

APPLIED RESEARCH SINNOVATION Selkirk College



Welcome

The State of the Basin initiative monitors and reports on indicators of environmental, economic, cultural and social well-being in the Columbia Basin-Boundary Region. The Columbia Basin Rural Development Institute (RDI) compiles the Snapshot report to provide a summary of current State of the Basin research. More information on the indicators of well-being and related reports and resources are available on the new State of the Basin website: stateofthebasin.ca.

Arts Culture Heritage Recreation Business Climate & Sectors Housing Infrastructure Workforce Civic Engagement & Safety Demographics Learning Health & Wellness

USING RESEARCH TO IMPROVE REGIONAL WELL-BEING

Every day, Columbia Basin-Boundary residents and organizations make decisions that influence the future of our region. The primary goal of the State of the Basin initiative is to provide access to data to support evidence-based decision-making, leading to improved well-being in the region. Four objectives support this goal:

- Inform citizens and organizations about the people, natural environment, communities, and economy of the region by providing
 access to accurate, credible, and timely information;
- Encourage understanding of complex issues and trends over time, including future projections when possible;
- **Signal** whether conditions are similar or different within the region, and in comparison to other areas to highlight and celebrate areas of achievement, and to identify significant issues, ideally before they become critical; and
- Motivate discussion, information sharing, strategic evidence-based decisions, and collective action.

INDICATORS & DATA SOURCES

State of the Basin research draws on available data from a variety of sources including federal, provincial, and local governments, crown corporations and non-profit initiatives. This data is collected from open access sources and through custom requests. While quantitative State of the Basin indicators help establish foundational knowledge of regional well-being, they only tell part of the story. Qualitative information, including the RDI's subjective well-being research, can further contribute to understanding the well-being

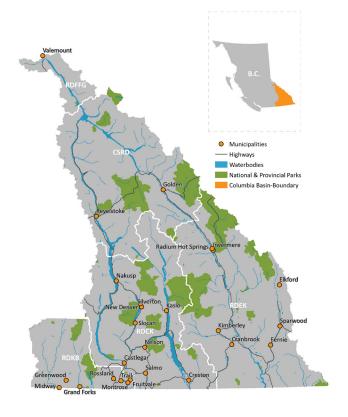
of our communities and region. In August 2019, a random sample of 400 Columbia Basin-Boundary residents participated in subjective well-being research. Participants responded to over 100 closed-ended questions, and some of their responses are included in this Snapshot.

THE COLUMBIA BASIN-BOUNDARY REGION

The Columbia Basin-Boundary Region encompasses more than 8.6 million hectares of land in southeastern British Columbia, Canada. It includes the Regional Districts of Kootenay Boundary, Central Kootenay, and East Kootenay, as well as a portion of the Columbia Shuswap Regional District and the Regional District of Fraser-Fort George. The Kootenay Development Region is within the Columbia Basin-Boundary Region, while two other development regions intersect the borders of the region: Thompson-Okanagan, and Cariboo. The Columbia Basin-Boundary Region is home to approximately 175,000 people.¹

STATE OF THE BASIN AND COVID-19

The COVID-19 pandemic has affected all aspects of life in the Columbia Basin-Boundary Region. Our understanding of these impacts will deepen as new data becomes available. This Snapshot report contains the most recent data available at time of publication. Some preliminary data, where available, is included to show how the COVID-19 pandemic is impacting the region. A more complete picture of the impacts will be visible when 2020 annual data is released in 2021.



ENVIRONMENT

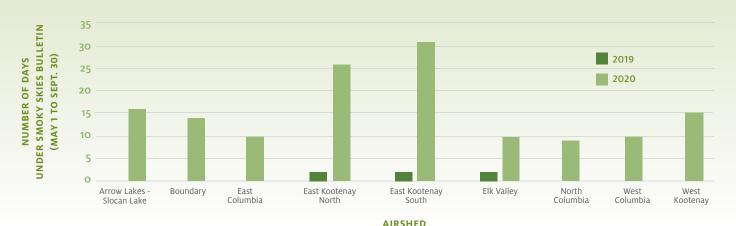
Air, Climate & Biodiversity

The well-being of all life within our region is connected to the health of our natural environment. The natural environment is the foundation of all built systems and structures in our societies and economies. We must protect and sustain the integrity of our environment for continued socio-economic growth and prosperity. The unique and diverse landscapes of the Columbia Basin-Boundary Region provide habitat for a multitude of species, land to grow food, harvestable resources, and clean air and water for everyone.

As of early 2020, there were 96 species at risk that are red listed (extirpated, endangered, or threatened) within the Columbia Basin-Boundary Region, such as the monarch butterfly (Danaus plexippus).4 There were 26 threatened ecosystems, or, red listed ecological communities.5

BIOGEOCLIMATIC ZONE	# OF RED LISTED SPECIES
Engelmann Spruce - Subalpine Fir	48
Interior Cedar-Hemlock	60
Interior Douglas-fir	47
Interior Mountain-heather Alpine	18
Montane Spruce	31
Ponderosa Pine	33

All airsheds in the Columbia Basin-Boundary Region experienced more Smoky Skies Bulletins during the 2020 wildfire season as compared to 2019.3 The East Kootenay airsheds had the greatest number of days with smoky skies.



of residents polled indicated that climate change is a problem to some degree, with 13% of those indicating it is a big problem.2

of residents polled indicated that there are impacts of climate change in our region.2

of residents polled indicated that air pollution is a small problem or no problem at all.2

of residents polled indicated that wildlife presence is a small problem or no problem at all.2

INVASIVE SPECIES

There were 139 invasive plant species confirmed to be present in the Columbia Basin-Boundary Region in 2019, an increase from the 132 reported in 2017.6

44% of residents polled indicated invasive weeds are a small problem or no problem at all.2

A leading factor of <u>human-wildlife conflict</u> in our region is the improper management of attractants - livestock/livestock feed and garbage are among the most common attractants resulting in the destruction of a bear.7

> bears were destroyed in the Columbia Basin-Boundary Region in 2019.⁷



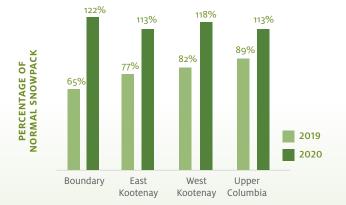
ENVIRONMENT

Water & Land

SNOWPACK

On April 1, 2020, the <u>snowpack</u> in regional snow basins was higher than normal.⁸ The April 1 snow water index provides an indication of the amount of water that will be available to serve human and environmental needs over the spring and summer seasons.

of residents polled indicated the health or quality of lakes, streams, and ground water is a small problem or not a problem at all.²

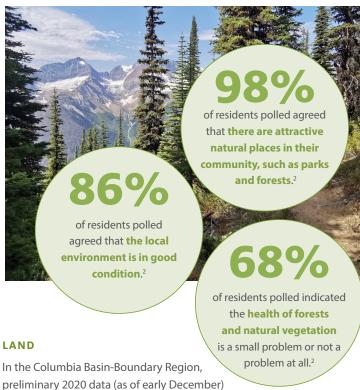


SNOW BASIN

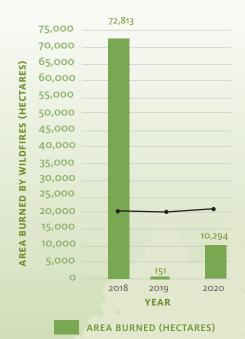


78% of residents polled rated access to fresh fruits and vegetables as good or very good.2

62% of residents polled rated access to affordable food as good or very good.



In the Columbia Basin-Boundary Region, preliminary 2020 data (as of early December) shows 10,294 hectares <u>burned</u> in 2020, which is well below the 10-year average.⁹



10-YEAR MOVING AVERAGE

In 2019, just over 8,300 hectares were logged in the Columbia Basin-Boundary Region, down from the over 15,800 hectares logged in 2018. 10,11,12



ECONOMY

Business Climate & Workforce

The well-being of our communities is supported by economic prosperity and the strength of our business climate. When our workforce is skilled, engaged, and has sufficient access to essential infrastructure, we can achieve economic growth. Structural systems dictate many aspects of well-being within our communities, such as: housing, transportation, water distribution, and waste disposal. We can support a healthy economy, population, and natural environment through well-functioning infrastructure. Economic data is often reported at the level of development region, and the Kootenay Development Region encompasses the Regional Districts of Central Kootenay, East Kootenay, and Kootenay Boundary.



From 2018 to 2019, the **employment rate** in the Kootenay Development Region increased by **0.7%.**¹³



Kootenav Development Region

British Columbia

Canada

Preliminary 2020 data shows the COVID-19 pandemic had substantial impacts on economic conditions in the region. The full impact will be visible when annual data becomes available in early 2021.

In 2019, 71,800 people were employed in all industries in the Kootenay Development Region.14 Over 39,000 businesses existed across all industries in the Columbia Basin-Boundary Region in 2019.15

The number of <u>business incorporations</u> (594) greatly exceeded the number of business bankruptcies (3) in the Kootenay Development Region in 2019. 16,17 In the same year, there were 147 consumer bankruptcies at a rate of 2.03 consumer bankruptcies per 1000 households.18



The Consumer Confidence Index (CCI) is a measure of the degree of optimism that consumers feel about the economy overall and their personal financial situation. The CCI in the Columbia Basin-Boundary Region was 66% in 2019, up from 34% in 2015 and 54% in 2016.2 If the CCI is high, people tend to make more purchases, and if CCI is low, people tend to spend less and save more.



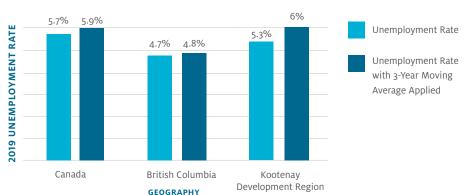
Between January and March of 2020, there was a total of 32 major projects in the Kootenay Development Region at an estimated cost of

\$9.4 billion.

In 2018, the average income of census families in the Columbia Basin-Boundary Region was \$99,761, as compared to \$109,468 in British Columbia. 20,21

There were **3,020 recipients** of employment insurance in May 2019 in the Kootenay Development Region.^{22,23}

The <u>unemployment rate</u> is a strong indicator of economic health, as it takes into account one of the economy's most important resources - people.24





MUNICIPALITY	AVERAGE APARTMENT RENT	VACANCY RATE
Cranbrook	\$822	0.9%
Nelson	\$912	0.4%

When more than 30% of a household's income is spent on shelter costs, the housing is said to be unaffordable. In 2016, 20.2% of owner and tenant households in the Columbia Basin-Boundary Region were spending 30% or more of household total income on shelter costs.

ECONOMY

Housing & Infrastructure

The Canada Mortgage and Housing Corporation provided vacancy rates and average rents for two municipalities in the Columbia Basin-Boundary Region in 2019.²⁵ The vacancy rates of both municipalities are well below the balanced rental vacancy rate of 3%.^{26,27}

As of March 31, 2019, there were a total of 1,165 independent social housing units in the Columbia Basin-Boundary Region.^{29,30} Social housing is subsidized by a level of government.31

of residents polled indicated poor access to housing.



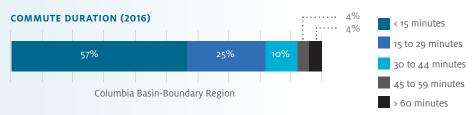
57% of commuters in the Columbia Basin-Boundary Region travelled less than 15 minutes to get to work in 2016.37

of residents indicated drinking water quality is a small problem or not a problem at all.2

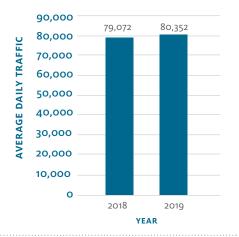
As of June 10, 2020, there were 212 drinking water advisories in the Columbia Basin-Boundary Region. 33,34,35 44% of advisories have been active for longer than five years, indicating a

long-term concern with either a water system's source or treatment infrastructure.

ТҮРЕ	NUMBER OF ADVISORIES
Boil Water Notice	177
Water Quality Advisory	26
Do Not Consume	9
Total	212



From 2018 to 2019, the average daily traffic volumes at permanent traffic count stations in the Columbia Basin-Boundary Region increased by 1.6%.³⁸ The shutdown due to the COVID-19 pandemic impacted regional traffic volumes. For example, Highway 3 West of Castlegar saw a 29% decrease in vehicle traffic in May 2020 compared to May 2019.



The Regional District of Central Kootenay waste disposal rate (469 kg/person) was the only Columbia Basin-Boundary regional district below the provincial average in 2018.³⁶



505 kg/person British Columbia



469 kg/person Central Kootenay



593 kg/person **Kootenay Boundary**



East Kootenay



Columbia Shuswap



790 kg/person Fraser Fort-George

CULTURE

Arts & Culture

Our emotional, spiritual, and physical well-being is sustained through expressions of arts and culture. The abundance of outdoor, recreational opportunities in the Columbia Basin-Boundary Region allows our regional and cultural identities to flourish. Arts and culture are an outlet to demonstrate our individuality, creativity, and the unique ways in which we choose to live. When we are free to retain, interpret and express ourselves through art, history, heritage and tradition, we contribute to and sustain our emotional and spiritual prosperity.

In 2018, municipal governments in the Columbia Basin-Boundary Region spent over \$39 million dollars on parks, recreation and culture, which was 14.3% of total spending.39

There are 22 <u>libraries</u> in the Columbia Basin-Boundary Region, most falling within the Kootenay Library Federation.⁴¹ Circulation per capita is the total circulation of all materials divided by the service population and is used as a measure of performance. Libraries are primarily funded by local governments. Local government support per capita is the total local government support divided by the service population.

PUBLIC LIBRA (2018)	RIES	AVERAGE LOCAL GOVERNMENT SUPPORT PER CAPITA	AVERAGE CIRCULATION PER CAPITA
Columbia Basin-Bou	ındary	\$35.79	8.7

There were 357,963 total visitors to visitor centres in the Kootenay Rockies Tourism Region in 2019. This is an increase of 2.9% from 2018.40

Due to the COVID-19 shutdown, April through June 2020 saw a 79% drop in total visitors to visitor's centers in the Kootenay Rockies Tourism Region compared to the same time period in 2019.





CULTURE

Heritage & Recreation

In 2020, there were 94 historic places in the Columbia Basin-Boundary Region officially recognized for their heritage value.⁴² The historic functions of these places range from commerce/commercial services, education, government, industry, leisure, religion, residency, and transportation (rail and water).

The Local Government Act permits the designation of heritage conservation areas, which are identified in an official community plan and defined as places with special heritage values or character.⁴³

There is one heritage conservation area in the Columbia Basin-Boundary Region located in Revelstoke. This area preserves the integrity of the heritage buildings and historic streetscapes around the Revelstoke Station of the Canadian Pacific Railway.44



There are **62 civic facilities** in the Columbia Basin-Boundary Region in 2020.45

TYPE OF FACILITY	COUNT
Arena	11
Community Hall	9
Curling Club	9
Museum	18
Recreation Centre	15

of residents polled rated access to recreational facilities as good or very good.2

of residents polled indicated they frequently take part in sports groups or teams.²

rated access to recreational experiences and opportunities as good or very good.2



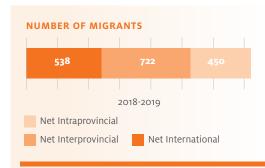


Demographics, Health & Wellness

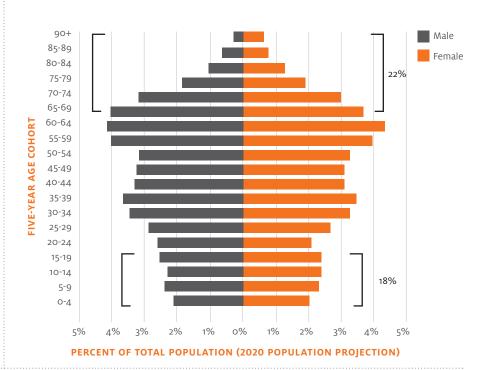
Our communities are influenced by the composition and structure of our society. Demographic data can be used to glean insight into the changes experienced within our population, as different population groups have varied needs and capabilities related to housing, education, employment, and social services. The overall health and well-being of our residents, and their level of community engagement, contribute to the vitality of our region. A healthy community is safe, connected, and contains all necessary resources to achieve and maintain mental and physical well-being. Education is a key determinant of social capacity, as it provides people with the knowledge and skills required to participate in society, contribute to communities, and promote personal health and well-being.



REGIONAL DISTRICT/ REGION	POPULATION ESTIMATE (2019) ⁴⁹
Central Kootenay	63,311
East Kootenay	64,695
Kootenay Boundary	33,432
Northern Basin (Valemount, Revelstoke, Golden)	13,444
Columbia Basin-Boundary	174,882



In 2018/2019, there was a total of 1,710 net total migrants in the Kootenay Development Region.51 When examining population age structure by 5-year age cohort and gender, 18% of the total population is between 0 and 19 years of age, and 22% is from 65 to 90 years of age and older.50





In 2019, the average life expectancy in local health areas of the Columbia Basin-Boundary Region was 81 years of age. 52 rated access to general health services such as a doctor or pharmacist as good.2

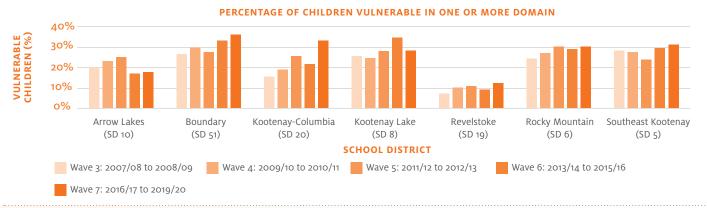


Of the 1,250 live births in the Columbia Basin-Boundary Region in the 2019/2020 fiscal year, 6.2% were low birth weight newborns.53

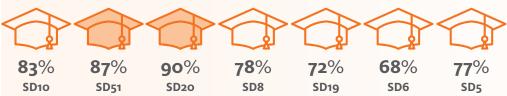
SOCIETY

Education, Civic Engagement & Safety

The Early Development Instrument (EDI) is a questionnaire that assesses the developmental readiness of a group of kindergarten children with an aim of identifying vulnerabilities on one or more scales (physical, social, language, emotional, communication).^{54,55} The percentage of children vulnerable in one or more domains over time is shown on the graph.⁵⁶



In the 2018/2019 school year, two of the seven school districts in the Columbia Basin-Boundary Region exceeded the provincial high school completion rate of 85%.57



campuses in the Columbia Basin-**Boundary Region included** 89% domestic students.58

In the 2019 federal election, voter turnout in all three of the federal ridings intersecting the Columbia Basin-Boundary Region exceeded the voter turnout in both British Columbia and Canada.60

GEOGRAPHY/RIDING	VOTER TURNOUT (2019)
Kootenay-Columbia	73%
South Okanagan - West Kootenay	69%
Prince George - Peace River - Northern Rockies	68%
British Columbia	66%
Canada	66%

An estimated 54.5% of registered voters across British Columbia voted in the 2020 provincial election. 61

From 2018 to 2019, 62% of police services in the Columbia Basin-Boundary Region reported an increase in the Crime Severity Index (CSI).62

The CSI considers all Criminal Code violations and crimes included are assigned a weight based on the seriousness of the offence. Substantial shifts in a small community's CSI may occur as a result of only a few crimes causing large fluctuations in CSI year-over-year.

In 2018, over 24,700 Columbia Basin-**Boundary taxfilers made** charitable donations (18.4% of all taxfilers) totaling over \$33 million.59

of residents polled never get involved in political activities.2

of residents polled

agreed that their community



Learn More

To get more information on indicators of well-being within the Columbia Basin-Boundary Region go to stateofthebasin.ca. This website also contains previous Snapshot Reports, Subjective Well-being Reports (results of a poll of Columbia Basin-Boundary residents focused on perceptions and behaviours), and Community Profiles (summaries of community-specific State of the Basin data); and a monthly feature trend analysis. Through the State of the Basin initiative, the RDI also provides remote data provision support. This is one-on-one support to provide State of the Basin research for use by an organization or initiative. To access this service, contact Jayme Jones.

REFERENCES & RESOURCES

- BC Stats. (2020). Municipal and sub-provincial areas population, 2011 to 2019 (XLSX). [Dataset].
- Columbia Basin Rural Development Institute. (2020). 2019 State of the Basin subjective well-being report.
- BC Ministry of Environment and Climate Change Strategy. (2020). Smoky skies summaries [Custom data set].
- BC Ministry of Environment & Climate Change Strategy. (2020). BC Species & Ecosystems Explorer. B.C. Conservation Data Centre.
- BC Ministry of Environment & Climate Change Strategy. (2020). B.C. Conservation Data Centre.
- BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development. (2019). Invasive alien plant site. [Data set].
- BC Ministry of Environment and Climate Change Strategy. (2020). Bears. BC Conservation Officer Service. [Custom data set].
- Ministry of Forests Lands Natural Resource Operations and Rural Development. (2020). Snow conditions & water supply bulletin.
- BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development. (2019). Fire perimeters – historical. BC Wildfire Service. [Data set].
- BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development. (2019). Results – openings svw. Resource Practices. [Data set].
- 11. BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development. (2019). Results – forest cover reserve. Resource Practices. [Data set].
- 12. BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development. (2019). Fire perimeters – historical. BC Wildfire Service.
- 13. Statistics Canada. (2020). Table 14-10-0090-01 labour force characteristics by province, territory and economic region, annual [Data set].
- Statistics Canada. (2020). Table 14-10-0092-01 employment by industry, annual, provinces and economic regions (x 1,000). [Data set].
- BC Stats. (2019). Business locations by Census Subdivision (municipalities and non-incorporated areas) (XLSX) [Data set].
- 16. BC Stats. (2020). Incorporations 2001 to 2019 (XLSX) [Data set].
- 17. BC Stats. (2020). Bankruptcies for 2006 to 2020 (XLSX) [Data set].
- BC Stats. (2020). Bankruptcies for 2006 to 2020 (XLSX) [Data set].
- Government of British Columbia. (2020). Major projects inventory Q1 2020 [Data set].
- 20. Census families include: 1) couples (married or common-law) living in the same dwelling, with or without children; and 2) lone-parents (male or female) with one or more children.

- 21. Statistics Canada. (2020). F-06: Sources of income by census family type, 2018. Taxfiler (T1FF) – Income of Families, Income Statistics Division. [Data set].
- 22. The month of May was chosen as it is outside the winter and summer seasons when there may be variations in employment.
- Statistics Canada. (2020). Employment insurance beneficiaries by census division, monthly, unadjusted for seasonality (Table 14-10-0323-01) [Data set].
- Statistics Canada. (2020). Labour force characteristics by province, territory and economic region, annual (Table 14-10-0090-01) [Data set].
- 25. Canada Mortgage and Housing Corporation is no longer collecting data for small municipalities; therefore, current data are only available for Cranbrook and Nelson.
- 26. Federation of Canadian Municipalities. (2012). No vacancy: Trends in rental housing in Canada: A QOLRS in brief report.
- 27. Canada Mortgage and Housing Corporation. (2020). Housing market portal.
- 28. Statistics Canada. (2019). Census profile, 2016 Census (Catalogue no. 98-316-X2016001) [Data set].
- 29. BC Housing. (2019). Number of units under BC Housing administration by local government and service allocation group/subgroup in BC Regional Districts [Custom data set].
- 30. This is long-term housing with rent geared to income (30% of household total gross income, subject to minimum rent based on number of people) for people who permanently reside in British Columbia when applying, with gross household income below a certain limit. Client groups include: families, seniors, people with disabilities, and singles and couples.
- 31. The Homeless Hub. (2019). Affordable housing.
- Statistics Canada. (2019). Census profile, 2016 Census (Catalogue no. 98-316-X2016001) [Data set].
- 33. Interior Health Authority. (2020). Types of advisories.
- 34. Interior Health Authority. (2020). Interior Health interactive drinking water advisory map. [Retrieved 2020, June 10].
- Northern Health Authority. (2020). Current water advisories. [Retrieved 2020, June 10].
- 36. Environmental Reporting BC. (2019). Municipal solid waste disposal in B.C. (1990-2018).
- Statistics Canada. (2020). Main mode of community (10), community duration (6), distance from home to work (12) and time leaving for work (7) for the employed labour force aged 15 years and over having a usual place of work, in private households of Canada, provinces and territories, census divisions and census subdivisions, 2016 Census - 25% sample data (Table 98-400-X2016328) [Data set].

- 38. BC Ministry of Transportation and Infrastructure. (2020). Traffic data program GIS application.
- 39. BC Ministry of Municipal Affairs and Housing. (2019). Financial statistics by schedule, expenses schedule 402, 2018 (XLS). [Data set].
- 40. Destination British Columbia. (2020). Visitor services network statistics program, year over year reports, 2018 to 2019. [Data set].
- 41. BC Ministry of Education Libraries Branch. (2020). BC public libraries statistics 2002-present. [Data set]. DataBC.
- BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development – Heritage Branch. (2020). BC historic places web map.
- 43. BC Ministry of Tourism, Sport and the Arts Heritage Branch. (n.d.). Heritage conservation: a community guide.
- BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development - Heritage Branch. (2020).
 Heritage conservation areas of BC. [Data set].
- 45. BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development GeoBC Branch. (2020). Civic facilities.
- 46. Parks Canada. (2019). Parks Canada attendance 2018-19.
- 47. The Columbia Basin Rural Development Institute recognizes that gender identity is not a binary of male and female and that some transgender, non-binary, two spirit, and intersex populations may not be correctly represented by the data. Databases, such as the 2016 census, limit responses to male or female. Canada's 2021 census will include more nuanced questions on sex, sexual orientation, and gender identity to better represent LGBTQ2IA+ populations.
- 48. Statistics Canada. (2017). Age (in single years) and average age (127) and sex (3) for the population of Canada, census metropolitan areas, census agglomerations and census subdivisions, 2016 and 2011 Censuses 100% data (catalogue no. 98-400-X2016002). [Data set].
- BC Stats. (2020). Municipal and sub-provincial areas population, 2011 to 2019 (XLSX). [Dataset].

- 50. Government of British Columbia. (2019). Population projections application.
- BC Stats. (2020). Migration by development region and regional district.
 [Data set].
- 52. BC Statistics. (2020). Life expectancy at birth by health area, 1986-2019 [Data set].
- 53. Perinatal Services BC. (2020). Low birth weights in the Columbia Basin [custom data set].
- 54. Offord Centre for Child Studies. (2019). What is the EDI?
- Human Early Learning Partnership. (2019). Vulnerability on the EDI [Fact sheet]. University of British Columbia.
- Human Early Learning Partnership. (2020). EDI waves 2-7 (SD,LHA,NH,BC).
 [Data set].
- 57. BC Ministry of Education. (2020). BC schools six year completion rate. [Data set].
- 58. BC Ministry of Advanced Education. (2020). Domestic and international student headcount by economic development region and institution. https://catalogue.data.gov.bc.ca/dataset/domestic-and-international-student-headcount-by-economic-development-region-and-institution
- Statistics Canada. (2019). Taxfiler (T1FF) Financial data and charitable donations.
- 60. Elections Canada. (2020). Elections Canada official reports.
- 61. Elections BC. (2020). Preliminary voter turnout estimate available.
- 62. Statistics Canada. (2020). Crime severity index and weighted clearance rates, police services in British Columbia. [Data set].



For more information on RDI projects and resources, visit www.cbrdi.ca.



The Columbia Basin Rural Development Institute acknowledges the support of Columbia Basin Trust.

State of the Basin findings have been developed by a team of qualified researchers. A variety of data sets were used to develop indicator findings, and as such, community groupings may vary from indicator to indicator. In some cases community-specific data is not available. State of the Basin research should not be considered a complete analysis, and we make no warranty as to the quality, accuracy or completeness of the data. The Columbia Basin Rural Development Institute, Selkirk College and Columbia Basin Trust will not be liable for any direct or indirect loss resulting from the use of or reliance on this data.

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We'd love your feedback on this and other State of the Basin initiatives. Visit stateofthebasin.ca/feedback.