

| Indicator | Definition | Nanaimo | BC | Island Health |
|---|---|---|---|---|
| Multiple-family Households | Percent of private households with multiple families | 1.5 | 2.9 | 1.5 |
| Crowded Households | Percent of private households with 6 or more persons | 1.7 | 3.3 | 1.7 |
| Older Housing | Percent of dwellings built prior to 1961 | 14.7 | 16.0 | 20.2 |
| Dwelling Needing Major Repairs | Percent of dwellings rated as needing major repairs by renter or owner | 6.5 | 7.2 | 6.9 |
| Home Ownership Costs | Percent of home owners spending more than 30% of income on housing | 23.8 | 23.8 | 21.1 |
| Gross Major Monthly Payment ($) | Average gross major monthly payment of owner-occupied private non-farm, non-reserve dwellings | $1,026 | $1,228 | $1,083 |
| Housing Rental Costs | Percent of renters spending more than 30% of income on rent | 52.1 | 45.3 | 48.0 |
| Average Gross Rent ($) | Average gross rent of tenant-occupied private non-farm, non-reserve dwellings | $901 | $989 | $930 |

Source: Statistics Canada (2011 Census)

## 4.4 Social Support

**Key Notes:**

- Nanaimo had a higher percentage of male lone-parent families (7.5%) compared to BC (5.7%).
- There were a higher percentage of people in common law relationships in Nanaimo (10.8%) than in BC (8.6%), but a similar percentage as in Island Health (10.6%).
- There were a higher percentage of separated/divorced (11.4%) and widowed (6.6%) individuals in Nanaimo than in BC (9.4% and 5.5%), but a similar percentage as in Island Health (11.1% and 6.4%).



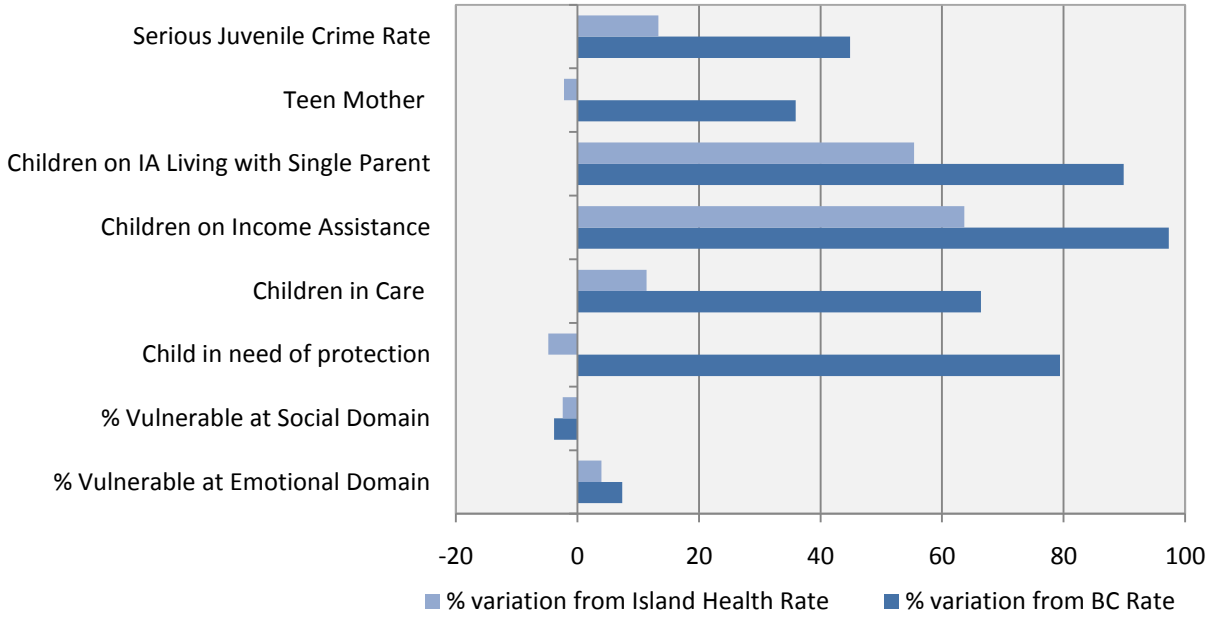

| Indicator | Definition | Nanaimo | BC | Island Health |
|---|---|---|---|---|
| Seniors Living Alone | Percent of persons aged 65 and over that are not in census families and are living alone | 26.9 | 25.7 | 27.6 |
| Adults Living Alone | Percent of persons in private households that are not in census families and are living alone | 12.9 | 11.5 | 13.9 |
| Male Lone-parent Families | Percent of census families with children in private households that are male lone-parent families | 7.5 | 5.7 | 7.0 |
| Female Lone-parent Families | Percent of census families with children in private households that are female lone-parent families | 26.0 | 21.0 | 24.1 |
| Lone-parent Families | Percent of census families with children in private households that are lone-parent families | 33.4 | 26.7 | 31.1 |
| Widowed | Percent of population aged 15 and over that are widowed | 6.6 | 5.5 | 6.4 |
| Separated or Divorced | Percent of population aged 15 and over that are legally married but are separated, or are divorced | 11.4 | 9.4 | 11.1 |
| Common-law | Percent of population aged 15 and over that are in a common-law relationship | 10.8 | 8.6 | 10.6 |
| Married | Percent of population aged 15 and over that are legally married (not separated) | 46.7 | 49.2 | 47.5 |
| Singles | Percent of population aged 15 and over that have never legally married | 24.5 | 27.2 | 24.5 |

Source: Statistics Canada (2011 Census)

## 4.5 Healthy Development (Child and Youth)

**Key Notes:**

- There were a higher percentage of children living on income assistance with a single parent in Nanaimo (5.1%) than in BC (2.7%) or Island Health (3.3%).
- There was a higher rate of children in need of protection in Nanaimo (11.6 per 1,000 children aged 0-18) compared to BC (6.4 per 1,000), but a similar rate compared to Island Health (12.1 per 1,000).
- There was a higher rate of serious juvenile crime in Nanaimo (5.1 per 1,000 youth aged 12-17) than in BC (3.5 per 1,000) or Island Health (4.5 per 1,000).



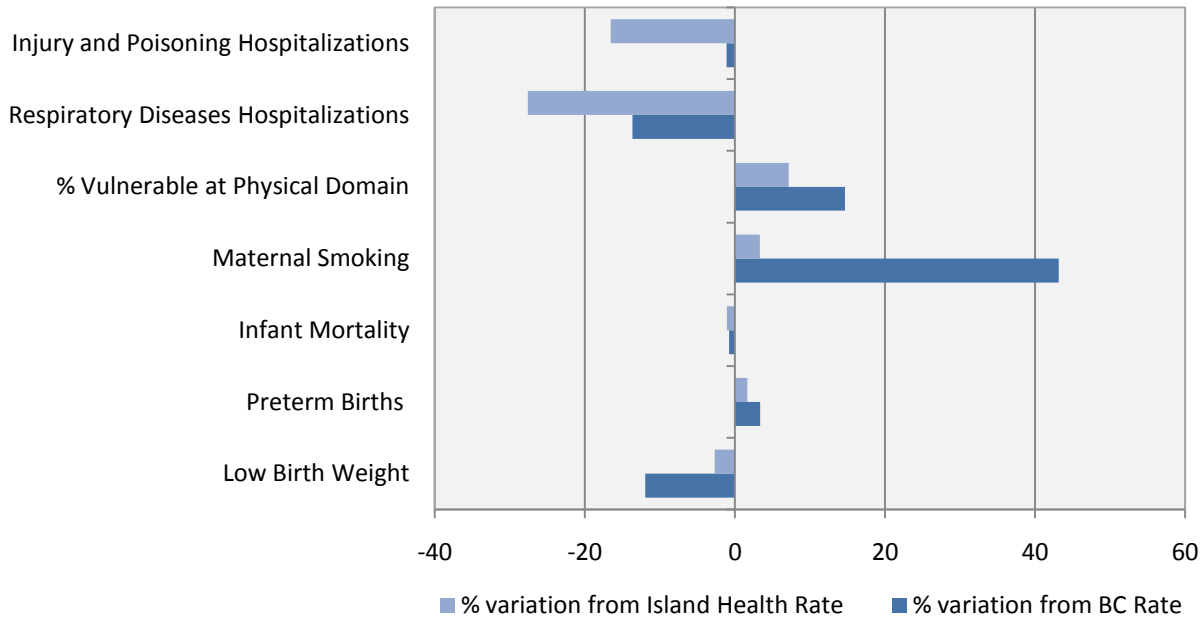

| Indicator | Definition | Nanaimo | BC | Island Health |
|---|---|---|---|---|
| Serious Juvenile Crime Rate[1] | Juvenile crime rate per 1,000 population aged 12 to 17 (B&E, crimes with weapons and assaults with serious injury) | 5.1 | 3.5 | 4.5 |
| Teen Mother[2] | Live births to mothers under 20 years of age per 1,000 live births | 39.5 | 29.0 | 40.4 |
| Children on IA Living with Single Parent[3] | Percent of children less than 15 years of age receiving income assistance and living with a single parent | 5.1 | 2.7 | 3.3 |
| Children on Income Assistance[3] | Percent of children less than 15 years of age receiving income assistance | 6.2 | 3.1 | 3.8 |
| Children in Care[4] | Children in care per 1,000 children aged 0 to 18 years | 15.1 | 9.1 | 13.5 |
| Children in Need of Protection[5] | Reported children in need of protection rate per 1,000 children aged 0 to 18 years | 11.6 | 6.4 | 12.1 |
| Preschool Social Development Vulnerability[6] | Percent of kindergarten children rated as having problems forming friendships, accepting rules and showing respect for adults | 15.0 | 15.6 | 15.4 |
| Preschool Emotional Development Vulnerability[6] | Percent of kindergarten children rated as having problems with aggressive behaviour, impulsivity, disobedience and inattentiveness | 16.0 | 14.9 | 15.4 |

[1]BC Statistics Agency, Statistics Canada and Canadian Centre for Justice Statistics (2009-2011); [2]BC Vital Statistics Agency (2008-2012) [3]BC Statistics Agency, Statistics Canada Census 2006 and Ministry of Social Development (Sep 2012), [4]BC Statistics Agency and Ministry of Children and Family Development (Dec 2012); [5]BC Statistics Agency and Ministry of Children and Family Development (Dec 2011); [6]Human Early Learning Partnership (2011-2013)

## 4.6 Child Health

**Key Notes:**

- There was a higher rate of maternal smoking in Nanaimo (12.3%) compared to BC (8.6%), but a similar rate compared to Island Health (11.9%).
- Nanaimo had a lower rate of children hospitalized for respiratory diseases (7.8 per 1,000 children aged 0-14) compared to BC (9.0 per 1,000) and Island Health (10.7 per 1,000).



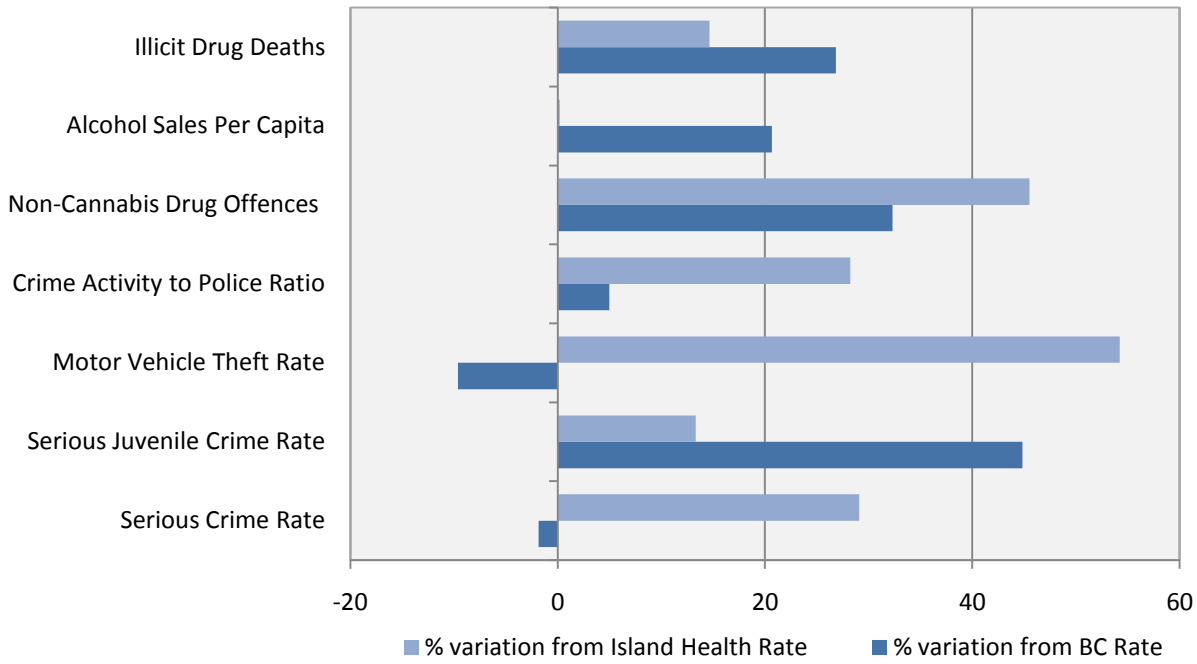

| Indicator | Definition | Nanaimo | BC | Island Health |
|---|---|---|---|---|
| Injury and Poisoning Hospitalizations[1] | Hospitalization rate per 1,000 children aged 0 to 14 | 4.4 | 4.4 | 5.3 |
| Respiratory Diseases Hospitalizations[1] | Hospitalization rate per 1,000 children aged 0 to 14 | 7.8 | 9.0 | 10.7 |
| Preschool Physical Development Vulnerability[2] | Percent of kindergarten children rated as having problems with fine and gross motor skills, daily preparedness for school, washroom skills, and handedness | 18.0 | 15.7 | 16.8 |
| Maternal Smoking[4] | Percent of pregnant women who reported smoking at any time during their current pregnancy | 12.3 | 8.6 | 11.9 |
| Infant Mortality[3] | Deaths of children under 1 year of age per 1,000 live births | 3.6 | 3.7 | 3.7 |
| Preterm Births [3] | Newborns with a gestational age < 37 weeks per 1,000 live births | 77.5 | 75.0 | 76.2 |
| Low Birth Weight[3] | Births weighing less than 2,500 grams per 1,000 live births | 49.1 | 55.8 | 50.5 |

[1]BC Statistics Agency and Ministry of Health (2011-2012); [2]Human Early Learning Partnership (2011-2013), [3]BC Vital Statistics (2008-2012), [4]BC Perinatal Health Program (2008/2009-2012/2013)

## 4.7 Crime

**Key Notes:**

- There was a higher rate of non-cannabis drug offences in Nanaimo (225.3 per 100,000 people) than in BC (170.3 per 100,000) or Island Health (154.8 per 100,000).
- There was a higher motor vehicle theft rate in Nanaimo (3.2 per 1,000 people) than in Island Health (2.1 per 1,000), but a lower rate than in BC (3.6 per 1,000).
- There was a higher rate of deaths due to illicit drugs in Nanaimo (9.7 per 100,000 people) than in BC (7.7 per 100,000) or Island Health (8.5 per 100,000).




| Indicator | Definition | Nanaimo | BC | Island Health |
|---|---|---|---|---|
| Illicit Drug Deaths[1] | Deaths per 100,000 population aged 19 to 64 | 9.7 | 7.7 | 8.5 |
| Alcohol Sales Per Capita[2, 5] | Litres of alcohol sold per resident population aged 19 and older | 124.6 | 103.2 | 124.3 |
| Non-Cannabis Drug Offences [3] | Non-cannabis drug offences per 100,000 population | 225.3 | 170.3 | 154.8 |
| Crime Activity to Police Ratio[3] | Number of serious crimes per police officer | 7.3 | 7.0 | 5.7 |
| Motor Vehicle Theft Rate[3] | Motor vehicle theft rate per 1,000 population | 3.2 | 3.6 | 2.1 |
| Serious Juvenile Crime Rate[3] | Juvenile crime rate per 1,000 population aged 12 to 17 (B&E, crimes with weapons and assaults with serious injury) | 5.1 | 3.5 | 4.5 |
| Serious Crime Rate[3] | Total violent and property crime rate per 1,000 population | 9.9 | 10.1 | 7.7 |

[1]BC Statistics Agency, Coroner's Office, Ministry of Public Safety & Solicitor General (Avg 2008-2010), [2]BC Statistics Agency, Liquor Distribution Branch (2012), [3]BC Statistics Agency, Statistics Canada, Canadian Centre for Justice Statistics (Avg 2009-2011)

[5] Alcohol sales per capita is based on total volume sold in a local health area and does not consider the impact of tourist volume or non-resident alcohol purchases in that area.

# 5 Health Status

## 5.1 Birth Statistics

**Key Notes:**

- Nanaimo had the third lowest rate of stillbirth in Island Health.

| Birth Rates | Nanaimo | Island Health | % Difference | Rank in Island Health | BC | % Difference |
|---|---|---|---|---|---|---|
| Elderly Gravida | 170.82 | 201.52 | -15% | 7 | 230.60 | -26% |
| Low Birth Weight | 49.14 | 50.50 | -3% | 10 | 55.82 | -12% |
| Infant Death | 3.65 | 3.69 | -1% | 8 | 3.68 | -1% |
| Teen Mother | 39.48 | 40.37 | -2% | 8 | 29.05 | 36% |
| Cesarean | 261.37 | 286.01 | -9% | 8 | 311.97 | -16% |
| Pre-term | 77.47 | 76.21 | 2% | 9 | 74.96 | 3% |
| Stillbirth | 5.97 | 8.37 | -29% | 12 | 9.81 | -39% |
| Live Birth | 8.95 | 8.47 | 6% | 7 | 9.77 | -8% |

Source: BC Vital Statistics, 2008-2012

## 5.2 Mortality Statistics

**Key Notes:**

- Nanaimo was ranked 3rd for deaths due to medically treatable diseases.

| Indicator | Nanaimo SMR Value | Island Health SMR Value | % Difference | Rank in Island Health | PYLLI |
|---|---|---|---|---|---|
| Drug Induced Deaths | 1.24 | 1.14 | 9% | 4 | 1.11 |
| Medically Treatable Diseases | 1.21 | 0.93 | 31% | 3 | 1.03 |
| Circulatory System | 1.11 | 1.03 | 7% | 7 | 1.33 |
| Digestive System | 1.03 | 1.08 | -4% | 9 | 1.28 |
| Alcohol Related Deaths | 1.28 | 1.31 | -3% | 10 | 1.34 |
| Falls | 0.97 | 1.19 | -19% | 10 | 0.70 |
| Cancer | 1.10 | 1.06 | 4% | 6 | 1.14 |
| Respiratory | 0.96 | 0.93 | 3% | 9 | 1.33 |
| Suicide | 1.06 | 1.19 | -11% | 9 | 1.19 |
| Motor Vehicle | 0.79 | 0.92 | -14% | 10 | 0.94 |
| End/Nut/Met Diseases | 1.24 | 1.01 | 23% | 5 | 1.06 |
| Diabetes | 1.30 | 1.01 | 29% | 4 | 1.06 |
| Arteries/Arterioles/Capillaries | 0.86 | 1.02 | -16% | 11 | 0.80 |
| Pneumonia and Influenza | 0.90 | 0.83 | 7% | 5 | 1.31 |
| Lung Cancer | 1.08 | 1.04 | 4% | 9 | 1.13 |
| Ischaemic Heart Disease | 1.15 | 0.99 | 16% | 4 | 1.32 |
| Chronic Lung Disease | 1.02 | 0.99 | 4% | 7 | 1.20 |
| Cerebrovascular Disease/Stroke | 1.07 | 1.03 | 4% | 8 | 1.08 |
| **Total Deaths** | **1.08** | **1.03** | **5%** | **5** | **1.20** |

Source: BC Vital Statistics Annual Report, 2011 (Aggregate 2007-2011)

## 5.3 Chronic Disease Prevalence[6]

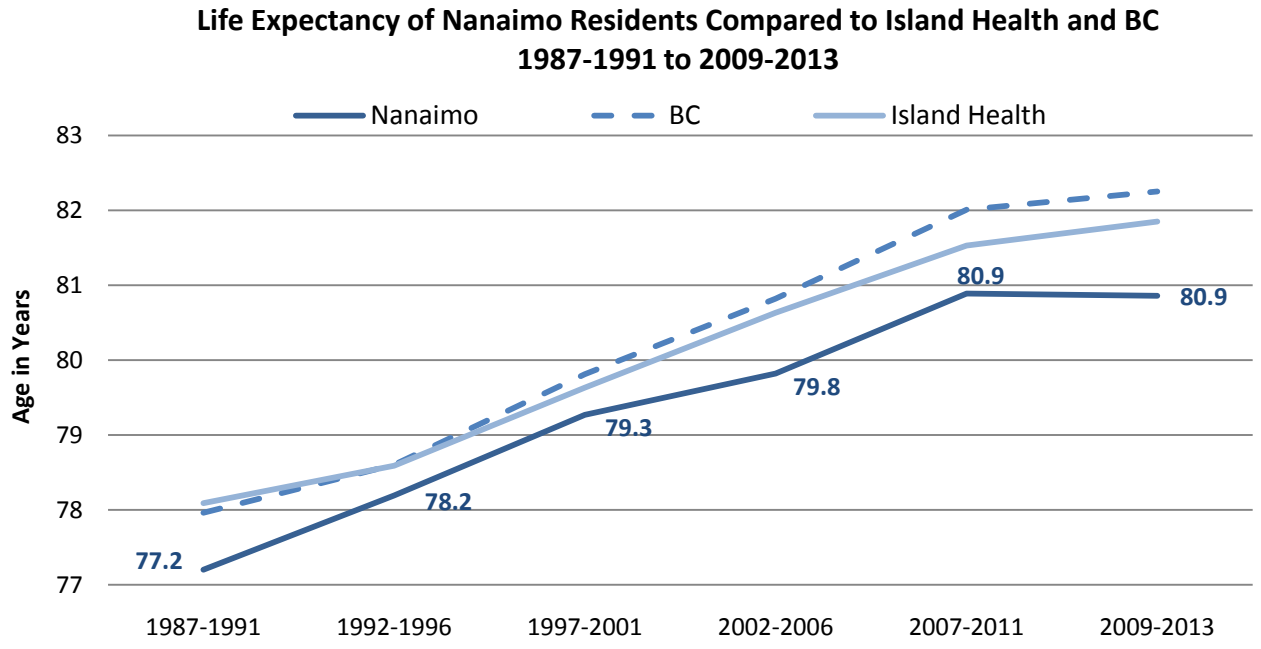
**Key Notes:**

- Nanaimo had a higher crude prevalence of asthma (11.8%) than BC (10.5%) or Island Health (11.1%).

| Chronic Conditions | Nanaimo | | Island Health | | BC | |
|---|---|---|---|---|---|---|
| | # of Patients | % of Pop | # of Patients | % of Pop | # of Patients | % of Pop |
| Hypertension | 21,114 | 24.8% | 163,139 | 26.5% | 886,638 | 24.6% |
| Depression/Anxiety | 24,216 | 23.1% | 203,669 | 27.0% | 1,110,914 | 24.5% |
| Asthma | 7,691 | 11.8% | 52,017 | 11.1% | 317,750 | 10.5% |
| Osteoarthritis | 10,868 | 10.4% | 81,779 | 10.8% | 404,772 | 8.9% |
| Diabetes | 8,846 | 8.4% | 61,423 | 8.1% | 371,563 | 8.2% |
| Chronic Obstructive Pulmonary Disease | 3,322 | 6.3% | 23,648 | 6.2% | 123,153 | 6.0% |
| Osteoporosis | 4,299 | 4.1% | 36,176 | 4.8% | 193,577 | 4.3% |
| Ischaemic Heart Disease | 4,283 | 4.1% | 28,812 | 3.8% | 158,074 | 3.5% |
| Dementia | 1,924 | 3.7% | 15,109 | 3.9% | 66,519 | 3.3% |
| Chronic Kidney Disease | 2,601 | 2.5% | 18,181 | 2.4% | 91,517 | 2.0% |
| Congestive Heart Failure | 2,569 | 2.5% | 18,135 | 2.4% | 100,559 | 2.2% |
| Rheumatoid Arthritis | 1,339 | 1.3% | 10,584 | 1.4% | 54,141 | 1.2% |
| Hospital Stroke | 785 | 0.7% | 5,991 | 0.8% | 33,597 | 0.7% |

Source: BC Ministry of Health Services Primary Health Care Chronic Disease Registries 2011/12

## 5.4 Life Expectancy at Birth




| Life Expectancy by Gender, 2009-2013 | | | |
|---|---|---|---|
| | Nanaimo | Island Health | BC |
| **MALES** | 78.5 | 79.8 | 80.2 |
| **FEMALES** | 83.3 | 83.9 | 84.3 |

[6] This reflects the lifetime prevalence of these diseases in 2011/2012, not the 2011/12 prevalence. If a resident has had one of these diseases in their life it will appear in this data. These rates are not age-standardized.

# 6 Health Service Utilization

## 6.1 Hospital Admissions[7]

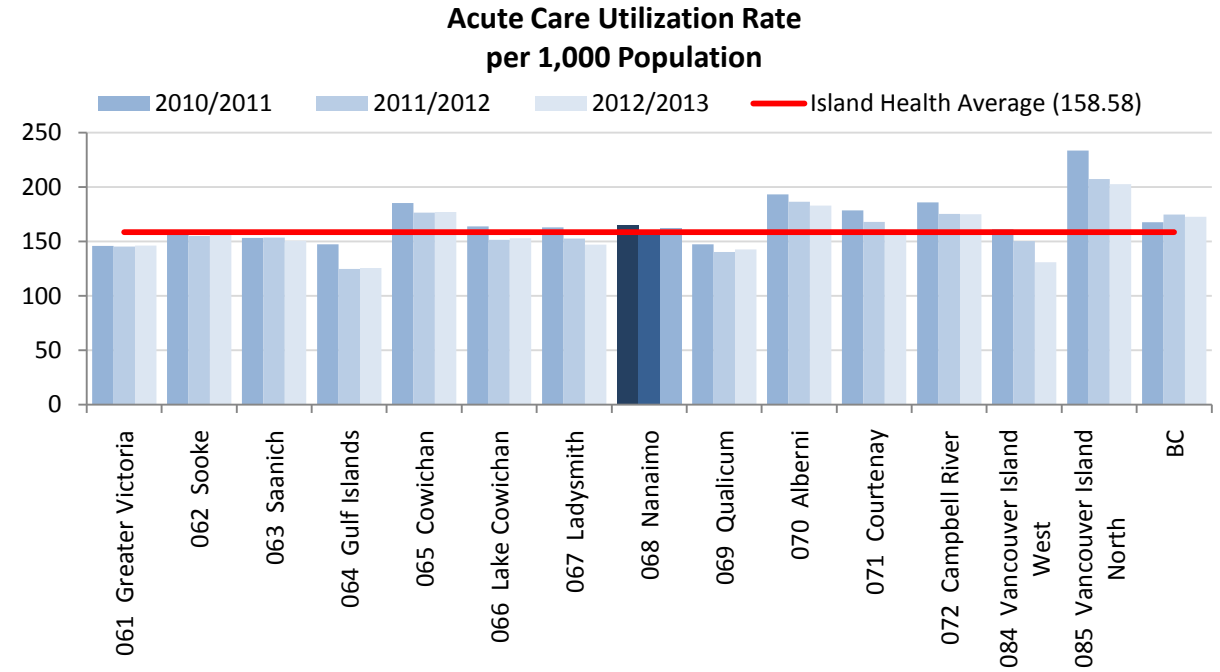
**Key Notes:**

- Of the 20,021 hospital cases for Nanaimo residents in 2012/13:
  - 47.5% were day cases, while 52.5% were inpatient cases;
  - 55.4% were medical cases, while 44.6% were surgical cases;
  - Digestive symptoms/signs were responsible for the most inpatient cases (328);
  - Lens extraction/insertion, typically for cataracts, was responsible for the most day cases (1,339).
  - 83% of cases were treated at Nanaimo Regional General Hospital, while 7% were at Royal Jubilee Hospital in Victoria.
- Of the 80,850 inpatient days for Nanaimo residents in 2012/13:
  - 14.9% were for an alternate level of care;
  - Mental diseases and disorders were responsible for the most patient days (14,217 or 17.6%).
- The ambulatory care sensitive conditions (ACSC) rate for Nanaimo residents is 4.8% of cases, slightly higher than the Island Health average of 4.5%; and
- The percentage of alternate level of care days (ALC) has been decreasing similar to Island Health since 2010/11.

**Total Hospital Cases and Days for Nanaimo Residents**

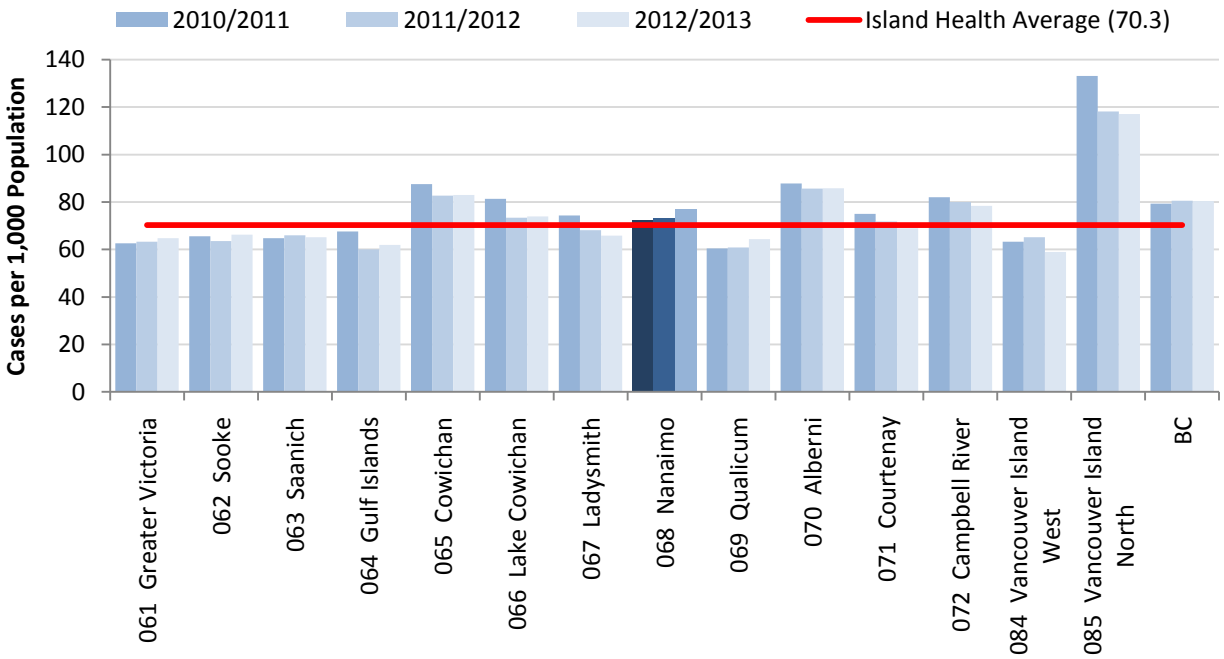
| 2012/13 | Day Cases | Inpatient Cases | Inpatient Days | % Days ALC | Total Cases |
|---|---|---|---|---|---|
| Medical | 3988 | 7100 | 58252 | 17.9% | 11088 |
| Surgical | 5512 | 3421 | 22598 | 7.3% | 8933 |
| **Total** | **9500** | **10521** | **80850** | 14.9% | **20021** |

**Acute Utilization Rates overall and by category:**

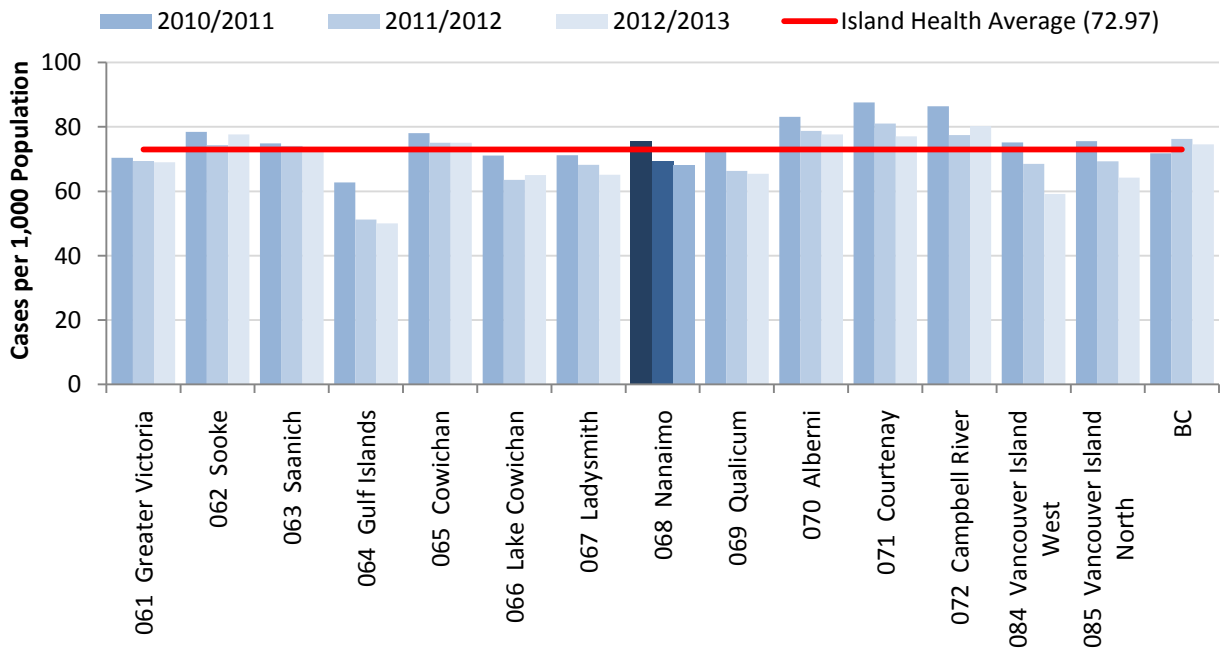



[7] Source: 2012/13 Discharge Abstract Database; excludes newborn records.

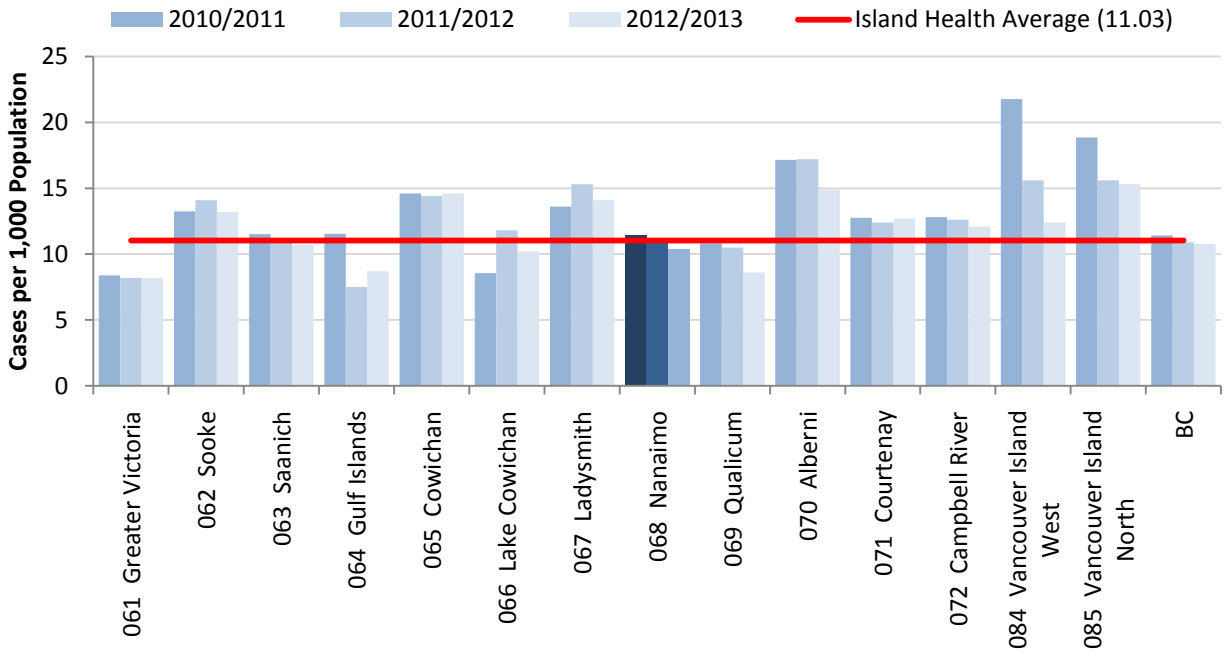
**Medical Acute Care Utilization Rate per 1,000 Population**



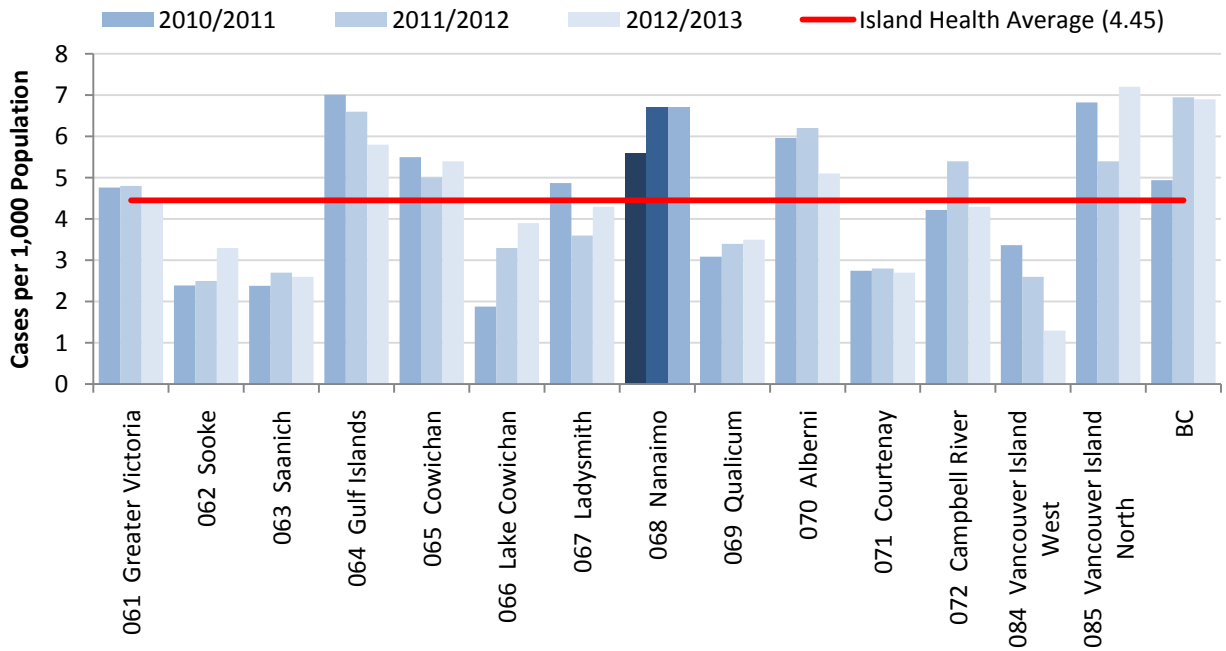

**Surgical Acute Care Utilization Rate per 1,000 Population**



**Maternity Acute Care Utilization Rate per 1,000 Population**




**Psychiatry Acute Care Utilization Rate per 1,000 Population**



**Leading reasons for Inpatient and Day cases for Nanaimo Residents by Case Mix Group, 2012/13:**

**Top 10 Inpatient Cases for Residents by Case Mix Group**

| Top 10 Inpatient Case Mix Groups | Cases | Days | ALC Days |
|---|---|---|---|
| Symptom/Sign of Digestive System | 328 | 858 | 20 |
| Palliative Care | 305 | 3811 | 417 |
| Vaginal Birth without Anaesthetic without Non-Major Obstetric/Gynecologic Intervention | 269 | 395 | 0 |
| Chronic Obstructive Pulmonary Disease | 217 | 2267 | 478 |
| Viral/Unspecified Pneumonia | 199 | 1360 | 122 |
| Heart Failure without Coronary Angiogram | 189 | 2603 | 598 |
| Unilateral Knee Replacement | 187 | 613 | 0 |
| Myocardial Infarction/Shock/Arrest without Coronary Angiogram | 173 | 786 | 56 |
| Unilateral Hip Replacement | 164 | 585 | 0 |
| Hysterectomy with Non Malignant Diagnosis | 155 | 228 | 0 |

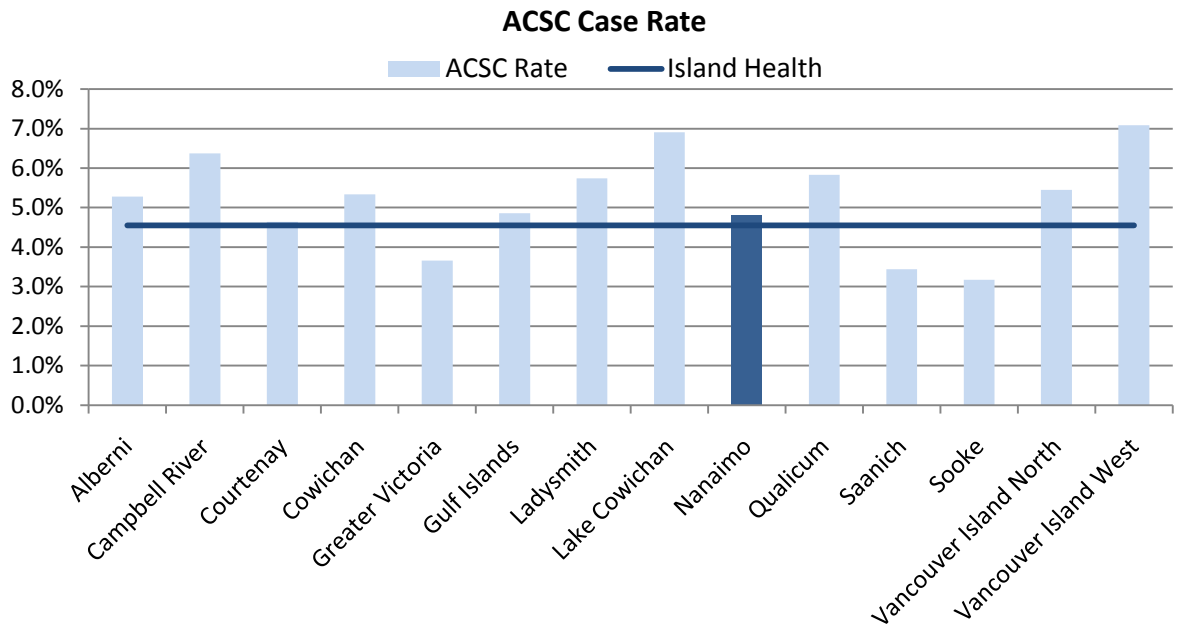
**Top 10 Day Cases for Residents by Case Mix Groups**

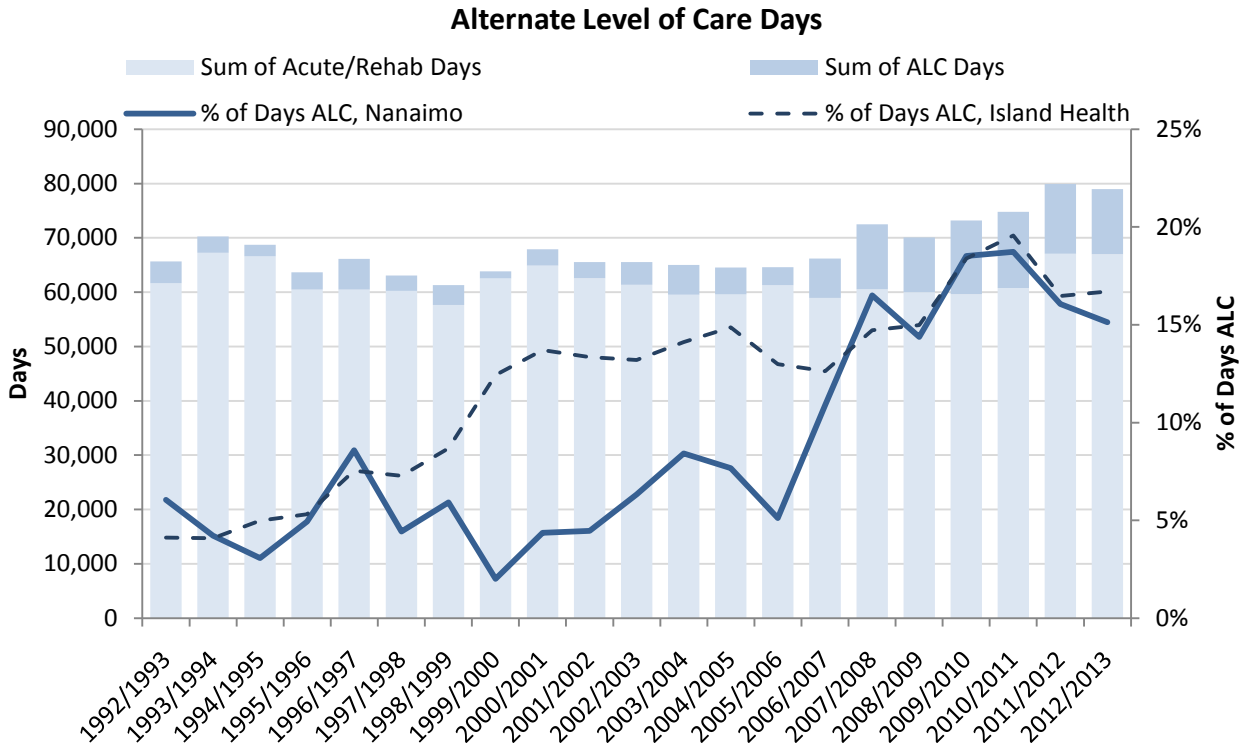
| Top 10 Day Case Mix Groups | Cases |
|---|---|
| Lens Extraction/Insertion | 1339 |
| Minor Lower Gastrointestinal Intervention | 721 |
| Other Chemotherapy | 638 |
| Symptom/Sign of Digestive System | 415 |
| Esophagitis/Gastritis/Miscellaneous Digestive Disease | 334 |
| Diagnosis Not Generally Hospitalized | 326 |
| Closed Knee Intervention except Fixation without Infection | 297 |
| Disease of Oral Cavity/Salivary Gland/Jaw | 243 |
| Follow-Up Treatment/Examination | 234 |
| Non-Major Intervention on Lower Urinary Tract, Planned | 160 |

**Total Cases and Days for Nanaimo Residents by Major Clinical Category, 2012/13:**

| Major Clinical Categories | Cases | Days | ALC Days |
|---|---|---|---|
| Digestive System | 3773 | 7258 | 345 |
| Circulatory System | 2020 | 9657 | 872 |
| Eye | 1549 | 53 | 0 |
| Musculoskeletal System & Connective Tissue | 1495 | 4232 | 366 |
| Kidney, Urinary Tract & Male Reproductive System | 1223 | 3247 | 366 |
| Other Reasons for Hospitalization | 1102 | 10097 | 1456 |
| Blood & Lymphatic System | 1035 | 1324 | 3 |
| Mental Diseases & Disorders | 1034 | 14217 | 4514 |
| Trauma, Injury, Poisoning & Toxic Effects of Drugs | 1023 | 6238 | 731 |
| Pregnancy & Childbirth | 997 | 2292 | 0 |
| Respiratory System | 817 | 6212 | 770 |
| Female Reproductive System | 799 | 579 | 0 |
| Ear, Nose, Mouth & Throat | 793 | 890 | 79 |
| Skin, Subcutaneous Tissue & Breast | 553 | 1964 | 307 |
| Hepatobiliary System & Pancreas | 516 | 2361 | 162 |
| Nervous System | 474 | 5303 | 1372 |
| Miscellaneous CMG & Ungroupable Data | 331 | 14 | 0 |
| Endocrine System, Nutrition & Metabolism | 263 | 1688 | 394 |
| Multisystemic or Unspecified Site Infections | 160 | 2389 | 321 |
| Newborns & Neonates with Conditions Originating in Perinatal Period | 56 | 766 | 0 |
| Burns | 8 | 69 | 0 |
| **Grand Total** | **20021** | **80850** | **12058** |

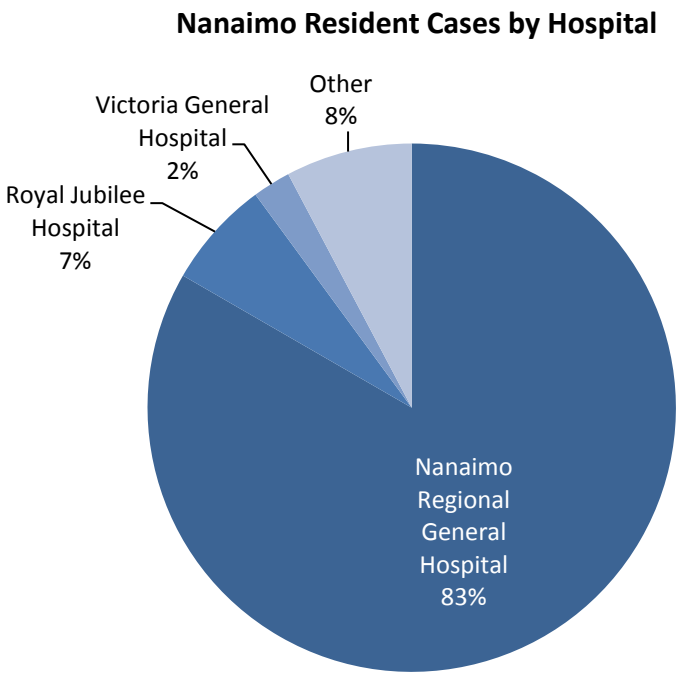
**Ambulatory Care Sensitive Conditions (ACSC) and Alternative Level of Care (ALC) Days, 2012/13:**






Source: Quantum Analyzer, Discharge Abstract Database

**Where Residents Receive Hospital Care**

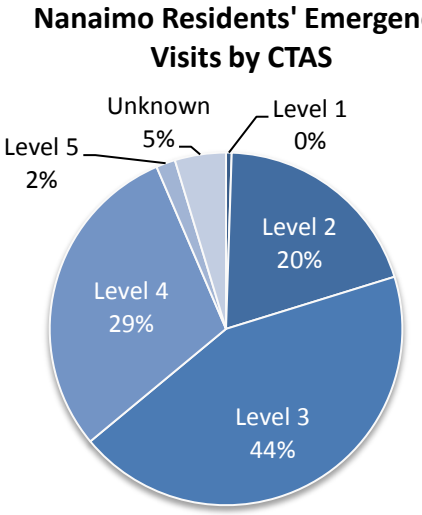


## 6.2 Emergency Visits by Residents, 2012/13

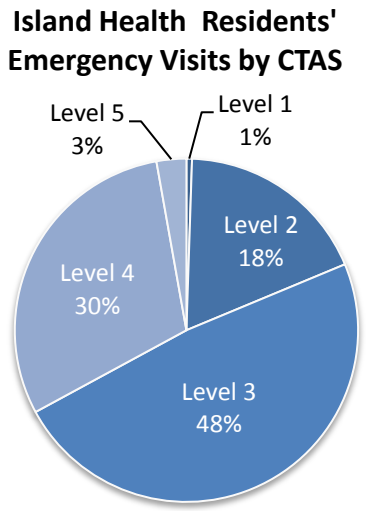
**Key Notes:**

- Of the 43,369 emergency visits by Nanaimo residents in 2012/13:
  - 67% of those with known scores were CTAS[8] 1, 2 and 3, similar to Island Health;
  - 93% were at Nanaimo Regional General Hospital; and
  - 32% were for those aged over 60.
- More visits occurred on Saturday than on other days of the week; and
- Nanaimo residents had a slightly higher rate of emergency visits (402 per 1,000) compared to Island Health as a whole (369 per 1,000).

**Emergency Visits by Nanaimo and Island Health Residents by CTAS Level**

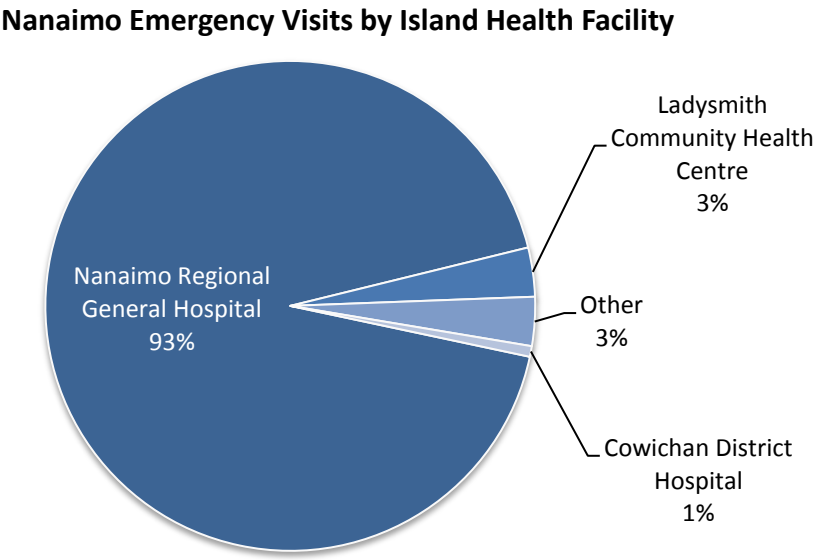



Source: Island Health IDEAS




Source: Island Health IDEAS

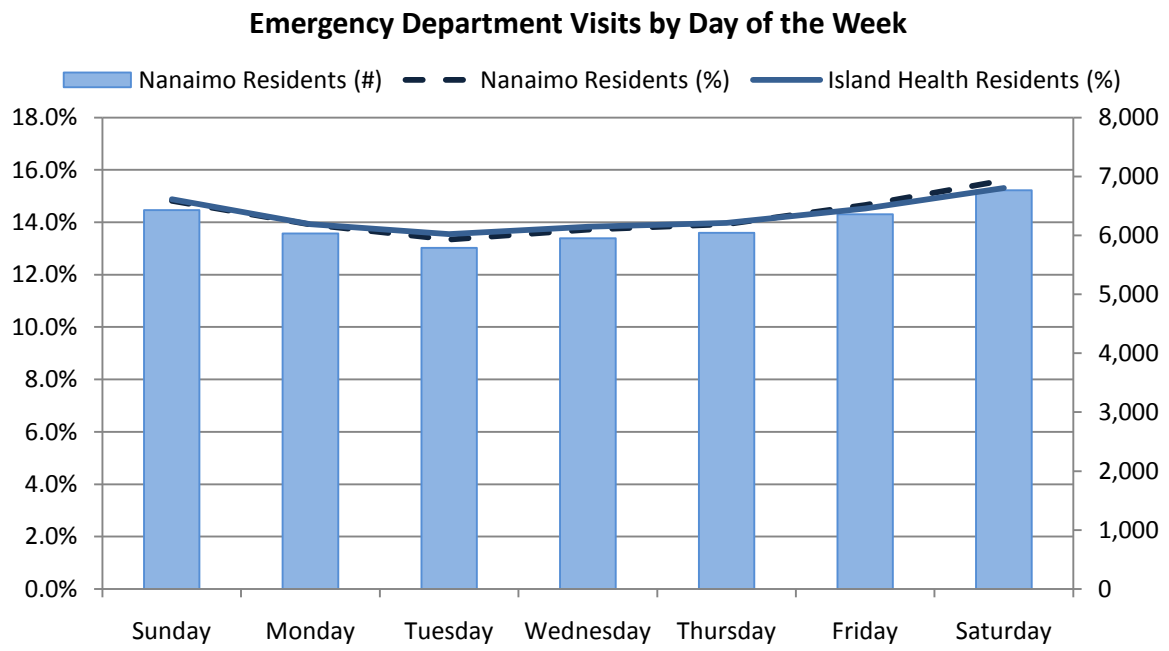
**Where Residents go for Emergency Visits**




Source: Island Health IDEAS

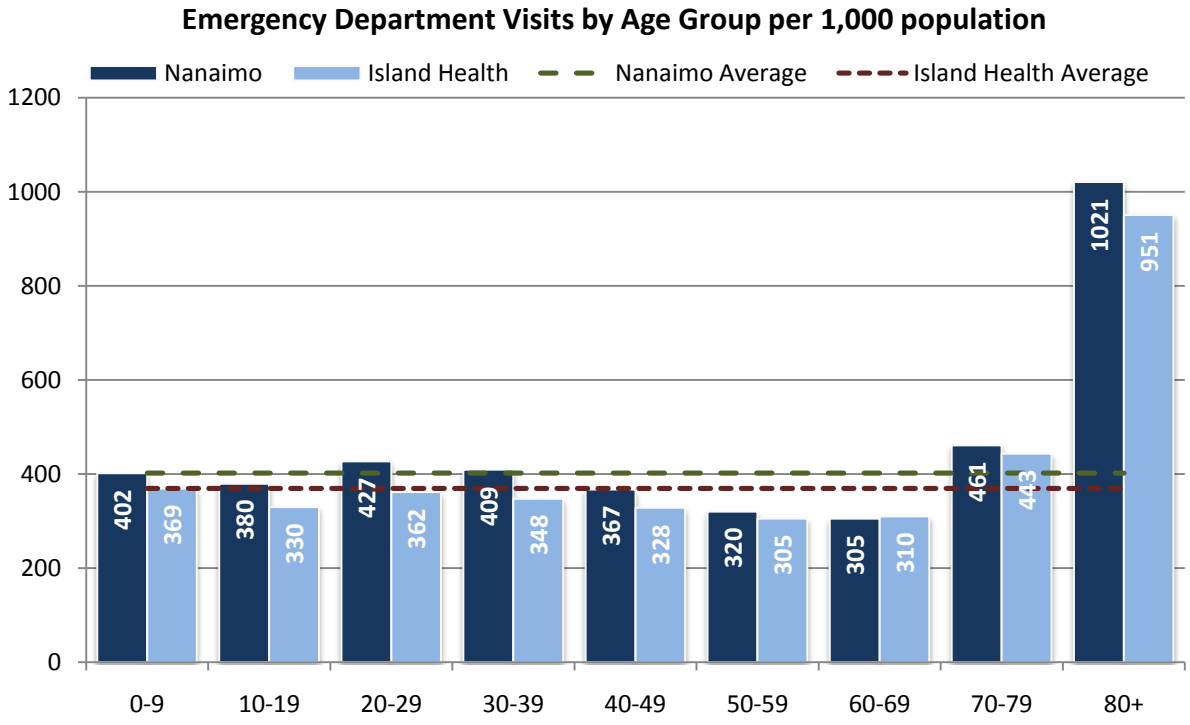
[8] Canadian Emergency Department Triage & Acuity Scale. Level 1 is the most severe and categorized as resuscitation, Level 5 is the least severe and categorized as non urgent.

**Emergency Visits by Nanaimo and Island Health Residents by Day of the Week**




Source: Island Health IDEAS

**Emergency Visits by Nanaimo and Island Health Residents by Age Group of Patient**




Source: Island Health IDEAS


# 2013
# Local Health Area Profile
# Qualicum (69)

Prepared by Planning and Community Engagement
Island Health
December 2014

An accompanying Interpretation Guide has been created to assist with the interpretation of indicators. The Interpretation Guide should be read with the profiles.

These profiles are not intended to be used for detailed planning or analysis. As they are updated on an annual basis, there may be more current data available. If you are intending to use these profiles for health planning purposes, or if you have questions or notice a discrepancy, please contact Melanie Rusch (Melanie.Rusch@viha.ca).

# Table of Contents

# 1 Key notes

## Demographics

- On average, the population of Qualicum is older than that of BC and Island Health.
- As of 2013, Qualicum represents 6.0% (46,100 people) of Island Health's population of 771,660.
- As of 2011, 4.1% of people living in Qualicum identified as Aboriginal[1] compared to 6.6% in Island Health and 5.4% in BC.
- The overall population is expected to increase by 25% over the next 20 years; however, the population aged 75+ is expected to increase by 101%, while the population aged 45-64 is expected to decrease by 9% between 2014 and 2034.

## Economic Wellbeing

- There were a lower percentage of people on income assistance in Qualicum (1.0%) than in BC (1.7%) and Island Health (1.8%).
- Qualicum had a lower percentage of low income seniors (8.0%) than BC (13.9%) or Island Health (11.1%).
- Qualicum had a lower labour force participation rate (49.8%) than BC (65.6%) or Island Health (62.6%).

## Education

- Qualicum had a higher rate of grade 4 and 7 children below standard in reading (25.0%) and writing (27.9%) than BC (20.5% and 14.2%) or Island Health (22.4% and 18.3%).
- Qualicum had a lower percentage of kindergarten children rated as vulnerable for communication skills (12.0%) than BC (13.7%), but a similar percentage as Island Health (12.0%).
- Qualicum had a higher percentage of kindergarten children rated as vulnerable for language development (10.0%) than BC (9.0%), but a similar percentage as Island Health (9.7%).

## Housing

- Qualicum had a lower percentage of older housing (6.2%) than BC (16.0%) or Island Health (20.2%).
- Qualicum had a lower percentage of crowded (1.0%) and multiple-family (0.9%) households than BC (3.3% and 2.9%) or Island Health (1.7% and 1.5%).
- Qualicum had lower home ownership costs (17.9% spending more than 30% of income) but higher rental costs (53.9%) compared to BC (23.8% and 45.3%) and Island Health (21.1% and 48.0%).

## Social Support

- Qualicum had a lower percentage of singles (15.7%) than BC (27.2%) or Island Health (24.5%).
- Qualicum had a higher percentage of widowed individuals (8.0%) than BC (5.5%) or Island Health (6.4%).
- Qualicum had lower percentage of seniors living alone (22.1%) than BC (25.7%) or Island Health (27.6%).

## Healthy Development

- Qualicum had a lower rate of children in need of protection (5.8 per 1,000 children aged 0-18) than BC (6.4 per 1,000) or Island Health (12.1 per 1,000).
- Qualicum had a lower percentage of children on income assistance (2.4%) than BC (3.1%) or Island Health (3.8%).
- Qualicum had a higher percentage of kindergarten children rated vulnerable for emotional development (18.0%) compared to BC (14.9%) or Island Health (15.4%).

[1] Statistics Canada, National Household Survey, 2011; refers to those persons who self identified with at least one Aboriginal group (North American Indian, Métis or Inuit, and/or those who reported being a Treaty Indian or a Registered Indian, as defined by the *Indian Act* of Canada, and/or those who reported they were members of an Indian band or First Nation).

## Child Health

- Qualicum had a lower rate of children hospitalized due to respiratory diseases (5.3 per 1,000 children aged 0-14) than BC (9.0 per 1,000) or Island Health (10.7 per 1,000).
- Qualicum had a higher percentage of kindergarten children rated as vulnerable for physical development (20.0%) than BC (15.7%) or Island Health (16.8%).
- Qualicum had a higher infant mortality rate (5.7 per 1,000 live births) compared to BC (3.7 per 1,000) or Island Health (3.7 per 1,000).

## Crime

- Qualicum had a higher crime activity to police officer ratio (8.3 serious crimes per police officer) than BC (7.0 per officer) or Island Health (5.7 per officer).
- Qualicum had a lower rate of non-cannabis drug offences (80.1 per 100,000 people) than BC (170.3 per 100,000) or Island Health (154.8 per 100,000).
- Qualicum had a lower motor vehicle theft rate (1.8 per 1,000 people) than BC (3.6 per 1,000) or Island Health (2.1 per 1,000).

## Birth Statistics

- Qualicum had the lowest live birth rate and the lowest rate of pre-term births in Island Health.

## Mortality Statistics

- Qualicum ranked low in overall deaths, but second in deaths due to pneumonia and influenza.

## Chronic Disease Prevalence

- Qualicum had a higher crude prevalence for several chronic conditions including hypertension (34.4%), osteoarthritis (15.6%) and diabetes (10.0%) compared to BC (24.6%, 24.5% and 8.2%) and Island Health (26.5%, 27.0% and 8.1%).

## Hospital Admissions

- Of the 9,608 hospital admissions among Qualicum residents in 2012/2013:
  - There were slightly fewer inpatient cases (47.4%) compared to day cases (52.6%),
  - 49.5% were surgical cases, while 50.5% were medical cases;
  - Unilateral knee replacements were responsible for the most inpatient cases (143);
  - Lens extraction/insertion, typically for cataracts, was responsible for the most day cases (891).
- Of the 36,400 patient days for Qualicum residents:
  - 15.6% were for an alternate level of care (ALC);
  - Mental disease and disorders were responsible for the most patient days (5,407 or 14.9%).
- The ambulatory care sensitive conditions (ACSC) rate for Qualicum residents was 5.8% for 2011/12; higher than the Island Health rate of 4.5%.
- The percentage of alternate level of care days (ALC) for Qualicum residents has remained lower than that of Island Health in recent years, although it has been increasing since 2010/11.

## Emergency Department Visits

- Of the 17,688 Emergency Department visits made by Qualicum residents in 2012/13[2]:
  - 75% of those with known scores were for CTAS[3] 1, 2 or 3 compared to 67% for Island Health;
  - 93% were to Nanaimo Regional General Hospital; and
  - 51% were by people aged 60 or older.
- More visits were made on Saturday or Sunday; overall the pattern of daily ED usage was similar to that of Island Health.
- Compared to Island Health as a whole, the residents of Qualicum made fewer to the Emergency Department overall and across each age group.

[2] These data do not contain visits to Oceanside Health Centre. It will be included in the next profile.

[3] Canadian Emergency Department Triage & Acuity Scale. Level 1 is the most severe and categorized as resuscitation, Level 5 is the least severe and categorized as non urgent.

# 2 Geography

## 2.1 Location Description

- Qualicum Local Health Area (LHA) is one of 14 LHAs in Island Health and is located in Island Health's Central Health Service Delivery Area (HSDA).
- Qualicum is at the north eastern tip of the Central HSDA. It covers 834 square kilometres, and contains the cities of Parksville and Qualicum Beach. It is bordered on by three other LHAs: Nanaimo, Alberni and Courtenay.

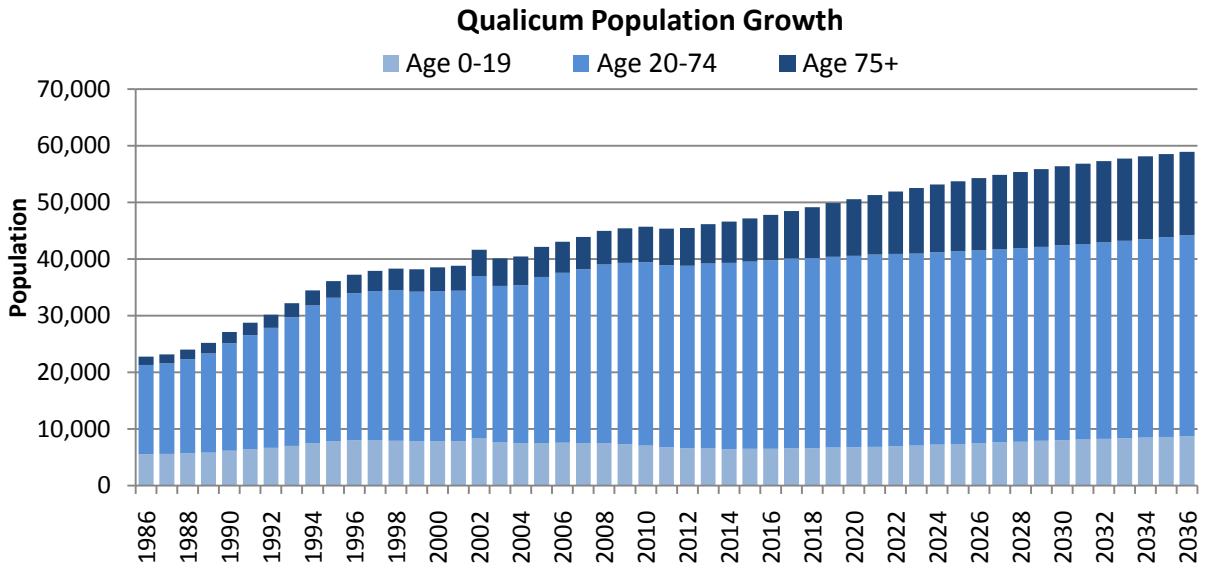

## 2.2 Transportation

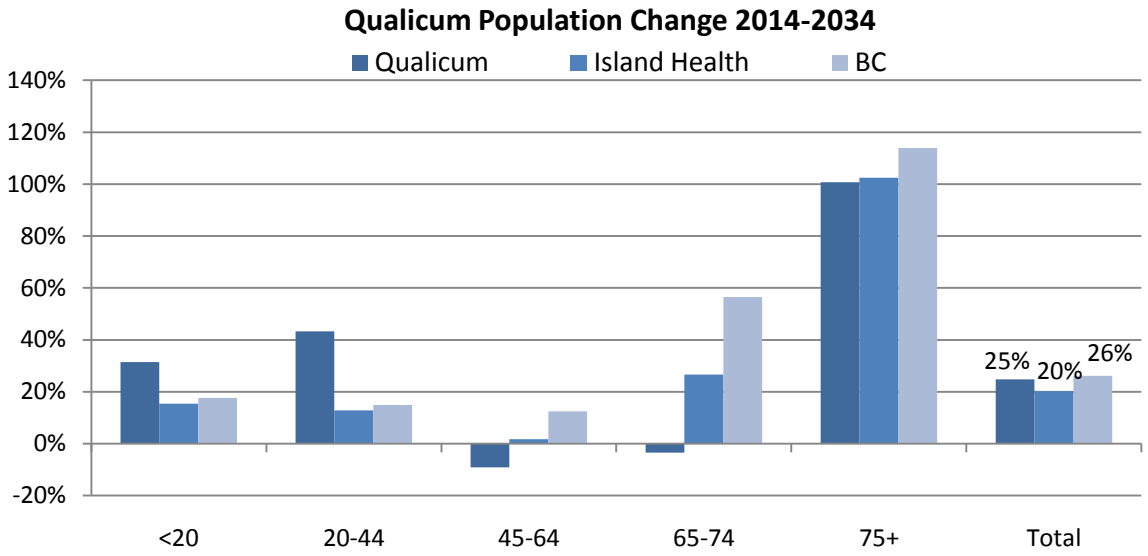
- Qualicum is situated along Highway 19. It is approximately half an hour from Nanaimo and an hour from Courtenay.
- The Qualicum area has 3 BC Transit bus routes and a handyDART service. There is a ferry service between the French Creek Harbour and Lasqueti Island.

# 3 Demographics[4]

**Key Notes:**

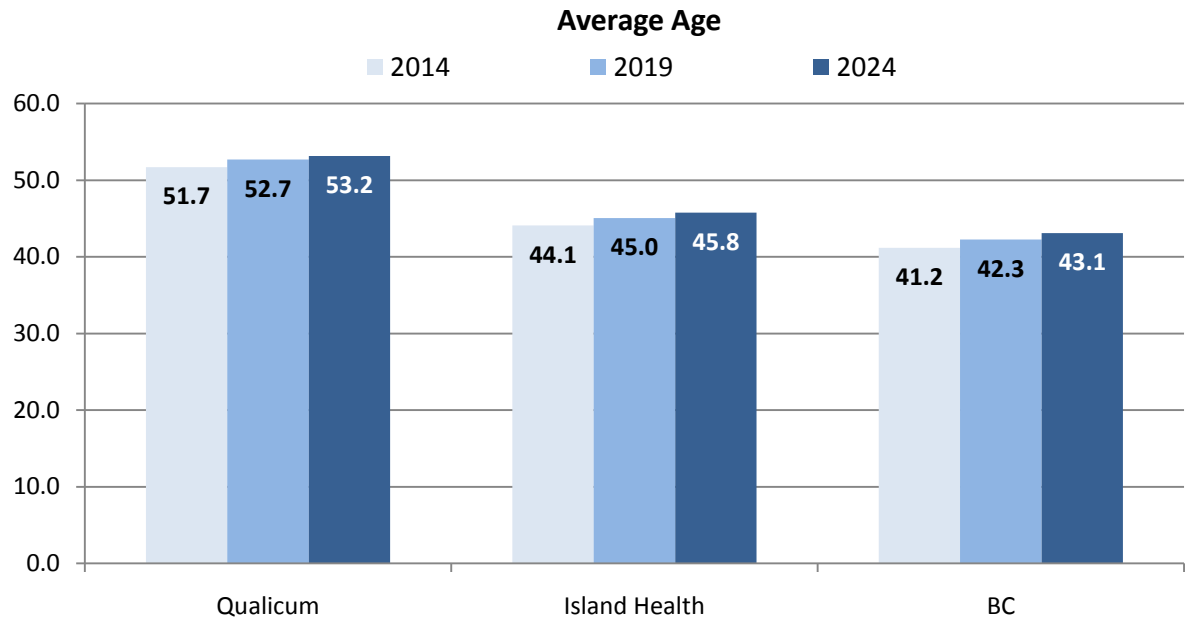
- On average, the population of Qualicum is older than that of BC and Island Health.
- As of 2013, Qualicum represents 6.0% (46,100 people) of Island Health's population of 771,660.
- As of 2011, 4.1% of people living in Qualicum identified as Aboriginal[5] compared to 6.6% in Island Health and 5.4% in BC.
- The overall population is expected to increase by 25% over the next 20 years; however, the population aged 75+ is expected to increase by 101%, while the population aged 45-64 is expected to decrease by 9% between 2014 and 2034.



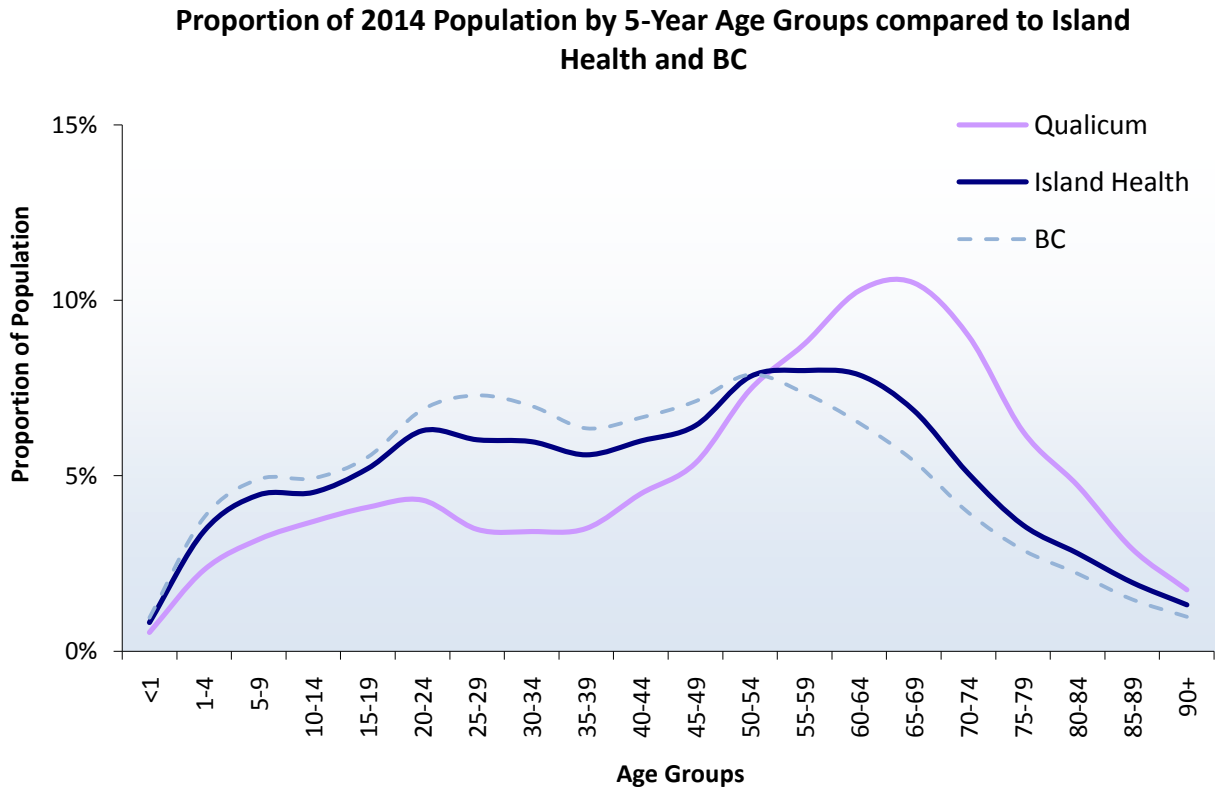

[4] Source: BC Statistics, PEOPLE 2012, unless otherwise specified.

[5] Statistics Canada, National Household Survey, 2011; refers to those persons who self identified with at least one Aboriginal group (North American Indian, Métis or Inuit, and/or those who reported being a Treaty Indian or a Registered Indian, as defined by the *Indian Act* of Canada, and/or those who reported they were members of an Indian band or First Nation).




**Qualicum's 2014 population profile is somewhat similar to Island Health and BC; however, it has:**

- A lower percentage of people under 50 years of age; and,
- A higher percentage of people 55+.

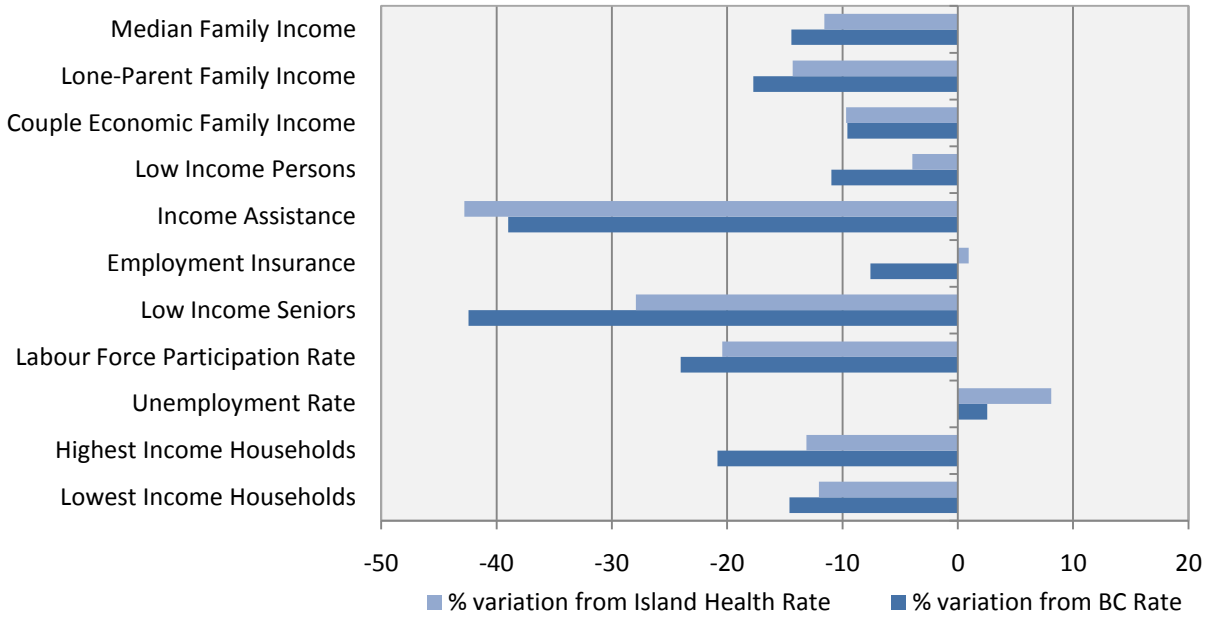


# 4 Social Determinants of Health and Wellbeing

## 4.1 Economic Wellbeing

**Key Notes:**

- There were a lower percentage of people on income assistance in Qualicum (1.0%) than in BC (1.7%) and Island Health (1.8%).
- Qualicum had a lower percentage of low income seniors (8.0%) than BC (13.9%) or Island Health (11.1%).
- Qualicum had a lower labour force participation rate (49.8%) than BC (65.6%) or Island Health (62.6%).



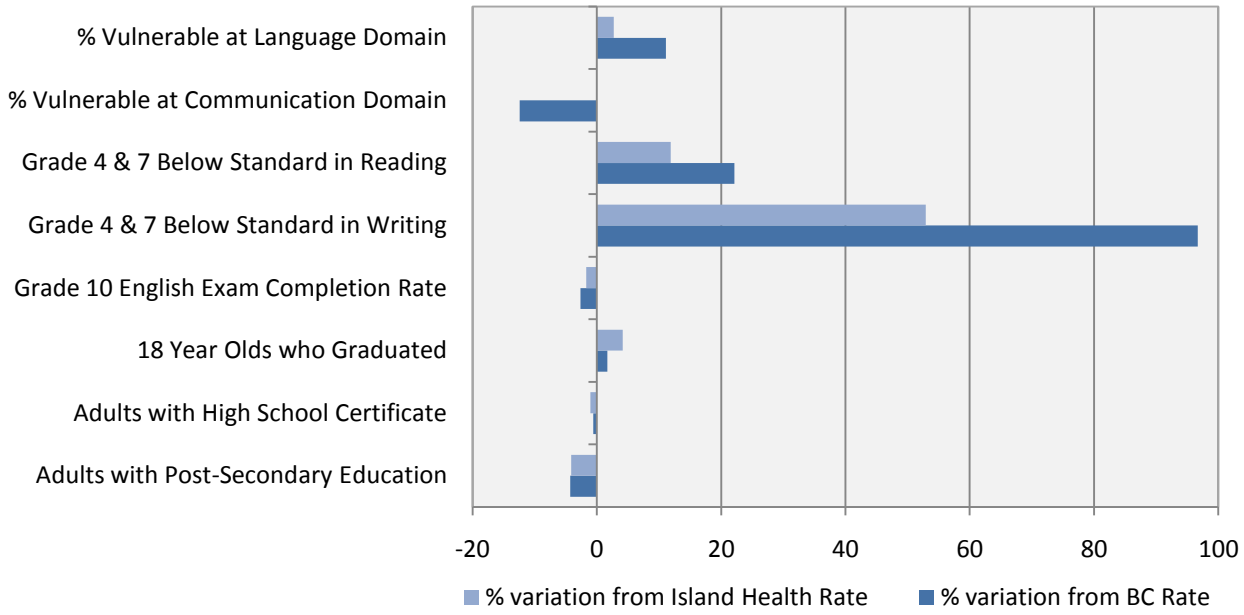

| Indicator | Definition | Qualicum | BC | Island Health |
|---|---|---|---|---|
| Median Family Income[1] | Median family income from all sources in 2010 | $64,864 | $75,797 | $73,358 |
| Lone-Parent Family Income[1] | Average family income of lone-parent economic families in 2010 | $35,057 | $42,610 | $40,914 |
| Couple Economic Family Income[1] | Average family income of couple economic families in 2010 | $85,579 | $94,632 | $94,769 |
| Low Income Persons[1] | Prevalence (%) of low income in 2010 based on after-tax low-income measure | 14.6 | 16.4 | 15.2 |
| Income Assistance (IA)[2] | Percent of population aged 15+ receiving income assistance from provincial program | 1.0 | 1.7 | 1.8 |
| Employment Insurance[2] | Percent of population 15+ on Employment Insurance | 1.4 | 1.5 | 1.4 |
| Low Income Seniors[1] | Percent of persons 65 years of age and over that were low income in 2010 based on after-tax low-income measure | 8.0 | 13.9 | 11.1 |
| Labour Force Participation Rate[1] | Percent of population aged 25 and over that are participating in the labour force | 49.8 | 65.6 | 62.6 |
| Unemployment Rate[1] | Percent of population aged 25 and over that are unemployed | 8.0 | 7.8 | 7.4 |
| Highest Income Households[1] | Percent of private households earning >$80,000 | 28.8 | 36.3 | 33.1 |
| Lowest Income Households[1] | Percent of private households earning <$20,000 | 12.2 | 14.3 | 13.9 |

Source: [1]Statistics Canada (2011 Census); [2]BC Statistics Agency, Employment Insurance Statistics and Statistics Canada (4 Quarter Average Dec 2011-Sep 2012)

## 4.2 Education

**Key Notes:**

- Qualicum had a higher rate of grade 4 and 7 children below standard in reading (25.0%) and writing (27.9%) than BC (20.5% and 14.2%) or Island Health (22.4% and 18.3%).
- Qualicum had a lower percentage of kindergarten children rated as vulnerable for communication skills (12.0%) than BC (13.7%), but a similar percentage as Island Health (12.0%).
- Qualicum had a higher percentage of kindergarten children rated as vulnerable for language development (10.0%) than BC (9.0%), but a similar percentage as Island Health (9.7%).



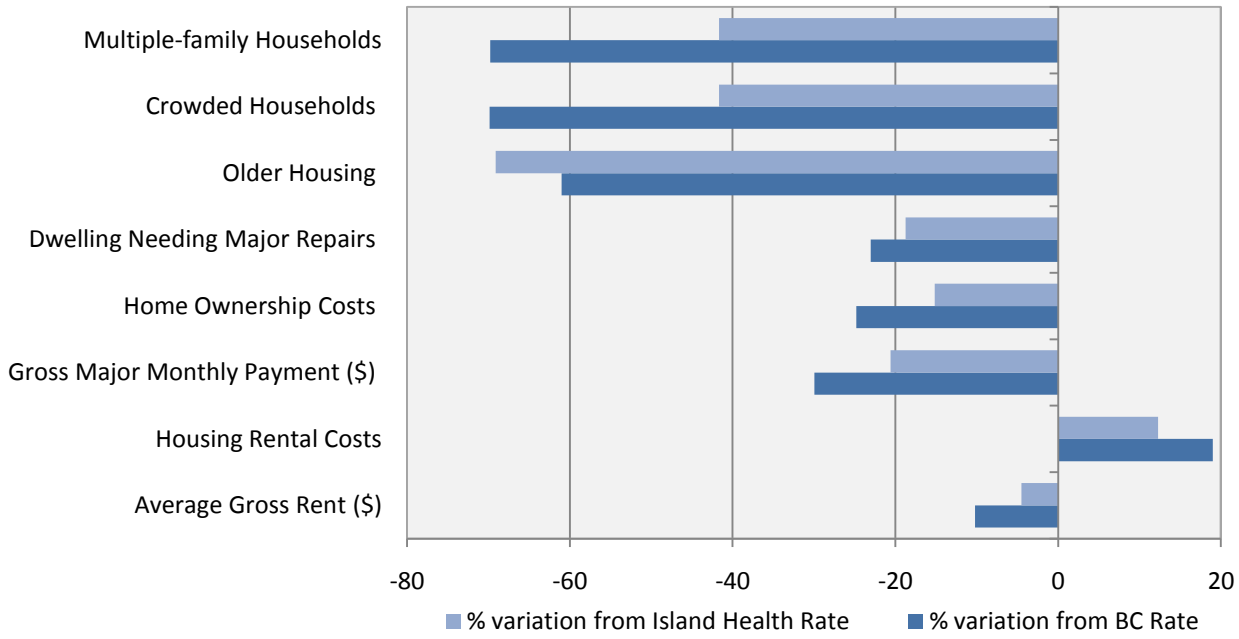

| Indicator | Definition | Qualicum | BC | Island Health |
|---|---|---|---|---|
| Preschool Language Development Vulnerability[2] | Percent of kindergarten children rated as vulnerable for language and cognitive development (problems in reading, writing and numeracy) | 10.0 | 9.0 | 9.7 |
| Preschool Communication Skills Vulnerability[2] | Percent of kindergarten children rated as vulnerable in communication and general knowledge skills | 12.0 | 13.7 | 12.0 |
| Grade 4 & 7 Below Standard in Reading[3] | Percent of students scoring below standards on standardized test | 25.0 | 20.5 | 22.4 |
| Grade 4 & 7 Below Standard in Writing[3] | Percent of students scoring below standards on standardized test | 27.9 | 14.2 | 18.3 |
| Grade 10 English Exam Completion Rate[3] | Percent of students who did write or pass Grade 10 provincial English exam | 80.8 | 83.0 | 82.2 |
| 18 Year Olds who Graduated[3] | Percent of 18 year olds who did graduate high school | 75.1 | 73.8 | 72.1 |
| Adults with High School Certificate[1] | Percent of population aged 25 to 64 with high school certificate or equivalent | 89.4 | 89.9 | 90.3 |
| Adults with Post-Secondary Education[1] | Percent of population aged 25 to 64 with post-secondary education (apprenticeship or trades certificate or diploma, college, CEGEP or other non-university certificate or diploma, or university certificate, diploma or degree | 62.1 | 64.8 | 64.8 |

[1]Statistics Canada (2011 Census), [2]Human Early Learning Partnership (2011-2013); [3]BC Statistics Agency and Ministry of Education (2009/2010-2011/2012)

## 4.3 Housing

**Key Notes:**

- Qualicum had a lower percentage of older housing (6.2%) than BC (16.0%) or Island Health (20.2%).
- Qualicum had a lower percentage of crowded (1.0%) and multiple-family (0.9%) households than BC (3.3% and 2.9%) or Island Health (1.7% and 1.5%).
- Qualicum had lower home ownership costs (17.9% spending more than 30% of income) but higher rental costs (53.9%) compared to BC (23.8% and 45.3%) and Island Health (21.1% and 48.0%).



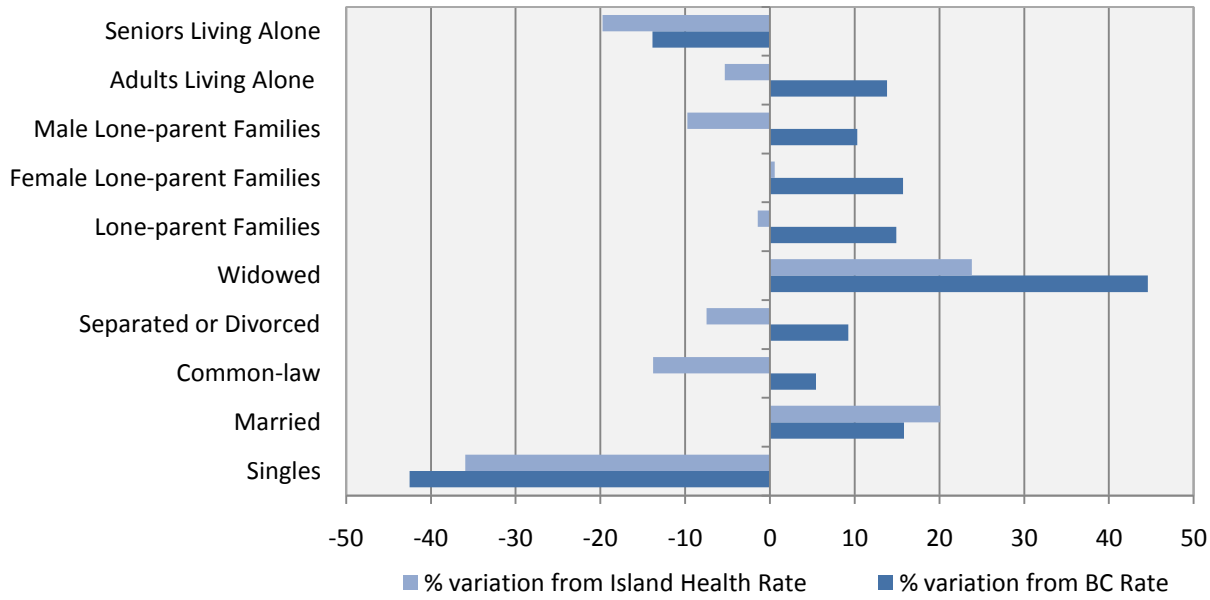

| Indicator | Definition | Qualicum | BC | Island Health |
|---|---|---|---|---|
| Multiple-family Households | Percent of private households with multiple families | 0.9 | 2.9 | 1.5 |
| Crowded Households | Percent of private households with 6 or more persons | 1.0 | 3.3 | 1.7 |
| Older Housing | Percent of dwellings built prior to 1961 | 6.2 | 16.0 | 20.2 |
| Dwelling Needing Major Repairs | Percent of dwellings rated as needing major repairs by renter or owner | 5.6 | 7.2 | 6.9 |
| Home Ownership Costs | Percent of home owners spending more than 30% of income on housing | 17.9 | 23.8 | 21.1 |
| Gross Major Monthly Payment ($) | Average gross major monthly payment of owner-occupied private non-farm, non-reserve dwellings | $860 | $1,228 | $1,083 |
| Housing Rental Costs | Percent of renters spending more than 30% of income on rent | 53.9 | 45.3 | 48.0 |
| Average Gross Rent ($) | Average gross rent of tenant-occupied private non-farm, non-reserve dwellings | $888 | $989 | $930 |

Source: Statistics Canada (2011 Census)

## 4.4 Social Support

**Key Notes:**

- Qualicum had a lower percentage of singles (15.7%) than BC (27.2%) or Island Health (24.5%).
- Qualicum had a higher percentage of widowed individuals (8.0%) than BC (5.5%) or Island Health (6.4%).
- Qualicum had lower percentage of seniors living alone (22.1%) than BC (25.7%) or Island Health (27.6%).



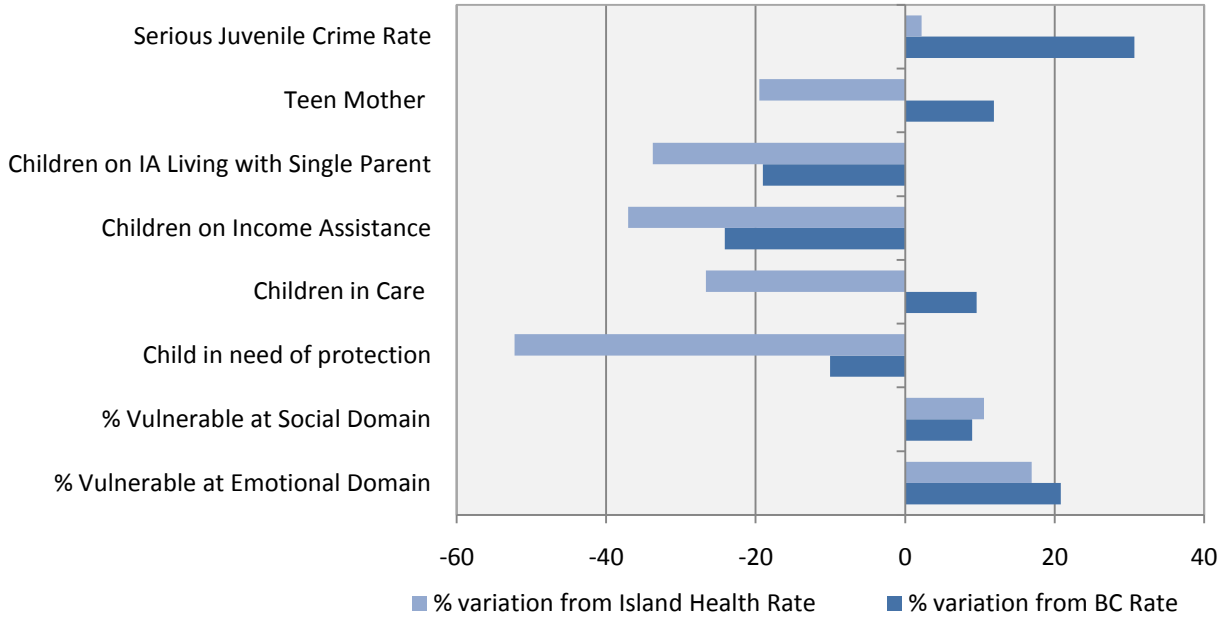

| Indicator | Definition | Qualicum | BC | Island Health |
|---|---|---|---|---|
| Seniors Living Alone | Percent of persons aged 65 and over that are not in census families and are living alone | 22.1 | 25.7 | 27.6 |
| Adults Living Alone | Percent of persons in private households that are not in census families and are living alone | 13.1 | 11.5 | 13.9 |
| Male Lone-parent Families | Percent of census families with children in private households that are male lone-parent families | 6.3 | 5.7 | 7.0 |
| Female Lone-parent Families | Percent of census families with children in private households that are female lone-parent families | 24.3 | 21.0 | 24.1 |
| Lone-parent Families | Percent of census families with children in private households that are lone-parent families | 30.7 | 26.7 | 31.1 |
| Widowed | Percent of population aged 15 and over that are widowed | 8.0 | 5.5 | 6.4 |
| Separated or Divorced | Percent of population aged 15 and over that are legally married but are separated, or are divorced | 10.2 | 9.4 | 11.1 |
| Common-law | Percent of population aged 15 and over that are in a common-law relationship | 9.1 | 8.6 | 10.6 |
| Married | Percent of population aged 15 and over that are legally married (not separated) | 57.0 | 49.2 | 47.5 |
| Singles | Percent of population aged 15 and over that have never legally married | 15.7 | 27.2 | 24.5 |

Source: Statistics Canada (2011 Census)

## 4.5 Healthy Development (Child and Youth)

**Key Notes:**

- Qualicum had a lower rate of children in need of protection (5.8 per 1,000 children aged 0-18) than BC (6.4 per 1,000) or Island Health (12.1 per 1,000).
- Qualicum had a lower percentage of children on income assistance (2.4%) than BC (3.1%) or Island Health (3.8%).
- Qualicum had a higher percentage of kindergarten children rated vulnerable for emotional development (18.0%) compared to BC (14.9%) or Island Health (15.4%).



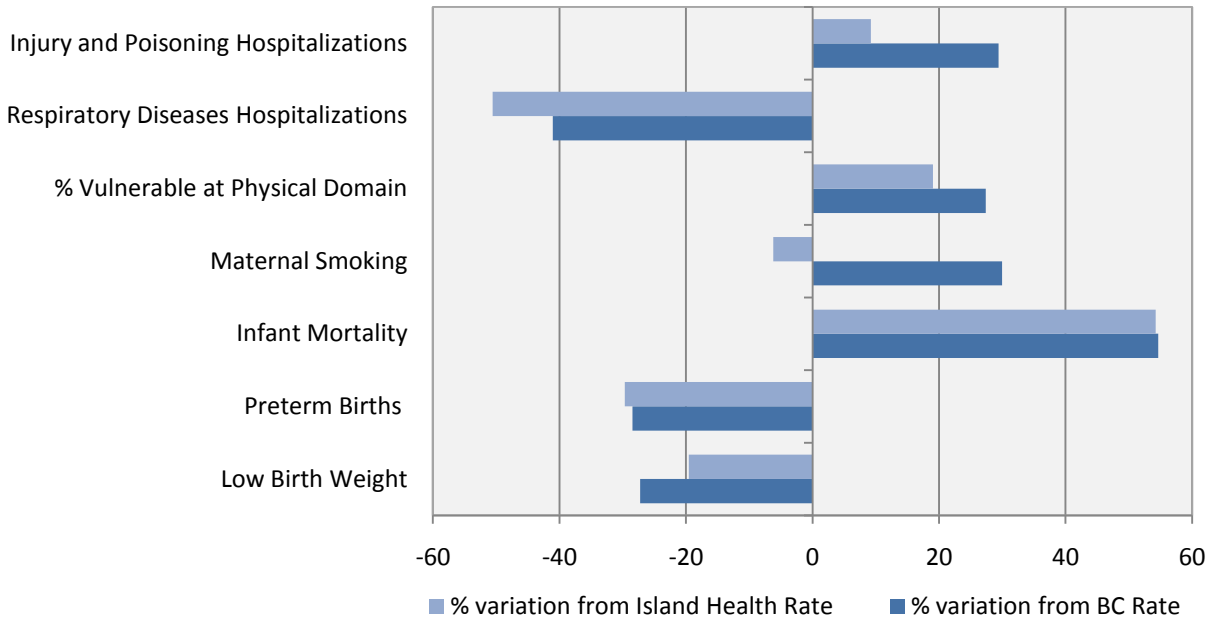

| Indicator | Definition | Qualicum | BC | Island Health |
|---|---|---|---|---|
| Serious Juvenile Crime Rate[1] | Juvenile crime rate per 1,000 population aged 12 to 17 (B&E, crimes with weapons and assaults with serious injury) | 4.6 | 3.5 | 4.5 |
| Teen Mothers[2] | Live births to mothers under 20 years of age per 1,000 live births | 32.5 | 29.0 | 40.4 |
| Children on IA Living with Single Parent[3] | Percent of children less than 15 years of age receiving income assistance and living with a single parent | 2.2 | 2.7 | 3.3 |
| Children on Income Assistance[3] | Percent of children less than 15 years of age receiving income assistance | 2.4 | 3.1 | 3.8 |
| Children in Care[4] | Children in care per 1,000 children aged 0 to 18 years | 9.9 | 9.1 | 13.5 |
| Children in Need of Protection[5] | Reported children in need of protection rate per 1,000 children aged 0 to 18 years | 5.8 | 6.4 | 12.1 |
| Preschool Social Development Vulnerability[6] | Percent of kindergarten children rated as having problems forming friendships, accepting rules and showing respect for adults | 17.0 | 15.6 | 15.4 |
| Preschool Emotional Development Vulnerability[6] | Percent of kindergarten children rated as having problems with aggressive behaviour, impulsivity, disobedience and inattentiveness | 18.0 | 14.9 | 15.4 |

[1]BC Statistics Agency, Statistics Canada and Canadian Centre for Justice Statistics (2009-2011); [2]BC Vital Statistics Agency (2008-2012) [3]BC Statistics Agency, Statistics Canada Census 2006 and Ministry of Social Development (Sep 2012), [4]BC Statistics Agency and Ministry of Children and Family Development (Dec 2012); [5]BC Statistics Agency and Ministry of Children and Family Development (Dec 2011); [6]Human Early Learning Partnership (2011-2013)

## 4.6 Child Health

**Key Notes:**

- Qualicum had a lower rate of children hospitalized due to respiratory diseases (5.3 per 1,000 children aged 0-14) than BC (9.0 per 1,000) or Island Health (10.7 per 1,000).
- Qualicum had a higher percentage of kindergarten children rated as vulnerable for physical development (20.0%) than BC (15.7%) or Island Health (16.8%).
- Qualicum had a higher infant mortality rate (5.7 per 1,000 live births) compared to BC (3.7 per 1,000) or Island Health (3.7 per 1,000).



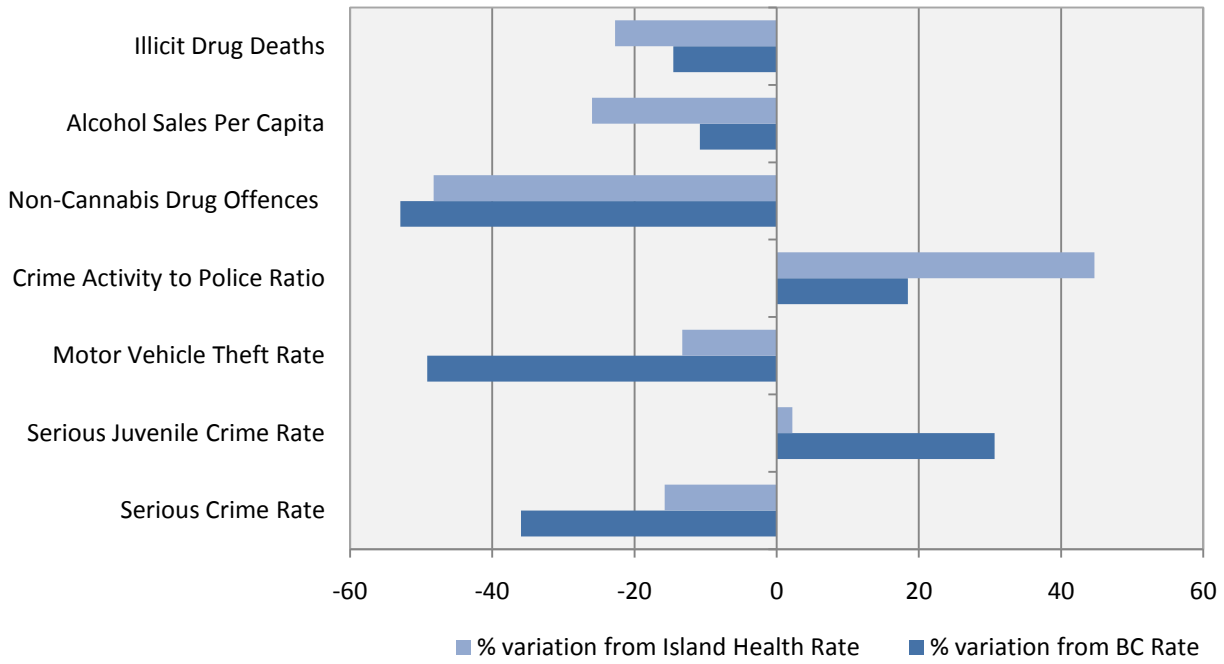

| Indicator | Definition | Qualicum | BC | Island Health |
|---|---|---|---|---|
| Injury and Poisoning Hospitalizations[1] | Hospitalization rate per 1,000 children aged 0 to 14 | 5.7 | 4.4 | 5.3 |
| Respiratory Diseases Hospitalizations[1] | Hospitalization rate per 1,000 children aged 0 to 14 | 5.3 | 9.0 | 10.7 |
| Preschool Physical Development Vulnerability[2] | Percent of kindergarten children rated as having problems with fine and gross motor skills, daily preparedness for school, washroom skills, and handedness | 20.0 | 15.7 | 16.8 |
| Maternal Smoking[4] | Percent of pregnant women who reported smoking at any time during their current pregnancy | 11.1 | 8.6 | 11.9 |
| Infant Mortality[3] | Deaths of children under 1 year of age per 1,000 live births | 5.7 | 3.7 | 3.7 |
| Preterm Births [3] | Newborns with a gestational age < 37 weeks per 1,000 live births | 53.6 | 75.0 | 76.2 |
| Low Birth Weight[3] | Births weighing less than 2,500 grams per 1,000 live births | 40.6 | 55.8 | 50.5 |

[1]BC Statistics Agency and Ministry of Health (2011-2012); [2]Human Early Learning Partnership (2011-2013), [3]BC Vital Statistics (2008-2012), [4]BC Perinatal Health Program (2008/2009-2012/2013)

## 4.7 Crime

**Key Notes:**

- Qualicum had a higher crime activity to police officer ratio (8.3 serious crimes per officer) than BC (7.0 per officer) or Island Health (5.7 per officer).
- Qualicum had a lower rate of non-cannabis drug offences (80.1 per 100,000 people) than BC (170.3 per 100,000) or Island Health (154.8 per 100,000).
- Qualicum had a lower motor vehicle theft rate (1.8 per 1,000 people) than BC (3.6 per 1,000) or Island Health (2.1 per 1,000).




| Indicator | Definition | Qualicum | BC | Island Health |
|---|---|---|---|---|
| Illicit Drug Deaths[1] | Deaths per 100,000 population aged 19 to 64 | 6.6 | 7.7 | 8.5 |
| Alcohol Sales Per Capita[2, 6] | Litres of alcohol sold per resident population aged 19 and older | 92.0 | 103.2 | 124.3 |
| Non-Cannabis Drug Offences[3] | Non-cannabis drug offences per 100,000 population | 80.1 | 170.3 | 154.8 |
| Crime Activity to Police Ratio[3] | Number of serious crimes per police officer | 8.3 | 7.0 | 5.7 |
| Motor Vehicle Theft Rate[3] | Motor vehicle theft rate per 1,000 population | 1.8 | 3.6 | 2.1 |
| Serious Juvenile Crime Rate[3] | Juvenile crime rate per 1,000 population aged 12 to 17 (B&E, crimes with weapons and assaults with serious injury) | 4.6 | 3.5 | 4.5 |
| Serious Crime Rate[3] | Total violent and property crime rate per 1,000 population | 6.5 | 10.1 | 7.7 |

[1]BC Statistics Agency, Coroner's Office, Ministry of Public Safety & Solicitor General (Avg 2008-2010), [2]BC Statistics Agency, Liquor Distribution Branch (2012), [3]BC Statistics Agency, Statistics Canada, Canadian Centre for Justice Statistics (Avg 2009-2011)

[6] Alcohol sales per capita is based on total volume sold in a local health area and does not consider the impact of tourist volume or non-resident alcohol purchases in that area.

# 5 Health Status

## 5.1 Birth Statistics

**Key Notes:**

- Qualicum had the lowest live birth rate and the lowest rate of pre-term births in Island Health.

| Birth Rates | Qualicum | Island Health | % Difference | Rank in Island Health | BC | % Difference |
|---|---|---|---|---|---|---|
| Elderly Gravida | 212.84 | 201.52 | 6% | 4 | 230.60 | -8% |
| Low Birth Weight | 40.62 | 50.50 | -20% | 13 | 55.82 | -27% |
| Infant Death | 5.69 | 3.69 | 54% | 3 | 3.68 | 55% |
| Teen Mother | 32.49 | 40.37 | -20% | 11 | 29.05 | 12% |
| Cesarean | 272.14 | 286.01 | -5% | 4 | 311.97 | -13% |
| Pre-term | 53.61 | 76.21 | -30% | 14 | 74.96 | -28% |
| Stillbirth | 6.46 | 8.37 | -23% | 11 | 9.81 | -34% |
| Live Birth | 5.43 | 8.47 | -36% | 14 | 9.77 | -44% |

Source: BC Vital Statistics, 2008-2012

## 5.2 Mortality Statistics

**Key Notes:**

- Qualicum ranked low in overall deaths, but second in deaths due to pneumonia and influenza.

| Indicator | Qualicum SMR Value | Island Health SMR Value | % Difference | Rank in Island Health | PYLLI |
|---|---|---|---|---|---|
| Drug Induced Deaths | 0.64 | 1.14 | -44% | 11 | 0.80 |
| Medically Treatable Diseases | 0.84 | 0.93 | -9% | 8 | 1.25 |
| Circulatory System | 0.91 | 1.03 | -12% | 11 | 0.82 |
| Digestive System | 0.99 | 1.08 | -8% | 12 | 1.11 |
| Alcohol Related Deaths | 1.05 | 1.31 | -20% | 12 | 1.19 |
| Falls | 1.21 | 1.19 | 1% | 6 | 0.36 |
| Cancer | 1.02 | 1.06 | -4% | 11 | 1.01 |
| Respiratory | 1.07 | 0.93 | 16% | 5 | 1.03 |
| Suicide | 0.79 | 1.19 | -33% | 12 | 0.59 |
| Motor Vehicle | 1.35 | 0.92 | 47% | 5 | 2.00 |
| End/Nut/Met Diseases | 0.64 | 1.01 | -37% | 12 | 0.69 |
| Diabetes | 0.65 | 1.01 | -35% | 12 | 0.90 |
| Arteries/Arterioles/Capillaries | 0.92 | 1.02 | -10% | 10 | 0.71 |
| Pneumonia and Influenza | 1.56 | 0.83 | 87% | 2 | 1.35 |
| Lung Cancer | 0.91 | 1.04 | -12% | 12 | 0.94 |
| Ischaemic Heart Disease | 0.90 | 0.99 | -9% | 10 | 0.85 |
| Chronic Lung Disease | 0.84 | 0.99 | -15% | 10 | 0.49 |
| Cerebrovascular Disease/Stroke | 0.91 | 1.03 | -11% | 11 | 0.83 |
| **Total Deaths** | **0.95** | **1.03** | **-8%** | **12** | **1.01** |

Source: BC Vital Statistics Annual Report, 2011 (Aggregate 2007-2011)

## 5.3 Chronic Disease Prevalence[7]

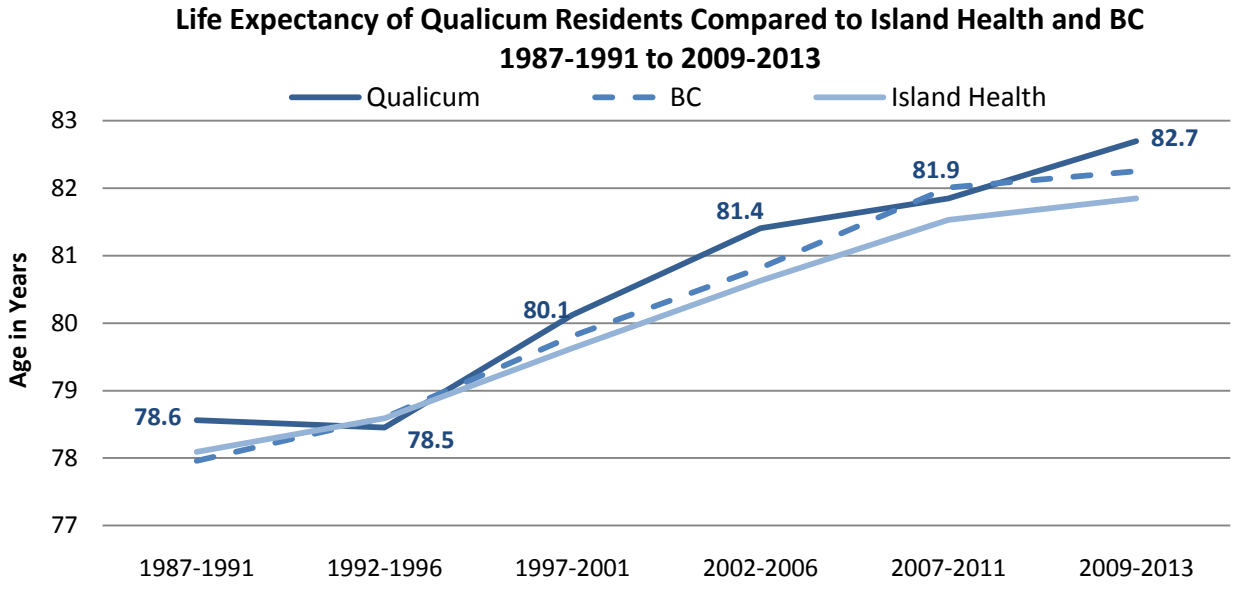
**Key Notes:**

- Qualicum had a higher crude prevalence for several chronic conditions including hypertension (34.4%), osteoarthritis (15.6%) and diabetes (10.0%) compared to BC (24.6%, 24.5% and 8.2%) and Island Health (26.5%, 27.0% and 8.1%).

| Chronic Conditions | Qualicum | | Island Health | | BC | |
|---|---|---|---|---|---|---|
| | # of Patients | % of Pop | # of Patients | % of Pop | # of Patients | % of Pop |
| Hypertension | 13,257 | 34.4% | 163,139 | 26.5% | 886,638 | 24.6% |
| Depression/Anxiety | 11,331 | 25.2% | 203,669 | 27.0% | 1,110,914 | 24.5% |
| Osteoarthritis | 7,043 | 15.6% | 81,779 | 10.8% | 404,772 | 8.9% |
| Asthma | 2,395 | 11.3% | 52,017 | 11.1% | 317,750 | 10.5% |
| Diabetes | 4,494 | 10.0% | 61,423 | 8.1% | 371,563 | 8.2% |
| Osteoporosis | 3,030 | 6.7% | 36,176 | 4.8% | 193,577 | 4.3% |
| Chronic Obstructive Pulmonary Disease | 1,917 | 6.5% | 23,648 | 6.2% | 123,153 | 6.0% |
| Ischaemic Heart Disease | 2,533 | 5.6% | 28,812 | 3.8% | 158,074 | 3.5% |
| Dementia | 1,309 | 4.4% | 15,109 | 3.9% | 66,519 | 3.3% |
| Congestive Heart Failure | 1,607 | 3.6% | 18,135 | 2.4% | 100,559 | 2.2% |
| Chronic Kidney Disease | 1,390 | 3.1% | 18,181 | 2.4% | 91,517 | 2.0% |
| Rheumatoid Arthritis | 786 | 1.7% | 10,584 | 1.4% | 54,141 | 1.2% |
| Hospital Stroke | 415 | 0.9% | 5,991 | 0.8% | 33,597 | 0.7% |

Source: BC Ministry of Health Services Primary Health Care Chronic Disease Registries 2011/12

## 5.4 Life Expectancy at Birth




| Life Expectancy by Gender, 2009-2013 | | | |
|---|---|---|---|
| | Qualicum | Island Health | BC |
| **MALES** | 80.1 | 79.8 | 80.2 |
| **FEMALES** | 85.4 | 83.9 | 84.3 |

[7] This reflects the lifetime prevalence of these diseases in 2011/2012, not the 2011/12 prevalence. If a resident has had one of these diseases in their life it will appear in this data. These rates are not age-standardized.

# 6 Health Service Utilization

## 6.1 Hospital Admissions[8]

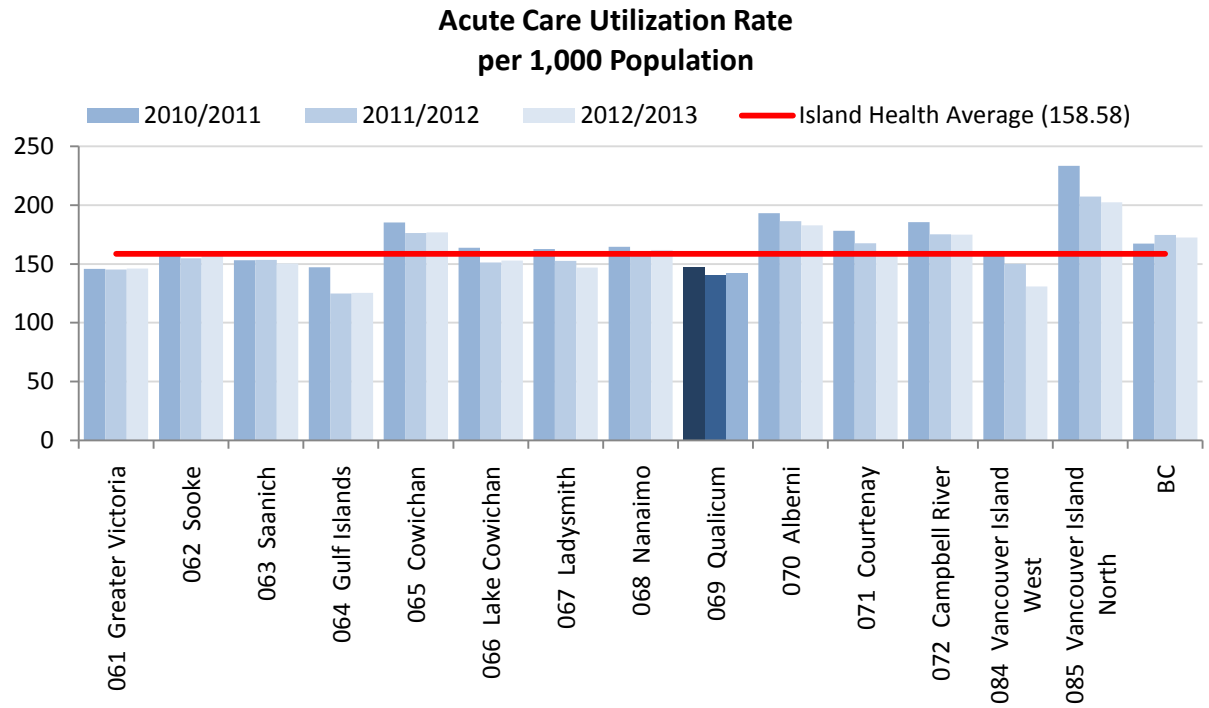
**Key Notes:**

- Of the 9,608 hospital admissions among Qualicum residents in 2012/2013:
  - There were slightly fewer inpatient cases (47.4%) compared to day cases (52.6%),
  - 49.5% were surgical cases, while 50.5% were medical cases;
  - Unilateral knee replacements were responsible for the most inpatient cases (143);
  - Lens extraction/insertion, typically for cataracts, was responsible for the most day cases (891).
- Of the 36,400 patient days for Qualicum residents:
  - 15.6% were for an alternate level of care (ALC);
  - Mental disease and disorders were responsible for the most patient days (5,407 or 14.9%).
- The ambulatory care sensitive conditions (ACSC) rate for Qualicum residents was 5.8% for 2011/12; higher than the Island Health rate of 4.5%.
- The percentage of alternate level of care days (ALC) for Qualicum residents has remained lower than that of Island Health in recent years, although it has been increasing since 2010/11.

**Total Hospital Cases and Days for Qualicum Residents**

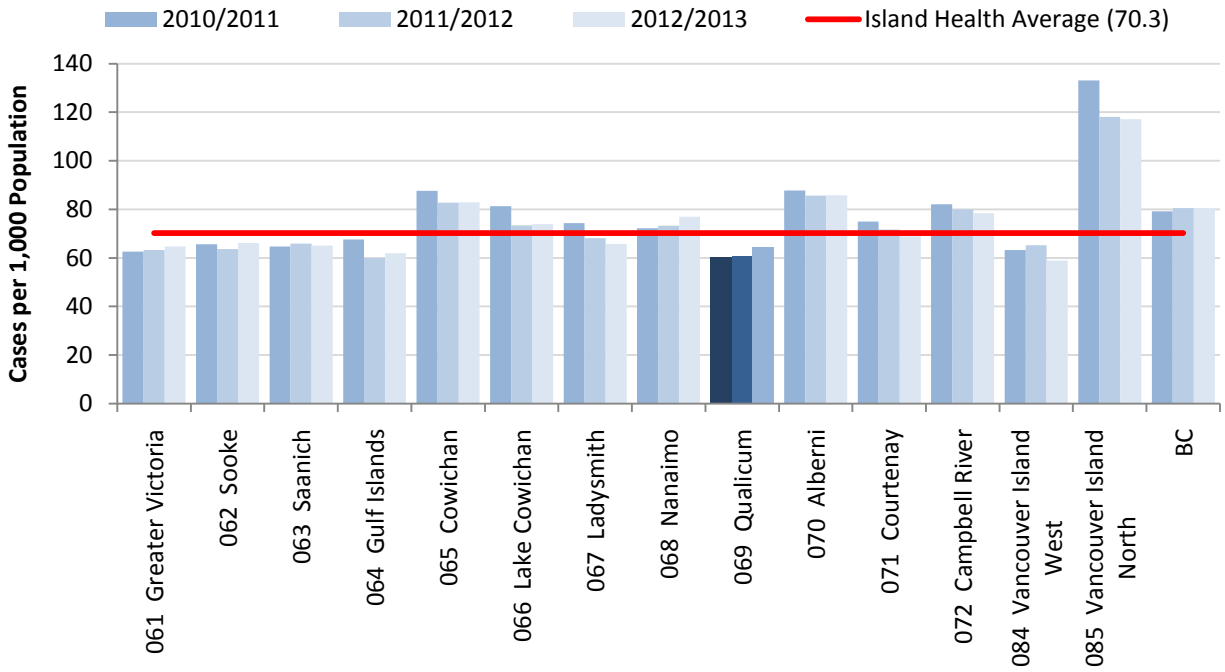
| 2012/13 | Day Cases | Inpatient Cases | Inpatient Days | % Days ALC | Total Cases |
|---|---|---|---|---|---|
| Medical | 1991 | 2858 | 25330 | 20.4% | 4849 |
| Surgical | 3061 | 1698 | 11070 | 4.9% | 4759 |
| **Total** | **5052** | **4556** | **36400** | **15.6%** | **9608** |

**Acute Utilization Rates overall and by category:**

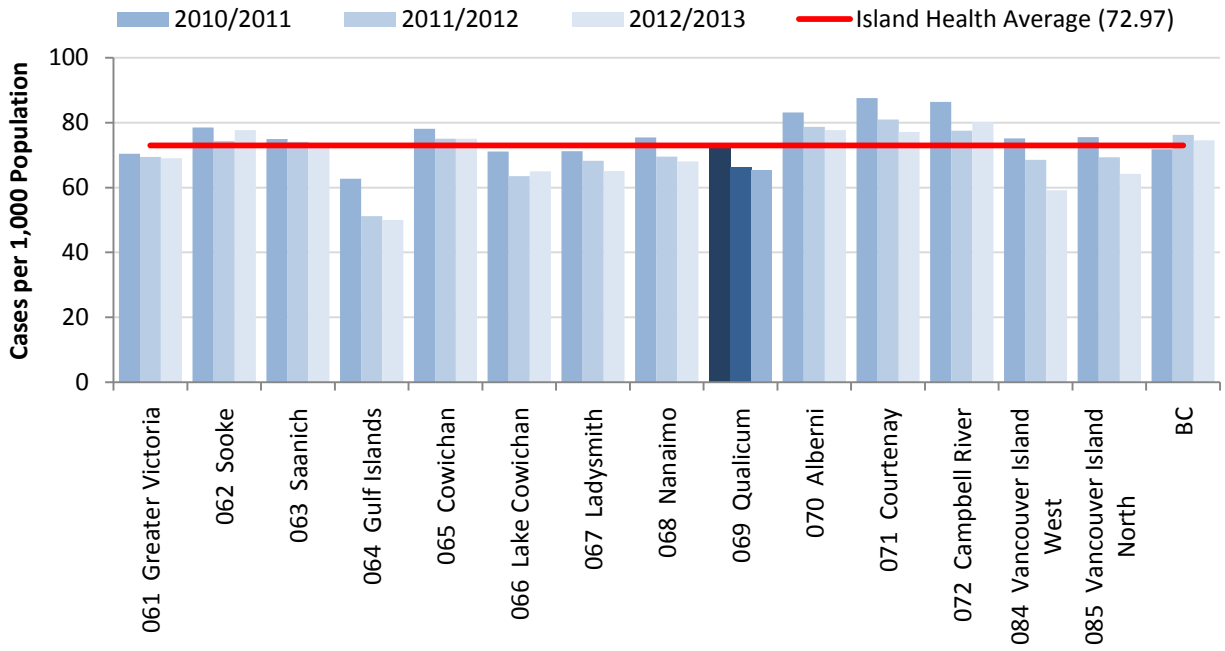



[8] Source: 2012/13 Discharge Abstract Database; excludes newborn records.

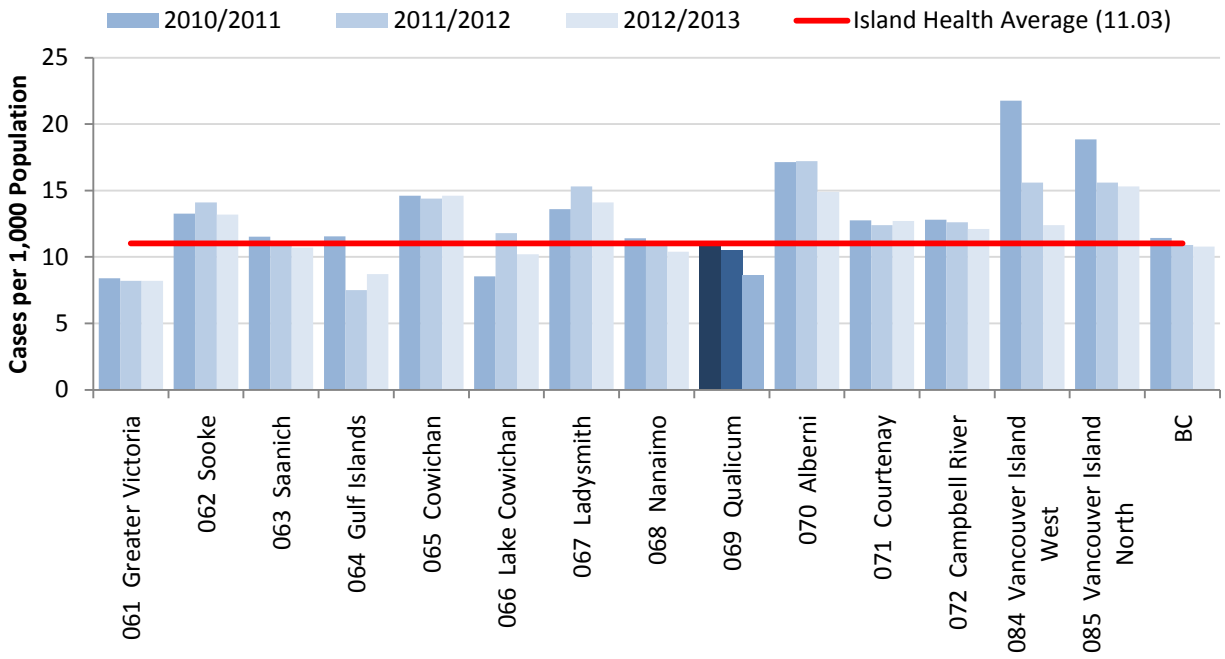
**Medical Acute Care Utilization Rate per 1,000 Population**



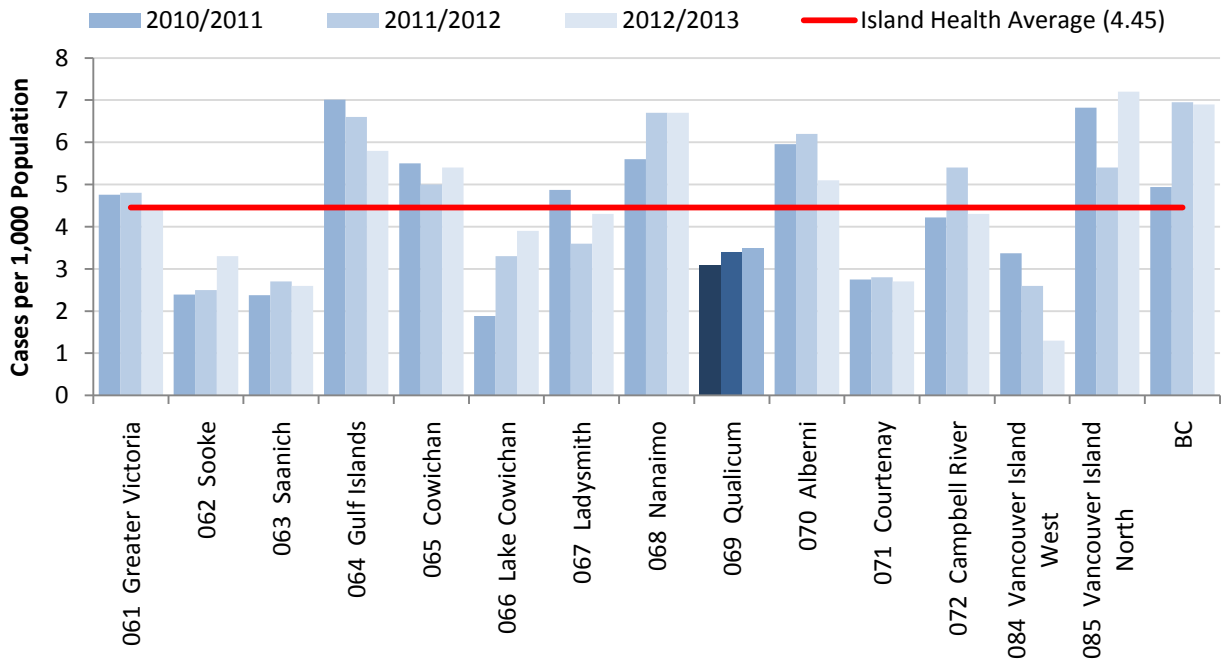

**Surgical Acute Care Utilization Rate per 1,000 Population**



**Maternity Acute Care Utilization Rate per 1,000 Population**




**Psychiatry Acute Care Utilization Rate per 1,000 Population**



**Leading reasons for Inpatient and Day cases for Qualicum Residents by Case Mix Group, 2012/13:**

**Top 10 Inpatient Cases for Residents by Case Mix Group**

| Top 10 Inpatient Case Mix Groups | Cases | Days | ALC Days |
|---|---|---|---|
| Unilateral Knee Replacement | 143 | 521 | 2 |
| Heart Failure without Coronary Angiogram | 114 | 800 | 10 |
| Unilateral Hip Replacement | 106 | 373 | 3 |
| Symptom/Sign of Digestive System | 104 | 257 | 19 |
| Chronic Obstructive Pulmonary Disease | 100 | 869 | 41 |
| Palliative Care | 100 | 1224 | 357 |
| Myocardial Infarction/Shock/Arrest without Coronary Angiogram | 99 | 406 | 26 |
| Arrhythmia without Coronary Angiogram | 86 | 608 | 202 |
| Viral/Unspecified Pneumonia | 73 | 742 | 114 |
| Unstable Angina/Atherosclerotic Heart Disease without Coronary Angiogram | 64 | 281 | 20 |

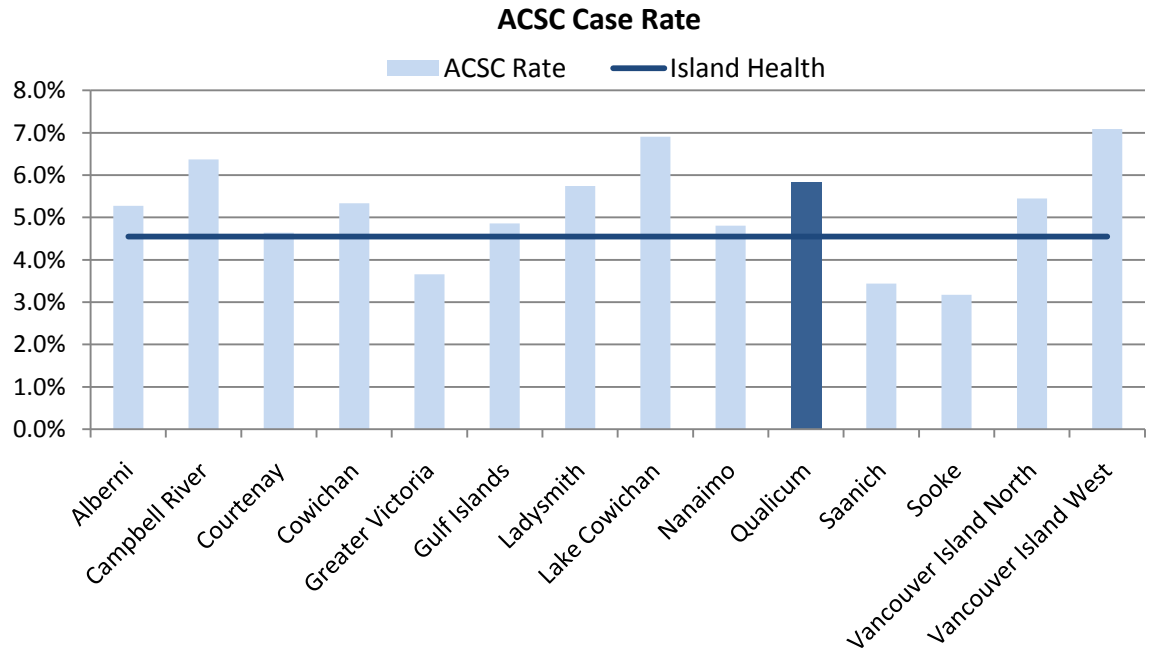
**Top 10 Day Cases for Residents by Case Mix Groups**

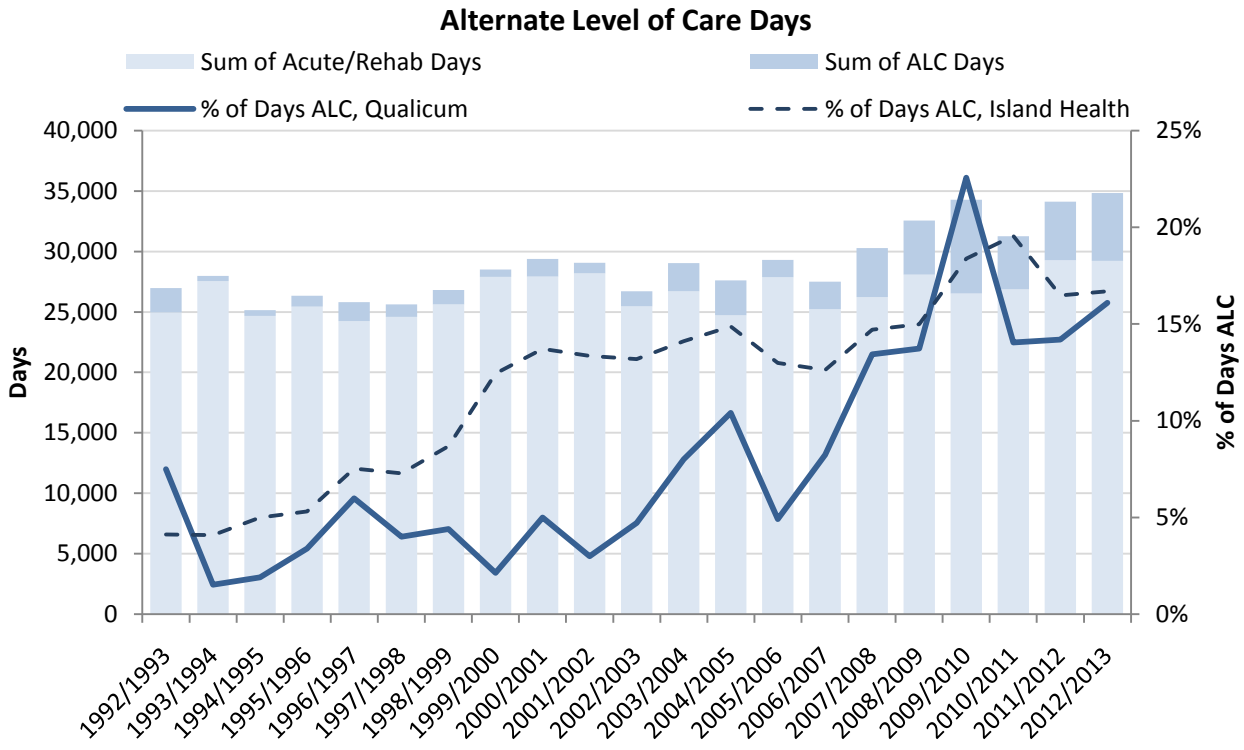
| Top 10 Day Case Mix Groups | Cases |
|---|---|
| Lens Extraction/Insertion | 891 |
| Minor Lower Gastrointestinal Intervention | 453 |
| Other Chemotherapy | 267 |
| Symptom/Sign of Digestive System | 232 |
| Esophagitis/Gastritis/Miscellaneous Digestive Disease | 182 |
| Diagnosis Not Generally Hospitalized | 180 |
| Closed Knee Intervention except Fixation without Infection | 159 |
| Follow-Up Treatment/Examination | 159 |
| Depressive Episode with ECT | 97 |
| Dilation & Curettage/Other Minor Intervention on Uterus | 93 |

**Total Cases and Days for Qualicum Residents by Major Clinical Category, 2012/13:**

| Major Clinical Categories | Cases | Days | ALC Days |
|---|---|---|---|
| Digestive System | 1970 | 3262 | 86 |
| Circulatory System | 1103 | 4473 | 336 |
| Eye | 1002 | 18 | 0 |
| Musculoskeletal System & Connective Tissue | 868 | 2611 | 140 |
| Kidney, Urinary Tract & Male Reproductive System | 592 | 1625 | 134 |
| Other Reasons for Hospitalization | 583 | 4941 | 1166 |
| Blood & Lymphatic System | 447 | 522 | 17 |
| Trauma, Injury, Poisoning & Toxic Effects of Drugs | 430 | 3226 | 549 |
| Respiratory System | 376 | 2894 | 165 |
| Mental Diseases & Disorders | 372 | 5407 | 2124 |
| Female Reproductive System | 323 | 271 | 0 |
| Ear, Nose, Mouth & Throat | 253 | 432 | 0 |
| Skin, Subcutaneous Tissue & Breast | 250 | 980 | 185 |
| Hepatobiliary System & Pancreas | 217 | 839 | 16 |
| Pregnancy & Childbirth | 215 | 485 | 0 |
| Nervous System | 213 | 2202 | 623 |
| Miscellaneous CMG & Ungroupable Data | 180 | 0 | 0 |
| Endocrine System, Nutrition & Metabolism | 108 | 592 | 23 |
| Multisystemic or Unspecified Site Infections | 87 | 1477 | 130 |
| Other categories (grouped due to small numbers | 19 | 143 | 1 |
| **Grand Total** | **9608** | **36400** | **5695** |

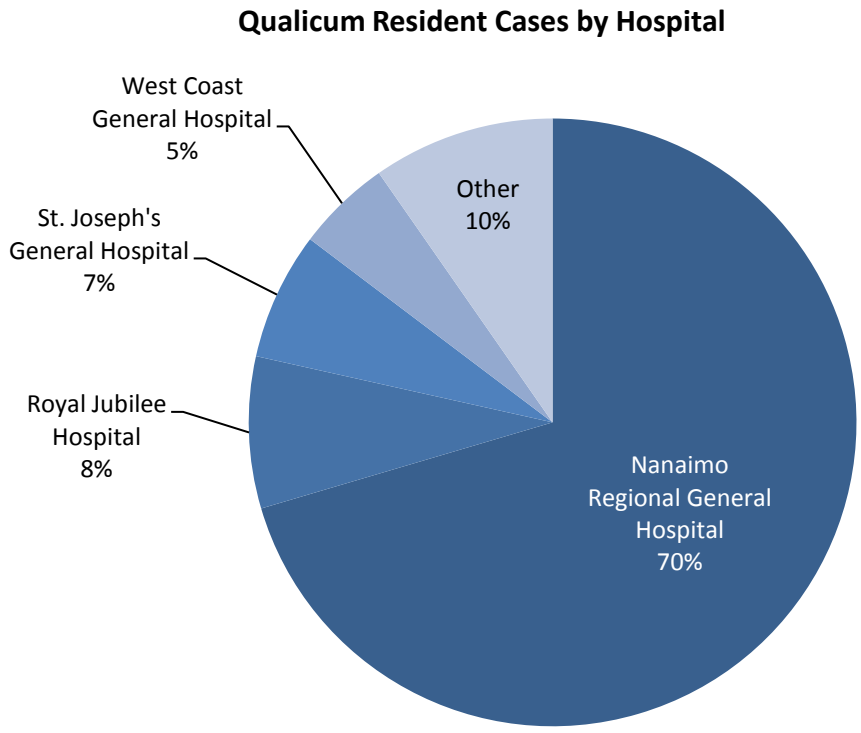
**Ambulatory Care Sensitive Conditions (ACSC) and Alternative Level of Care (ALC) Days, 2012/13:**






Source: Quantum Analyzer, Discharge Abstract Database

**Where Residents Receive Hospital Care**

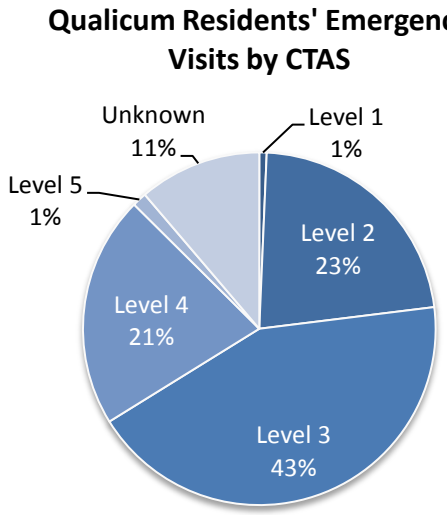


## 6.2 Emergency Visits by Residents, 2012/13

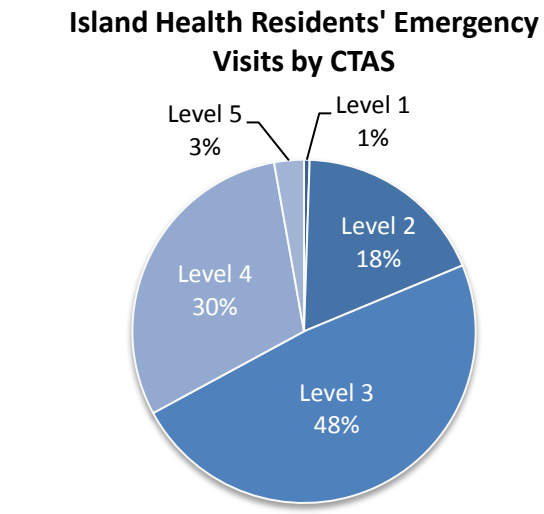
**Key Notes:**

- Of the 17,688 Emergency Department visits made by Qualicum residents in 2012/13[9]:
  - 75% of those with known scores were for CTAS[10] 1, 2 or 3 compared to 67% for Island Health;
  - 93% were to Nanaimo Regional General Hospital; and
  - 51% were by people aged 60 or older.
- More visits were made on Saturday or Sunday; overall the pattern of daily ED usage was similar to that of Island Health.
- Compared to Island Health as a whole, the residents of Qualicum made fewer to the Emergency Department overall and across each age group.

**Emergency Visits by Qualicum and Island Health Residents by CTAS Level**

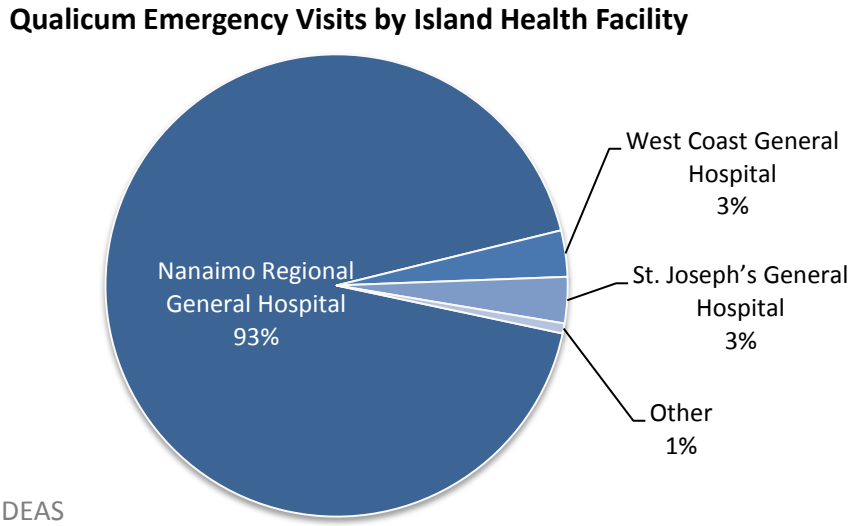



Source: Island Health IDEAS




Source: Island Health IDEAS

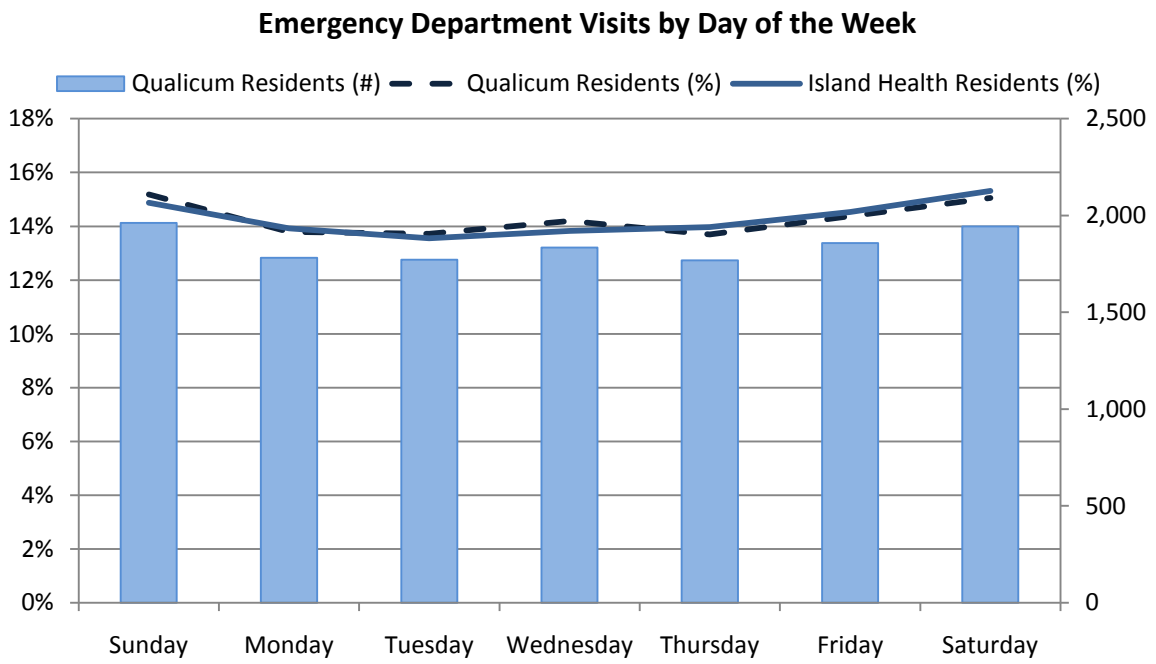
**Where Residents go for Emergency Visits**




Source: Island Health IDEAS

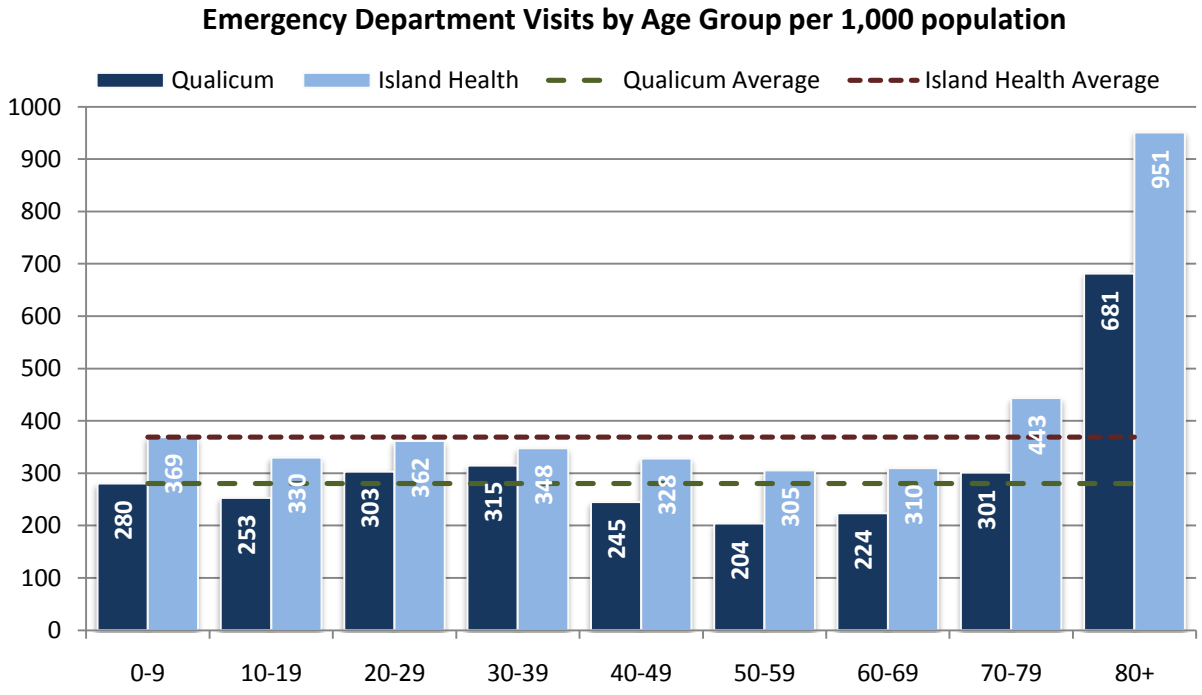
[9] These data do not contain visits to Oceanside Health Centre; this will be included in the next profile.
[10] Canadian Emergency Department Triage & Acuity Scale. Level 1 is the most severe and categorized as resuscitation, Level 5 is the least severe and categorized as non urgent.

**Emergency Visits for Qualicum and Island Health Residents by Day of the Week**




Source: Island Health IDEAS

**Emergency Visits by Qualicum and Island Health Residents by Age Group of Patient**




Source: Island Health IDEAS

From: Paul Chapman
Sent: Monday, March 30, 2015 1:50 PM
Subject: April 14th CoW presentation

Gail Adrienne and I would like to present to the RDN CoW on April 14th about the Nanaimo River Watershed Roundtable, a multi-stakeholder group formed *to advise and develop strategies and initiatives for the long-term promotion, protection, sustainability and stewardship of the watershed.*

Please let me know if you need any additional information.

Take care,

Paul Chapman
Nanaimo & Area Land Trust
www.nalt.bc.ca
250-714-1990

**REGIONAL DISTRICT OF NANAIMO**

**MINUTES OF THE REGULAR COMMITTEE OF THE WHOLE MEETING OF THE REGIONAL DISTRICT OF NANAIMO HELD ON TUESDAY MARCH 10, 2015 AT 7:09 PM IN THE RDN BOARD CHAMBERS**

In Attendance:

| | |
|---|---|
| Director J. Stanhope | Chairperson |
| Director C. Haime | Deputy Chairperson |
| Director A. McPherson | Electoral Area A |
| Director H. Houle | Electoral Area B |
| Director M. Young | Electoral Area C |
| Director B. Rogers | Electoral Area E |
| Director J. Fell | Electoral Area F |
| Director B. Veenhof | Electoral Area H |
| Director B. McKay | City of Nanaimo |
| Director B. Bestwick | City of Nanaimo |
| Director J. Hong | City of Nanaimo |
| Director J. Kipp | City of Nanaimo |
| Director W. Pratt | City of Nanaimo |
| Director I. Thorpe | City of Nanaimo |
| Director B. Yoachim | City of Nanaimo |
| Alternate | |
| Director S. Powell | City of Parksville |
| Alternate | |
| Director B. Avis | Town of Qualicum Beach |

Regrets:

| | |
|---|---|
| Director M. Lefebvre | City of Parksville |
| Director T. Westbroek | Town of Qualicum Beach |

Also in Attendance:

| | |
|---|---|
| P. Thorkelsson | Chief Administrative Officer |
| W. Idema | Director of Finance |
| R. Alexander | Gen. Mgr. Regional & Community Utilities |
| G. Garbutt | Gen. Mgr. Strategic & Community Development |
| T. Osborne | Gen. Mgr. Recreation & Parks |
| J. Hill | A/Director of Corporate Services |
| D. Pearce | A/Gen. Mgr. Transportation & Solid Waste |
| C. Golding | Recording Secretary |

## CALL TO ORDER

The Chairperson called the meeting to order and welcomed Alternate Directors' Powell and Avis to the meeting.

## DELEGATIONS

**Brian Hunter, Oceanside RCMP, re Overview of 2014 and Priorities for 2015.**

Staff Sargent Brian Hunter provided an overview of crime statistics in the Oceanside area and advised the Board of the strategic priorities for 2015 and strategies for crime reduction in the detachment area.

**Paul Manly, re Petition to Bring the Jump Lake Community Drinking Watershed Under Public Ownership.**

Bill McCallum provided a presentation outlining benefits of a publically owned watershed, and shared his concerns regarding effects of private ownership of the Nanaimo watershed. He asked the Board to join the City of Nanaimo and other affected parties to establish a Watershed Board, and to work together to gain control and management of the Nanaimo community watershed.

**June Ross, re Establishment of a Watershed Board.**

June Ross voiced her concerns regarding private ownership of Nanaimo's watershed and asked the Board to support the Vancouver Island Water Watch Coalition in the establishment of a Nanaimo Watershed Board.

## COMMITTEE OF THE WHOLE MINUTES

**Minutes of the Regular Committee of the Whole meeting held Tuesday, February 10, 2015.**

MOVED Director Avis, SECONDED Director Veenhof, that the minutes of the Committee of the Whole meeting held Tuesday, February 10, 2015, be adopted.

CARRIED

## COMMUNICATION/CORRESPONDENCE

**Lynn and Robert Raffle, re Proposed Cell Tower at 1957 Plecas Road, South Wellington.**

MOVED Director Veenhof, SECONDED Director Powell, that the correspondence received from Lynn and Robert Raffle regarding the proposed cell tower at 1957 Plecas Road, South Wellington be received.

CARRIED

**Sharon Gaetz, Fraser Valley Regional District, re Minister of Environment's Rejection of Bylaw 280.**

MOVED Director Veenhof, SECONDED Director Powell, that the correspondence received from Sharon Gaetz, Fraser Valley Regional District, regarding the Minister of Environment's rejection of Bylaw 280 be received.

CARRIED

**John Hofman, Friends of the Morden Mine Society, re Emergency Work for Morden Mine.**

MOVED Director Veenhof, SECONDED Director Powell, that the correspondence received from John Hofman, Friends of the Morden Mine Society, regarding emergency work for the Morden Mine be received.

CARRIED

**Eric Ricker, Friends of the Morden Mine Society, re Application for Funding for Morden Mine.**

MOVED Director Veenhof, SECONDED Director Powell, that the correspondence received from Eric Ricker, Friends of the Morden Mine Society, regarding the application for funding for Morden Mine be received.

CARRIED

**FINANCE**

**Preliminary Operating Results for the Period Ending December 31, 2014.**

MOVED Director Veenhof, SECONDED Director Powell, that the summary report of financial results for Regional District of Nanaimo operations to December 31, 2014, be received for information.

CARRIED

**Gas Tax – Strategic Priorities Fund Infrastructure Stream.**

MOVED Director Thorpe, SECONDED Director Veenhof, that the Board support the following projects for application by the Regional District of Nanaimo to the Gas Tax — Strategic Priorities Fund Infrastructure Stream for the April 15, 2015 application intake.

- Greater Nanaimo Pollution Control Centre Upgrades - $62 million.
- Greater Nanaimo Marine Outfall Replacement - $16 million.

CARRIED

MOVED Director Thorpe, SECONDED Director Veenhof, that the Board continue to support application by the City of Parksville for the Englishman River Water Service project.

CARRIED

**Bylaw No. 1722 – Regional District of Nanaimo 2015 to 2019 Financial Plan.**

MOVED Director Veenhof, SECONDED Director Houle, that "Regional District of Nanaimo Financial Plan 2015 to 2019 Bylaw No. 1722, 2015" be introduced and read three times.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "Regional District of Nanaimo Financial Plan 2015 to 2019 Bylaw No. 1722, 2015" be adopted.

CARRIED

**REGIONAL AND COMMUNITIY UTILITIES**

**WATER AND UTILITY**

**Nanoose Bay Peninsula Water Service Development Cost Charge Bylaw.**

MOVED Director Kipp, SECONDED Director Houle, that the Board amend "Nanoose Bay Peninsula Water Service Development Cost Charge Bylaw No. 1715, 2014" as outlined in this report.

CARRIED

MOVED Director Kipp, SECONDED Director Houle, that the Board give second reading, as amended, to "Nanoose Bay Peninsula Water Service Area Development Cost Charge Bylaw No. 1715, 2014".

CARRIED

MOVED Director Kipp, SECONDED Director Houle, that the Board give third reading to "Nanoose Bay Peninsula Water Service Development Cost Charge Bylaw No. 1715, 2014" and forward it to the Ministry of Community, Sport and Cultural Development for approval.

CARRIED

**Bylaw No. 1655.03 – Water User Rate Amendments 2015.**

MOVED Director Rogers, SECONDED Director Powell, that "Regional District of Nanaimo Water Services Fees & Charges Amendment Bylaw No. 1655.03, 2015" be introduced and read three times.

CARRIED

**Sanitary Sewer User Rate Amendments.**

MOVED Director Veenhof, SECONDED Director Houle, that "Surfside Sewer Rates and Regulation Amendment Bylaw No. 1241.07, 2015" be introduced and read three times.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "Surfside Sewer Rates and Regulation Amendment Bylaw No. 1241.07, 2015" be adopted.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "Fairwinds Sewerage Facilities Specified Area Rates Amendment Bylaw No. 765.15, 2015" be introduced and read three times.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "Fairwinds Sewerage Facilities Specified Area Rates Amendment Bylaw No. 765.15, 2015" be adopted.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "French Creek Sewer Specified Area Rates Amendment Bylaw No. 422.18, 2015" be introduced and read three times.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "French Creek Sewer Specified Area Rates Amendment Bylaw No. 422.18, 2015" be adopted.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "Barclay Crescent Sewer Rates and Regulations Amendment Bylaw No. 1472.06, 2015" be introduced and read three times.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "Barclay Crescent Sewer Rates and Regulations Amendment Bylaw No. 1472.06, 2015" be adopted.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "Cedar Sewer Rates and Regulations Amendment Bylaw No. 1532.04, 2015" be introduced and read three times.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "Cedar Sewer Rates and Regulations Amendment Bylaw No.1532.04, 2015" be adopted.

CARRIED

**Georgia Basin Inter-Regional Education Initiative.**

MOVED Director Avis, SECONDED Director Veenhof, that continued participation in the Georgia Basin Inter-Regional Education Initiative as proposed by the Partnership for Water Sustainability in British Columbia be endorsed.

CARRIED

MOVED Director Avis, SECONDED Director Veenhof, that the Board continues to support staff participation in Partnership for Water Sustainability in British Columbia activities associated with water sustainability.

CARRIED

**Garry Oak Drive and Spruce Lane Watermain Upgrade – Construction Tender Award.**

MOVED Director Rogers, SECONDED Director Powell, that the Board approve Milestone Equipment Contracting Inc. be awarded the construction of the Garry Oak Drive and Spruce Lane Watermain Upgrade project for the Tender price of $266,536.02 (excluding GST).

CARRIED

MOVED Director Rogers, SECONDED Director Powell, that "Nanoose Bay Peninsula Water Service Area Capital Improvements Security Issuing Bylaw No. 1723, 2015" be introduced and read three times.

CARRIED

MOVED Director Rogers, SECONDED Director Powell, that "Nanoose Bay Peninsula Water Service Area Capital Improvements Security Issuing Bylaw No. 1723, 2015" be adopted.

CARRIED

MOVED Director Rogers, SECONDED Director Powell, that "Nanoose Bay Peninsula Water Service Area Capital Improvements Interim Financing Bylaw No. 1724, 2015" be introduced and read three times.

CARRIED

MOVED Director Rogers, SECONDED Director Powell, that "Nanoose Bay Peninsula Water Service Area Capital Improvements Interim Financing Bylaw No. 1724, 2015" be adopted.

CARRIED

**WASTEWATER**

**Bylaw Amendment 988.09 to change the septage user fee to $.023 per gallon.**

MOVED Director Veenhof, SECONDED Director Powell, that "Regional District of Nanaimo Trucked Liquid Waste Disposal Amendment Bylaw No. 988.09, 2015" be introduced and read three times.

CARRIED

MOVED Director Veenhof, SECONDED Director Powell, that "Regional District of Nanaimo Trucked Liquid Waste Disposal Amendment Bylaw No. 988.09, 2015" be adopted.

CARRIED

**Greater Nanaimo Pollution Control Centre – Engineering Services for the Secondary Treatment Project.**

MOVED Director Haime, SECONDED Director Thorpe, that the Board award the engineering for detailed design, tendering, construction, commissioning and post-construction services for the Greater Nanaimo Pollution Control Centre Secondary Treatment Project to AECOM for $4,679,115.

CARRIED

**TRANSPORTATION AND SOLID WASTE**

**SOLID WASTE**

**Cedar Road Landfill Gas/Cedar Road Bioenergy.**

MOVED Director Kipp, SECONDED Director Powell, that the Board receive the report for information.

CARRIED

**STRATEGIC AND COMMUNITY DEVELOPMENT**

**LONG RANGE PLANNING**

**Use of Island Health Homelessness Funding.**

MOVED Director Pratt, SECONDED Director Veenhof, that the Board receive the report for information and direct staff to send this information to Island Health with a letter thanking them for providing funding and indicating that there is a need for sustained funding to achieve the goal of ending homelessness.

CARRIED

**2014 Annual Report on Regional Growth Strategy Implementation and Progress.**

MOVED Director Pratt, SECONDED Director Rogers, that the Regional Growth Strategy 2014 Annual Report be received.

CARRIED

MOVED Director Pratt, SECONDED Director Rogers, that staff be directed to distribute and use the Regional Growth Strategy 2014 Annual Report as part of efforts to raise awareness and provide education about the Regional Growth Strategy and its implementation.

CARRIED

**BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS**

**Establishment of a Watershed Board.**

MOVED Director Bestwick, SECONDED Director Young, that the Regional District of Nanaimo agree in principle to participate in the establishment of a Watershed Board.

CARRIED

**NEW BUSINESS**

**Friends of Morden Mine Society – Tipple Stabilization.**

MOVED Director Thorpe, SECONDED Director Young, that the budget be amended to include a $45,000 grant to the Friends of the Morden Mine Society to cover the immediate cost of alleviating the potential damage at the site based upon approval from the Provincial Government to perform those improvements.

DEFEATED

**Electoral Area 'A' Noise Bylaw Amendment.**

MOVED Director McPherson, SECONDED Director Rogers, that staff be directed to investigate and report back to the Board on options to amend the existing provisions of the Noise Bylaw in effect in Electoral Area 'A' to address community concerns regarding intense noise and activities that generate intense noise over extended periods of time. Options for consideration should include the narrowing of the current times of day and/or days of the week during which the generation of noise is allowed.

CARRIED

**Notice of Motion – Morden Park Mine Site.**

Director Thorpe noted that the following motion will be brought forward to the March 24, 2015 Board Agenda:

> That staff prepare a report that investigates the viability of the Regional District of Nanaimo leasing the Morden Park mine site from the provincial government, including an estimate of associated costs and liabilities involved.

**Notice of Motion – Board Procedure Bylaw.**

Director Veenhof noted that the following motion will be brought forward to the April 14, 2015 Committee of the Whole Agenda:

> That staff be directed to open the Board Procedure Bylaw for staff and Director review.

**IN CAMERA**

MOVED Director Veenhof, SECONDED Director Avis, that pursuant to Sections 90(1)(e), (f) and (j) of the *Community Charter* the Committee proceed to an In Camera meeting for discussions related to land acquisitions, law enforcement and third party business interests.

CARRIED

TIME: 9:55 PM

**ADJOURNMENT**

MOVED Director Avis, SECONDED Director Young, that this meeting be adjourned.

CARRIED

TIME: 9:57 PM

CHAIRPERSON

CORPORATE OFFICER

# Snuneymuxw First Nation

668 Centre Street
Nanaimo, BC, V9R 4Z4

Telephone: (250) 740-2300
Fax: (250) 753-3492



March 16, 2015

Regional District of Nanaimo
6300 Hammond Bay Rd.
Nanaimo BC V9T 6N2

Attention: Mr. Paul Thorkelsson,

Dear Mr. Thorkelsson

**RE: Appointment to the Liquid Waste Management Plan Monitoring Committee**

I am pleased to inform you that Doug Muir, Community Infrastructure and Housing Coordinator has been appointed to the LWMP Monitoring Committee to oversee and evaluate the implementation of the amended LWMP.

Doug looks forward to working with the LWMP Monitoring Committee in the future.

Sincerely,

K. Cossey

Ken Cossey, MCIP, RPP
Executive Director

**From:** VI & Coast Conservation Society
**Sent:** Sunday, March 22, 2015 11:08 PM
**Subject:** World Water Day Request re. Cassidy Aquifer, to Nanaimo City Council & RDN Board

World Water Day - March 22, 2015

Dear Council & Directors,

We are writing on World Water Day, in the spirit of cooperation, hoping to open a dialogue with respect to local water protection and the Cassidy aquifer.

Along with the Harmac pulp mill and North Cedar Improvement District the 'vulnerable and threatened' Cassidy aquifer, so designated by the BC government, provides for water needs throughout Cedar, Yellowpoint, the most northern area of the CVRD, as well as Cassidy and South Wellington. An RDN hydrologist study of the Cassidy aquifer in 2010 suggests however that a number of potential hazards could contaminate the aquifer(s) which lie immediately below the Nanaimo airport.

Discussions with City representatives and District Directors have made us aware of City of Nanaimo emergency plans to tap into the Cassidy aquifer should water shortage problems arise. We now understand that such plans are being revised with the intention of permanently accessing the Cassidy aquifer and Nanaimo River to meet ongoing needs via a growing network of private and public water supply lines.

This past week new information also came to our attention that suggests development plans and negotiations are taking place outside of the attention of local communities and the Nanaimo public, plans that could lead to hazardous and toxic materials entering the aquifer and water supply.

To our surprise we learned that the CVRD has been approached by the Nanaimo Airport Commission, requesting support for its Master Plan and associated zoning changes that will enable airport lands to be developed for non-aviation related purposes. To date federal regulations that permit only airport-related development, and local concerns which were raised in the revision of the RDN Area A OCP, had been cited in preventing such unrestricted development on airport lands.

In this regard VICCS is concerned that the aquifer's water, just a meter or so below the surface in places, could be contaminated for many years by inappropriate development being located on airport lands immediately above the Cassidy aquifer. Unintentional, incremental and accidental releases of spilled fuels, chemicals and the like could pose significant danger to aquifer waters and related ecosystems.

At this time there appears to be no consultation process required so that the public might become informed, or able to speak to development that may be considered to be located above the Cassidy aquifer on airport lands. Nor do we know whether independent environmental assessments will be undertaken, or what measures are in place to protect the aquifer – a public resource and water supply for Nanaimo and surrounding areas.

The legal non-conforming status of the airport lands, approved by the RDN, also raises questions; as does the unwillingness of the RDN to release a legal opinion to the public which was solicited in 2010. At that time the RDN claimed not to be responsible for enforcing zoning regulations on airport lands.

We do not believe the NAC's special relationship with the RDN should supercede the public interest in the public resource that is the Cassidy aquifer and catchment basin. And we are concerned that the safety of aquifer waters may be unintentionally compromised through a lack of process and the inability of the public to participate in decision-making processes that affect our watershed, and our children's future. The NAC's bottom-line, and the City and Region's wish to pursue economic and development goals, should not sideline the public interest in the protection of the Cassidy aquifer and essential ecological systems upon which we all depend.

In this respect the appointment of the Area A Director onto the Board of the NAC, immediately following his decision not to run in the 2011 local elections, also raises serious questions about the degree to which the NAC has received preferential treatment, and been briefed on legal matters and the intentions of local governments. As this in turn raises concerns about a possible conflict of interest there is a commensurate need, incumbent upon the RDN, to again review and scrutinize Area A OCP amendments and related RDN Board decisions that were approved during his tenure.

With lobbying of local governments and other parties in the mid-island and outlying regions underway by NAC, without public knowledge or input, it might be expected that a number of development plans may be in the works. VICCS would contend that, in order for the safety of the City of Nanaimo's drinking water to be assured, development ventures on airport lands above a 'vulnerable and threatened' aquifer, should be open to public scrutiny as well as require formal and independent reviews and environmental assessments.

The need for greater community and public involvement in protection of local water supplies is in fact one of the major recommendations of a UN report, released just two days ago. The UN's World Water Development report also notes that within 15 years the world's population could face a 40% shortfall in a secure water supply.

With such local and global concerns in mind we have booked a hall in Cedar for a public meeting in late May. In the spirit of cooperation we would like to extend an invitation to the RDN and the City, to jointly host and set the agenda for the meeting.

At this meeting, and in future discussions with the City and RDN, VICCS would like to address a recent decision of the Victoria Airport authority, whereby funds are to be raised by instituting a $5 surcharge on flights. VICCS believes the public interest would be served here, in our unique circumstances, by instituting a $5 surcharge on all tickets issued for flights into and out of the Nanaimo airport ...such monies to be held in trust by an independent non-profit organization and to be directed to local aquifer, water and watershed protection.

A fund to help protect our drinking water supply, aquifer and watershed would seem to be a positive and responsible means to ensure that those who use the airport also pay for protection of the aquifer and waters that may be endangered by such use.

Along with partnering in our meeting we would also invite the City and RDN to consider setting a region-wide public process in place. It is essential, if a secure, safe and sustainable water supply is to be assured in the mid island region, that all interests are provided the opportunity to be involved in important decisions that affect the Cassidy aquifer(s) and Nanaimo River, and any development affecting these waters.

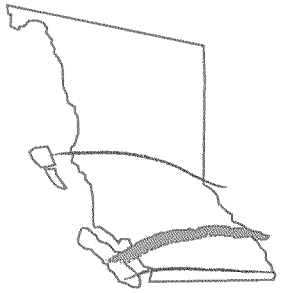
Our thanks to you for your time and consideration on these matters. We look forward to hearing from you, and to working with you.

Sincerely,

Laurie Gourlay
President, VICCS

*Vancouver Island & Coast Conservation Society, P.O. Box 333, Cedar, B.C., V9X 1W1, (250 722-3444)*

*"Each generation is entitled to the interest on the natural capital, but the principal should be handed on unimpaired."*
*- Canadian Conservation Commission, 1915*




# Third Crossing Society

1A - 7624 Duncan Street, Powell River, B.C. V8A 5L2
info@thirdcrossing.com
www.thirdcrossing.com


| RDN CAO'S OFFICE | | | |
|---|---|---|---|
| CAO | ✓ | GM R&P | |
| GMS&CD | | GM T&SW | |
| GM R&CU | | DF | |
| MAR 18 2015 | | | |
| DCS | | BOARD | ✓ |
| CHAIR | ✓ | | |

March 17, 2015

Chair John Stanhope and Board,
Regional District of Nanaimo,
6300 Hammond Bay Road,
Nanaimo, BC V9T 6N2

Dear Chair Stanhope and Board:

We are a small group of individuals promoting a highway link between northern Vancouver Island and the Central Interior. We request a letter of support in principle for this Province-building initiative.

To better acquaint you with our proposal, we have enclosed a copy of our submission to *BC on the Move*, and refer you to www.thirdcrossingsociety.com for further details.

To summarize, this highway would connect the North Island with Highway 99 near Squamish, by way of the Comox / Powell River ferry. We see it as a mid-province economic corridor that would benefit the relatively isolated communities of the North Island and all regions north of the Lower Mainland.

From a Nanaimo point of view, it would offer Islanders driving to the Interior an alternative to the Coquihalla and Trans-Canada, allowing them to avoid the Lower Mainland. Similarly, it would offer the rest of the Province, and the country, a new way to reach the Island, and attract tourists with two additional circle routes.

Our proposed highway follows logging roads out of Squamish and Powell River which now stretch toward each other but don't quite touch. These roads would have to be upgraded to Provincial standard and connected by about 42 kilometres of new pavement, including a tunnel of 3.2 kilometres. By our reckoning, this could all be accomplished for between $500- and $600-million, a modest outlay as such projects go.

Our proposal is well researched – we have done our homework. To date we have formal support in principle of two municipalities (Powell River and Comox); three regional districts (Alberni Clayoquot, Squamish Lillooet and Powell River); two Chambers of Commerce (Pemberton and Powell River); one First Nation (Sliammon) and several other organizations.

This letter launches our campaign to make all regions across central British Columbia aware of this initiative. I will call your office in the near future in order to answer any questions you may have.

Thank you for your time and consideration,

Yours truly,

Gary Fribance
President

**THE THIRD CROSSING SOCIETY**
**1a-7624 Duncan Street,**
**Powell River, B.C. V8A 5L2**

# THE CASE FOR A THIRD CROSSING OF BRITISH COLUMBIA

**Linking Vancouver Island, the Upper Sunshine Coast, the Sea to Sky Communities and the Central Interior**

*(At this writing, the following had all voted their unanimous support in principle for the project described here: the Regional Districts of Powell River, Squamish-Lillooet, Alberni-Clayquot; the City of Powell River, the Sliammon First Nation, the Town of Comox, the Comox Valley Airport Commission, the Pemberton and Powell River Chambers of Commerce, the Powell River and Sunshine Coast Real Estate Boards and Powell River Tourism.)*

We are often asked why we call ourselves the Third Crossing Society. Few think about, or perhaps understand, the fact that British Columbia's existence and well-being have, from earliest times, depended on east-west, cross-province transportation corridors, of which we have effectively only two. Because Vancouver Island is a large part of our province, both corridors include not only highways but ferries. Thus, unless the Province decided to throw a bridge across the Georgia Strait, ferries must remain an element in any cross-province corridor.

Today, British Columbia's first and most-travelled east-west crossing runs from the south end of Vancouver Island by ferry to Vancouver, and then along Highways 1, 3 and 5 to the rest of the province, Alberta, and beyond. The second runs by ferry from Haida Gwai to Prince Rupert and by highway from there to Prince George and points north, south and east. ▶

As its name suggests, the Third Crossing Society advocates construction of a road that crosses BC's coastal mountains – a mid-province ferry and highway economic corridor that links northern Vancouver Island with the rest of the province via the Central Interior.

The Society has been building local and regional support for this proposed corridor, and submits that in fairness to the communities that generate so much of the province's wealth, it should be an element in any transportation infrastructure plan.

The beauty of the proposal is that three of this corridor's components are already in place: the Vancouver Island highway system; the Comox-Powell River ferry; and the Sea to Sky Highway. All that would be required to complete the job would be construction of about 42 kilometres of new road, upgrading of 135 km of existing logging roads, and a tunnel of 3.2 km, for a total length of about 177 km. Eventually, it would also entail upgrades on Highway 99 to make it suitable for heavy commercial traffic, although perhaps not immediately.

The figures presented in an earlier version of this paper were 35 km of new road, and 185 km of logging road upgrades for a total length of 215 km. Measurements based on GPS co-ordinates have since allowed us to make the more precise estimates.

Similarly, the original cost estimate was pegged at $503-million. Further investigation made it clear that the project can be completed for between $500- and $600-million – there are too many variables to pin it down more closely than that, at this time.

The payback would be economic stimulation of a large swath of the province just north of the Lower Mainland in the first instance, but the *whole* province as time goes on.

The proposal described here has a key advantage over certain others, in that it would not entail the very considerable cost of crossing private land.

Like those who advocated the Coquihalla, the Society has been promoting this mid-province corridor for a long time. For reasons described below, we are convinced that it would not only benefit the whole province, it would be economical.

A challenge it may be, but in a province where the mountain ranges run north and south, construction of railways and highways running east and west has *always* been a challenge, and British Columbians always meet it, thereby greatly enhancing the economic growth and well-being of our inland communities, many of which would otherwise be marginalized. The Hope-Princeton, Fraser Canyon and Coquihalla highways are notable examples of challenges met, missions accomplished.

The third crossing proposal in the past has taken a back seat to some other priority, such as the 2010 Olympics. With the closure of two paper mills, and upwardly spiralling ferry fares, the coastal communities have fallen on hard times. Our economy needs adjustment, and a mid-province corridor linking the vast regional economies of northern Vancouver Island and the area north of the Lower Mainland, would produce an economy much greater than the sum of its parts, because that is what such links always do.

## OVERVIEW OF BENEFITS

The proposed corridor would:

- Stimulate the economies of every community in its path, and in the vast areas of the province at both ends;
- Open up a new tourism and recreation playground in the mountainous and virtually inaccessible terrain between Squamish and the Upper Sunshine Coast;
- Make British Columbia even more attractive to the wave of winter-weary retiring baby-boomers already rolling west;
- Reduce traffic congestion at the Horseshoe Bay ferry terminals and on Lower Mainland highways, while extending their economic life;
- Boost traffic on the Comox/Powell River run, improve BC Ferries' bottom line, and perhaps engender service improvements instead of reductions;
- Encourage the development of Powell River as a port, a federal legal designation it already possesses;
- Reduce travel time and costs for traffic between northern Vancouver Island and the Central Interior, and free travellers from the time constraints of ferry schedules.

It is also worth noting that whatever savings in time or money accrue to individuals and families would also accrue to the operators of commercial vehicles.

## BENEFITS CLASSIFIED AND ANALYZED

Below, we classify the benefits into three categories:

- Benefits identified and quantified – offsets
- Benefits identified but not quantified
- Potential benefits to be evaluated

### Benefits identified and quantified - offsets

| | |
|---|---|
| **Federal assistance 1/3** | **$183 million** |
| **BC Ferries Comox/Powell River** | **50 million** |
| **Tolls** | **25 million** |
| **Total cost offsets to date:** | **$258 million** |

### Federal funding assistance

Under the Infrastructure Stimulus Fund and the Building Canada Fund federal government assistance is available. Typically, these programs fund one third of a project's eligible costs.

Since British Columbia's funding allocation is $1.09 billion over 10 years, the projects to be assisted will have eligible costs of $3.27 billion.

As stated above, our project is estimated to cost between $500- and $600-*million*. That means it would receive 15 – 18% of the available funding assistance. Usually this type of federal assistance is spread out over a large number of projects. However, because this project would benefit so many communities and have such favourable implications for the entire province, it is appropriate that this project receive a large portion of the allocation.

Many of the communities that will be directly impacted by the proposed road have suffered for many years from the decline in forestry employment. This investment, the proposed road, will help restore vigour to those economies.

## BC Ferries – Comox/Powell River

The proposed road will doubtlessly add to the ridership on the Comox/Powell River route and significantly reduce its annual operating losses. Riders from the central and northern parts of the Island wishing to travel to the central and northern interior will no longer have to use the overcrowded southern ferry routes. Similarly, Islanders may elect to travel to the Lower Mainland using the Comox/Powell River Ferry. These changes will also apply in reverse.

The positive shift from moving increased traffic to the Comox/Powell River route will move traffic away from the overtaxed Horseshoe Bay and Tswassen/Nanaimo runs and avoid costly expansions for many years to come.

We have not estimated the quantum of this increased ridership, but it is likely to be significant. The benefit that would accrue to BC Ferries is that traffic would be transferred from the over-utilized southern routes to the under-utilized Comox/Powell River run. We argue that revenue on the southern routes would not decline (indeed there is an argument that it could increase), but the extra revenue for Comox/Powell River would convert to extra profit for BC Ferries.

Our hypothesis is that traffic on the Comox/Powell River route could increase by 25% or even 50% due to the extraordinarily low ridership on that run at present. Let's do the math!

| | 2012 | 2013 |
|---|---|---|
| Vehicle traffic | 145,705 | 136,530 |
| Passenger ridership | 352,820 | 329,098 |

*Assumed average fares of $50 for vehicles and $15 for passengers produces:*

| | | |
|---|---|---|
| Theoretical vehicle revenue | $7.3 million | $6.8 million |
| Theoretical passenger revenue | $5.2 million | $4.9 million |
| Theoretical total annual fare revenue | $12.5 million | $11.7 million |
| Adjustment to actual fare revenue | $11.7 million | $9.0 million |

If our hypothesis of increasing revenue by 25% or 50% were to in fact materialize, then based on the actual revenues for 2013, it could increase say $2.5 or even $5.0 million. This would be an annual extra profit that would last forever. Calculating the capital value of that annual saving is a

sophisticated process that includes determination of an appropriate capitalization rate. Therefore, we have simply assigned a capital value of 10 times the annual saving.

The saving, on that basis, provides an offset to the cost of the highway of $25 to $50 million or more. For now, we are taking the 50% hypothesis, say $50 million.

### Tolls

Tolls can produce significant revenue. Over 22 years, tolls on the Coquihalla produced $845 million, almost equivalent to the cost of the highway, $848 million.

Vehicle traffic on the Comox/Powell River ferry is about 140,000 per year. We have hypothesized that increases of 25% to 50% are possible from extra traffic over the road. That would covert to 35,000 to 70,000 vehicles per year over the proposed road.

The Earl's Cove/Saltery Bay ferry carries about 165,000 vehicles per year. The vast majority of these would use the road and travel more frequently because of the lower cost. A figure of 200,000 vehicles per year is reasonable.

Combining these two sources of traffic, 250,000 vehicles per year, at $10 would yield tolls of $2.5 million. Over only 10 years that would contribute $25 million to the cost of the road.

## Benefits identified but not quantified

There are additional potential economies that have been identified, but are not yet quantified. These economies would accrue to BC Ferries in the form of relieving pressure on existing systems. For example, on September 30, 2014, BC Ferries stated that $200 million was needed to relieve shore-side congestion at Horseshoe Bay terminal. Drawing traffic from the Horseshoe Bay/Nanaimo route to the Comox/Powell River route will not only enhance the economies at Comox/Powell River, it will relieve pressure at the terminal, both shore-side and marine-side.

Similar economies will accrue to BC Ferries by relieving pressure on the vessels themselves. We note that in recent years ridership has decreased largely due to increased fares (and perhaps other reasons), but it is estimated that British Columbia's population will increase 25% over the next ten years. Deferring the purchase of expensive vessels, or using smaller ones, will provide a significant benefit. We look forward to working with BC Ferries to produce estimates of those potential savings.

### BC Ferries - Capital Benefits

Unlike the Washington State ferry system, which is largely a commuter service, BC Ferries has a significant seasonality issue: in summer ridership is high, for the rest of the year it's relatively low, and as in all such situations, the demand in peak season sets the capacity levels of vessels so that an acceptable service level is achieved.

Above, we estimated the improved annual profitability that would accrue to the Comox/Powell River route. As a result of that shift, other facilities would see reduced traffic that would defer the need for capital outlays, and that, of course, would benefit the ferry system. It is noted that in

recent years ridership has declined, but, hopefully, that issue will soon be resolved. In any case, estimated population growth of 25% (one million) over the next 10 years will result in significant growth in demand.

A specific financial benefit of moving traffic from the Departure Bay route to Comox would be the opportunity to defer the expenditure of an estimated $200 million at the Horseshoe Bay terminal to remove both the shore- and marine-side congestion there.

## Potential Benefits to be evaluated

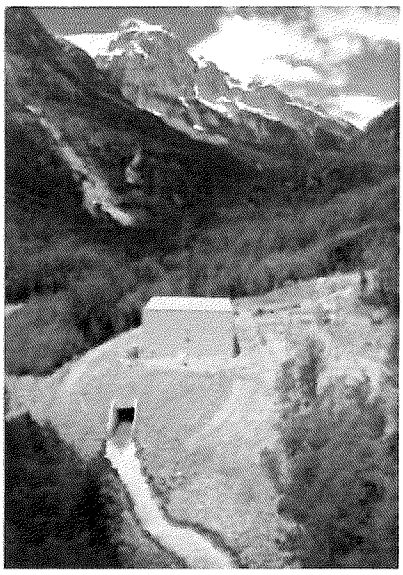
Finally, we have identified several potential projects that could generate positive economic benefits in our province. These potentials require research and evaluation. Again we would welcome the assistance of qualified professionals to help make these determinations.

- Run-of-river
- Mining
- Aggregate
- Shipping
- Ski resort
- Housing and the baby boomers
- Recreational opportunities
- Tourism opportunities

### Run-of-river projects

Increased access to rivers could create additional, and more economic, run-of-river opportunities.

Unlike traditional hydroelectric facilities, which flood large areas of land, run-of-river projects divert a portion of the river's flow into a pipe called a penstock, which transmits the water down-hill to a generating station. The natural force of gravity creates the energy required to spin the turbines that in turn generate electricity. The water leaves the generating station and is returned to the river. The Toba Montrose project pictured below, opened in 2010, cost $660 million.



**Right:** *Alterra's run-of-river project near Toba Inlet.*

### Mining potential

Opening new areas creates the potential for additional exploration. The Third Crossing Society is investigating opportunities and will be consulting with experts at the BC Geological Survey and others.

### Sourcing aggregate for domestic and export markets

There are existing opportunities for exporting aggregates. Increased access could increase immediate benefits.

## Shipping development

Catalyst's mill at Powell River is deep enough to serve international shipping needs, and City Transfer currently operates a barge terminal. Building the proposed road would give BC an additional outlet for exports, and in fact the potential for LNG export from there is being studied.

## Potential ski resort area

Triple Peaks, located about 6 km from Goat Lake, on Goat Lake 2 logging road. The three peaks (elevation about 2000m) surround a valley. A ski resort may be feasible. For comparison, note that the summits of Mount Washington and Whistler are 1587m and 2184m respectively.

## Housing and the baby boomers

Recently Vancouver was declared the most expensive city in Canada. House prices throughout the Lower Mainland are through the roof. Combine that with the understanding that the baby boomers began to hit retirement age in 2012 and will continue to retire until 2031 and you have a mega-opportunity for the coastal regions.

**Above:** *Vancouver West house: $3,590,000.*
**Below:** *Powell River house: $329,000*

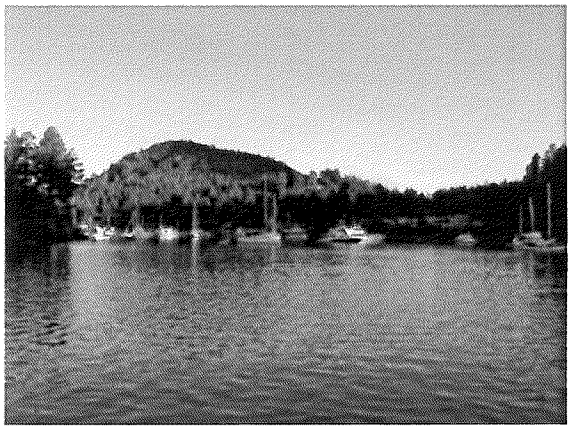
Retirees from urban centres everywhere are shedding their high-priced real estate and relocating to coastal communities, pocketing substantial (and taxable) nest-eggs in the process. They're arriving from the Lower Mainland, Alberta and points east and this should be a long process. The road will enhance these migrations, and wherever retirees come to roost, economies will prosper. Like our climate, BC's natural beauty, and those nest-eggs, good roads to the coastal areas will be big drawing cards. They're arriving from the Lower Mainland, Alberta and many other points east, and this should be a long process. It is estimated that recently, 25 to 30% of home purchases in the Parksville to Comox area have been to buyers from out of province.

## Recreational opportunities

BC's coastal and central interior areas are among the most popular tourist destinations in the world. World class boating, skiing, SCUBA diving, fishing, camping and hiking opportunities are abundant. The proposed road will increase access to existing attractions and create new opportunities.

### Boating

Our waters are among the best and most famous cruising destinations in the world. Consider Desolation Sound and the entire Georgia Strait and Gulf Islands. Our Marinas and communities welcome boaters and offer first class service. Our lakes are destinations in themselves.



**Right:** *Early morning at anchor in Pender Harbour.*

### Skiing

Whistler, the interior mountains and Mount Washington... need we say more? Well yes, a new resort area is possible!

### SCUBA diving

Our best kept secret ... we know how to deal with our cooler water ... and divers say we have one of the best diving experiences in the world. Promotion of this activity would be enhanced with increased accessibility.

**Left:** *Powell River's mermaid in 50 feet of water near Saltery Bay.*

### Fishing

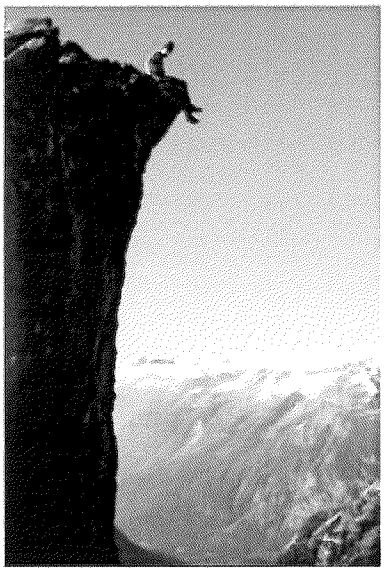
World class and world famous.

### Camping

New opportunities for everyone.

## Hiking

Our trail systems are well known tourist attractions, bringing visitors from afar and serving a large local population. Consider the West Coast Trail, the Sunshine Coast Trail, the Powell River Canoe Route, the Chief and Myra Canyon and hundreds of lesser known and yet to be discovered opportunities.



**Right:** Hanging out on Casement Mountain.

## CONCLUSION

It's no secret that vast resource revenue is produced on Vancouver Island and in the coastal regions, so it should come as no surprise that for most of the past decade, much of that revenue has been invested in transportation infrastructure in the Lower Mainland and the big population centres elsewhere in the province. That is perhaps inevitable.

But now comes news that an estimated $2.3 billion has been sucked out of the coastal communities' economies by ever-increasing ferry fares, and it's only natural that the people living there, already hot under the collar about those fares, would begin to wonder whether they exist and work mostly for the benefit of BC's urban masses. It's enough to make *anyone* angry.

Those who live and work in the coastal communities feel that perhaps *their* needs, too, should be part of any transportation infrastructure plan.

The Third Crossing Society submits that British Columbia is more than just its teeming southern lowland and its resource rich north – it has a vast swath of territory at mid-province where east-west travel would inevitably lead to development and thus boost provincial revenue and prosperity – not just in Vancouver, Victoria and the Okanagan, but the forgotten communities everywhere.

Best of all, in the context of all the big projects of the recent past, this one can be brought home for a little over half a billion dollars, a very modest expenditure as such projects go.

Considering that $16 billion has been spent on transportation infrastructure in BC over the past thirteen years, it's difficult to imagine a highway project with as much wallop as this one for a modest $500- to $600-*million.* And we suggest that it's time some of that resource revenue made its way back to the people who produced it.

We invite those studying this proposal to also visit our website,

http://www.thirdcrossingsociety.com

**END**

Nanaimo City Council
Regional District of Nanaimo
Greater Nanaimo Cycling Coalition

Dear Mayor, Councillors, Directors and Neighbours:

At our March 26 meeting, The Neighbours of Nob Hill Society unanimously passed a motion of support for the **Rail Trail Extension** through Nob Hill and other neighbourhoods in the south end.

We look forward to collaborating with you, and to assist in any way possible. This long anticipated extension will certainly benefit our own neighbourhood, and the entire city and its visitors, in many ways for many years to come.

Thank you!

Sincerely,

Norman Abbey (secretary),
Neighbours of Nob Hill Society

# Rural Advisory Council Announced

Mar 18, 2015

Fourteen individuals from across the province have been appointed to the Province's new Rural Advisory Council. Four of the representatives are local elected officials: Director Grace McGregor, Regional District of Kootenay Boundary; Mayor Gerry Thiessen, Vanderhoof; Councillor Sylvia Pranger, Kent; and Mayor Chris Pieper, Armstrong.

The mandate of the council is to provide input to government policy decisions related to rural communities. The initial focus for the council will be to provide advice on rural economic development, including rural access to capital and business development support for rural entrepreneurs and businesses. The council will also advise on rural community capacity building, including the Rural Dividend. Former Terrace Mayor David Pernarowski was also appointed to the group of fourteen.

To learn more about the Rural Advisory Council, visit the Government of British Columbia website.

**Follow Us On**

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# Deadline Approaching for Urban Deer Recommendations

Mar 25, 2015

Draft urban deer recommendations were circulated to the affected communities in early March. Communities are invited to provide feedback to UBCM by April 5th. If other members wish to receive and comment on the draft recommendations, please contact UBCM at 604 270 8226.

UBCM will be submitting the recommendations to the Province for consideration. Provincial government staff have committed to responding to the report and recommendations within three months of receipt.

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# Enviroment Committee Policy Update

Feb 25, 2015

UBCM's Environment Committee monitors and advocates for changes in environmental policy of interest to local governments. Two of the key issues the committee is engaged with concern land based spill preparedness and urban deer management.

## Land Based Spills Preparedness and Response

In November 2012, the Province released a policy intentions paper on Land Based Spill Preparedness and Response. This was the first step towards creating a world leading land based spill preparedness and response regime, which is one of the five conditions necessary for support of heavy oil projects.

UBCM has been actively engaged in this file over the past few years and has provided comments on the Province's first intentions paper; attended a 3-day symposium in March 2013 to discuss world leading preparedness and response regimes for land based spills, coastal shorelines, human health, and safety; and participated as a member on the Province's Advisory Committee. UBCM has also received delegations from Ministry of Environment staff to discuss their approach; provided comments on the Province's second intentions paper; and received a delegation at the July 2014 Environment Committee meeting from the Canadian Energy Pipelines Association (CEPA) to discuss their joint paper with the Railway Association of Canada.

With respect to this issue, the membership has provided clear direction and has asked for:

- An industry-funded contingency fund to address spills response in a timely manner;
- Response plans for high-risk areas;
- A collaborative approach to spill response;
- A regional planning authority to oversee spill response; and
- Wildlife system and ecosystem restoration funded by industry

UBCM continues to advocate for local government interests and recently met with Ministry staff at the February 2015 Environment Committee meeting. It was noted at this meeting that Ministry staff have collated the consultation feedback and provided options and recommendations for the government's consideration. They are currently waiting for direction before proceeding with next steps, including the drafting of regulations.

Recommendations from Ministry staff include the creation of an oversight organization for land-based spills in BC. The Province would set the rules for the oversight organization, require membership in the organization, and certify members that meet the standards. Staff have also advised that local governments and First Nations should have input and be involved with setting rules, planning and preparedness, and other matters as local governments will likely be the first responders in the case of a spill. On the issue of a contingency fund, Ministry staff have indicated their support and recommended that a contingency fund be BC based, and industry funded. For more information on this initiative, please visit the Ministry's website.

**Urban Deer**

At the 2013 UBCM Convention, Premier Clark and Minister Thomson, Forest, Lands and Natural Resources Operations (FLNRO) met with several mayors on the issue of urban deer management. Following this meeting, Premier Clark committed to provincial engagement with the UBCM in the creation of an Urban Deer Management Task Force.

Following an exchange of correspondence with the Province, Executive consideration, and staff discussions, it was agreed that the best way forward would be to offer a forum with affected mayors and Ministry staff from around the province to discuss deer management. At the 2014 Convention, it was announced that UBCM and the Ministry would collaborate in the delivery of a two-day workshop to engage the provincial government, UBCM and local government. The workshop would provide the participants with up to date legal, policy, administrative, communications and best practices information; and offer a structured opportunity for local governments to make recommendations on improvements and priorities for the management of urban deer in BC.

The Urban Deer Forum was held on January 12th and 13th in Richmond, BC. Thirty- three (33) participants attended the forum including staff from the provincial government, UBCM, local governments and the non-profit community. Twelve (12) local governments were represented by their staff and elected officials. This constitutes the majority of communities that have been actively engaging with FLNRO staff on urban deer issue.

On the first day of the Forum, presentations were received from experts, provincial government staff and non-profit organizations. The second day of the Forum focused on creating ideas and drafting recommendations. General categories for recommendations were established: roles and responsibilities; process and decision making; resources; communication and education; and tools.

UBCM staff will be sending out the draft recommendations via email to the affected communities for member feedback, prior to submitting them to the Province for consideration. If other members wish to receive and comment on the draft recommendations, please contact UBCM (604-270-8226, ext. 100). Provincial government staff have committed to responding to the report and recommendations within three (3) months of receipt.

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From: Bill Veenhof
Sent: Friday, April 03, 2015 9:45 AM
Subject: Re: Urban Deer Recommendations

A couple of comments:

1. We should clarify that this includes rural areas as well. In some respects our problems with deer are more acute than is found within traditional urban boundaries. Of course, some rural people are more likely to get away with solving the problem on their own.

2. I am not sure that this should be limited to deer. In the mid-island we have a huge problem with Canada Geese. They are an introduced species and are (on the Island) non-migratory. They are decimating the eel grasses in the intertidal areas. As eel grass is a "nursery" habitat for salmon, this grazing is having a negative consequence on fish populations. Additionally, the Brant geese also feed on eel grass, the difference being that the Brant eat it for a short time to fatten up for their flight to the arctic. One can surmise that Canada Geese could also have a negative impact on Brant populations.

3. It states:, "Local governments should ensure that their communities are non-enticing environments for deer to live. Communities can produce signage and education to the public against feeding of deer. The community can also encourage residents to secure their garbage and ensure that gardens are fenced through local bylaws."

- I am not sure that deer eating garbage is an issue, perhaps compost. Bylaws to fence would create a firestorm. In the end of the day, people will be motivated to fence if it is needed to protect their property. By putting "Bylaws" in, we give the province an argument that they will not support local government until local government enacts bylaws.

Bill Veenhof
Director, Area H
778-424-2810

REGIONAL DISTRICT OF NANAIMO

| RDN REPORT | | |
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# MEMORANDUM

**TO:** Paul Thorkelsson
Chief Administrative Officer

**DATE:** April 6, 2015

**FROM:** Wendy Idema
Director of Finance

**FILE:**

**SUBJECT:** **2015 Gas Tax Transfer and Community Works Fund Program Update**

## PURPOSE

To provide an update on the Community Works Fund Program and to obtain Board approval for the use of Community Works funds in 2015.

## BACKGROUND

The renewed Gas Tax Agreement (GTA) between Canada, British Columbia and UBCM, and the 2014-2024 Community Works Fund (CWF) agreement between the RDN and UBCM took effect April 1, 2014. Under these agreements, local governments receive annual transfers which may be used for local priorities which improve public infrastructure.

The range of projects eligible for funding include those within the following categories and funds can be utilized under these categories:

- **Capacity building** – includes investments related to strengthening the ability of Local Governments to develop long-term planning practices. Under the capacity building category, items related to asset management have been added such as long-term infrastructure plans, studies, strategies, or systems related to asset management and training directly related to asset management planning.
- **Local roads, bridges** – roads, bridges and active transportation infrastructure (active transportation refers to investments that support active methods of travel. This can include: cycling lanes and paths, sidewalks, hiking and walking trails).
- **Highways** – highway infrastructure.
- **Short-sea shipping** – infrastructure related to the movement of cargo and passengers around the coast and on inland waterways, without directly crossing an ocean.
- **Short-line rail** – railway related infrastructure for carriage of passengers or freight.
- **Regional and local airports** – airport-related infrastructure (excludes the National Airport System).
- **Broadband connectivity** – infrastructure that provides internet access to residents, businesses, and/or institutions in Canadian communities.
- **Public transit** – infrastructure that supports a shared passenger transport system that is available for public use.

- **Drinking water** – infrastructure that supports drinking water conservation, collection, treatment and distribution systems.
- **Wastewater** – infrastructure that supports wastewater and storm water collection, treatment and management systems.
- **Solid waste** – infrastructure that supports solid waste management systems including the collection, diversion and disposal of recyclables, compostable materials and garbage.
- **Community energy systems** – infrastructure that generates or increases the efficient usage of energy.
- **Brownfield Redevelopment** – remediation or decontamination and redevelopment of a brownfield site within Local Government boundaries, where the redevelopment includes:
    - the construction of public infrastructure as identified in the context of any other eligible project category under the GTF, and/or;
    - the construction of Local Government public parks and publicly-owned social housing.
- **Sport Infrastructure** – amateur sport infrastructure (excludes facilities, including arenas, which would be used as the home of professional sports teams or major junior hockey teams (e.g. Western Hockey League)).
- **Recreational infrastructure** – recreational facilities or networks.
- **Cultural infrastructure** – infrastructure that supports arts, humanities, and heritage.
- **Tourism infrastructure** – infrastructure that attracts travelers for recreation, leisure, business or other purposes.
- **Disaster mitigation** – infrastructure that reduces or eliminates long-term impacts and risks associated with natural disasters.

Costs such as land purchases, legal costs and operating/administrative costs remain ineligible under the gas tax funding program, and the disaster mitigation category is limited to projects/costs that are for mitigation, not response related infrastructure. As well, there is an expectation under the new program that ultimate recipients (local governments and other eligible entities) are required to "work to strengthen" asset management during the term of the agreement.

Allocations under the Community Works Fund consist of a $50,000 funding floor, plus a per-capita amount for each Local Government. A Board decision was made under the first agreement to allocate the CWF for use in the Electoral Areas on a population basis with the $50,000 floor funding amount designated as base funding for cross-region projects. Each municipality within the Regional District receives funds separately for the same purposes. This program is separate from the application based Strategic Priorities Fund which provides funding for projects that are larger in scale, regional in impact, or innovative in nature.

Each year at this time staff prepare a list of ongoing and new eligible CWF projects for the coming years (Schedules A and B) and report on the outcomes of work done in the prior year (Schedule C). The projects listed provide a broad range of outcomes including the development of community water and sewer systems, walking/cycling trails, building upgrades, actively engaging the community in green building education and best practices, as well as the development of corporate monitoring programs.

Some of the projects to be undertaken will include a transfer of funding to another local government or to a not-for-profit association. In those cases, sub-agreements are completed with these eligible recipients to ensure compliance with all of the Gas Tax Program criteria and reporting requirements.

**ALTERNATIVES:**

1. Receive this report for information and endorse the 2015 Community Works Funds program as presented.
2. Recommend changes to the proposed projects and endorse an amended plan.

**FINANCIAL IMPLICATIONS:**

Alternative 1

Under the renewed CWF program, the RDN received $1,708,370, including interest (allocated from UBCM and internally through RDN) in 2014/15 and a minimum of $1,596,725 in base funding before interest is expected in 2015/16. The $50,000 received as floor funding is allocated to cross-area projects and the remainder is allocated on a per capita basis.

Based on 2014 year end balances, plus expected funding for 2015/16, less funds required to complete known and estimated projects, estimated balances available by area are per the following table. Many of the project amounts are unknown or based on rough estimates only at this time and further updating will be required.

| | Dec 31, 2014 Balance | 2015 Estimated Allocation | 2015/16 Estimated Spending | Estimated Remainder Available |
|---|---|---|---|---|
| Base funding | $34,165 | $50,000 | $64,500 | $19,665 |
| Electoral Area A | $1,222,064 | $292,680 | $163,375 | $1,351,369 |
| Electoral Area B | $713,053 | $162,510 | $101,745 | $773,818 |
| Electoral Area C | $546,429 | $125,390 | $303,000 | $368,819 |
| Electoral Area E | $680,109 | $236,150 | $130,000 | $786,259 |
| Electoral Area F | $1,411,582 | $298,185 | $754,860 | $954,907 |
| Electoral Area G | $1,011,105 | $287,580 | $100,000 | $1,198,685 |
| Electoral Area H | $500,033 | $144,230 | $15,000 | $629,263 |
| **Total** | **$6,118,540** | **$1,596,725** | **$1,632,480** | **$6,082,785** |

A list and description of the 2015 and future anticipated projects is attached to this report as Schedules A and B. Under this alternative an estimated $1,582,445 will be expended during 2015. Use of Community Works funds for these projects means that incremental work which would not otherwise be feasible without significant tax increases can be completed.

The use of Community Works funds can be authorized at any time. Should the Board identify further projects during 2015, they can be authorized to proceed at a later date.

**SUMMARY/CONCLUSIONS:**

The renewed Gas Tax Agreement (GTA) between Canada, British Columbia and UBCM, and the 2014-2024 Community Works Fund (CWF) agreement between the RDN and UBCM took effect April 1, 2014. Under these agreements, local governments receive annual transfers which may be used for local priorities which improve public infrastructure.

The renewed agreement includes a broad range of eligible categories, and there is an expectation under the new program that ultimate recipients (Local Governments and other eligible entities) will "work to strengthen" asset management during the term of the agreement.

Estimated balances available by Electoral Area using a per capita allocation formula as in the past are noted above and Schedules A and B attached provide information on current and anticipated projects. Schedule C identifies work carried out in 2014. Should the Board identify further projects during 2015, it can authorize those to proceed at a later date.

**RECOMMENDATIONS:**

1. That this report on the renewed Gas Tax Funding Program and on the use of Community Works Funds in 2014 be received for information.

2. That the 2015 and future Community Works Funds program attached as Schedules A and B be approved and that staff be authorized to continue work on the projects as needed.

Report Writer

CAO Concurrence

**SCHEDULE A**
**2015 COMMUNITY WORKS PROJECTS UNDERWAY**

| | | |
|---|---|---|
| Snuneymuxw First Nations Sport Court – EA A | $120,000 budget | Capital funding for sport court upgrades |
| Morden Colliery Bridge & Trail Design – EA A | $80,000 budget<br>$43,375 remaining | Community consultation & development of detailed design plan and costing |
| Gabriola Island Community Bus – EA B | $70,500 budget<br>$13,020 remaining | Additional capital funding to Island Futures Society for Community Bus upgrades |
| Gabriola Village Trail Design Phase – EA B | $65,000 budget<br>$18,700 remaining | Development of detailed design plan incorporating surveys, environmental studies, landowner, community and MoTI consultation |
| Gabriola Commons Solar Array – EA B | $20,000 budget | Installation of solar array for power generation |
| Extension School Capital Upgrade - EA C | $250,000 preliminary budget | Capital upgrade funding for historic school site |
| Extension Miners Bridge – EA C | $60,150 budget,<br>$5,000 remaining | Trail and bridge construction costs |
| South Forks hydrant water service – EA C | $8,000 budget | Contribution to City of Nanaimo for water main service to fire hydrants in area. Protection of water treatment plant in significant interface fire risk area |
| Meadow Drive Trail – EA C | $40,000 budget | Trail improvements |
| Community Signage Program – EA E | $30,000 budget | Integrated wayfinding and community signage program for Nanoose Bay |
| Claudet Community Park Trail – EA E | TBD | Trail design & construction |
| Nanoose Bay Water Quality/ Quantity Monitoring – EA E | $100,000 budget | Development & capital infrastructure for well monitoring program |
| Septic System for Arrowsmith Recreational Hall | $15,000 budget | Transfer from NCED application to investigate eligibility of use of CWF for this purpose based on NCED Committee recommendation and Board approval (April 2014) |
| Whiskey Creek Water System Upgrades – EA F | $450,000 budget<br>$428,850 remaining | Engineering and construction of treatment facility for Whiskey Creek Water System in response to order from Island Health |
| Meadowood Community Rec Centre – EA F | $300,000 budget | Moving, site prep and installation costs for 2 portables to be used as community rec centre |
| Arrowsmith Community Trails | $11,000 budget | Price Road trail development/upgrades |
| French Creek Community Path & Trail – EA G | $100,000 budget | Detailed design plans incorporating surveys, environmental studies, landowner, community and MoTI consultation |
| Speed reader Board – EA H | $15,000 budget | Traffic calming initiatives within community |

| | | |
|---|---|---|
| Green Building Best Practices Guidebook Series – continuation of annual series – all EAs | $30,000 budget completion of 2014 guidebook ($20,000) + 2015 ($10,000) | Continue to review and develop compendium of guidebooks. 2014 topic = Sustainable Site Design & Subdivision; 2015 topic = Onsite Grey Water Reuse |
| Staff/Building Inspector training related to Green Building Guidebooks – all EAs | $2,000 budget | Ongoing training |
| Community Outreach Speaker Series – all EAs | $20,000 budget | Continuation of Green Building speaker series and open houses - covers speakers, open house costs and hall rentals |
| Corporate Performance Monitoring – all EAs | $12,500 budget | In conjunction with RGS monitoring - development of reporting tool to assist reporting on progress toward Strategic Plan Goals (50% cost shared with General Admin) |
| **TOTAL All Projects** | **$1,582,445** | |

Note: Work related to community trails planning projects will be combined where possible to obtain efficiencies and may require phasing depending on MoTI staff availability. Survey costs may be significant in some areas depending on information available and obstacles encountered (such as driveways). Type of trail and level of accessibility would be decided through the design process.

**SCHEDULE B**
**FUTURE PLANNED COMMUNITY WORKS PROJECTS**

| | Budget | Purpose |
|---|---|---|
| Cedar Elementary School – EA A | TBD | Development of Baseball Diamond |
| Community Busing Review – EA A | RDN resources only at this time | Pending completion of SD 68 – Ladysmith – VIU – Cedar route options which are current priority. Review community busing options in conjunction with BC Transit and residents to provide alternatives and cost estimates for more detailed planning in 2015/16 |
| Gabriola Cycling Plan – EA B | $50,000 budget | Plan design |
| Gabriola Village Trail Phase 2 – EA B | TBD | Construction Phase |
| Huxley Community Park – EA B | TBD | Recreational infrastructure |
| Rollo McClay Community Park – EA B | TBD | Recreational infrastructure |
| Firefighting Water Storage Tanks – EA E | TBD | Installation of infrastructure for water storage in urban interface areas |
| Park & Rides/Rest Stops – EA H | TBD | Possible project in conjunction with MOTI |
| Spider Lake Broadband – EA H | TBD | Discussions with Telus to expand coverage |
| Deep Bay to Shaw Hill Roadside Trail – EA H | TBD | Project in conjunction with MOTI |

**SCHEDULE C**
**2014 COMMUNITY WORKS PROJECTS – WORK COMPLETED**

| | Budget | Purpose | Expended in 2014 |
|---|---|---|---|
| Morden Colliery Bridge & Trail Design – EA A | $80,000 | Development of detailed design plan | $36,625 |
| Gabriola Village Trail – EA B | $65,000 | Development of detailed design plan | $46,275 |
| Gabriola Island Community Bus – EA B | $70,500 | Capital funding for Community Bus purchase and related infrastructure | $11,660 |
| Extension Miners Bridge – EA C | $60,150 | Trail and bridge construction costs | $13,005 |
| Extension School Capital Upgrade - EA C | $250,000 preliminary | Capital upgrade funding for historic school site | $14,125 |
| Westurne Heights Water System - EA F | $10,200 | Completion of the engineering review for a renewed water system | $10,950 |
| Whiskey Creek Water System Upgrades – EA F | $450,000 budget | Treatment and water sourcing options analysis | $21,140 |
| Meadowood Community Rec Centre – EA F | $300,000 budget | Moving, site prep and installation costs for 2 portables to be used as community rec centre | $1,085 |
| San Pareil Water System Improvements – EA G | $315,750 | Improved pump station and reservoir enhancing capacity for future water treatment | $315,775 |
| Electoral Area G Community Park service | $6,000 | Monitoring of the bioengineered bank at Miller Road Community Park along approximately 140 meters of eroded river. Project to build bank was largely completed in 2012 | $1,475 |
| Lighthouse Community Centre – EA H | $20,000 | Capital upgrades to community hall, roof/structural repairs | $20,000 |
| Community Parks Greenways Strategy – Electoral Areas E, F, G and H | $50,000 | A strategy to identify specific strategic actions within Electoral Areas E, F, G & H regarding the acquisition/protection, development and management of community parks and trails | $1,930 |
| Green Building Best Practices Guidebook Series – continuation of annual series – all EAs | $20,000 | Continue review and development of compendium of alternative solutions to BC Building Code – 2014 topic = Sustainable Site Design & Subdivision | Staff resources only in 2014 |
| Community Outreach and Speaker Series – all EAs | $20,000 | Green Building information sessions in each Electoral Area. Budget covers speakers, open house costs and hall rentals | $15,835 |
| **TOTAL all projects** | **$1,717,600** | | **$509,880** |

REGIONAL DISTRICT OF NANAIMO

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# MEMORANDUM

**TO:** Sean De Pol
Manager, Wastewater Services

**DATE:** March 29, 2015

**FROM:** Maurice Mauch
Project Engineer, Wastewater Services

**FILE:** 5330-20-FCPCC-TF-Roof

**SUBJECT:** FCPCC Trickling Filter Roof Replacement Project Award

## PURPOSE

To consider awarding a construction contract and project management services for the FCPCC Trickling Filter Roof Replacement Project.

## BACKGROUND

The Regional District of Nanaimo (RDN) owns and operates the French Creek Pollution Control Center (FCPCC), a secondary wastewater treatment facility at 957 Lee Road, Parksville, BC. The facility makes use of trickling filters in the secondary treatment process.

Constructed in 1997, the roof structure enclosing the trickling filter equipment contains odors and protects the equipment from the environment. Due to the high humidity and corrosive gas present the roof structure is badly corroded and requires replacement. An inspection of the roof was completed in 2012 and included 3 options for roof replacement.

A detailed design for the roof replacement was completed in 2015 by AECOM, and has been reviewed by RDN Staff. The design includes a new self-supporting roof constructed of fiberglass reinforced plastic and modifications to the concrete support structure. The expected life of the roof and supporting structure is 30 years.

FCPCC Trickling Filter Roof Replacement Project was issued for tender on March 3, 2015. Tender documents were made available on the RDN website and BC Bid. The tender closed March 24, 2015. A total of four (4) bids were received and opened in public. The bids were reviewed by AECOM and the results are as follows:

- Island West Coast Developments Ltd. $574,302
- Copcan Civil Ltd. $587,115
- Knappett Projects $694,950
- Giffels Westpro Constructors Inc. $704,720

It is recommended that the construction contract be awarded to Island West Coast Developments. Island West Coast Developments provided the lowest compliant bid, and their tender price is within the pre-tender estimate and project budget.

Contract administration, inspection and field engineering services will be required to provide quality assurance and administrative oversight through to the completion of the project. AECOM have been involved in this project from the beginning, it is recommended that they be retained for the completion of the project. The following is a summary of the most recent costing for the completion of the project:

| | |
|---|---|
| Detailed Design (completed) | $44,225 |
| Engineering, Permitting and Construction Services (AECOM) | $25,000 |
| Building permit | $5,000 |
| Construction Contract (Island West Coast Developments Ltd.) | $574,302 |
| Contingency | $20,000 |
| **Total Project Cost** | **$668,527** |

**ALTERNATIVES**

1. Award the contract for FCPCC Trickling Filter Roof Replacement Project to Island West Coast Developments for the tendered price of $574,302 and a contract for construction and Permitting services to AECOM for $25,000.
2. Do not award the proposal and re-assess the project requirements and re-tender.

**FINANCIAL IMPLICATIONS**

*Alternative 1*

The Regionally Significant Projects Fund under the Gas Tax Transfer Agreement will provide $200,000 towards the Roof Replacement project. The remaining balance will be funded by a transfer from reserves. There are sufficient funds in the 2015 budget to complete the project.

*Alternative 2*

If the contract is not awarded, the roof replacement will be delayed. Delaying this work may lead to a significant structural failure or a roof collapse in a heavy snowfall, in addition the $200,000 of funding from the Regionally Significant Projects Fund under the Gas Tax Transfer would be lost if the project is substantially delayed.

**STRATEGIC PLAN IMPLICATIONS**

Award of the FCPCC Trickling Filter Roof Replacement project directly supports strategic priorities related to: building and maintaining efficient infrastructure; protecting and enhancing ecosystems; and providing services in a cost effective manner. This project also supports economic development in the region by providing construction opportunities to local contractors.

**SUMMARY/CONCLUSIONS**

Trickling filter building roof replacement is required. A detailed design of the roof replacement was completed by AECOM. The new roof is will cover the trickling filters, contain odors and protect equipment for the next thirty (30) years.

A competitive tender process was completed on March 24 2015, four (4) tenders received, the low tender was provided by Island West Coast Developments.

The engineering construction services estimate of $25,000 aligns with industry standards for projects of this nature.

**RECOMMENDATIONS**

1. Award the French Creek Pollution Control Center Trickling Filter Roof Replacement Project to Island West Coast Developments for $574,302.00.
2. That the Board award the engineering services for the French Creek Pollution Control Center Trickling Filter Roof Replacement Project to AECOM for $25,000.

Report Writer

Manager Concurrence

General Manager Concurrence

CAO Concurrence

REGIONAL DISTRICT OF NANAIMO

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# MEMORANDUM

**TO:** Sean De Pol
Manager, Wastewater Services

**DATE:** April 7, 2015

**FROM:** Shelley Norum
Wastewater Program Coordinator

**FILE:** 5345-40

**SUBJECT:** **SepticSmart Education Program Progress Report**

## PURPOSE

To update the Board on the Wastewater Services' SepticSmart achievements.

## BACKGROUND

It is estimated that there are more than 12,000 individual private onsite (e.g. septic) systems in the RDN that provide wastewater treatment to properties not connected to community sewer. Under the provincial Sewerage System Regulation, homeowners are responsible for ensuring their onsite systems are properly maintained. Proper onsite system maintenance protects property value, human health, and the health of the environment.

Wastewater Services' SepticSmart program empowers residents to proactively care for and maintain their onsite systems. Since 2008, SepticSmart has provided free public workshops, a household information kit, and website information at www.SepticSmart.ca.

SepticSmart workshops discuss how onsite systems work and offer care and maintenance tips. They also include an interactive session where the public can have their questions answered by industry experts. To date, over 1,100 RDN residents have participated in a SepticSmart workshop. Feedback on the program is positive, from both residents who are new to the region as well as long-time residents with limited knowledge of onsite systems.

### 2014 Septic Maintenance Rebate

Workshop participants often mention that with financial assistance they would be more able to manage onsite system maintenance. In response to this feedback, Wastewater Services incorporated Septic Maintenance Rebates into the 2014 SepticSmart program. Rebate goals included: making it easier for residents to take care of septic maintenance, promoting long-term maintenance habits, and maximizing the longevity of existing onsite systems. Wastewater Services launched the rebate program in September 2014, to align with the fall SepticSmart workshops series. Rebates were funded through a combination of septage receiving fees and a grant from the WCOWMA Onsite Wastewater Management of BC (WCOWMA-BC).

The RDN offered up to $600 per household to help residents maintain their septic systems. The RDN covered 75% of eligible maintenance costs, to a maximum of $200 per category:

- Category 1: Custom Maintenance Plan
- Category 2: Effluent Filter Installation
- Category 3: Riser Installation.

Applications to the Septic Maintenance Rebate program came from every electoral area plus the City of Parksville and District of Lantzville. During the four months of the program, the RDN provided 98 households with $25,815 in rebates. This resulted in $87,220 in onsite system maintenance and repairs in the region which may not have otherwise been completed ($25,815 in RDN rebates plus $61,405 in residents' contributions).

**2015 Septic Maintenance Rebate and SepticSmart Workshop Schedule**

With the success of the 2014 Septic Maintenance Rebate program, the RDN proposes to continue the rebate program in 2015, starting in June, following a series of SepticSmart workshops. The schedule for 2015 workshops is as follows:

| | | | |
|---|---|---|---|
| St. Columba Church Hall | Jonanco Hobby Shop | Bradley Centre | Lighthouse Community Centre |
| 921 Wembley Road | 2745 White Rapids Road | 975 Shearme Road | 240 Lion's Way |
| Electoral Area G | Electoral Area C | Electoral Area F | Electoral Area H |
| Wednesday, May 20th | Monday, May 25th | Thursday, May 28th | Tuesday, June 2nd |
| 6:00-8:00 | 6:00-8:00 | 6:00-8:00 | 6:00-8:00 |

SepticSmart workshops were held in Electoral Areas A, B and E and the City of Parksville in 2014.

## ALTERNATIVES

1. Receive this report for information.
2. Do not approve receiving the report for information.

## FINANCIAL IMPLICATIONS

There is no charge for residents to attend a SepticSmart workshop. The SepticSmart program is a user-pay service, paid for through septage receiving fees. Of the $0.18 per gallon currently charged to process septage at RDN facilities, $0.02 per gallon supports the program. Wastewater Services also received an $8,500 grant from WCOWMA-BC in 2014 to support SepticSmart and the rebate program.

The 2015 Liquid Waste Management Planning budget includes $25,000 for Septic Maintenance Rebates funded from septage receiving fees. WCOWMA-BC has also agreed to contribute $8,500 to the 2015 SepticSmart budget to support the rebate and educational program for another year. There will be a total of $33,500 in Septic Maintenance Rebates available in 2015.

## STRATEGIC PLAN IMPLICATIONS

The Board Strategic Plan identifies the improvement of septic systems through monitoring and education, provision septic system information, and continuation of the SepticSmart program as actions for Regional and Community Utilities.

## SUMMARY/CONCLUSIONS

Wastewater Services' SepticSmart program empowers residents to be proactive in the care and maintenance of their private onsite (e.g. septic) systems. Onsite systems provide wastewater treatment to properties not connected to community sewer.

Since 2008, SepticSmart has provided free public workshops, a household information kit, and website information at www.SepticSmart.ca. To date, over 1,100 RDN residents have participated in a SepticSmart workshop. Feedback on the program is positive, from both residents who are new to the region as well as long-time residents with limited knowledge of onsite systems. Workshop participants often mention that with financial assistance they would be more able to manage onsite system maintenance.

In September 2014, Wastewater Services, in partnership with WCOWMA Onsite Wastewater Management of BC (WCOWMA-BC), offered a Septic Maintenance Rebate through the SepticSmart program to make it easier for residents to take care of septic maintenance, promote long-term maintenance habits, and maximize the longevity of existing onsite systems. During the four months of the 2014 program, Wastewater Services provided 98 households with a total of $25,815 in rebates. This resulted in $87,220 in onsite system maintenance and repairs in the region which may not have otherwise been completed ($25,815 in RDN rebates plus $61,405 in residents' contributions).

The 2015 Liquid Waste Management Planning budget includes $25,000 in Septic Maintenance Rebates funded from septage receiving fees. As well, WCOWMA-BC has also agreed to contribute $8,500 to the 2015 SepticSmart program to support the rebate program. Altogether, there will be a total of $33,500 in Septic Maintenance Rebates offered in 2015. Rebates are available in June, following a series of SepticSmart workshops.

## RECOMMENDATIONS

1. That the Board receives the report for information.

Report Writer

Manager Concurrence

General Manager Concurrence

CAO Concurrence

REGIONAL DISTRICT OF NANAIMO

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# MEMORANDUM

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| **TO:** | Geoff Garbutt, General Manager<br>Strategic and Community Development | **DATE:** | March 31, 2015 |
| **FROM:** | Chris Midgley<br>Manager, Energy and Sustainability | **FILE:** | 2240 20 AAA |

**SUBJECT:** **Community Works Fund Contribution - Arrowsmith Agricultural Association**

## PURPOSE

To seek Board approval to draft and execute a Contribution Agreement with the Arrowsmith Agricultural Association for the use of up to $15,000 in Community Works Funds for an on-site wastewater system.

## BACKGROUND

In the spring of 2014, Arrowsmith Agricultural Association (AAA) submitted an application to the Northern Community Economic Development (NCED) program requesting $7,000 to support the upgrade and expansion to the on-site, in-ground septic system servicing the Arrowsmith Hall, located at 1014 Ford Road, in Coombs BC (Electoral Area 'F').

According to AAA, increasing the capacity of the existing system would allow the facility to host more frequent community and cultural events with a larger number of attendees thereby increasing tourist opportunities in the RDN's rural areas and contributing to local economic growth and employment.

At the NCED Select Committee meeting held April 9, 2014, the motion below was carried and subsequently endorsed by the Board of Directors at the Regular Board Meeting held April 22, 2014:

> *That the proposal be pulled, and staff investigate the use of Community Works Funds to contribute to the construction of an in-ground septic system for the Arrowsmith Recreational Hall.*

Given the limited funds available through the NCED program ($50,000 annually) the Committee recognized that a more impactful contribution could be made using Community Works Funds, provided:

- The AAA could be verified as an eligible third party recipient of Community Works Funds;
- The project fits within an eligible Community Works Funds project category; and
- The project is consistent with the intended use of funds raised through federal gas taxes.

Based on staff's investigation, the project passes each of these tests.

As an organization providing infrastructure primarily for public benefit, AAA is an eligible third party recipient of Community Works Funds as long as the project is formally supported by the RDN Board of Directors, the RDN retains responsibility for project reporting requirements, and an executed agreement between the RDN and the AAA establishes a contractual framework for both parties.

The project itself, as an enhanced on-site system for wastewater treatment, fits within the Wastewater project category for Community Works Funds. Finally, building infrastructure to increase the capacity of the facility to host more frequent cultural events with more attendees is consistent with the intended use of federal gas tax revenues to build and revitalize public infrastructure that supports productivity, economic growth and a clean environment.

**ALTERNATIVES**

1. Direct staff to enter into a Contribution Agreement with the Arrowsmith Agricultural Association for the use of up to $15,000 in Community Works Funds to assist with eligible costs for a proposed new on-site wastewater treatment system for Arrowsmith Hall.

2. Direct staff to not enter into a Contribution Agreement with the Arrowsmith Agricultural Association, or provide alternate direction.

**FINANCIAL IMPLICATIONS**

At present, over one million dollars are available for eligible Community Works Funds projects in Electoral Area 'F'. Based on specifications and drawings for the proposed wastewater system, the AAA has requested a $12,000 contribution from the RDN. This amount has been revised to 'up to $15,000' to provide a contingency for unanticipated additional eligible costs, and to cover costs relating to communications and signage, as required by the Government of Canada. This establishes a maximum that the RDN would contribute. If less than $15,000 is required for the project, the lesser amount will be provided. All payments from the RDN will be made after receiving an invoice from AAA, and only eligible costs, as defined in the *Administrative Agreement on the Federal Gas Tax Fund in British Columbia*, will be covered.

**STRATEGIC PLAN IMPLICATIONS**

Through the Board Vision, Values and Strategic Priorities, the Board Strategic Plan ties together the overarching desire to strengthen and grow the regional economy while respecting the environment and protecting water resources. Within the strategic priorities of *Self-sufficiency* and *Economic Viability* the Strategic Plan specifically describes the objectives to protect the quality of drinking water, to manage waste responsibly; and to strengthen the local agricultural economy so that it contributes to the cultural identity of the region.

Contributing toward improved on-site wastewater treatment infrastructure at the Arrowsmith Hall will produce positive economic and environmental benefits that advances each of these objectives. A greater volume of wastewater will be managed more effectively than at present, protecting the region's drinking water and watersheds, and the additional capacity for community and cultural events at the Arrowsmith Hall will give the Arrowsmith Agricultural Association a stronger presence in the community.

## SUMMARY

At the Regular Board Meeting held April 22nd, 2014, the Board directed staff to investigate the use of Community Works Funds to contribute to the construction of an in-ground septic system for Arrowsmith Hall. The results of that investigation confirm that the Arrowsmith Agricultural Association is an eligible third party recipient of Community Works Funds, the project fits within an eligible project category (Wastewater), and the project as a whole is consistent with the intended use of federal gas tax revenues.

In addition, there are sufficient resources available to contribute up to $15,000 in Community Works Funds allocated to Electoral Area 'F' toward the project, and doing so supports the Board Vision, Values and Strategic Priorities as outlined in the Board Strategic Plan.

To proceed, it is necessary for the Board of Directors to convey formal support for the project in the form of a Board resolution, and for staff to draft and execute a Contribution Agreement between the RDN and the AAA to establish a contractual framework for both parties with respect to the project. This is captured in the recommendations that follow.

## RECOMMENDATIONS

1. That the Board supports the use of Community Works Funds allocated to Regional District of Nanaimo Electoral Area 'F' to contribute to a proposed new on-site wastewater treatment system for Arrowsmith Hall.

2. That the Board direct staff to draft and execute a Contribution Agreement between the Arrowsmith Agricultural Association and the Regional District of Nanaimo to provide up to $15,000 in Community Works Funds toward eligible costs for a proposed new on-site wastewater treatment system for Arrowsmith Hall.

Report Writer

A/General Manager Concurrence

CAO Concurrence

REGIONAL DISTRICT OF NANAIMO

MINUTES OF THE AGRICULTURAL ADVISORY COMMITTEE
MEETING HELD ON FRIDAY, MARCH 27, 2015 AT 1:00 PM
IN THE RDN COMMITTEE ROOM

**Present:**

| | |
|---|---|
| Director H. Houle | Chairperson |
| Director C. Haime | District of Lantzville |
| K. Wilson | Representative (South) |
| M. Ryn | Representative (South) |
| C. Watson | Representative (North) |
| R. Thompson | Representative (North) |
| J. Thony | Regional Agricultural Organization |
| K. Reid | Regional Aquaculture Organization |
| W. Haddow | Regional Agrologist, Ministry of Agriculture |

**Also in Attendance:**

| | |
|---|---|
| W. Haddow | Regional Agrologist, Ministry of Agriculture |
| G. Garbutt | General Manager of Strategic and Community Development |
| P. Thompson | Manager of Long Range Planning |
| J. Holm | Manager of Current Planning |
| G. Keller | Senior Planner |
| N. Hewitt | Recording Secretary |

**Regrets:**

| | |
|---|---|
| Director J. Fell | Electoral Area F |
| J. McLeod | Regional Agricultural Organization |

**CALL TO ORDER**

Chairperson Houle called the meeting to order at 1:03 p.m.

**MINUTES**

**Minutes of the Agricultural Advisory Committee meeting held Friday January 23, 2015.**

MOVED M. Ryn, SECONDED K. Reid, that the minutes of the Agricultural Advisory Committee meeting held Friday January 23, 2015 be adopted.

CARRIED

**COMMUNICATIONS/CORRESPONDENCE**

**Ministry of Agriculture, Minister Norm Letnick, re, Review of Section 11.1 of the Livestock Act.**

J. Holm provided a verbal update on the correspondence sent from the Regional District of Nanaimo to the Ministry of Agriculture.

MOVED M. Ryn, SECONDED K. Reid, that the correspondence from the Ministry of Agriculture regarding the review of Section 11.1 of the *Livestock Act* be received.

CARRIED

**REPORTS**

**ALR Application No. PL2014-013 – Paravicini – 531, 533, and 539 Parker Road West, Electoral Area 'G'.**

MOVED M. Ryn, SECONDED K. Wilson, that Application No. PL2014-013 for subdivision in the ALR be forwarded to the Agricultural Land Commission with no recommendation from the Agricultural Advisory Committee.

CARRIED

**Bylaw and Policy Update Project – Current Status.**

There was no motion.

**Agriculture Advisory Committee Workshop.**

M. Ryn provided a verbal overview of the Agriculture Advisory Committee Workshop.

**Upcoming meeting with Agricultural Land Commission – Wednesday April 22, 2015 from 1-4pm.**

G. Keller provided a verbal overview of the meeting scheduled with the Agricultural Land Commission on April 22, 2015.

**Dogs at Large.**

G. Garbutt provided a Board direction from February 24, 2015, to prepare bylaw amendments with regards to Dogs at Large in Electoral Area 'F'.

**ADJOURNMENT**

MOVED M. Ryn, SECONDED K. Reid, that this meeting be adjourned.

CARRIED

Time 2:08 pm

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CHAIRPERSON

REGIONAL DISTRICT OF NANAIMO

MINUTES OF THE DISTRICT 69 RECREATION COMMISSION
REGULAR MEETING
HELD THURSDAY MARCH 19, 2015
2:00PM
*(OCEANSIDE PLACE)*

**Attendance:** Reg Nosworthy, Electoral Area 'F'
Julie Austin, School District 69 Trustee
Neil Horner, Councillor, Town of Qualicum Beach
Gordon Wiebe, Electoral Area 'E'
Bill Veenhof, Director, RDN Board Deputy Chairperson

**Staff:** Tom Osborne, General Manager of Recreation and Parks
Dean Banman, Manager of Recreation Services
Ann-Marie Harvey, Recording Secretary

**Regrets**: Joe Stanhope, Director, RDN Board, Electoral Area 'G'
Al Grier, Councillor, City of Parksville

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**CALL TO ORDER**

Mr. Veenhof, Director, RDN Board Deputy Chair called the meeting to order at 2:00pm

**WELCOME NEW MEMBERS/INTRODUCTION**

The Commissioner members and staff introduced themselves and their roles to who they represent.

**DELEGATIONS**

No new delegations, Jerry Michael was going to attend but had to lifeguard at Ravensong.

**MINUTES**

MOVED Commissioner Nosworthy SECONDED Commissioner Horner that the Minutes of the Regular District 69 Recreation Commission meeting held February 19, 2015 be approved.

CARRIED

MOVED Commissioner Horner SECONDED Commissioner Nosworthy that the Minutes of the District 69 Recreation Grants Sub-Committee Minutes held February 25, 2015 be approved.

CARRIED

**BUISNESS ARISING FROM THE MINUTES**

Grant Approvals

1. That the following District 69 Youth Recreation Grant application be approved:

| Youth Organization | 2015 Recommended |
|---|---|
| 893 Beaufort Squadron- training activities | $2,500 |
| Ballenas Secondary School - Dry Grad | $1,200 |
| Errington War Memorial Hall Association- Intercultural Music Project | $1,100 |
| The Nature Trust of BC- Brant Wildlife Festival/Youth Photo Exhibit | $700 |
| Oceanside Minor Lacrosse Association- Shark Attack Tournament | $2,500 |
| **Total** | **$8,000** |

2. That the following District 69 Community Recreation Grant applications be approved:

| Community Organization | 2015 Recommended |
|---|---|
| Arrowsmith Community Recreation Association- Coombs Community Picnic | $529 |
| Corcan Meadowood Residents Association- Canada Day event | $2,350 |
| Errington Elementary School PAC- grade 3 swim program | $2,500 |
| Errington Elementary School- Tribune Bay subsidies for low-income families | $2,500 |
| Errington Therapeutic Riding Association - program expenses horses and arena & insurance | $1,000 |
| Oceanside Elementary School PAC- new playground construction | $2,500 |
| Town of Qualicum Beach- Select Committee on Beach Day Celebrations | $1,500 |

| | |
|---|---|
| **Total** | **$12,879** |

MOVED Commissioner Wiebe, SECONDED Commissioner Horner that the Grant applications be approved.

CARRIED

**COMMUNICATIONS/CORRESPONDENCE**

A. Protasiewich, Ravensong Patron to RDN – Ravensong Pool, **RE: Handicap Parking at Ravensong**

M. Chestnut, Superintendent of Aquatic Services to A. Protasiewich, Ravensong Patron, **RE: Correspondence Received March 4, 2015.**

G. Filipski & J. Whinn, Ravensong Patrons to RDN Recreation & Parks Department, **RE: Aquafit at Ravensong**

M. Chestnut, Superintendent of Aquatic Services to G. Filipski & J. Whinn, Ravensong Patrons, **RE: Aquafit at Ravensong Response**

MOVED Commissioner Horner SECONDED Commissioner Wiebe motion to receive Communications/ Correspondence.

CARRIED

**UNFINISHED BUSINESS**

**REPORTS**

**Monthly Update – Oceanside Place – February 2015**

Dean updated on Spring Break Hockey tournaments, they are under way with a couple more coming up i.e.: Grumpy Old Men Tournament and the Premiere League. Ice will be coming out of the pond at the end of March and Meeker Ice will be coming out in April. Pickle ball will be starting up here once ice is out. Tom mentioned that the Bid for U-18 is in.

**Monthly Update – Ravensong Aquatic Centre –February 2015**

Dean talked about the BC Family Day Free Swim, it was very well attended. The Lifesaving Society was in to the pool to critique us on safety measures, they compile a report at the end of the visit with their recommendations. Tom mentioned we also have Municipal Insurance Agency which is on a different level than Lifesaving Society, MIA makes sure certain things are in place such as signage etc.... for insurance purposes.

**Monthly Update – Northern Recreation Program Services – February 2015**

Dean shared copies of the Spring and Summer guide. Our Spring Break camps have been very successful with a few left on waitlists. Unfortunately we weren't able to retain more staff to open up those spots. Extreme Week has proven beneficial with students learning, WHIMIS, First Aid,

Toastmaster and Super Host training to help provide them with future opportunities. Spring Break revenue is up 38% this year, up from last year. And the Summer programs are up in Revenue from this time last year at 100%.

**Monthly Update of Community and Regional Parks and Trails Projects – Jan-Feb 2015 (verbal)**
Tom mentioned the Opps and Planning Parks staff have now moved into their new building on March 16, 2015. Electoral Area E Fairwinds Management Plan Open House may be postponed until May instead of April. Blueback Park will be underway. Wembley road update, letter was written to the ministry re: road expansion. Ministry will $250.000 towards the expansion. Commissioner Veenhof of Area H talked about the volunteers called the Bowser Trail Bashers that build trails. The RDN bought GPS and trained the volunteers on how to use them.

MOVED Commissioner Horner SECONDED Commissioner Wiebe motion to accept REPORTS

CARRIED

**BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS**

None

**NEW BUSINESS**

Ravensong Aquatic Centre – Lifeguard/Instructor Recruitment Plan (handout)

MOVED Commissioner Nosworthy SECONDED Commissioner Horner motion to accept New Business

**CARRIED**

**2015 BUDGET UPDATE**
Dean updated on the Budget for Oceanside Place, Ravensong Aquatic Centre and Northern Community Recreation. Tom talked about what needs to happen in regards to the upgrade/expansion process for Ravensong Aquatic Centre.

MOVED Commissioner Horner SECONDED Commissioner Nosworthy motion to accept Budget Update

**CARRIED**

**COMMISSIONER ROUNDTABLE**

Commissioner Nosworthy updated on the Arrowsmith Recreation Team. It has been a rough start with illness and not much offered over Spring Break due to the illnesses. Great insert in the PQB News overview on what is going on in the Arrowsmith community. Thank you to Julie for the article.

Commissioner Wiebe is glad to be back, mentioning that Area E has a very good committee this year, everyone is very enthusiastic.

Director Veenhof mentioned that Area H will be having meetings on their own without the RDN being there, and will report back on how that goes.

**ADJOURNMENT**

MOVED Commissioner Nosworthy, SECONDED Commissioner Horner that the meeting be adjourned at 3:45 pm.

CARRIED

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Chair

REGIONAL DISTRICT OF NANAIMO
RECREATION AND PARKS

**REGIONAL DISTRICT OF NANAIMO**

**DISTRICT 69 RECREATION COMMISSION**
**GRANTS COMMITTEE MEETING MINUTES**

**HELD AT 2:00 P.M. ON WEDNESDAY, FEBRUARY 25, 2015**
**OCEANSIDE PLACE, PARKSVILLE**

Present:

| | | |
|---|---|---|
| | G. Wiebe | District 69 Recreation Commission |
| | N. Horner | District 69 Recreation Commission |
| | R. Nosworthy | District 69 Recreation Commission |
| Minutes: | C. MacKenzie | Recreation Programmer |

**BUDGET**

| | |
|---|---|
| Annual Budget 2015 | $62,500 |
| Surplus from 2014 | $16,593 |
| Total Grants available for 2015 | $79,093 |

**REVIEW OF THE DISTRICT 69 RECREATION GRANT PROGRAM**

The District 69 Recreation Grant Committee reviewed the process, criteria and budget for the District 69 Recreation Grant Program.

**REVIEW OF WINTER 2015 APPLICATIONS**

The Grants Committee reviewed applications for Youth and Community Grants. Priority was given to new applicants and/or projects that benefited people in all areas of the Regional District.

Five applications were received for Youth Grants, requesting $10,995. All five Youth Grant applications met grant criteria and are recommended for funding for a total of $8,000.

Ten applications were received for Community Grants, requesting $27,703. Seven Community Grant applications met the grant criteria and are recommended for funding for a total of $12,879. One application from Communities to Protect Our Coasts was not recommended for funding and is referred to RDN Grants-in-Aid. One application from Lighthouse Community Centre Society for a highway sign was not recommended for funding as the complete cost of the project was unclear. One application from Oceanside Minor Baseball for a lawn tractor was not recommended for funding as the request was high and similar equipment is already on-site.

**RECOMMENDATIONS**

1. That the following District 69 Youth Recreation Grant applications be approved:

| Youth Organization | Approved in 2014 | Current Request 2015 | 2015 Recommended |
|---|---|---|---|
| 893 Beaufort Squadron- training activities | 0 | 3,195 | 2,500 |
| Ballenas Secondary School - Dry Grad | 1,200 | 2,500 | 1,200 |
| Errington War Memorial Hall Association- Intercultural Music Project | 1,000 | 1,100 | 1,100 |
| The Nature Trust of BC- Brant Wildlife Festival/Youth Photo Exhibit | 0 | 700 | 700 |
| Oceanside Minor Lacrosse Association- Shark Attack Tournament | 0 | 3,500 | 2,500 |
| **Total** | | | **8,000** |

2. That the following District 69 Community Recreation Grant applications be approved:

| Community Organization | Approved in 2014 | Current Request 2015 | 2015 Recommended |
|---|---|---|---|
| Arrowsmith Community Recreation Association- Coombs Community Picnic | 0 | 529 | 529 |
| Corcan Meadowood Residents Association- Canada Day event | 1,500 | 2,350 | 2,350 |
| Errington Elementary School PAC- grade 3 swim program | 0 | 2,500 | 2,500 |
| Errington Elementary School- Tribune Bay subsidies for low-income families | 0 | 2,500 | 2,500 |
| Errington Therapeutic Riding Association - program expenses horses and arena & insurance | 1,500 | 2,500 | 1,000 |
| Oceanside Elementary School PAC- new playground construction | 0 | 10,000 | 2,500 |
| Town of Qualicum Beach- Select Committee on Beach Day Celebrations | 1,500 | 1,500 | 1,500 |
| **Total** | | | **12,879** |

3. That the following District 69 Recreation Grant applications not be approved:

| Community Organization | Approved in 2014 | Current Request 2015 |
|---|---|---|
| Communities to Protect Our Coast- Flourishing in a Green Economy exhibit | 0 | 924 |
| Lighthouse Community Centre Society- Hall signage for Highway 19A | 0 | 2,500 |
| Oceanside Minor Baseball Association- lawn tractor | 0 | 2,400 |

**ADJOURNMENT**

The meeting adjourned at 3:20pm.