Thompson-Nicola Regional District

Regional Growth Strategy 2022 Monitoring Report

The Region of BC's Best

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List of 10 Indicators

1. Population
2. Housing
3. Transportation
4. Economy
5. Employment
6. Environment
7. Health
8. Agriculture
9. Agricultural Protection
10. Solid Waste

Monitoring gives us a feedback loop to tell us about the outcome of our decisions, those of higher governments, and the events and trends - sometimes global - that impact our lives in the TNRD.

2022 RGS Monitoring Report

What is an RGS? A Regional Growth Strategy is our highest level plan. It forms an agreement between incorporated municipalities and rural areas on how we deliberate planning matters and human settlement that is socially, economically and environmentally responsible and makes efficient use of public facilities, services, land, and other critical resources.

Background The Board of Directors adopted RGS Bylaw 2409 in May of 2013, updating the original Strategy of 2000. Since then, given elected official and staff changes and time, it can be 'left on the shelf.' Monitoring reports help remind us of RGS policy and principles by tracking where we are going in respect to the indicators.

Why this indicator report? The *Local Government Act* requires Regional Districts that have adopted an RGS to establish a program to monitor the implementation and progress towards the objectives and actions of that Strategy, *and then to report on that progress*. The hope is that over time, this data reveals trends that give us an accurate indication of where we are in respect to achieving our RGS goals. These trends can determine the effectiveness of actions already implemented and the need for additional actions to protect current and future sustainability of our region.


Thompson River – Credit: Candice Kawaguchi

Acronym Reference

ALC	Agricultural Land Commission
ALR	Agricultural Land Reserve
BC	British Columbia
CRD	Cariboo Regional District
EA	Electoral Area
EC	Established community
FVRD	Fraser Valley Regional District
GHG	Greenhouse Gas
GIS	Geographic Information Systems
ha	Hectare
HSDA	Health Service Delivery Area
LHA	Local Health Area
MF	Multi-Family
MH	Manufactured home
MoE	Ministry of Environment
MSW	Municipal Solid Waste
MV	Motor vehicle
NAICS	North American Industry Classification System
NHS	National Household Survey
NO_2	Nitrogen Dioxide
PM10	Particulate matter 10 µm or less in diameter
PM2.5	Particulate matter 2.5 µm or less in diameter
RGS	Regional Growth Strategy
RSWMP	Regional Solid Waste Management Plan
SFD	Single family dwelling
SOV	Single occupancy vehicle
TNRD	Thompson-Nicola Regional District

1 Population

Growth Rate

RGS Goals: Recognize the importance of domestic and international immigration and attracting young families in developing our labour force

Population is selected as an indicator in all Regional Growth Strategy monitoring reports across BC. Population trends are the first and most critical indicators of regional change: where is growth occurring, where is population declining, who is moving where, and how does this impact our community? Population and demographics have a major impact on our overall region.

Population Growth and Decline

Figures 1.1 and 1.2 are sourced from BC statistics. The Census has historically under-reported the total population while those of BC Stats (called 'estimates') can be more accurate.

The majority of the TNRD increase was concentrated in the City of Kamloops which increased by 1,599 residents between 2019 and 2021 (+1.6%). Changes in some smaller municipalities were subtle but with notable population increases in Logan Lake (5.8%), Sun Peaks (4.3%), and Clearwater (2.5%). It is important to remember that communities with a smaller population will be impacted and *feel* effects of population increase/decrease more than those with 10,000 plus residents.

Figure 1.1: Municipal Population Trends[1]

**BC Stats population data for Sun Peaks remained unchanged from 2020 to 2021 projections at 964, while the 2021 Census reports an increase in population to 1404 – see end notes*

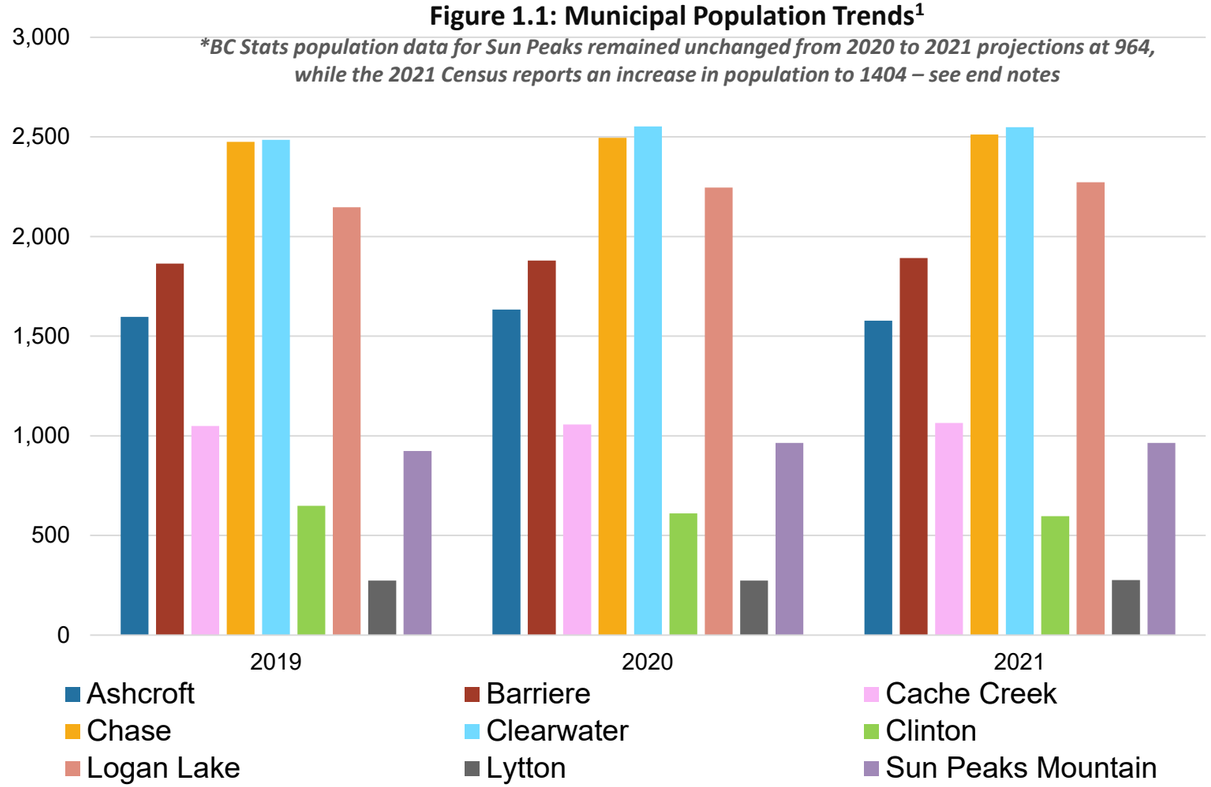
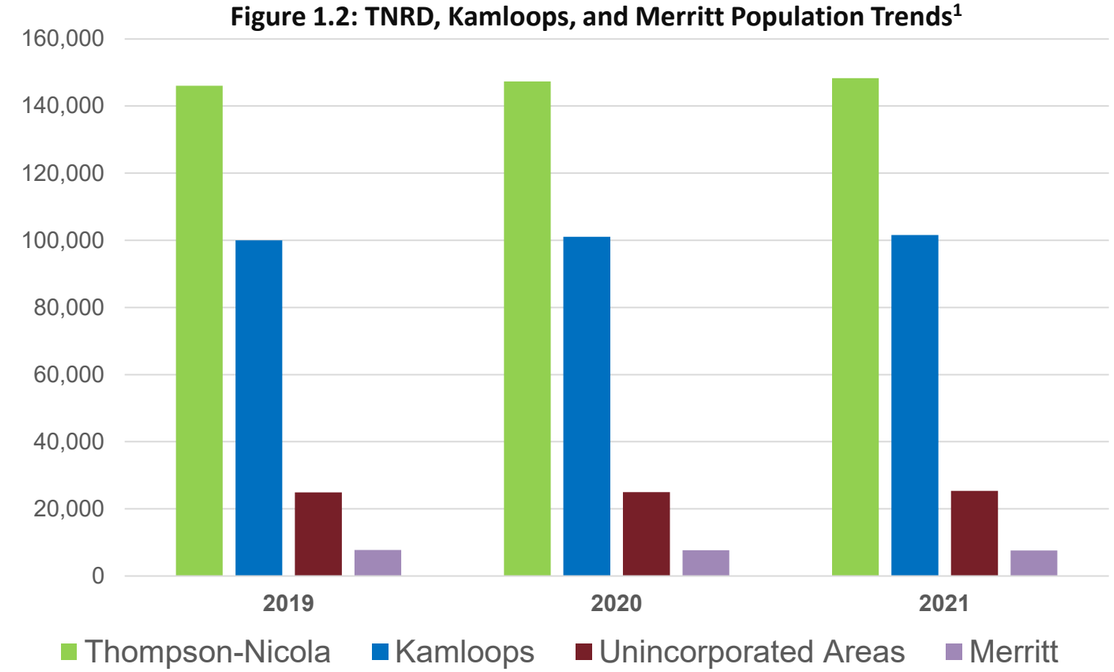


Figure 1.2: TNRD, Kamloops, and Merritt Population Trends[1]



Between 2019 and 2021, overall TNRD population (including all electoral areas and municipalities) grew by 1.5%, or 2,212 residents. According to Stats Canada, the enumerated population of the TNRD in 2021 was 143,680, an increase of 8.3% from the 2016 Census. This is both higher than the provincial rate of change of 7.6% and the national rate of 5.2% over this same period.[2]

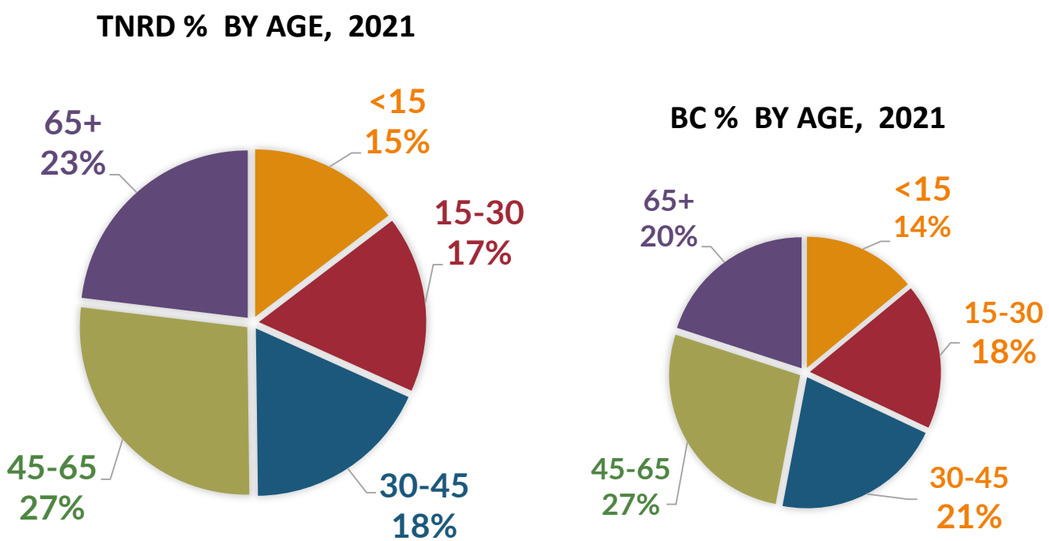
To accommodate this growth, thoughtful consideration will need to be given to achieving other key RGS goals, such as limiting rural sprawl, reducing greenhouse gas emissions (i.e. commuting), improving air quality, and protecting viable agricultural land.

1 Population
Age Distribution

Age Distribution

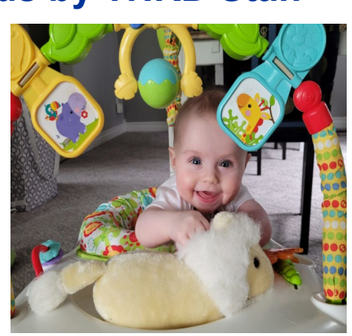
TNRD age distribution for younger age cohorts (ages under 15, 15-30, and 30-45) have remained unchanged from 2016 to 2021. Our older age cohorts, ages 45-65, *decreased* by 3%, while our 65+ age category *increased* by 3%. Our region now has a higher proportion of residents ages 65+ as compared to BC. The aging population is likely to increase demand on healthcare and the desire for more compact, low maintenance housing as many may be looking to downsize.

Figure 1.3: Age Distribution, 2021, as a %[3]



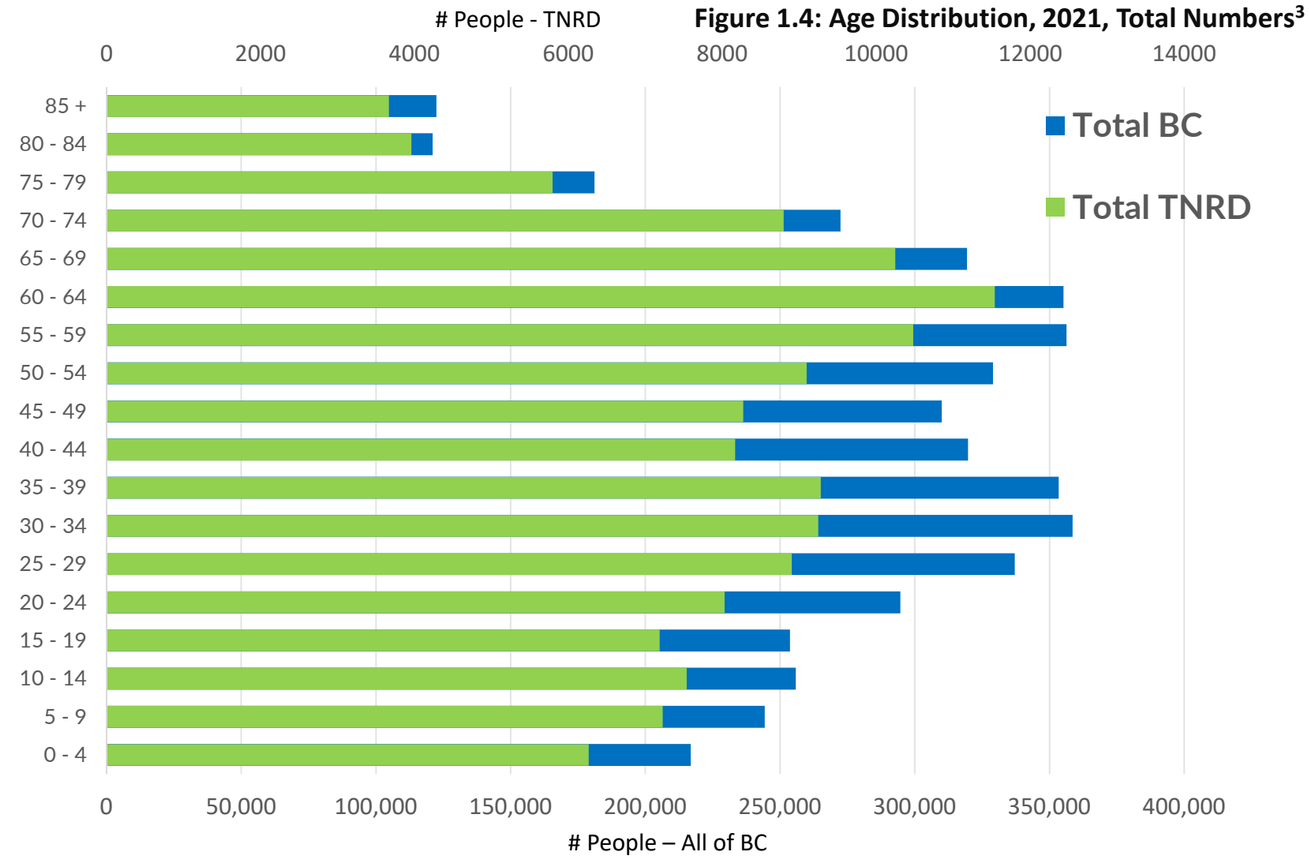
Recent Additions to Population Trends by TNRD Staff





The 2021 Population-Age Distribution Graph (2021 Census) shows the TNRD age distribution ranges in green vs. that of all of BC, scaled down, in blue. The increased extents of blue on the graph indicates that compared to BC, the TNRD has a lower proportion of those of working age (ages 15 to approx. 64).[4] This impacts on our labour force/employment (see Indicator 5).

Figure 1.4: Age Distribution, 2021, Total Numbers[3]



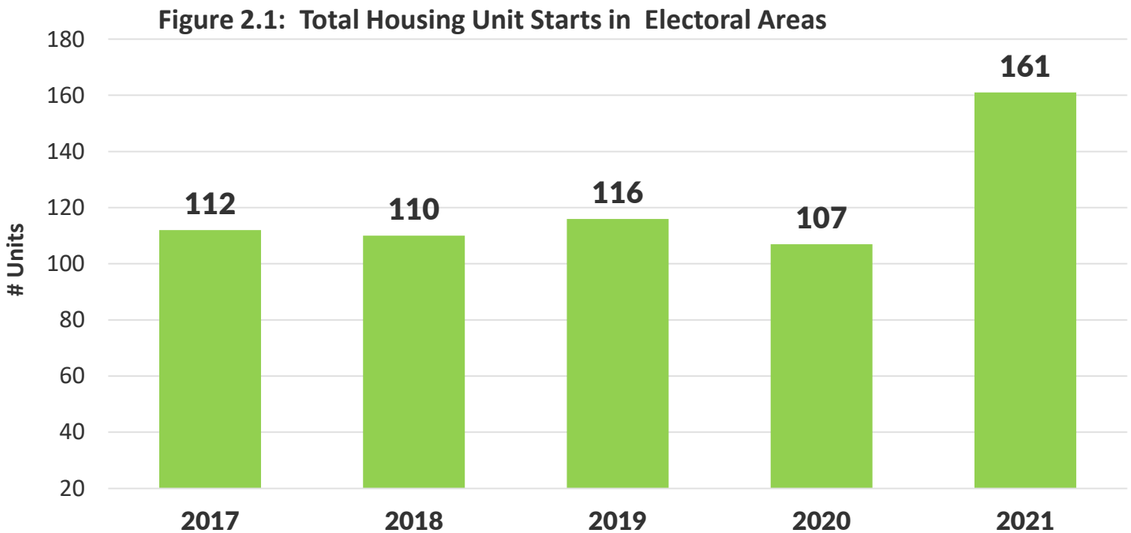
Natural Growth Rate and Migration

The TNRD's natural growth rate is lower than other communities with a higher proportion of young people. Further, the TNRD has the *lowest* share of working age (15 to 64)[4] population in BC. Thus migration (domestic and international) of younger working people into the TNRD will become critically important. In addition to employment opportunities, quality of life factors, such as ease of access to health care, housing, educational facilities, and recreational amenities also play a major role in determining migration for people. Thus, the TNRD will need to positively set itself apart in these domains as it competes with other regions to attract a steady workforce.

2 Housing

New Housing Starts

RGS Goals: Preserve the rural & wilderness character of the TNRD and contain urban and rural sprawl by building on the existing network of diverse regional centers



Given 2018 and 2019 saw a dramatic increase in housing starts in Clearwater, Logan Lake and Kamloops, we *were* making progress on the RGS goal of reducing sprawl by building in established communities - *until 2021*. Other points of note include:

- The data is for the year that the building permit is issued while completion and occupancy may not occur for a year or more (especially large multi-unit apartments).
- Recent migration trends (since Covid 19) indicate some movement to smaller communities or areas of high natural amenity values.
- The data must be qualified given the high number of housing starts in the City of Kamloops, especially for multi-unit developments.
- Given recent steep rises in property/housing costs, many TNRD residents are adding 2nd dwellings in rural areas and are prepared to commute further.

Of all 2020 & 2021 TNRD housing starts , 164 or about 2/3 (!) are within a 50km / 30 minute commute of Kamloops' city centre

What are we tracking and why?

This indicator tracks the number and location of housing starts in municipalities and EAs from 2017 to 2021 so we understand if we are creating rural sprawl or growth where services, schools and utilities support residents. A 'unit' can be a dwelling, a manufactured home, or suite in an apartment (so a duplex or house with a suite count as 2 units).

Where are we choosing to build?

Figure 2.1 shows the increase in housing starts in 2021 in all EAs. This increase is primarily in Tobiano and the trio of EAs encircling Kamloops within a manageable commute into the City. Based upon what we know so far for 2022, this trend is increasing especially since the zoning changes to allow an additional dwelling on almost all 4 ha parcels. There are also a high number of starts in lakeshore residential areas in EAs "E", "M" and "O".

Figure 2.2 shows the trend for municipalities' housing starts. While these are pooled, the trio of Kamloops, Sun Peaks and Merritt represent 95.7% of the total in 2020 and then 86% in 2021.

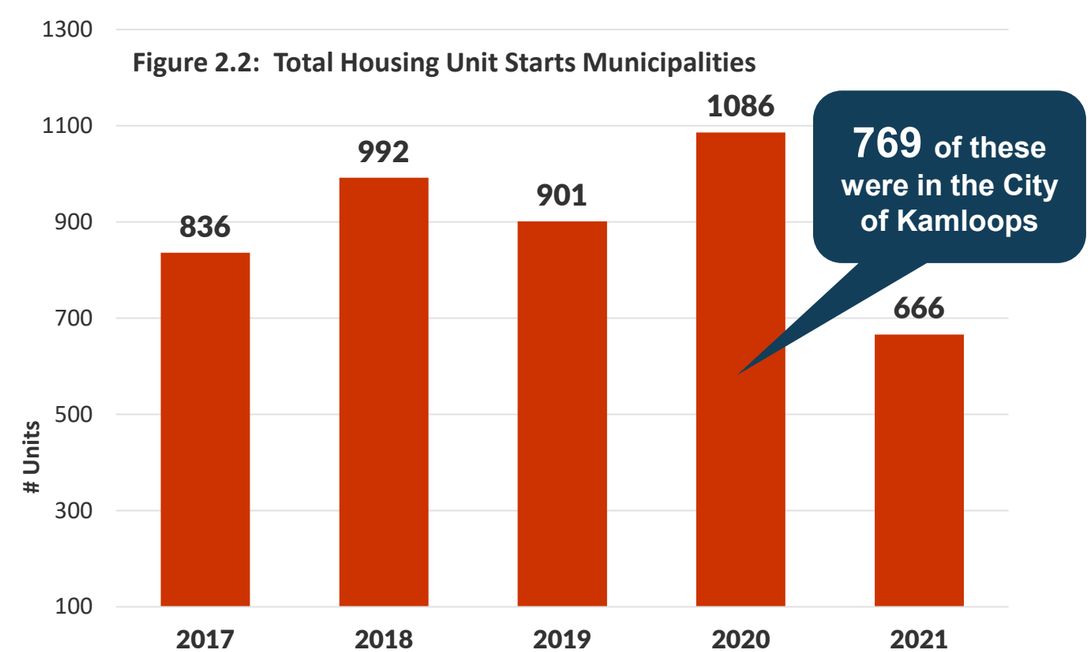
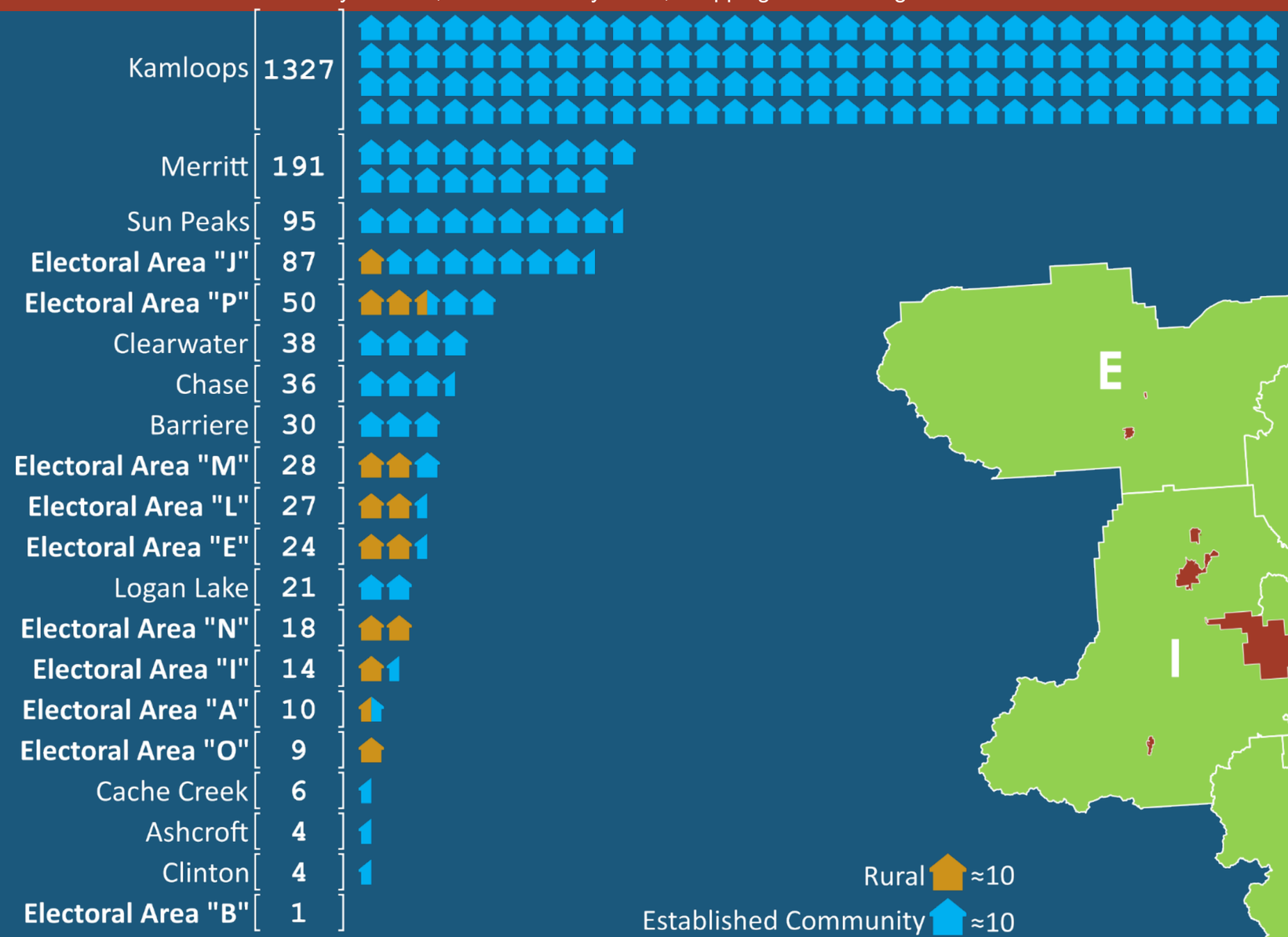


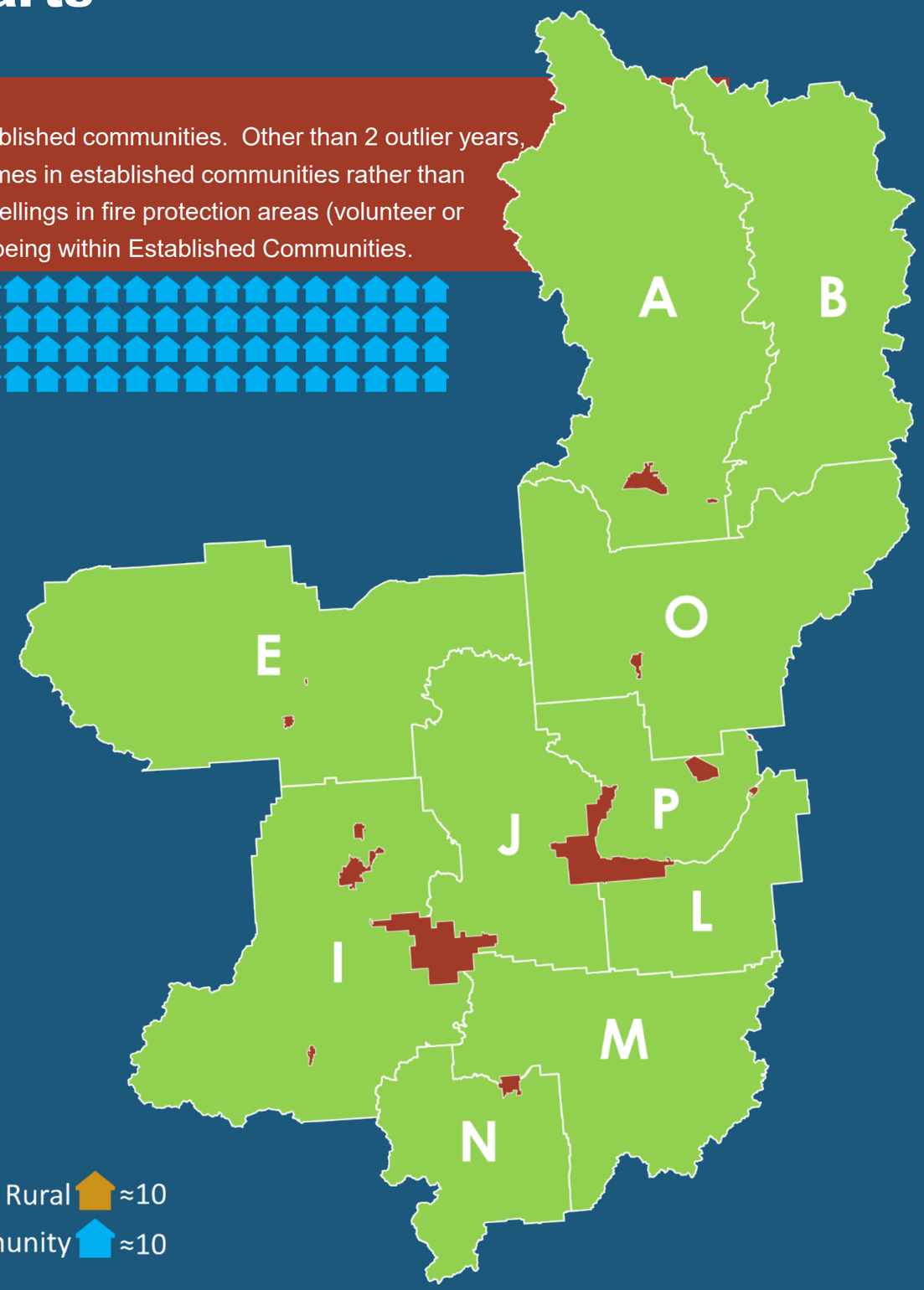
Figure 2.3 2020 & 2021 Housing Starts

% in Established Communities vs. Rural

Where are we building our homes?

Looking at Figure 2.3 the data suggests that we are doing well with directing new housing to established communities. Other than 2 outlier years, 2011 & 2014, the data of the previous decade shows a steadily increasing percentage of new homes in established communities rather than wholly rural areas. While this trend is encouraging, it needs to be tempered. The data assigns dwellings in fire protection areas (volunteer or otherwise) even where there are no community schools, water/sewer systems, shopping etc. as being within Established Communities.





2 Housing

What kind of housing is being built?

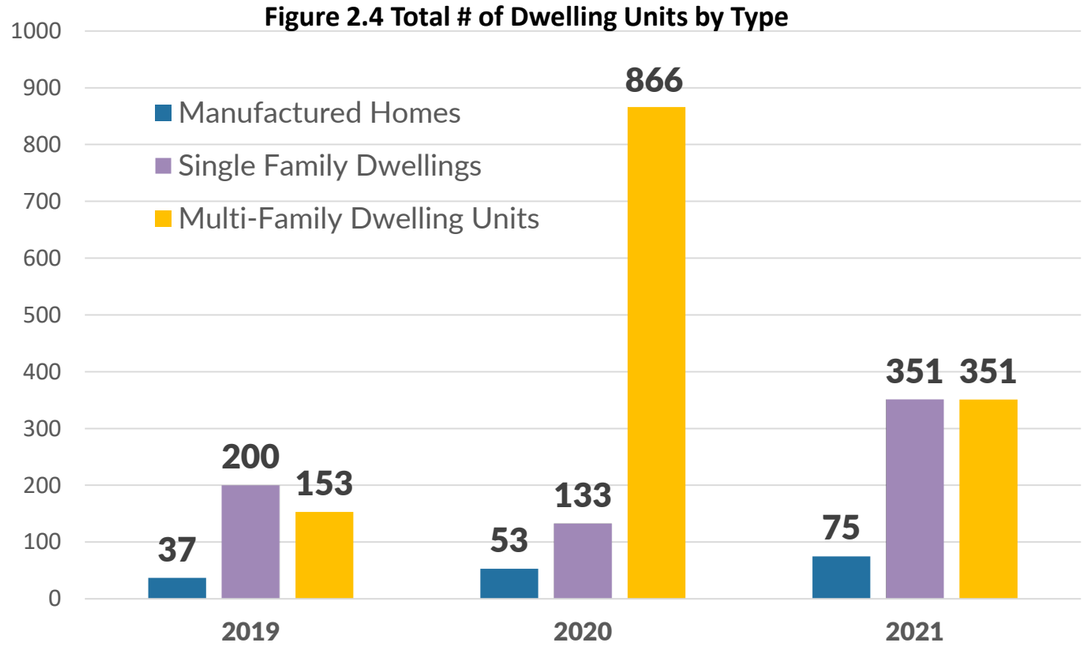
From 2019 to 2021, 62% of all new housing in the region was multi-family (any row house, apartment or cluster development with 3 or more units), mainly within the City of Kamloops. The % of multi-family housing being built has almost doubled since 2014 when it comprised only 32% of all housing starts. Even with the 2020 spike in the rear view mirror, 2021 numbers indicate that multi-family housing holds a critical proportion of the developing housing market.

The RGS supports multi-family housing in municipalities given it has lower per unit cost and is more affordable to operate. This housing type makes better use of land and contributes to efficiencies in servicing and infrastructure. It enables ease of access to shopping, facilities, transit, health/social support etc. especially to enable aging in place. This is critical as the TNRD has a relatively advanced demographic compared to BC and the rest of Canada.

Note the steady increase in manufactured homes (MH)* – mostly in EAs – as compared to pre-2006 levels when it was 6.5%. This may be in response to changes to the *BC Homeowner Protection Act* (i.e. few rural licenced contractors) and more recently, it may be due to demanding BC Building Code requirements. MHs are an affordable housing solution where multi-family units may not be acceptable or available; however, they contribute to increased rural commuting and pose a greater demand on utilities such as home heating.

*Our MH stats do not include temporary prefab housing such as pipeline worker camps or Sun Peaks staff units.

Figure 2.4 Total # of Dwelling Units by Type



Turning to Electoral Areas

Almost 1 in every 5 housing starts in 2019 and 2021 were temporary dwellings for 'assisted living' or additional dwellings on Class 9 Farm assessed land. While farms are land-extensive operations often away from Established Communities, additional dwellings for farm help enable workers (often family) to support the operation and are a planning benefit - even if categorized as rural sprawl. Importantly, recent changes which allow a 2nd dwelling with no relation to farm assessment and halved parcel size will impact this data in future indicator reports. Since 2022, many of the temporary or additional dwellings are now allowed outright and will serve as a mortgage-helper or simply income.

Owners vs. Renters – where are we?

Based on the 2021 Census (Figure 2.5), 75% of TNRD residents own their housing, almost 1/3 outright with no mortgage. This is a marked increase from only 16% in 2016. The relatively high rate of TNRD ownership - as compared to BC at 28% - will help housing security if interest rates increase in 2022 going forward. Rental and employee housing supply is a major challenge to secure in both small communities such as Sun Peaks and Blue River or larger cities such as Kamloops and Merritt. Affordable rental housing will play a key role in our economic future.

Figure 2.5: Housing Tenure in TNRD [1]

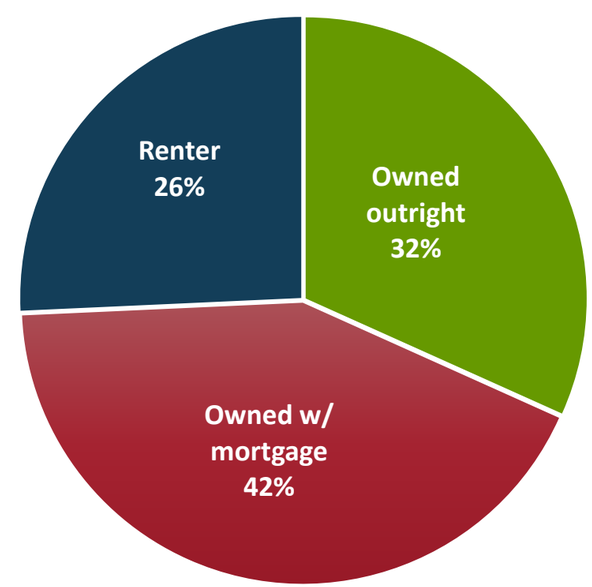
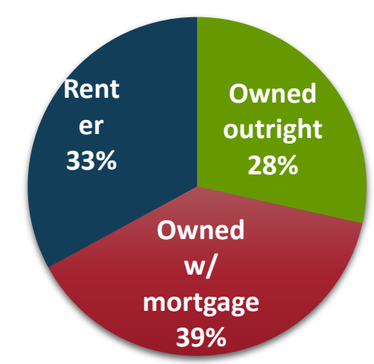


Figure 2.6: Housing Tenure in BC [1]



3 Transportation

Commute to Work – Mode of Transportation

RGS Goals: Integrate energy & transportation considerations with land use & settlement planning to achieve conservation, mobility, & efficiency goals

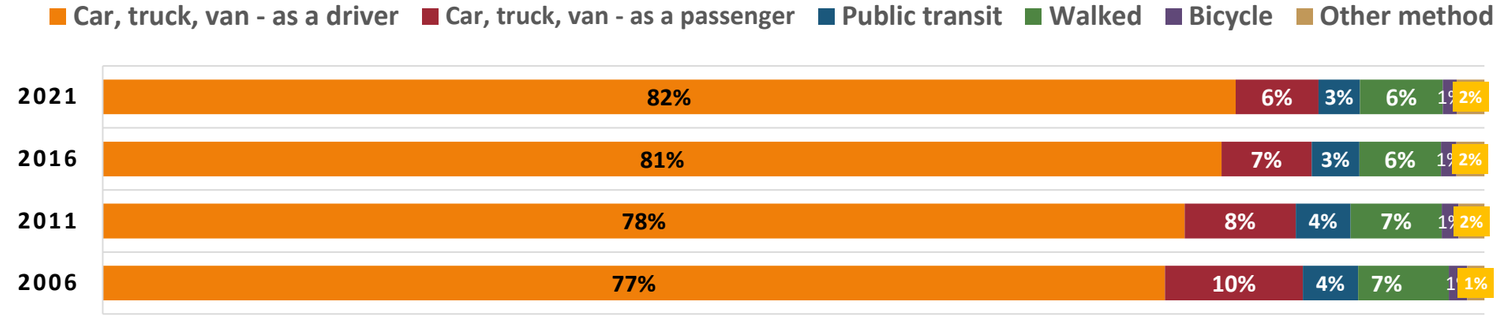
Commute to work mode share and duration of travel is the most frequent indicator applied to monitor how our transportation habits evolve. The commute **mode share** or method indicates *how* residents travel to work, whether by car or other single occupancy vehicles (SOVs), public transit or "active transportation" typically by bike or walking. The **duration** indicates how much time we spend getting to where we need to get. An increase in the duration of a commute that is not *active transportation* usually correlates with the following:

- an increase in greenhouse gas emissions (GHG's)
- quality of life as more time is spent away from family and leisure
- health, broadly, as it is sedentary so decreases physical activity

Credit: BC Transit, 2019

Between 2006 and 2021, the actual number of TNRD commuters as a whole increased by 1.2% even while over that time population grew 17% by Census. In municipalities the increase was a mere 1% as population there grew 23% in this 15 years. EAs saw 10% fewer commuters. Most EAs had fewer residents, except "J","L" &"P" where each grew ~12%. The proportionate decrease in commuters suggest residents are working from home, retired, or simply not working.

Figure 3.1 All TNRD Mode Share of Commute (%) 2006 to 2021[1]



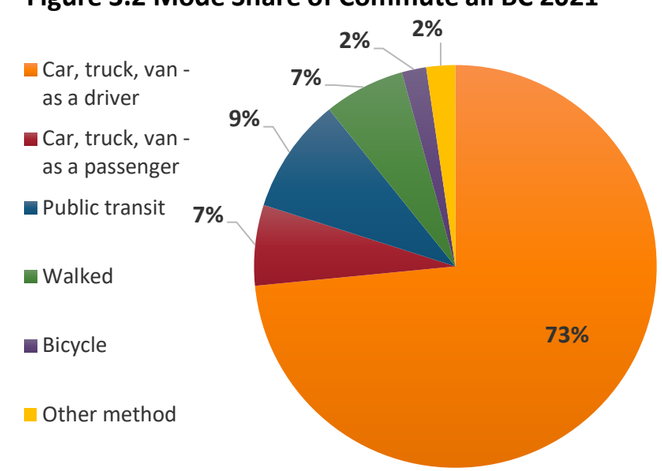
For Commuting, the car dominates progressively more each Census

As shown in Figure 3.1 above, the predominant *mode share* for TNRD commuting remains cars and other SOVs as the percentage of residents using SOVs has increased from 77% in 2006 to 82% in 2021. The extent of car pooling and transit use has reduced; meanwhile, active modes of transportation have stayed more or less the same, at a rate of 10%. This may be expected in rural areas considering distances, highway conditions, and lack of transit yet the same trend and almost the same proportion breakdown is true for municipalities.

By comparison, the percentage of residents in BC using SOVs to travel to work is 9% lower, capturing 73% of all commuting trips (see below). Like the TNRD, this percentage has increased, up from 68% in 2011; however, *unlike* the TNRD, more BC residents, 18%, are using transit, legs or bicycles to get to work.

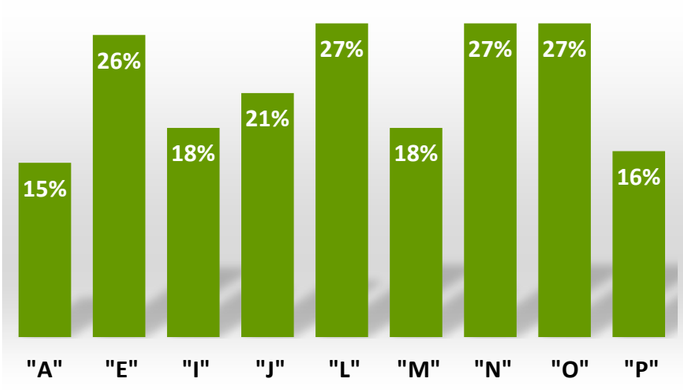

Credit: Cycling Magazine

Figure 3.2 Mode Share of Commute all BC 2021[1]



3 Transportation

Commute to Work – Duration of Travel



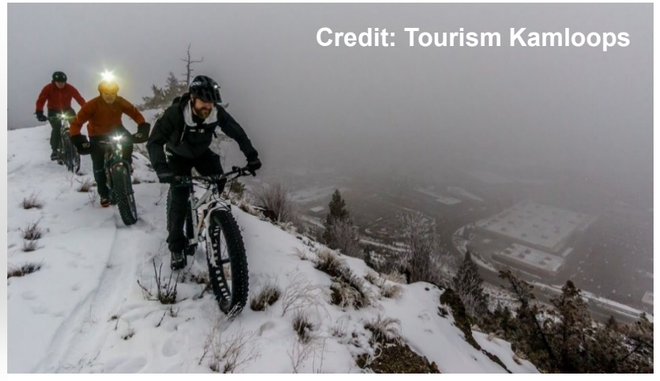
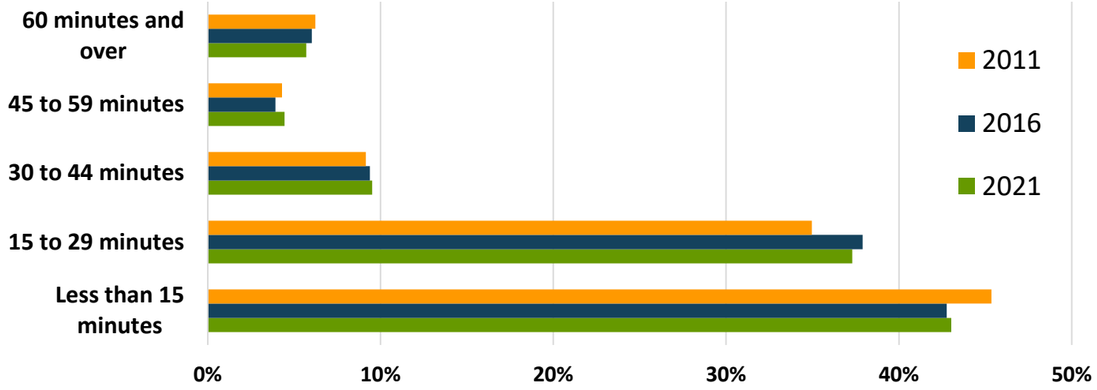
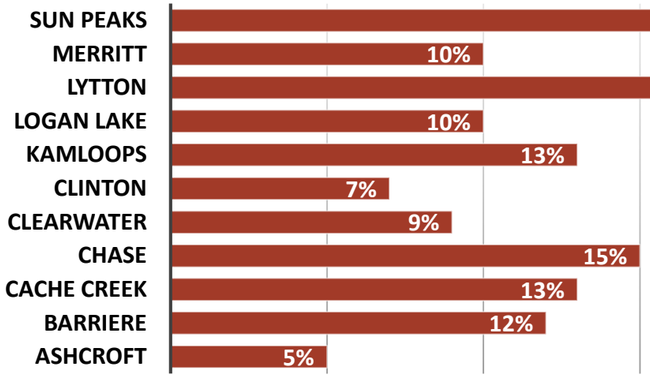


Figure 3.4 Commute Duration over 2011 to 2021[1]



Figures 3.3 Work from Home (%) by Area, 2021[1]



Working from home
Who is working from home where across the TNRD is charted at left (Figures 3.3). In general, aside from Sun Peaks and Lytton, more work from home in rural areas.

Half of all EAs exceed the BC norm of 23%. This trend impacts Indicator 3 and will be followed in future monitoring reports.

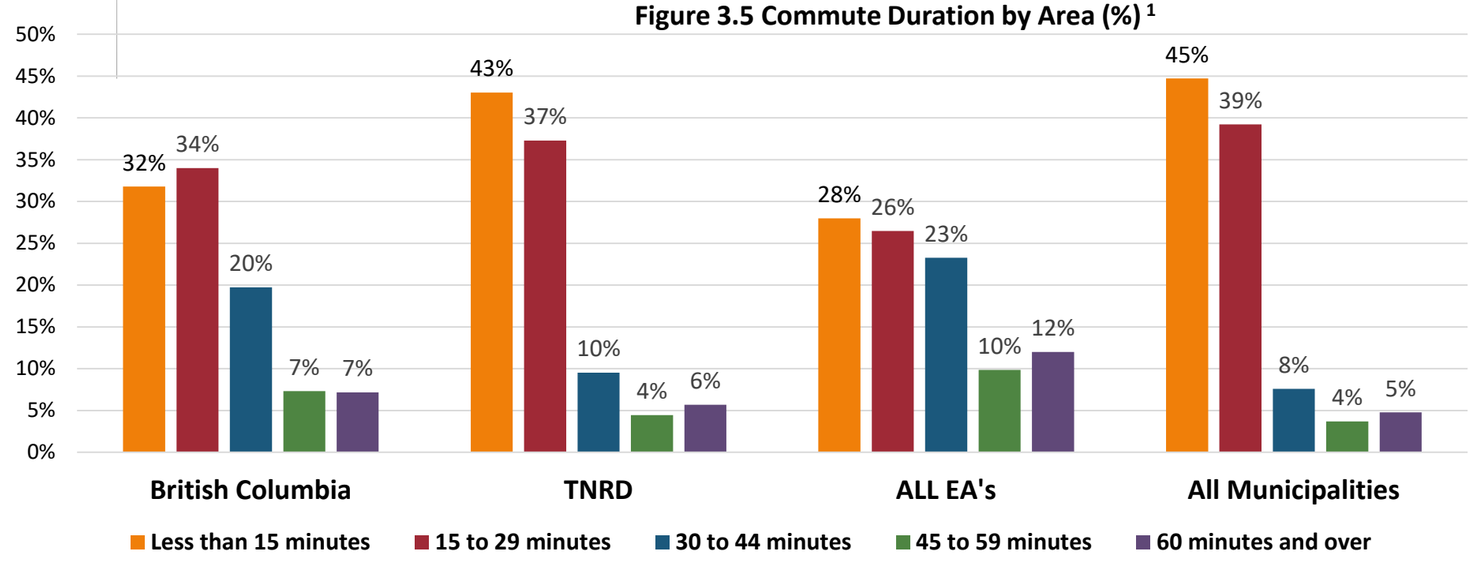
Most TNRD residents enjoy shorter commute times than the norm across all BC

What about the length of our commutes?

As shown in Figure 3.4 above, from 2011 to 2021, TNRD commute times are shifting. The hour plus edges down as a proportion of all commutes while the short, under 15 minutes - still the majority - has also declined since 2011. The number of commutes between 15-29 minutes declined marginally. The longer, half hour plus, commutes make up only a quarter of all travel, but are showing minimal change in trends.

In municipalities, 45% of commute times are under 15 minutes, whereas only 28% in EAs are this short. 12% of commuters living in EAs have commute times over an hour – indicating that rural residents are traveling farther for work, either by necessity or by choice.

Figure 3.5 Commute Duration by Area (%) [1]



4 Economy

Number of New Jobs in the Region

RGS Goals: Support and encourage existing primary, secondary, and tertiary industries while promoting new economic development opportunities. Broaden the region's economic base through diversification and expansion

Tracking the number of net new jobs (or losses) in the region is an indicator of the general health of the regional economy and economic future. While local government is not the primary level of government responsible, decisions regarding development can lay the foundation for economic resilience. Investment in a desirable community and recreational infrastructure assists in business attraction and retention. Employers understand how quality of life makes a region more desirable for potential employees. Affordable/available housing and the possibility of a family doctor also play into the equation.

The data for this indicator is primarily from the Stats Canada Census which combines reporting into a larger catchment comprised of the "Thompson-Okanagan Region" mapped in orange below - encompassing parts of 5 RDs. Data for smaller less populous areas is overshadowed by larger centres such as Kamloops & Kelowna.

Top 3 Jobs by Opportunity/Demand:

CONSTRUCTION

RETAIL TRADE

HEALTHCARE

While shifting positions, these 3 have shared the top 3 tiers for over a decade. In 2011, healthcare was at the top until the high level of construction activity pushed it to third.

Statistic of Concern:
Our Region has the lowest share of working age (15 to 64) population in BC.

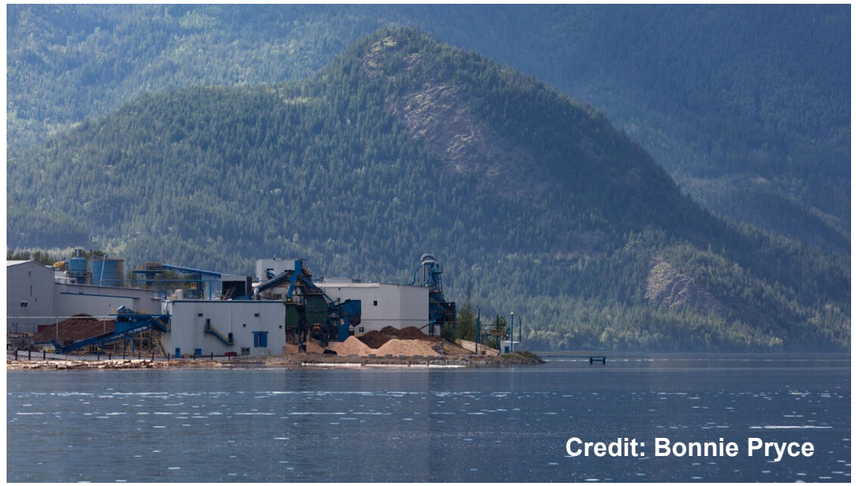
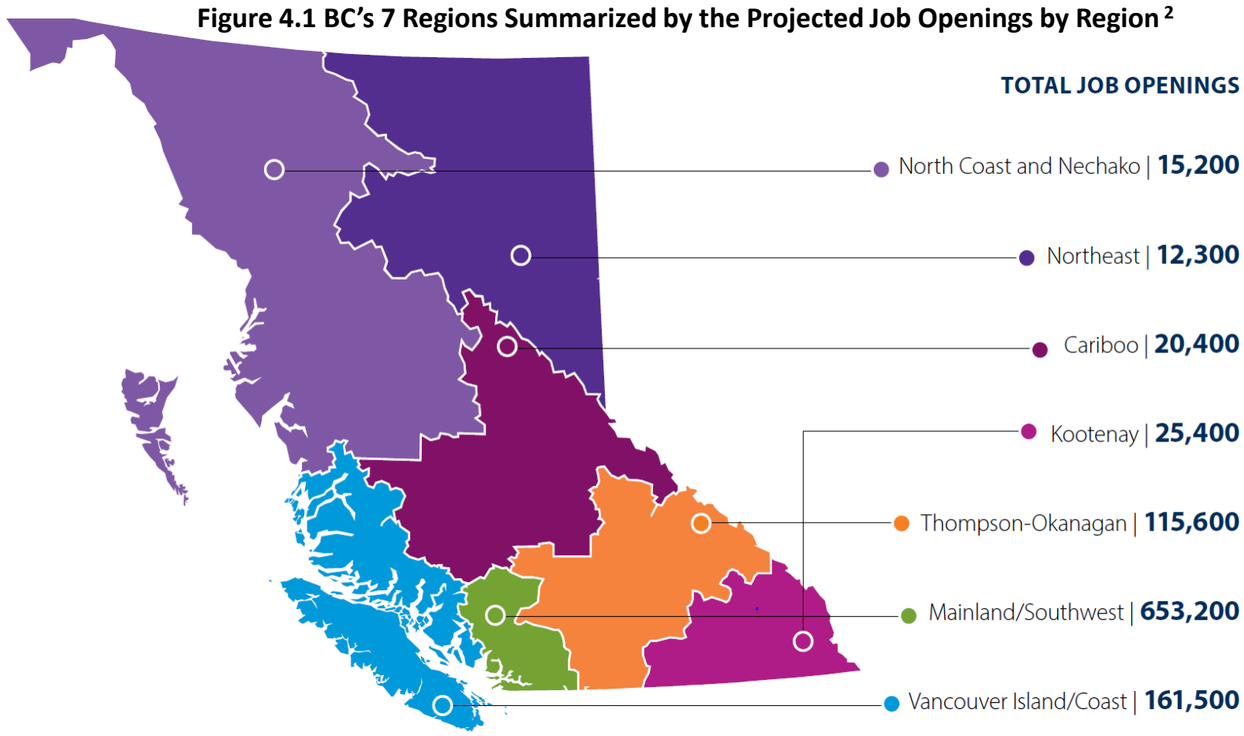

Credit: Bonnie Pryce

Figure 4.1 BC's 7 Regions Summarized by the Projected Job Openings by Region [2]



Recent Employment Rates

October 2022 Thompson-Okanagan Region Unemployment Rate = 4.9 %

(noting Kelowna is only 4.1% while all of BC is 4.3%) [1]

Unemployment % History in our Region

- 10 year low = 4.9% (now!)
- 10 year high = 9%
- 10 year average = 7.1%

4 Economy

Number of New Jobs in the Region

Based upon TNRD Census numbers shown adjacent in Figure 4.2, the healthcare/social assistance and construction sectors continue to see the greatest increases in number employed and worker demand. Retail trade and professional/technical services have increased to a lesser degree. While most other sectors have only marginally changed, the decline of the resource – mainly forestry - sector is marked even as mining/quarrying has edged up.

As changes in interest rates and inflation come into play, the economy continues to 'reset', the increase in construction may be tempered.

Figure 4.2 TNRD Number of Workers by Industry (2011 to 2021) [3]

4 Economy

What about the major primary resource industry?

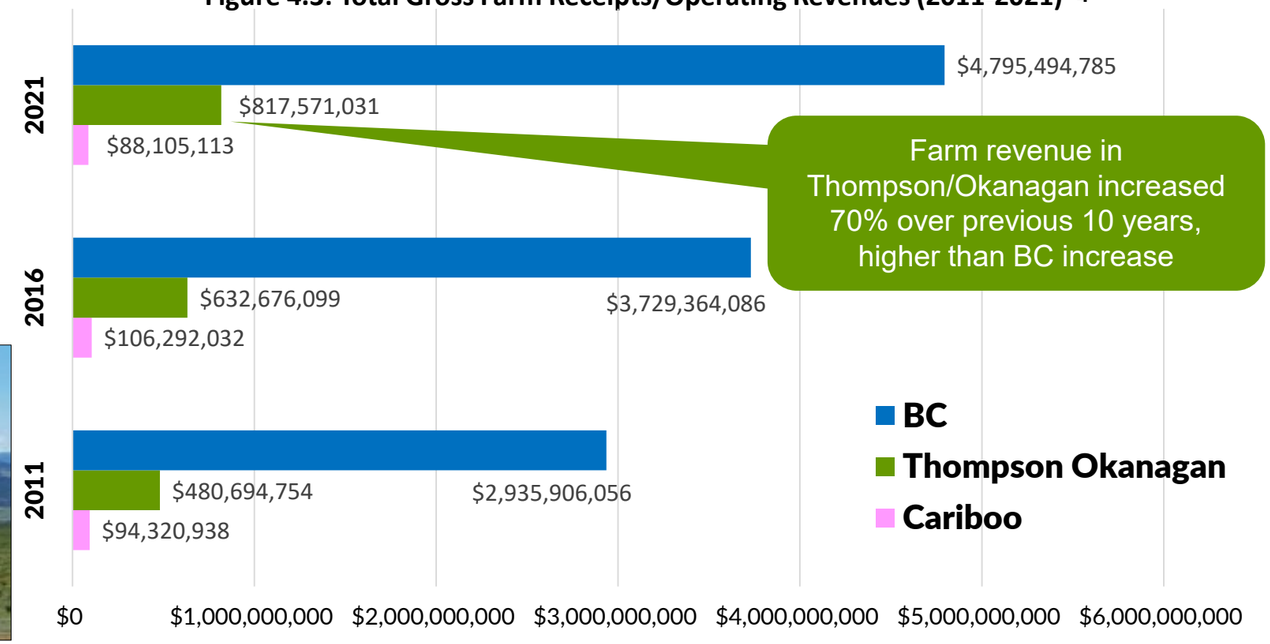
Despite forestry job losses indicated in Figure 4.2, other primary sector industries remain critical to the TNRD. Even employers such as New Gold Inc. New Afton Mine, are training-up recruits to fill positions as it is more difficult to hire pre-qualified workers.

What about the Ag-sector?

According to the BC Ministry of Agriculture, the TNRD is the largest region of BC with unallocated water resources and adequate soils to significantly expand and diversify from our historic mainstay, *ranching*. The past decade has seen a major increase in local vegetable production; large dairies relocating to the interior from the Fraser Valley, new fruit trees along the South Thompson River; and new wineries.

Cherry/Apple Orchards, 5028 Kamloops-Shuswap Rd - Credit: Kent Macpherson

Figure 4.3: Total Gross Farm Receipts/Operating Revenues (2011-2021)*4



2022 Industry in TNRD is challenged to recruit & keep able workers:

"No hope on the horizon for young, strong reliable staff willing to work and stay for minimum or just above minimum wages."

"No one wants to lift."

"Last 2 years saw more recruitment challenges: "too many other opportunities & potential staff cannot find housing"

Looking at the previous decade and Figure 4.3, the TNRD farm sector revenues increased 70% over the previous decade, higher than the healthy increase in BC overall and much higher than the Cariboo which shares our history of ranching. Diversification will make our region more resilient economically and most importantly, in respect to food security. See Indicators 8 & 9 for more detailed information about the agriculture sector.

In terms of staffing, larger operations in the TNRD offer the quotes captioned above. The Monte Creek Winery relays that it is definitely a challenge but they have been successful through a resourceful mix of co-op staffing; training local area residents for seasonal hospitality jobs; and ~20 temporary foreign workers many of whom follow wine seasons between north and south hemispheres.

One approach:

"From 2010 to 2021, **New Afton Mine** has run 24 cohorts resulting in 250 new team members. The program is not just appreciated by the participants who secure a new well paid career - many of whom are women - but by the team involved in doing the training as they enjoy the fresh perspectives joining the New Gold family.

An average of 80% of New Afton employees are hired locally from the Kamloops and surrounding TNRD area."

Credit: M. Anfield

5 Employment
Median Total Income

RGS Goals: Promote and encourage local and regional economic development

The median total income of residents is a reliable indicator of the availability of well-paying jobs in the TNRD. Comparing median income can show whether the relative income of residents is increasing or decreasing over time and in relation to other jurisdictions as well as the greater BC context. Since data captures residents' income for the year *prior* to the actual census (based upon Canada Revenue Agency reports), it is always a years' step out.


Credit: Transmountain

How are household incomes changing?

As per the inset, the median household income continues to rise across the region, 11.4% since 2015, well ahead of the 9.8% increase for Canada as a whole. Still, when we look at the 14.3% increase for BC during the same 2015 to 2020 period, our rate is 3% less. This can impact livability as cost of living increases in the Province, especially housing.

Looking to the broader context, historically the TNRD had a lower income rate increase until the decade from 2005 to 2015, when TNRD median total income increased 17.5%, well above the 11.9% for all BC. We had "caught up" to only now slightly lag behind. Still, the TNRD remains in a good position when the cost of living is taken into account as compared to the Lower Mainland, Capital Region, and parts of the Okanagan. Referring back to the Housing and Economy Indicators, the ability to find housing – more so *affordable* housing - directly impacts growth and economic diversification.

$73,500 comprises the 2020 TNRD median after-tax household income, up 11.4% from $66,000 in 2015.


Highland Valley Copper Mine

Disaggregating and comparing annual income to the BC & Canada context, as shown in Figure 5.1, we follow the national income break-down more so than that of BC where there is a notable jump in the highest income bracket.

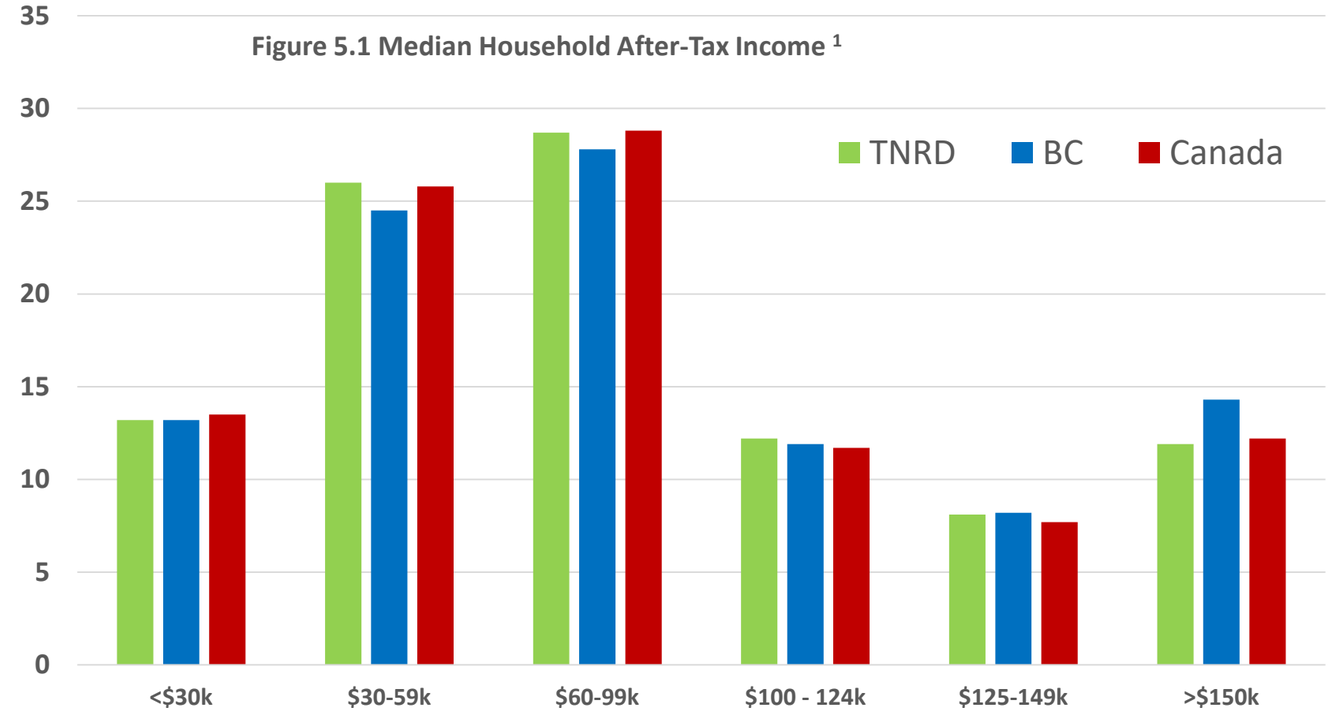


Figure 5.1 Median Household After-Tax Income [1]

5 Employment

What about more localized TNRD income trends?

As Figure 5.2 shows, Kamloops and some TNRD municipalities continue to have higher median household incomes while those within most EAs are slightly lower. The District of Barriere as well as Electoral Area "J" (possibly given recent development at Tobiano) show the greatest relative household income increase. Despite that some smaller communities and EAs show a lower income (see critical factors below), all show a positive income increase trend.

Factors to consider when looking at Figure 5.2 include:

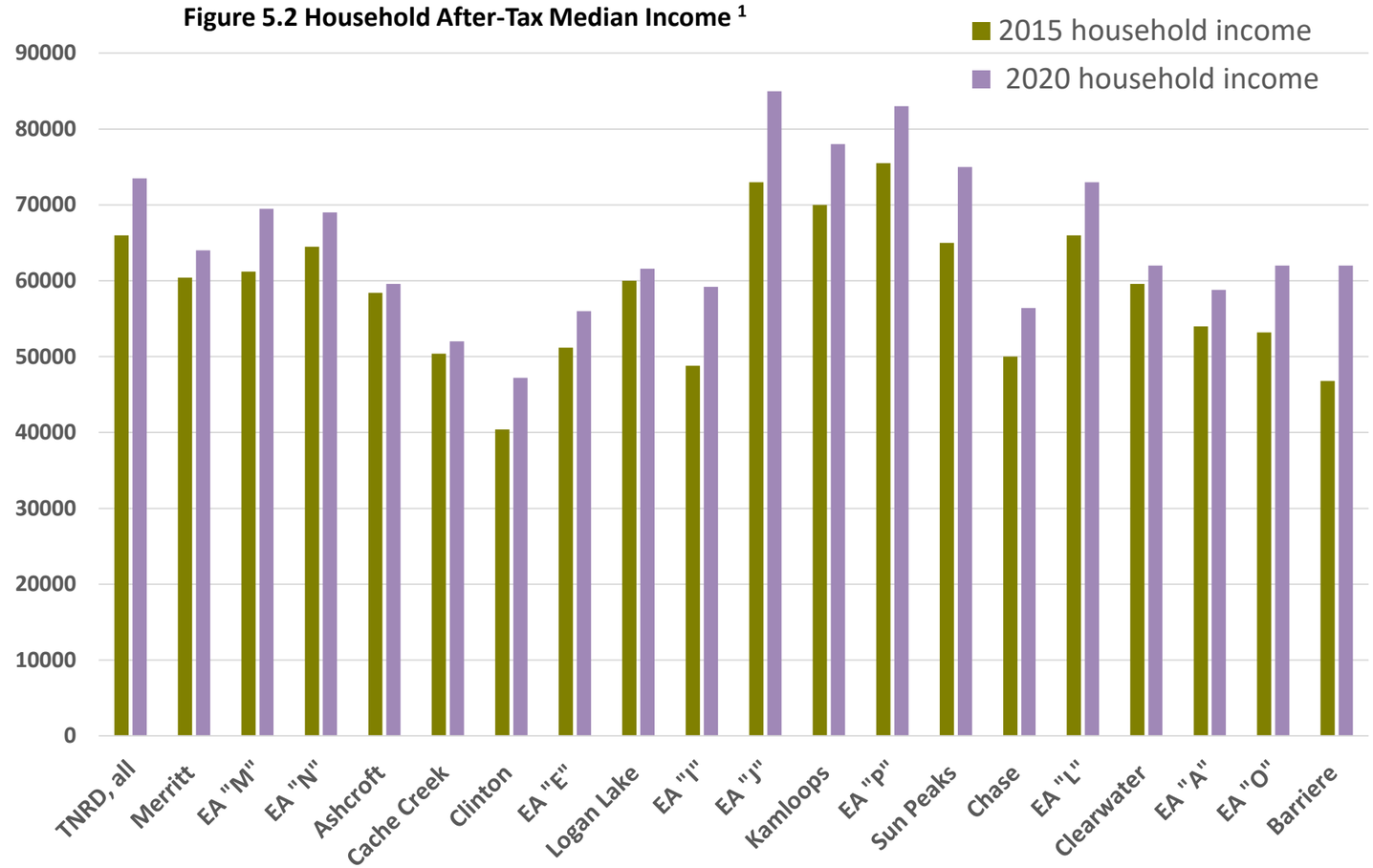
Age - where we have an increased elder population which may be retired and/or on fixed income, income is typically lower. Recall that we have the lowest % of working age residents of all BC regions.

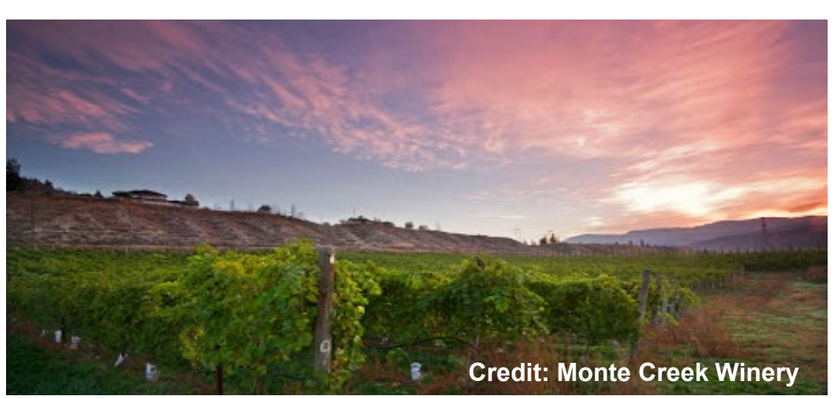
Household composition - where a household comprises of only one individual, single parent, or couple instead of perhaps a multi-generational mix, income will generally be lower.

Primary address - while we may have a significant increase in workers employed by pipeline construction or recovery works related to the November 2021 floods, income is reported to the individual's primary address. So workers from other provinces or regions of BC who are staying in Merritt or Blue River, report their income to their primary address.

As a note to Figure 5.2, jurisdictions with small populations (i.e. less than 300) such as EA "B" are supressed by the Census due to privacy concerns.

Figure 5.2 Household After-Tax Median Income [1]




Credit: Monte Creek Winery

Looking forward . . .

According to the BC provincial **Labour Market Outlook 2021,** the fastest growing employment industries/jobs in our region forecast for the next decade are as follow:

- Computer systems & related services
- Trades & private education services
- Travel arrangement services
- Machinery manufacturing

6 Environment

Air Quality

RGS Goals: Protect and enhance the natural environment. Encourage airshed management plans and policies that contribute to reduction and prevention of air pollution; and support initiatives to upgrade wood-burning appliances through stove exchange programs to improve air quality

The RGS sets policies to protect the environment, including an area of growing public concern: **air quality**. With the signing of the BC Climate Action Charter in 2007, we pledged to reduce greenhouse gas (GHG) emissions, and in doing so, address some of the primary causes of poor air quality.

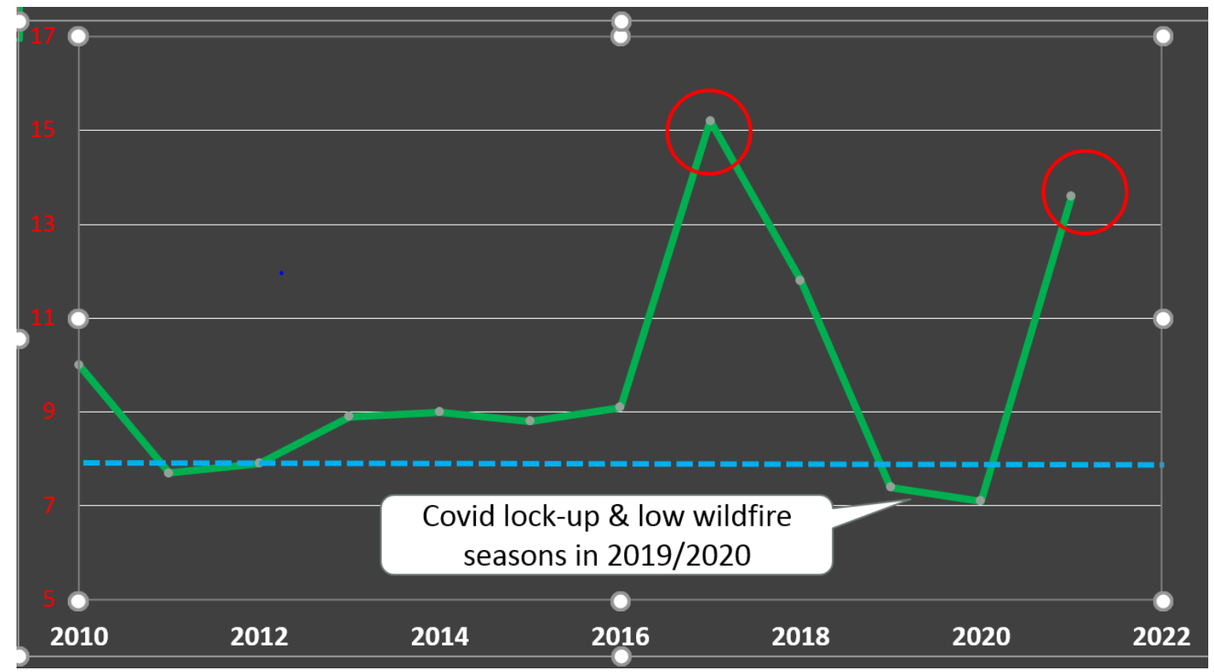
Air quality is determined by a number of factors. The choices we make on a daily basis such as how we get around; how we build and heat our houses; and how much waste we produce. All have a significant impact on air quality. There is also the impact of major wildfire seasons, which have in recent years started earlier and run later with massive erratic fire behaviour. In sum, natural and man-made activities such as wildfires, dust, wood burning appliances, climate change, reduced carbon sink, temperature inversions, and grassland degradation directly impact local air quality. GHG emissions and other air pollutants impact our region by decreasing the quality of the air we breathe, contributing to poor health and putting a significant burden on our healthcare costs.

To determine whether our air is improving, we monitor concentrations of fine particulate matter (PM2.5 explained next page). To qualify, the only long term comprehensive monitoring station tracking this data in the TNRD is in central Kamloops.

Figure 6.1, adjacent, shows Kamloops station PM2.5 data. Mark the PM2.5 spikes during 2017 and 2021 wildfire seasons.

There are other stations in the region (e.g. a pilot station in Merritt for a set term). These look at specific attributes such as particulate at a mine, but do not provide the same extent of comprehensive data over time. These also do not accurately reflect other areas where a significant portion of households heat with wood, sometimes in valleys that are subject to regular inversions and hold smoke into residential areas. Health impacts in these areas are of concern as the smoke can be persistent and continuous during most of our winters.

Figure 6.1: Annual Mean PM2.5 Values (24hour Mean at Kamloops AQ Monitoring Station) [1]



Particulate Matter (PM2.5)

As illustrated in the microscopic images on the next page, PM2.5 is particulate matter of a diameter 2.5 micrometers or less. It is a critical measure of air quality as it is these fine particles that affect respiratory and cardiovascular health. According to the BC Lung Association's State of the Air Report the most common causes for high levels of PM2.5 include wildfire and wood smoke.

The BC objective is that the annual mean concentration of PM2.5 not exceed 8 micrograms per cubic meter of ambient air (8 µg/m³). As shown in Figure 6.1, the average annual value for PM2.5 in Kamloops continues to be above the provincial objective of 8 PM2.5 shown in blue dash. The swift decline in 2019 and 2020 was more a function of reduced wildfire activity – bracketed by the record breaking years of 2017 and 2021 – than the reduced emissions of cars and industrial activity given Covid lockdowns.

6 Environment
Air Quality

What a Difference a Wildfire Season Makes

Major threats to our vascular health and regional air quality include the sudden spikes in PM2.5 concentrations during active wildfire seasons but more so, the slow burn of solid fuel (usually wood) appliances through the entire heating season, especially older less efficient units.

Figure 6.2 illustrates how wildfire smoke impacts peak days. During the active 2017 and 2021 wildfire seasons, the annual average PM2.5 levels reached near 35ug/m³ and for 2018 near 20ug/m³ at the Kamloops station. Then 2019 and 2020, relatively quiet wildfire seasons resulted in the annual average being held less than 8ug/m³.

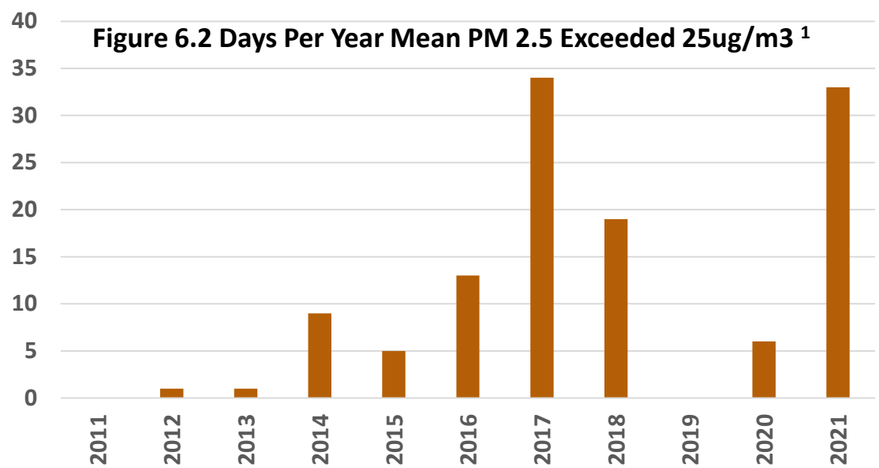
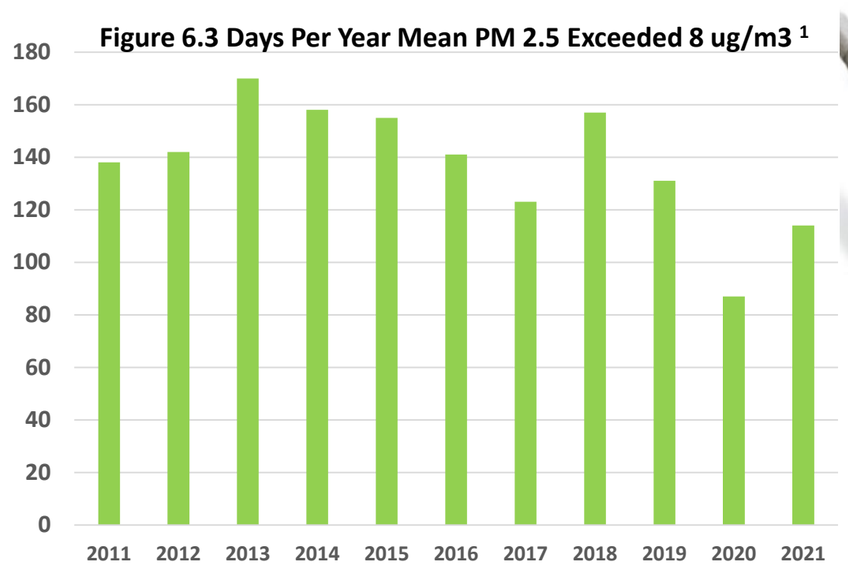
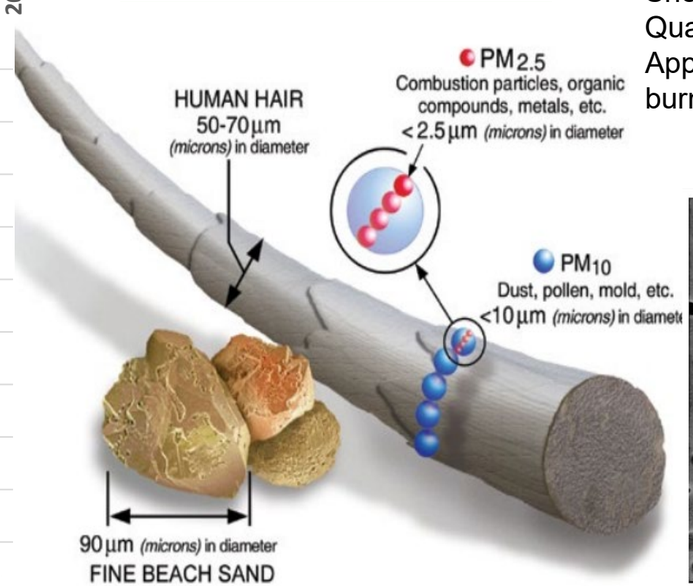


Figure 6.3 illustrates the broader trend across the entire year by focusing on the total number of days where the station registers the 24 mean as exceeding the BC provincial target. This figure is more optimistic as there is a slow steady decline in the number of days overall, leading to improved overall air quality for localized residents.





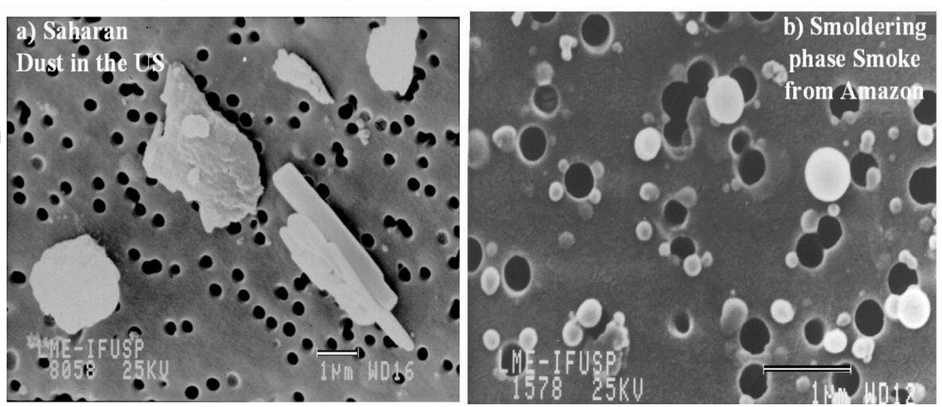
Taking Action on Air Quality

Actions that local governments can take to improve air quality include:

- ✓ Creating compact communities, alternate transportation infrastructure, idling reduction policies and bylaws to reduce the use of fossil fuels
- ✓ Encouraging alternative fueled vehicle and transit use
- ✓ Providing opportunities for residents to decrease wood burning, especially using older inefficient stoves or fireplaces
- ✓ Enacting BC Building Code energy efficiency Step Code standards
- ✓ Working to prevent degradation of grasslands from development and overgrazing. Native grasses have deep roots that prevent erosion, minimizing the amount of dust entering the airshed and store carbon and help to mitigate climate change impacts
- ✓ Educating landowners on wildfire prevention measures they can take to reduce risk for sudden spikes in airborne fine particulate.

Broadly, the RGS encourages the development of airshed management plans and policies as well as initiatives to upgrade wood-burning appliances through wood stove exchange programs to improve air quality. Both Kamloops and Merritt have adopted Air Shed/Quality Management Plans. Kamloops has struck a Air Quality working group while Merritt has adopted a Wood Burning Appliances and Air Quality Bylaw to limit the impact of wood burning stoves on air quality.

Source (below & to left) : Lung Assoc. 2018 State of the Air Report

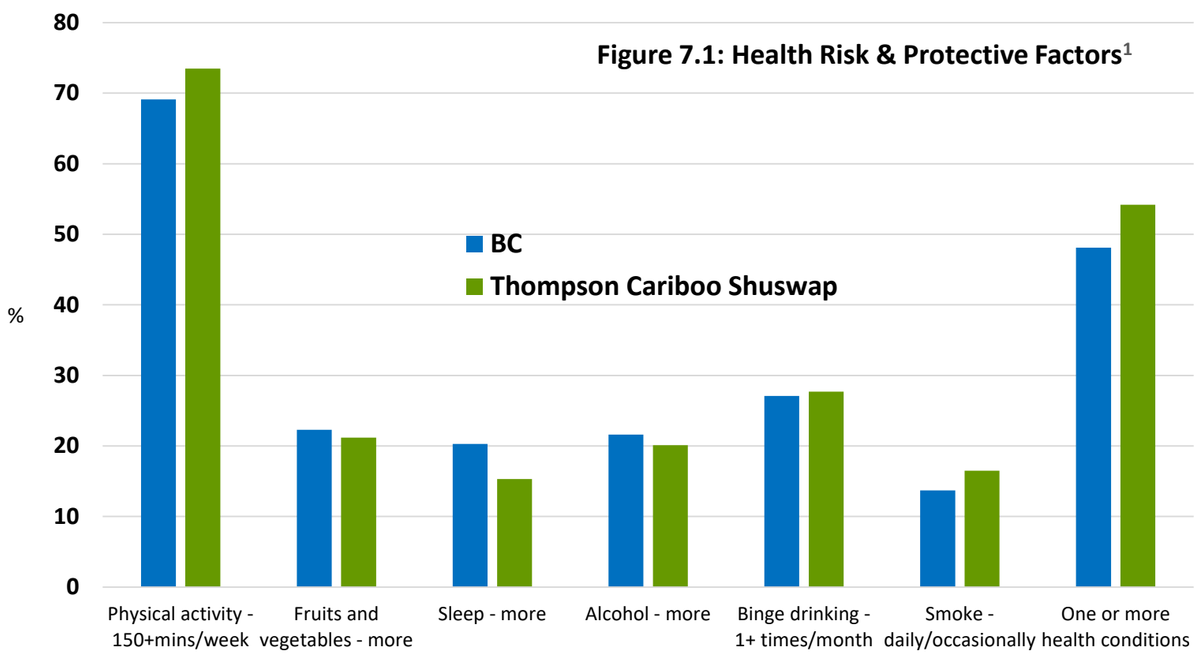


7 Health

Health Risk Factors and Health Care Access

RGS Goals: Indirect indicator of overall progress

While the RGS does not directly address population health, the health of residents can be indirectly influenced by TNRD decisions. For instance, communal recreational amenities can contribute to a more active lifestyle and enhanced social connection. Supporting agricultural productivity and processing facilities increases our access to local food which helps to meet our nutritional requirements, reduces greenhouse gas emissions, and improves air quality, all contributing to enhanced quality of life.



Health Risk & Protective Factors

The COVID-19 pandemic placed significant stress on virtually everyone, including residents in the *Thompson Cariboo Shuswap Health Service Delivery Area* (TCS HSDA). The BC *COVID-19 Survey on Population Experiences, Action, and Knowledge* (SPEAK) gives us a snapshot into understanding health impacts and stressors. Survey results should be interpreted with caution as they are based on self-reporting. The TCS HSDA reported higher levels of physical activity, slightly more smoking, and a higher prevalence of health conditions than BC overall. More than half of respondents (57%) in both TCS HSDA and BC overall experienced worse mental health compared to before the pandemic.[1]

Access to Health Care

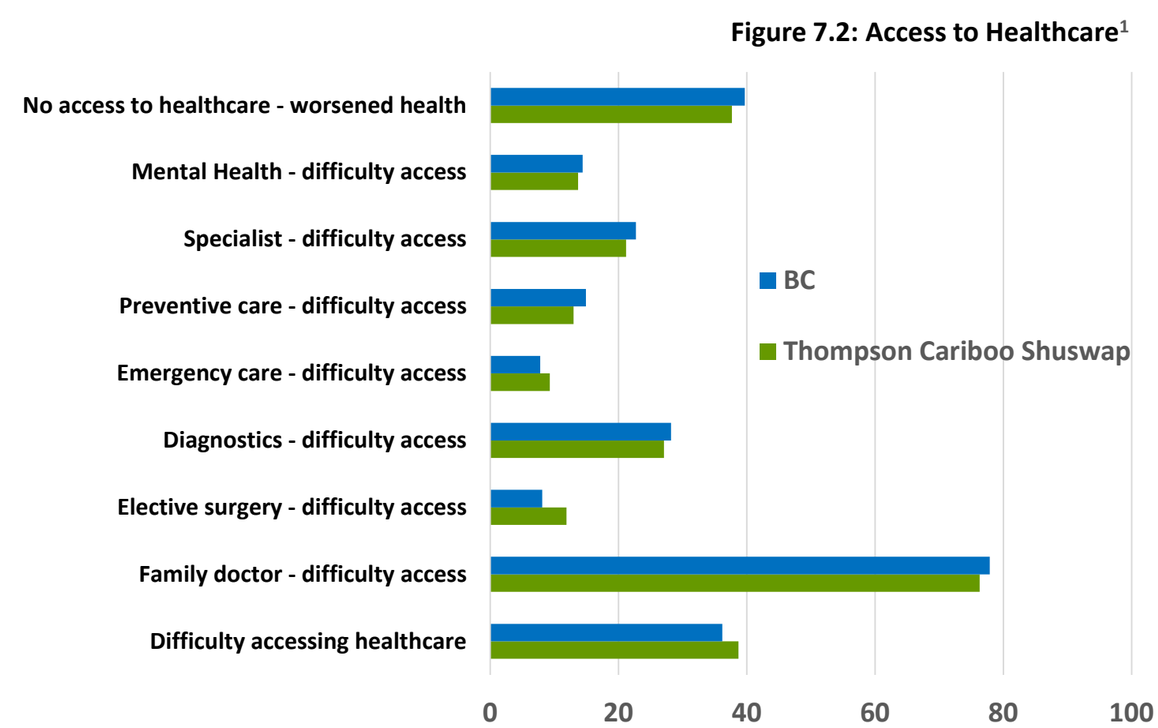
BCCDC's COVID SPEAK survey also highlighted the difficulty of accessing health care. Health care access was a challenge prior to the pandemic. For instance, many of TNRD's municipalities have experienced reduced emergency service hours due to staffing shortages. Residents in need must drive an hour or more to Kamloops.

Did you know that?

"Approximately 41,000 Kamloops residents are without a family doctor. That number jumps to more than 53,000 when you include surrounding areas like Sun Peaks and Barriere."

Ministry of Health data quoted by Kamloops Official

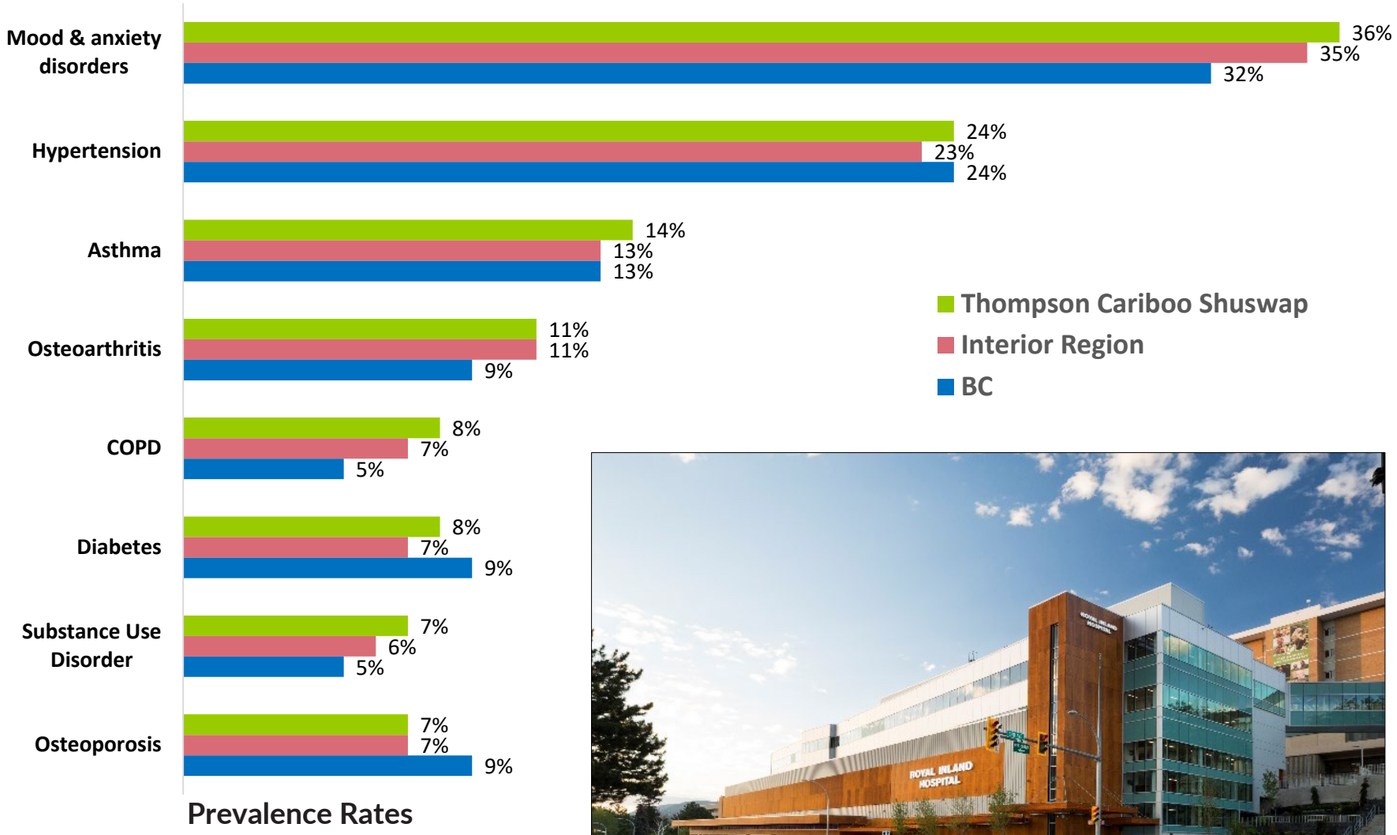
Accessing a family physician was reported as the greatest concern during the pandemic with 76.3% of respondents in the TCS HSDA reporting difficulty accessing a family doctor. More specifically, the number of residents connected to a family physician (using Ministry data) vs. the total population yields over 50,000 residents who are 'unattached'.



7 Health

Chronic Diseases, Mental Health, and Early Development

Figure 7.3: Chronic Disease Prevalence in Thompson Cariboo Shuswap HSDA, 2020/21[2]



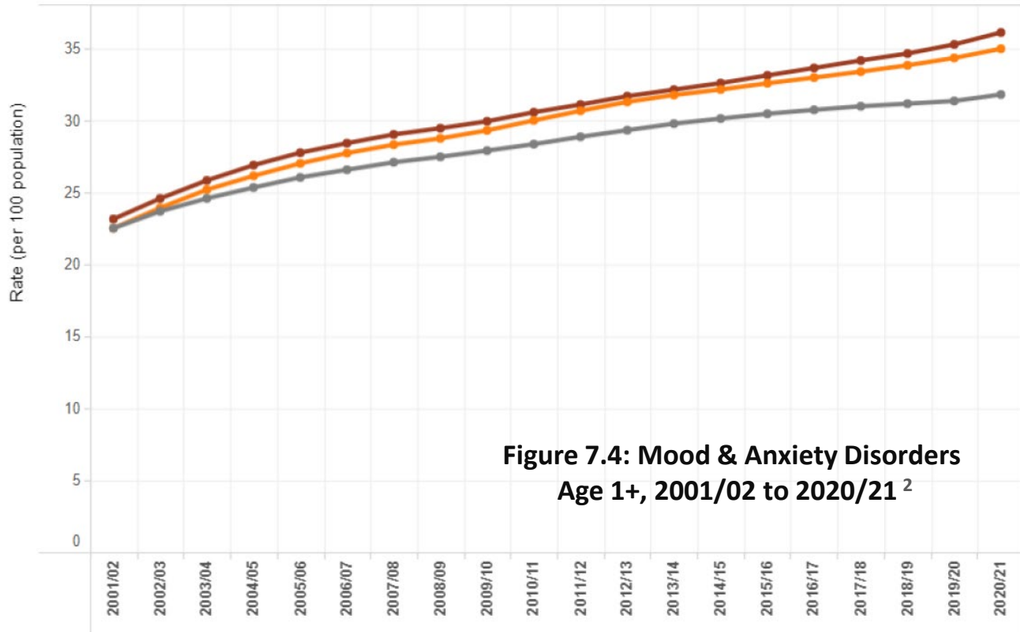


Figure 7.4: Mood & Anxiety Disorders Age 1+, 2001/02 to 2020/21 [2]

RIH, Kamloops -Credit: Interior Health

Prevalence of Chronic Diseases and Mental Health

As Figure 7.3 shows, the TCS Health Region incurs the highest rates of chronic diseases in several categories.[2] Interestingly, since the 2018/2019 stats, prevalence of diabetes and COPD (Chronic Obstructive Pulmonary Disease) across all three regions has decreased, while rates of mood/anxiety disorders and asthma have remained unchanged. The proportion of people with mood and anxiety disorders has steadily increased over the past 20 years. To add, the TCS and the IH region had a similar prevalence as the provincial rate in 2001, but since then, TCS and IH have seen higher rates of people with mood and anxiety disorders. Critically, this difference has been increasing compared to the BC rate (see Figure 7.4).

Healthy Development

The *Early Development Instrument* (EDI) measures 5 core domains of early childhood development that are known to be accurate predictors of adult health, education, and social outcomes.

In the latest 'wave' of data collection (2017-2019), almost 1 in 3 (32%) of kindergarten children in TCS and across the IH region were identified as vulnerable in one or more domains of the EDI.[3]

The COVID-19 pandemic exacerbated child vulnerability. Published evidence supports the overall worsening of mental health in BC and Canada, with youth experiencing worse outcomes than adults. Long-term impacts on the well-being of children/youth are unknown.[3]

Credit: Holly Louwerse Photography

8 Agriculture
Metrics & Trends

RGS Goals: Support the preservation and increased productivity of agricultural lands and local food production and processing facilities

Census of Agriculture data indicate that national trends such as industry consolidation and aging of farm operators, identified in previous census cycles continue in 2021.[1] These trends are mirrored in the TNRD where the number of farms continues to decline since 2011, while the average farm size has increased.[2] Further, the aging of Canadian farmers is not a new phenomenon and follows general population trends, both nationally and locally. The average age of Canada's farm operators increased to 56.0 years in 2021[1],while the average age of a TNRD farm operator is higher at 58.6 years.[4]

Clearwater Farmers' Market
Credit: Holly Louwerse Photography

The challenges associated with the COVID-19 pandemic coupled with the aging of Canadian farmers may explain the reason for a notable increase in farms reporting they have a succession plan.[1] In the TNRD, 23 more farms reported a written succession plan compared to 2016.

What is trending in the TNRD?[2]

- ✓ Lower Mainland dairy operations continue to purchase land in the interior for feed production & dry cow pasture.
- ✓ Land prices continue to rise – which can prompt a preference to sell farms & retire.
- ✓ Land growing grapes & fruit increased - the Thompson-Nicola had its first commercial cherry harvest this past year.
- ✓ Many new farmers are entering the industry in market garden/small scale operations with less land/capital requirements at startup.

David Geen of Jealous Fruits
Credit: Kamloops Now, Posted July 11, 2021

Figure 8.1: Agriculture Metrics for Thompson-Nicola Census Division[4]

	2011	2016	2021[5]
Total Farmland Area (ha)	462,032	548,233	516,079
Number of Farms	1,177	1,017	895
Area Irrigated (ha)	21,720	23,312	19,194
Total Farm Operators	1,815	1,580	1,380
Total Farm Capital	$2,027,861,130	$2,387,263,575	$3,265,521,457
Total Gross Farm Receipts/ Operating Revenues	$72,642,138	$136,841,713	$139,817,442
Total Employees	959	1,112	737
Farms with Written Succession Plans	N/A	47	70

The agricultural sector remains integral to BC's economy and continues to evolve. 2021 data shows BC amongst the nation's leaders in capital intensive agriculture that uses less land, including greenhouse and mushroom farming.[3] The Ministry noted that in our region, many new farmers are entering the industry in operations with less capital requirements (i.e. market gardens). It is important to acknowledge that while small lot agriculture is very beneficial for feeding TNRD families/farmers' market consumers, this scale cannot address food security on a regional/provincial scale. Maintaining large tracts of farmland remains vital.

Cattle numbers have declined substantially between the census years (123,660 total cattle & calves in 2016 compared to 96,270 total cattle in 2021).[4] According to the Ministry of Agriculture, pressure from extreme weather events and wildfire in our region can result in decreases. Further, the beef industry tends to be cyclical; thus, declining cattle numbers between census years could also simply be a factor of where the industry is in the cycle during a census year.

9 Agricultural Protection

Land Prices

Land prices are important to track as they reflect market demand for ag-land. If this sector is prospering, there will be more demand for farmland and prices increase - acknowledging this makes it harder to start a new farming operation.

Agricultural Land Prices Over The Longer-Term

The average price of farmland per hectare in the TNRD for larger parcels (8ha & up) has fluctuated in the past 12 years. Prices ranged from a low of $7,991 per ha in 2012 to a high of $17,348 in 2018. Most growth in farm real estate prices corresponds to a rise in beef prices and farm incomes. While the TNRD and CRD have both experienced increased farm income, our land prices for large tracts has remained affordable, especially when compared to the FVRD. The tracts of less than 20 acres, less so. (see Figure 9.1 for the overall farm land selling price).

Farm real estate in the FVRD (not depicted in figure below) has increased dramatically since 2010, making it is increasingly difficult for farmers to acquire land. Fraser Valley farmers are purchasing cheaper large farms in the TNRD where they can raise young dairy cows for subsequent milk-production. Farmers may be "cashing out" by selling lands in the Fraser Valley in exchange for lands elsewhere.

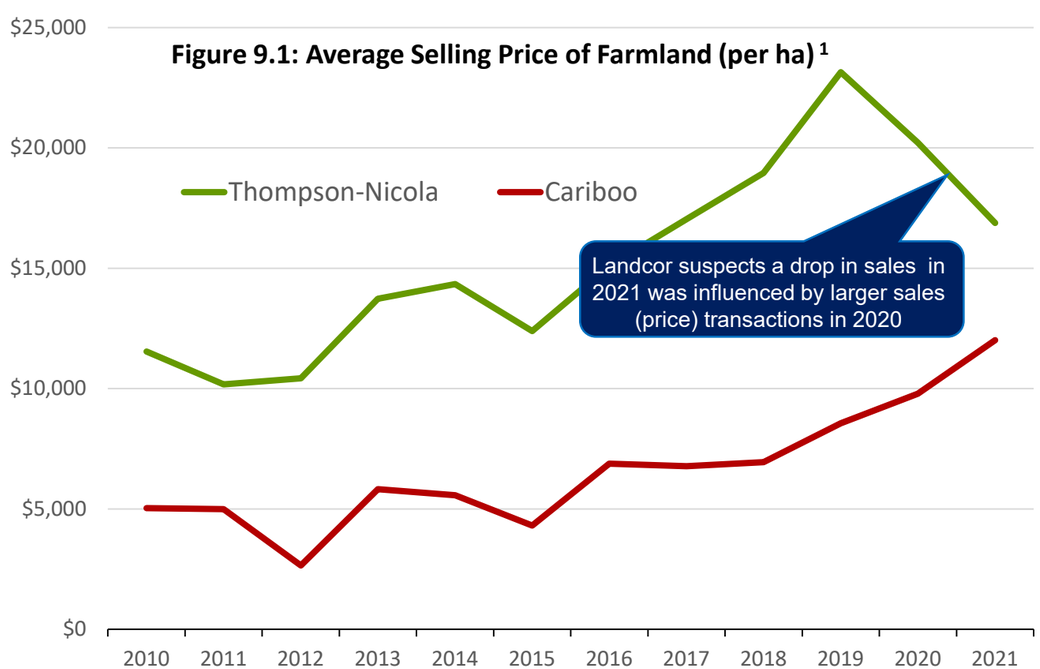
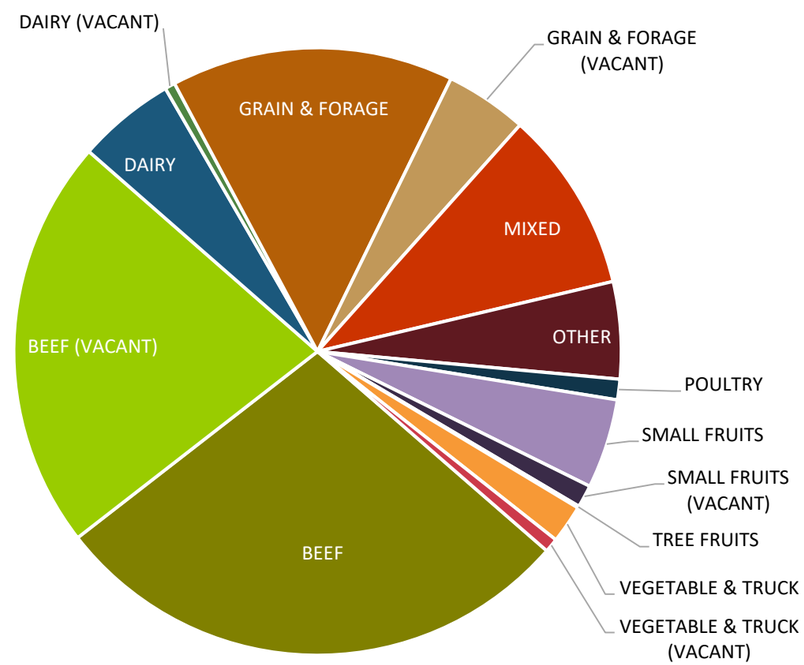


Figure 9.1: Average Selling Price of Farmland (per ha) [1]

Figure 9.2: Farms >8ha Average Number of Sales by Type (2010 - 2021) [1]



Farms on the Market

Over the past 12 years (Figure 9.2), the types of farms most frequently sold were beef producing; then grain and forage; and mixed farms third. Together, beef, dairy, and grain/ forage producing farms make up 74% of all farms over 8ha in the TNRD. Of the larger farms, most require extensive range. Farms of 8ha & less - not charted here - are dominated by grain & forage (21%), mixed (19%) and 'other' (18%).

TNRD farmland 8ha and smaller has continued to increase annually from $82,174/ha in 2018 to $142,356/ha in 2021.

Does size matter?

Yes! Small farm parcels cost 10 times more per ha. The TNRD 12 year average for larger parcels (8 ha & up) is $12,449/ha, but is $119,514/ha for those under 8ha. Once a hectare reaches these prices, the economic viability for farming becomes challenged.

Figure 9.3: TNRD Farm Sales 2010 - 2021[1]	
Average $ all parcels	$ 15,330 per ha
$ parcels 8 ha & over	$ 12,449 per ha
$ parcels under 8 ha	$ 119,514 per ha

Future of farming?

The cost of large farm parcels and increasing farm operating revenues (see Indicator 4) may bode well for owners currently farming, but the dramatic increase in small land prices is a financial barrier for young people considering a living in agriculture. With financial barriers to entry and the aging-out of farmers trend continuing, it is promising to see that succession planning has become a greater priority since 2016 with more farms reporting having a written succession plan.

9 Agricultural Protection

ALR Applications

Agricultural Protection

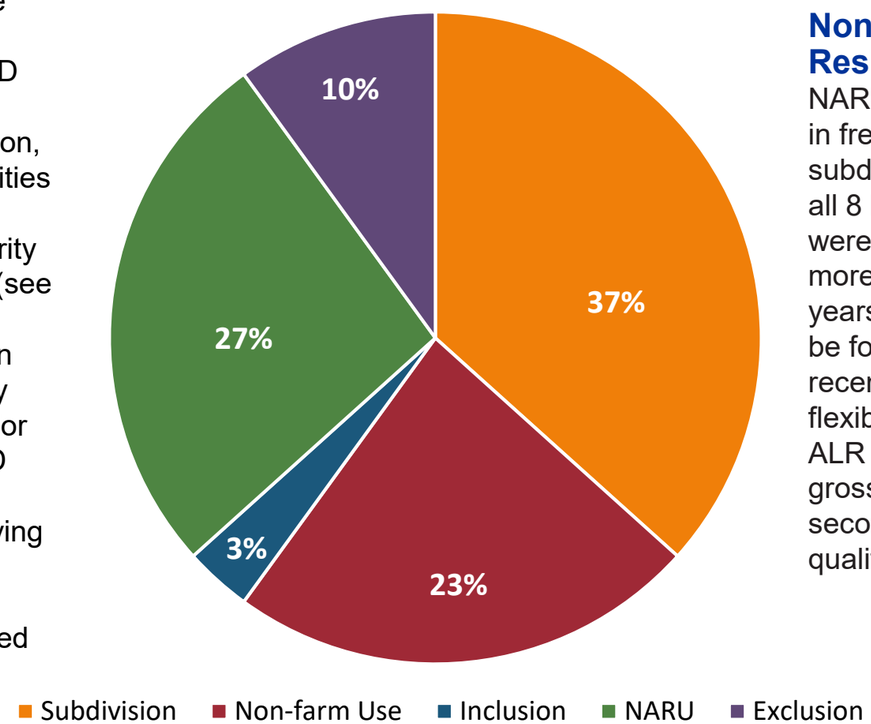
The ALR is provincially designated land where agriculture is prioritized. On ALR land, farming is encouraged and non-agricultural uses are restricted. In the TNRD, 31% (>800,000 ha) of area is within the ALR. These lands are regulated by TNRD's Zoning Bylaw, alongside Provincial legislation (*Agricultural Land Commission Act*). If someone wishes to subdivide, operate a non-farm use, or have a larger than permissible residential gross floor area in the ALR, they must submit an application to the ALC for consideration.

Developing ALR land for non-agricultural uses (such as institutional, commercial, and industrial) is more difficult as protecting these lands for agricultural use is intended to benefit the region as a whole. With the increase in disasters over the last couple of years (pandemic, wildfires, floods), the importance *and* desire for more sustainable, locally sourced food has been highlighted.

How are we doing?

In 2020 and 2021, there were a total of 30 applications in the TNRD that required local government consideration, including 3 in municipalities (excludes cancelled applications). The majority were to subdivide land (see Figure 9.4), though the proportion of subdivision applications has notably declined since years prior (2018 and 2019). TNRD planning staff caution landowners about applying to the ALC where it is anticipated that their proposal would be denied by the ALC.

Figure 9.4: Total ALR Applications (EA & Municipal) by Type – Adjudicated & Active, 2020-2021



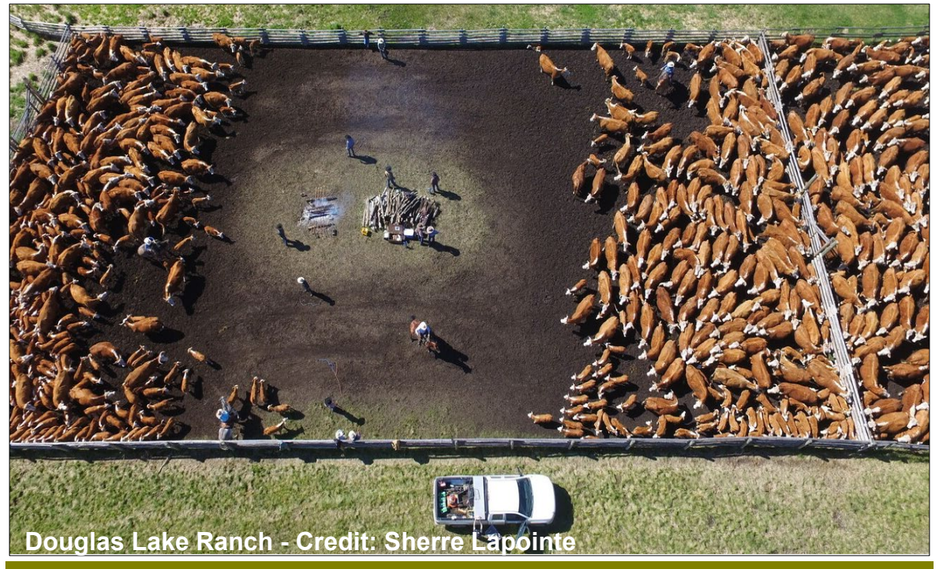
Empirical data clearly shows that subdivision of farmland is detrimental to farming. Specifically, rural parcels 8 ha or larger in the TNRD have a 50% chance of being farmed, while parcels 4 to 8 ha only have about a 25-35% chance of being farmed. This can change if soil quality improves and irrigation is available.[2] Critically, the extent of land under irrigation in 2021 declined 1/5 of what it was in 2016.

Subdivision

1/3 of subdivision applications from 2020-21 were in Electoral Area "L" (east & south of the City of Kamloops) – where most development pressure lies. All of these applications were denied by the ALC. In the 5 years from 2017 to 2021, 40% of adjudicated ALR applications were to subdivide in the ALR. Of these applications (proceeding to the ALC), 61.5% were denied. Meanwhile, the subdivision denial rate was 75% between the years 2015 and 2019. Staff infer that the denial rate has decreased *not* because the ALC is relaxing their policies; rather, owners are subdividing to enhance agriculture (i.e., a "land swap" to tie specific farming uses together).

Non-Adhering Residential Use (NARU)

NARU applications are 2nd in frequency after subdivision – from 2020-21 all 8 NARU applications were approved. We saw more NARUs than in past years and expect more to be forthcoming with the recent 2022 "residential flexibility" changes in the ALR which notably limit the gross floor area of secondary residences on qualifying properties.


Douglas Lake Ranch - Credit: Sherre Lapointe

Average 2021 selling price per ha in the TNRD:
$ 14,357 /ha for parcels 8 ha & larger
$142,356 /ha for parcels <u>under</u> 8 ha.

10 Waste Diversion

Generation and Diversion

RGS Goals: Adopt a "zero waste" philosophy and support Regional Solid Waste Management Plan waste reduction goals

The management of solid waste is a primary RD function and comprises a significant portion of our annual budget. Waste generation and diversion are readily measurable, making them ideal indicators of progress toward zero waste, a key RGS objective. Promoting zero waste is 1 of 8 guiding principles of the *2018 Regional Solid Waste Management Plan* (RSWMP). The 10 year RSWMP sets a goal of reducing waste annual generation to 500 kg/person by 2028.

Recent proactive steps include:

✓ Since the 2020 report, the Village of Chase has signed onto the *Recycle BC* program joining the TNRD, Merritt, Kamloops, Logan Lake, and Barriere which joined previously.

✓ The privately-owned *Campbell Hill Landfill* in Cache Creek opened in 2020 and receives waste from western TNRD solid waste facilities.

✓ In 2016 Kamloops opened the *Kamloops Resource Recovery Center* for diversion and landfilling of Demolition, Renovation, Construction (DRC) waste. In 2021 the City increased DRC disposal fees to encourage separation of materials that can be diverted.

Figure 10.1 Disposal Rate

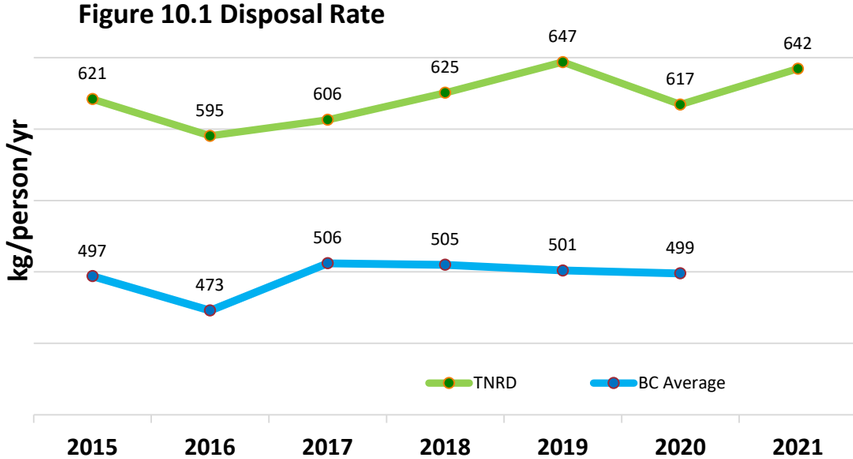
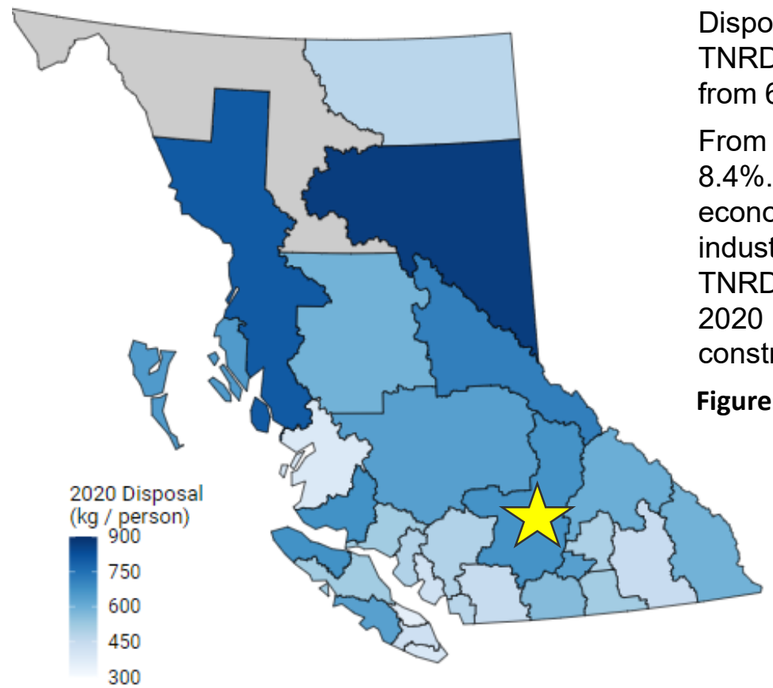


Figure 10.2 RD Disposal Rates Across BC



How do we compare across BC?

The disposal rate for each RD is published annually by the Province. As illustrated above by colour intensity, the further north, the more waste generation. In 2020, BC averaged 499 kg/person, from a low of 355 in Nanaimo to 870 in Peace River.

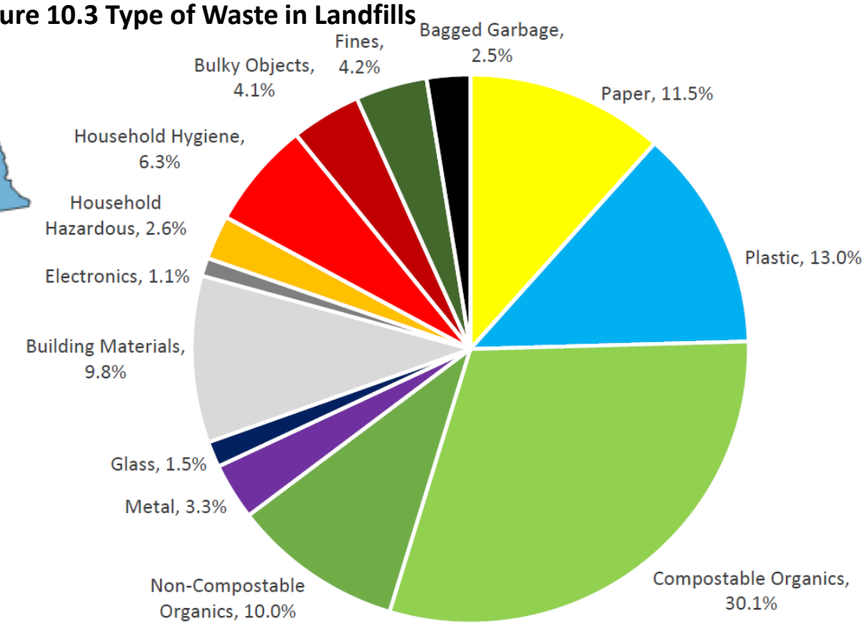
At 644 kg/person, in 2020 TNRD ranked 22nd of 27, well above surrounding regions. According to Figure 10.1, we finally saw some decline in 2021 but this may be attributed to extensive fire and flood events leading to thousands of displaced residents.

Waste Disposal: How are we doing?

Disposal rates (waste-to-landfill) from 2015 to 2021 for the entire TNRD (incl. Kamloops) show a slight dip then a subsequent rise from 621 kg/person in 2015 to 645 in 2019.

From 2016 to 2021, TNRD Census population has grown by 8.4%. Given disposal rates are directly linked to population and economic activity, the increase is expected. Large commercial or industrial projects also impact disposal rates. Traversing the TNRD, Trans-mountain Pipeline commenced construction in 2020 (2023 scheduled completion) has generated increased construction and temporary resident worker/contractor waste.

Figure 10.3 Type of Waste in Landfills



What is in our waste?

In 2021 we conducted a region wide waste composition study to help us understand the type of waste ending up in our landfills so as to focus diversion efforts to have the greatest impact. Figure 10.3 illustrates the results. Note the opportunity to reduce the compostable organics that make up almost 1/3 of TNRD waste.

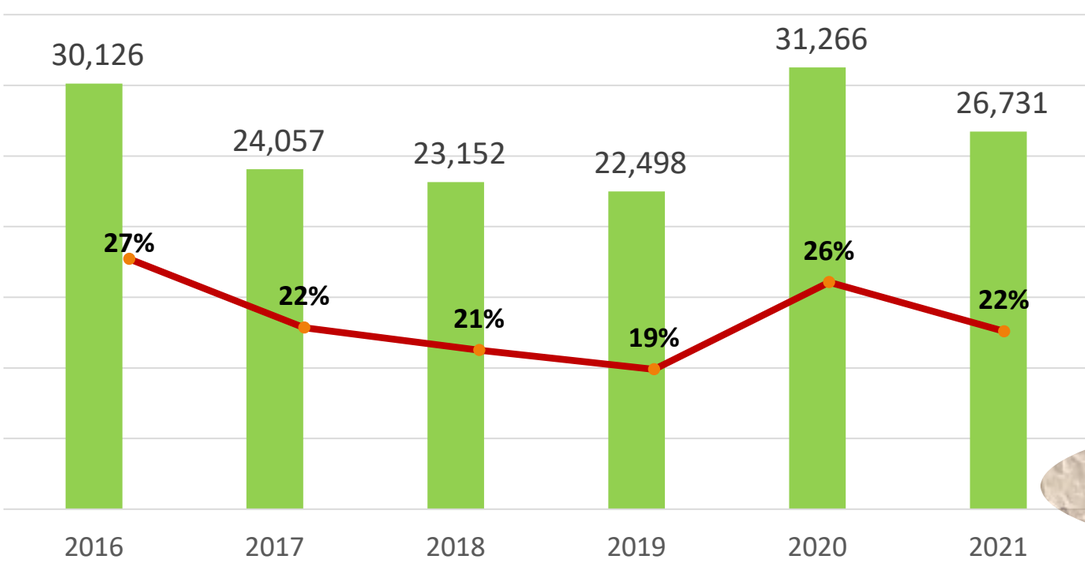
10 Solid Waste
Generation and Diversion

Waste Diversion

From 2016 to 2019 the total waste diverted from disposal gradually decreased but then increased in 2020 followed by a slight dip in 2021 (Figure 10.4). The 2020 increase is attributed to a large amount of concrete/asphalt. A global decrease in recycling capabilities coupled with an increase in waste-to-landfill (disposal rate) caused a steady decrease in the waste diversion. To achieve our waste reduction goals, more waste needs to be diverted or the amount we throw out reduced.

The pre-2019 trend in diversion is in part due to China's "National Sword" policy which banned import of most plastics and other materials from international markets including TNRD household and commercial recycling. This Policy also ended the *single stream recycling system*, replacing it with an extended producer responsibility program called Recycle BC. While this program secured end-markets for recycled commodities, it required us to sort recyclables into 7 streams. It also eliminated soft plastics and glass from curbside collection programs. While our recycling has decreased in volume from previous years, it has become cleaner.

Figure 10.4 Waste Diversion Rate & Amount (Metric Tonnes)



How can we do better?

The 2018 RSWMP set out strategies to reduce waste and increase diversion, including:

- **Increase business & institution recycling** by banning recyclables from disposal as 'garbage'; increasing the awareness of diversion opportunities for businesses; and supporting commercial haulers by communicating with their customers.
- **Mandatory Recyclables Bylaw,** adopted in 2021, banned corrugated cardboard from disposal in commercial refuse. Enforcement commenced in 2022 and is expected to improve diversion (recycling) rates.
- **Increasing diversion of construction and demolition waste (C&D).** Information regarding available diversion options throughout the TNRD for C&D waste materials will be made available to help contractors improve their waste management practices.
- **Reduce the compostable organic waste** by helping residents manage their food/yard waste at home (e.g. backyard composting) and support development of food waste collection and processing within Kamloops. Also, City of Kamloops completed a curb-side organics collection pilot in 2021 with city-wide collection set to begin in 2023.
- **Increase promotion & education efforts** region wide, e.g. promote localized waste reduction programs and develop a "Zero Waste" education program for schools.

An uptick in the 2021 overall diversion rate suggests we've adjusted to the more onerous sorting system & are recycling more items!

Sources and End Notes

Indicator 1 – Population

[1] BC Statistics – https://www2.gov.bc.ca/gov/content/data/statistics/people-population-community/population/population-estimates (accessed July 28, 2022).

*BC Stats document titled *BC Population Estimates and Projections Methodological Highlights - https://www2.gov.bc.ca/assets/gov/data/statistics/people-population-community/population/bc_population_estimates_and_projections_methodological_highlights.pdf*, states population projections and estimates come with limitations. In particular, population estimates and projections are based on the 2016 Census but will be re-based to the 2021 Census in the fall of 2023. We note that the BC Stats population data for Sun Peaks remained unchanged from 2020 to 2021 projections at 964, while the 2021 Census reports an increase in population to 1404.

[2] Statistics Canada. Focus on Geography Series. 2021 Census – https://www12.statcan.gc.ca/census-recensement/2021/as-sa/fogs-spg/page.cfm?topic=1&lang=E&dguid=2021A00035933 (accessed July 28, 2022).

[3] Age Percentage TNRD: Statistics Canada. *Census Profile*. 2021 Census of Population. Statistics Canada Catalogue no. 98-316-X2021001. (accessed July 28, 2022).

[4] Working age the lowest share in BC - https://www.workbc.ca/labour-market-information/regional-profiles/thompson-okanagan#view-full-profile

Indicator 2 – Housing

TNRD Building Inspection Services and Geographical Information Systems, & member municipalities (gathered annually). New Housing Starts on FN Reserves are not included. All housing starts in member municipalities were considered to be in “Established Communities” rather than “Rural”.

[1] Statistics Canada. Table 98-10-0237-01 Housing suitability by tenure: Canada, provinces and territories, census divisions and census subdivisions - https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=9810023701

Indicator 3 - Transportation

[1] Statistics Canada. Census Profile. 2011, 2016, 2021 Census. Statistics Canada Catalogue no. 98-316-X2021001. Ottawa. (accessed November 30, 2022)

Indicator 4 - Economy

*In 2021, Census slightly revised the definition of “farm”, so comparisons with earlier census results should be interpreted with caution. However, similar to all other 2021 Census variables, the broader the geography, the stronger the comparability across years.

[1] BC Monthly Labour Force, 3-month moving average, seasonally unadjusted

[2] BC Government Labour Market Outlook 2021

Indicator 4 - Economy cont’d

[3] Statistics Canada. Census Profile. 2011, 2016, 2021 Census. Statistics Canada Catalogue no. 98-316-X2021001. Ottawa. (accessed November 30, 2022)

[4] Statistics Canada. Census of Agriculture, 2011, 2016, and 2021.

Economic Profile for Thompson-Okanagan - https://www.workbc.ca/Labour-Market-Information/Regional-Profiles/Thompson-Okanagan#view-full-profile

Indicator 5 - Employment

[1] Statistics Canada. Focus on Geography Series. 2021 Census

Indicator 6 - Environment

[1] BC Ministry of Environment BC Air Data Archive - https://envistaweb.env.gov.bc.ca/

[2] https://bclung.ca/sites/default/files/media/1052-State%20Of%20The%20Air%202018_R12_web.pdf

Indicator 7 - Health

[1] BCCDC COVID-19 SPEAK Dashboard - http://www.bccdc.ca/health-professionals/data-reports/bc-covid-19-speak-dashboard (accessed September 9, 2022)

[2] Population Health Summary for TNRD RGS Annual Report, Interior Health Authority, Report Created by Epidemiology and Surveillance Unit; Using data from the Chronic Disease Registry, B.C. Ministry of Health (extracted from BCCDC Chronic Disease Dashboard) (accessed date unknown)

[3] Population Health Summary for TNRD RGS Annual Report, Interior Health Authority, Report created by Epidemiology and Surveillance Unit

Indicator 8 - Agriculture

[1] Statistics Canada. Canada's 2021 Census of Agriculture: A story about the transformation of the agriculture industry and adaptiveness of Canadian farmers - https://www150.statcan.gc.ca/n1/daily-quotidien/220511/dq220511a-eng.htm

[2] Input from Ministry of Agriculture, Regional Agrologist, regarding trends. (accessed November 16, 2022.)

[3] Canadian Agriculture at a Glance: Mushroom, greenhouse and highbush blueberry farming play pivotal role in British Columbia by Saneliso Mhlanga - https://www150.statcan.gc.ca/n1/en/pub/96-325-x/2021001/article/00010-eng.pdf?st=csDt8yfo

[4] Statistics Canada. Census of Agriculture, 2011, 2016, and 2021, by Census Consolidated Subdivision Thompson-Nicola. (accessed November 2, 2022.)

[5] **Change in farm definition**
For 2021 Census of Agriculture: a "farm" refers to a unit that produces agricultural products and reports revenues/ expenses for tax purposes to the CRA. Before 2021, a "farm" was as an operation that produced at least one agricultural product intended for sale. The change in definition may result in farms being classified differently across farm types than in previous censuses, so comparisons with earlier census results should be interpreted with caution.

Sources and End Notes Continued

Indicator 9 – Agriculture Protection

ALR background and application data was collected directly by the TNRD or from the ALC.

Data for agricultural land prices is sourced through LANDCOR, a private corporation that tracks the sales of land in the Province of BC through BC Assessment Authority records. This analysis includes sales of Class 9 farm assessed land: Farm at time of sale and references only those records that had a sales value greater than $0 and were not rejected by LANDCOR for sales comparison purposes.

Data often includes outliers, or values that lie outside of a norm. For data sets with smaller sample sizes, the effect of these outliers can be large. The average sale price for all farmland in a region included all records selected for analysis. That is, with a larger sample size, all values were used in calculating the average. To deal with the outlier effect, two averages are calculated. The first is based on all selected records. The second, a modified average, excludes outliers, in this case the highest and lowest sale values. Where the difference between the average of all records and the modified average is greater than 2.5%, the modified average is used. This reduces the outlier effect.

Mixed farms are those determined by BC Assessment Authority as having two or more contributory agricultural uses.

[1]Agricultural Land Price data all sourced from Landcor and based on Class 9 farm sales. Data received on June 1, 2022.

[2]Input received from Ministry of Agriculture, 2019

Indicator 10 - Waste Generation and Diversion

TNRD Environmental Services Department and City of Kamloops Environmental Services Department (tonnage of disposed & diverted waste)

Source of the BC disposal rates - http://www.env.gov.bc.ca/soe/indicators/sustainability/municipal-solid-waste.html

TNRD RSWMP - https://www.tnrd.ca/services/garbage-recycling/swmp/


Credit: Bonnie Pryce