

SOUTH OKANAGAN

REGIONAL GROWTH STRATEGY VOLUME 11, 2023



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Introduction

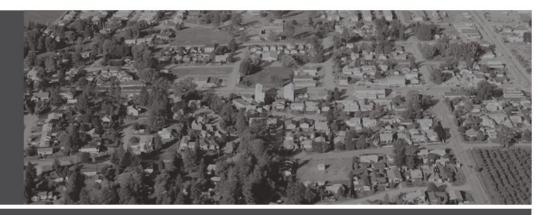
The Local Government Act requires a regional district to measure its progress on an RGS. Performance indicators selected for the South Okanagan RGS will allow the RDOS to monitor its implementation and progress towards the vision articulated by the community

An original set of indicators was established in 2008, and a selection of ten key indicators was chosen to start monitoring the RGS once it was adopted in 2010. The selected indicators were based on the seven goals of the RGS. A long list of indicators, derived from a literature review of existing or proposed regional growth strategy monitoring programs from regional districts in British Columbia and other indicator programs, was refined based on how well they suited RGS goals, data availability, and reliability. Since 2010, some indicators have proven to be difficult to track, suffer from data challenges, or poorly represent the goal with which they are associated. These were updated and replaced as necessary as part of the 2016 revisions. The 2015 Snapshot update was the first report to incorporate the 2016 revisions.

There are currently 16 indicators tracking the performance of the goals of the seven policy areas. Two additional context indicators show population growth trends against which change in other indicators can be made more meaningful. Indicators have been selected to balance fidelity to the goals with pragmatic concerns of data collection and reporting frequency. Data for all the indicators is available freely from trusted sources like BC Stats, Census data and RDOS internal reports.

This is the fifth volume of indicators produced since the 2016 revisions. The 2023 Snapshot will show any additional data available since Volume 10, 2018-2022 was produced.

CONTEXT



POPULATION GROWTH

INDICATOR

% change in population

Total regional population for 2023

WHAT'S GOING ON: Change since last period

The estimated population growth rate for the RGS area was approximately 0.7% from 2022 to 2023.

The estimated total population in the South Okanagan is 77,355

CONTEXT

When the Regional Growth Strategy (RGS) was adopted in 2010, it anticipated "a moderate population increase of more than 1.5% per year". Population growth in the Regional Growth Strategy (RGS) area between 2022 and 2023 was lower than expected, with an overall increase of 0.7%, raising the population from 76,187 to 77,355¹. This growth reflects a more rapid expansion than the long-term average of 0.63% annual growth observed in the RGS area between 1996 and 2021. While this is a positive indicator of regional development, population trends vary across municipalities and electoral areas within the RGS. Similarly, between 2022 and 2023, the RDOS saw a population increase of 0.7%, with the total population growing from 93,871 to 94,533.

The population estimates from BC Stats shows that the majority of growth occurred within the City of Penticton, Oliver and Osoyoos with 0.5% increase. Summerland's population similarly increased by 0.3%. For 2023, BC Stats does not provide population breakdowns for Electoral Areas but does provide statistical population projections for municipalities and for the RDOS as a whole. At present, BC Stats is projecting an anticipated average annual growth for the broader Regional District of Okanagan region of 0.7% between 2022 and 2046. This would result in a population of 112,834 in the RDOS region by 2046, or an increase of approximately 18,963 new residents.² These figures do not include population numbers for on-reserve First Nations in the RGS area (Penticton Indian Band, Osoyoos Indian Band).

¹ Population projections from BC Stats P.E.O.P.L.E. are only available at certain scales; Since electoral data is only available for census years, RDOS projections have been used to develop projections for the RGS study area, which may vary.

² Population projections from BC Stats P.E.O.P.L.E.



HOUSING AND DEVELOPMENT

GOAL

Focus development in serviced areas in designated Primary Growth Areas and Rural Growth Areas.

INDICATOR	HOW ARE WE DOING: Change since last period	
1.1) Percent of housing starts in primary growth/ rural areas	(Poor: the proportion of housing starts in primary growth areas decreased by 7% since the 2022 Snapshot
1.2) Hectares change (inclusions/exclusions) to ALR	(Poor : 1 ha of agricultural lands was excluded from the ALR
1.3) Median home prices	\Rightarrow	Well: Median home price decreased by 9.4% between 2022 and 2023
1.4) Affordability ratio	(Poor: The proportion of households spending 30% or more of their income on shelter (Core Housing Need) has increased.
		While the affordability ratio decreased from 6.3 to 5.5, it remains beyond common thresholds for affordability of 3.0 or 3.5
1.5) Number of housing starts by type		Well: Only 36.41% of new dwellings were single family units compared to the historic average of approximately 67%.

1.1) Percent of housing starts in primary areas / rural areas

This indicator measures the number of new housing units built³ in the RGS Area. This is important as a means of understanding growth within the RDOS to ensure residential areas can be effectively and efficiently serviced, as well as protecting important areas for agriculture and biodiversity. The RGS strongly encourages the development of compact communities. In 2023, approximately 75% of housing starts took place in primary growth areas.

1.2) Hectares change to ALR

This indicator tracks the success of protecting agricultural land by measuring the amount of land that has been added or removed annually from the Agricultural Land Reserve (ALR), within the RGS study

Electoral
Area "F"

LOWER SIMILKAMBEN INDIAN BAND

Agricultural Land Reserve

NORTH
1:650,000

FENTICTON PENTICTON
INDIAN BAND

Electoral Area "C"
OSOYOOS
INDIAN BAND

Electoral Area "C"
OSOYOOS
INDIAN BAND

Electoral Area "A"
Agricultural Area "B"
Lower SIMILKAMBEN BAND
INDIAN BAND

Electoral Area "A"
OSOYOOS
INDIAN BAND

Electoral Area "A"
INDIAN

Figure 1: ALR land within the RGS

area. This is determined through changes to ALR boundaries in Agricultural Land Commission (ALC) mapping each year.

Protection of this land is important as only 5% of BC's land is suitable for farming, making farmland a valuable commodity. With the goal of protecting agricultural land, the ALR recognizes the importance of agriculture as an economic driver, and important local food source. Within the south Okanagan, agriculture also forms an integral part of the local and regional history.

One of the key directives in the RGS is the protection of farmland and the agriculture industry in the south Okanagan by promoting retention of farmland and directing development to established growth areas⁴.

Between 2022 and 2023, 2 ALC exclusion applications and 2 ALC inclusion applications were approved in the RGS area. Overall, the area of ALR land in the RGS area decreased by 1 ha.

³ Based on residential building permits issued.

⁴ Farming activities also occur on agricultural land that is not in the ALR, and land in the ALR may not be actively farmed.

1.3) Median home price

Taken as a general measure of affordability, the median house price in the RGS Area decreased by 9.4% between 2022 and 2023, which is seen to be a positive change in terms of affordability. This indicator uses home values from BC Assessment and is expressed in 2010 CPI adjusted dollars to allow for comparison with previous years by removing the effects of inflation.

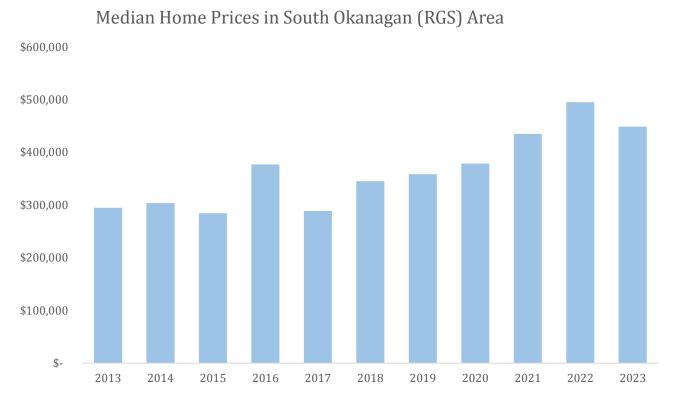


Figure 2: Median Home Price in South Okanagan RGS Area

Figure 2 illustrates that between 2017 and 2022, the median home price in the RGS area increased. Despite a 9.4% decrease from 2022-2023, the median home price in the RGS area has not returned to pre-2021 levels.

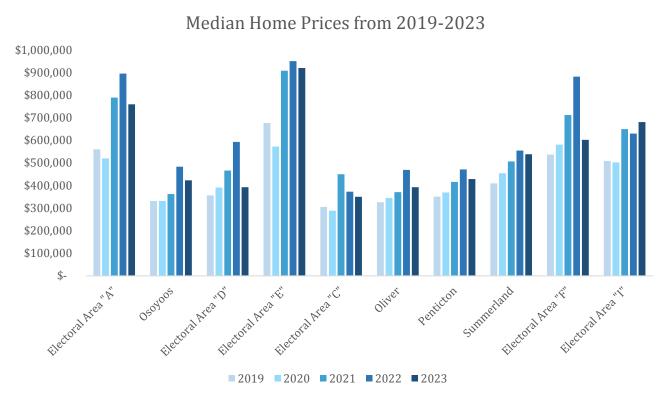


Figure 3: Median Home Price in Electoral Areas and Member Municipalities from 2019 to 2023⁵

Figure 3 shows that while the median home price decreased in most of the RGS area, Electoral Areas D and F experienced the most significant decreases. Other areas, such as Town of Oliver and Electoral Area A, also experienced moderate decreases. In contrast, Electoral Area I was the only location to see a slight increase in median home price.

1.4) Affordability ratio: Median home price to median household income

By comparing home prices to income, this indicator gives an idea as to how accessible housing is to residents of the RGS. Typically, a ratio of approximately 3.0 to 3.5 is considered a threshold for affordability, i.e., three to three and a half times the average household income is needed to purchase an average home (this is the inverse of another common metric – the "shelter-to-income" ratio - which assumes 30% of a household income should be enough to cover housing costs).

In the RGS study area, the affordability ratio has decreased from 6.3 to 5.5 between 2022 and 2023 snapshot, which represents an improvement in housing affordability. Despite this, a ratio of 5.5 indicates that it will take more than five times the median household salary to purchase a home, which is still well above common benchmarks for affordability.

Core Housing Need: Households Spending 30%+ of Income on Shelter

⁵ Based on BC Assessment – Assessed value

Looking at the wider Region, this portion of this indicator will speak to the incidence of households in Core Housing Need in the RDOS as a whole including the Similkameen Electoral Areas and Member Municipalities. Data is collected during each federal census, with the last data collection year being 2021.

A household is considered to be in the Core Housing Need category if their current dwelling is unaffordable, inadequate, and/or in poor repair, and acceptable alternative housing in the community would cost 30% or more of the household's before-tax income. Measuring the ratio of household income in relation to shelter costs is an important and widely accepted measure of housing affordability.

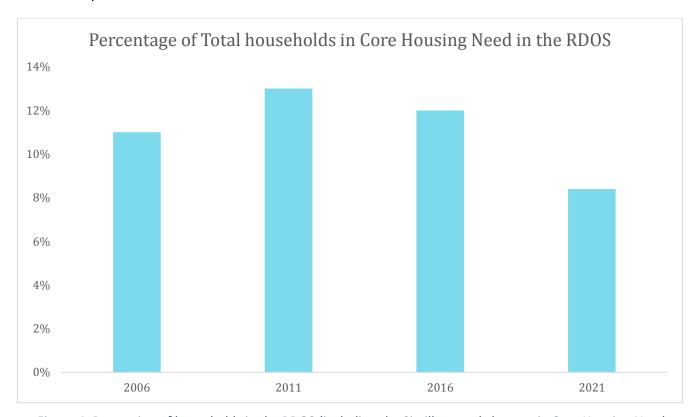


Figure 4: Proportion of households in the RDOS (including the Similkameen) that are in Core Housing Need

Approximately 8.4% of people in the RDOS as a whole are in Core Housing need. This represents a reduction from the 2016 census. In comparison, in the Province of British Columbia approximately 12.59% of people are considered in Core Housing need. The majority of households in the Core Housing Need category in the RDOS were renter households (22%).

1.5) Housing Diversity/Choice: Number of homes by structural type

This indicator measures the percentage mix of new housing by structural type; that is, the number of units that are single family homes, row houses, and apartment units. The range of housing types found within the total number has the potential of indicating overall community sustainability.

The RGS strongly encourages the development of compact, complete communities in the South Okanagan. Specifically, developing complete communities that are accessible to their residents requires a mix of housing types. Generally, multi-unit dwellings are more affordable than single detached dwellings.

In the RDOS as a whole, single-family home construction decreased from 256 in 2022 to 138⁶ in 2023, accounting for 36.41% of total new dwelling units. Row housing construction increased from 36 to 55 new units, and comprised 14.51% of total new dwelling units. While construction of apartment units declined from 449 to 186, this dwelling type continued to represent the largest proportion of new residential units at 49.08%.

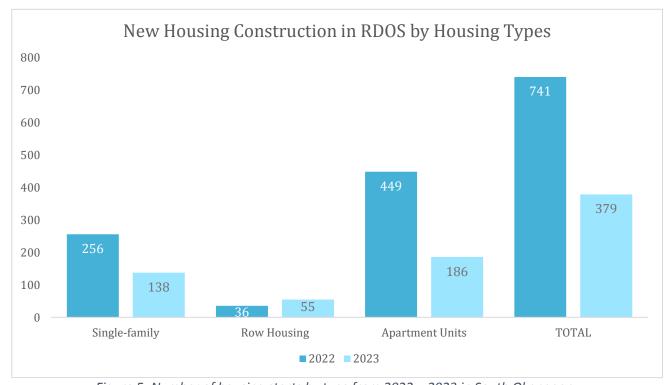


Figure 5: Number of housing starts by type from 2022 – 2023 in South Okanagan

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⁶ BC Stats-Building Permits

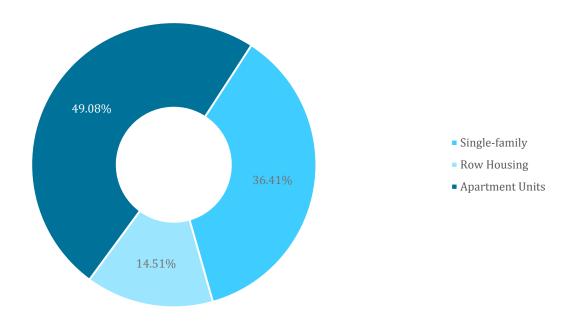
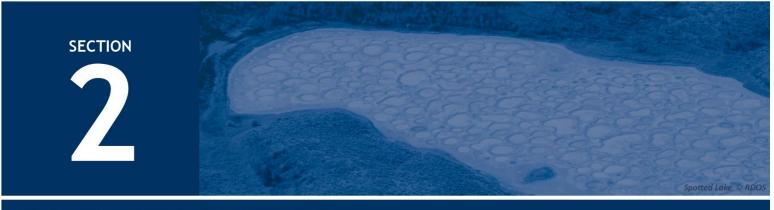


Figure 6: % of RDOS new construction by housing type in 2023



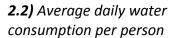
ECOSYSTEMS, NATURAL AREAS AND PARKS

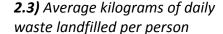
GOAL

Protect the health and biodiversity of ecosystems in the south Okanagan.

INDICATOR

2.1) Percent of land base that is parkland and protected areas





HOW ARE WE DOING: Change since last period



Well: protected land increased by 12 ha.



Well: consumption decreased by 32 m³ per person



Well: total annual waste landfilled at Campbell Mountain decreased by 1.2%

2.1) Percent of land base that is parkland and protected areas

This indicator measures the percentage of total land area of parks and protected natural areas in the South Okanagan. It includes lands zoned as a park and lands owned by The Nature Trust of BC, the Nature Conservancy, Ducks Unlimited and the Land Conservancy.

The Okanagan valley supports some of the rarest flora and fauna in Canada. The policies of the RGS strongly support the conservation, protection and enhancement of ecologically sensitive lands and the retention of open spaces, parks and large rural holdings.

Between 2022 and 2023, the total protected and parkland area within the RDOS (including Oliver, Osoyoos, Summerland, and Penticton) experienced a modest net increase of 12 hectares. The largest contribution to this change came from RDOS, Oliver, and Osoyoos, which saw a 13-hectare increase due to a zoning amendment shifting land from Rural Area (RA) to Conservation Area (CA). In contrast, Summerland experienced a slight decrease of 8 hectares, attributed to corrections in parcel calculations. Penticton's protected area expanded by 7 hectares, primarily due to zoning boundaries extending further into water. These minor adjustments reflect ongoing land management efforts in the region.

2.2) Average daily water consumption per person

Water availability is a concern in the South Okanagan. As the region grows in population, water supply will continue to be an issue. The RGS includes eight policies for communities, organizations and governments to work together to ensure future water sustainability.

This indicator uses combined residential and irrigation usage data collected from ten water utilities of the South Okanagan. Since the 2017 Snapshot report the RDOS has taken over two water systems (Sun Valley in Electoral Area "D" and Willowbrook in Electoral Area "C") and Okanagan Falls in 2023.

In 2023, the total water consumption increased slightly to 36,395,422 liters, compared to 35,701,600 liters in 2022. This represents an increase of about 1.95% in total water usage. However, the population in the service area also grew from 63,446 in 2022 to 68,571 in 2023, a rise of approximately 8.1%. Despite the increased water consumption and population growth, the annual water use per capita decreased from 562.71 m³ in 2022 to 530.77 m³ in 2023⁷, reflecting a reduction in water use per person. The annual per person consumption of 530. 76 m³ equals 1454.156 liters/day/person.

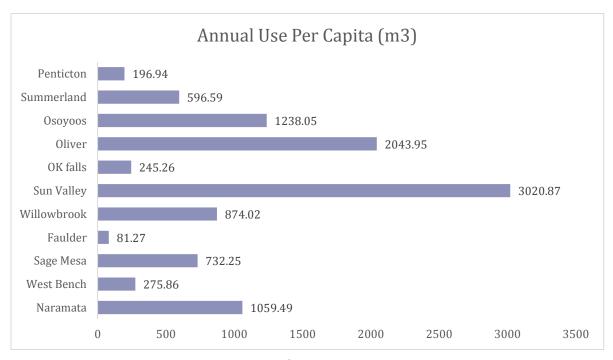


Figure 7: Annual Water Use per person

2.3) Average kilograms of daily waste landfilled per person (kg/day/capita)

⁷ Annual water consumption data were available for 2023 except for Summerland. Population data were missing so 2023 population estimate were used only for Oliver, Osoyoos, Penticton and Summerland while for remaining used the 2021 population estimate. As, Okanagan Falls was added from 2023, the calculations for this were based on 2021 population as well.

This indicator consists of measurements taken from the Campbell Mountain landfill, not including diverted waste (i.e., recycled).

The RGS speaks directly to reducing solid waste production by promoting and encouraging waste reduction, through best practices, public awareness and actions.

Between 2022 and 2023 the total tonnage disposed at the Campbell Mountain landfill decreased by 1.2%. The average daily amount of waste landfilled in 2023 was 1.34 kg per capita per day, a decrease from 1.45 kg per capita per day in 2022.8

Data fluctuations can be expected as the service area population is assumed constant and is estimated for the population both within the City's boundaries and those customers within the Regional District.

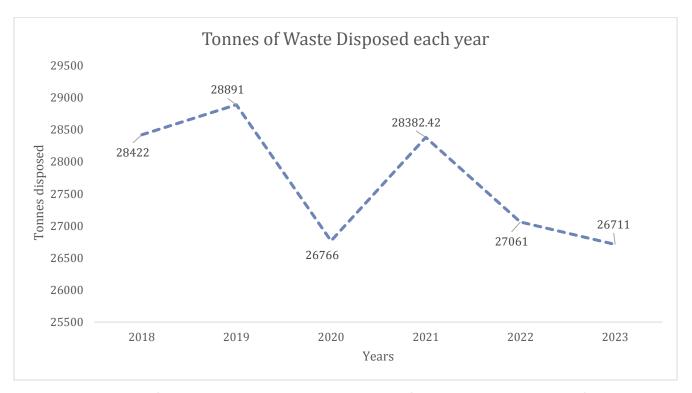


Figure 8: Tonnage of Waste and Diverted Materials Disposed of at Campbell Mountain Landfill Each Year

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⁸ Campbell Mountain Landfill 2023 Annual Report

INFRASTRUCTURE AND TRANSPORTATION

GOAL

Support efficient and effective infrastructure services and an accessible multi-modal transportation network.

INDICATOR

3.1) Total annual regional bus ridership

HOW ARE WE DOING: Change since last period



Well: Overall ridership in the Region increased since 2022. Significant increase seen in Summerland (Unit 764) by 45.6%.

3.1) Total annual regional bus ridership

This indicator measures the number of trips taken on BC Transit buses within each BC Transit business unit of the RGS area. South Okanagan residents depend on a municipal and provincial transportation network and services for work, recreation and day-to-day travel.

The South Okanagan-Similkameen Transit system consists of 16 routes, 15 of which service the RGS Area. BC Transit often reports data by "business units", areas that can consist of single bus routes or multiple routes. The three business units presented below include the following routes:

- Osoyoos business unit 747: Route 41 Osoyoos Local and Route 40 Osoyoos/Penticton
- **Summerland business unit 764**: Route 30 Summerland/Penticton
- Okanagan-Similkameen business unit 745: Route 10 Naramata/Penticton, Route 20 Okanagan Falls/ Penticton and Route 21 Okanagan Falls Local
- Penticton business unit 847: Route 1 Okanagan Lake/Wiltse, Route 2 West Side/Penticton Avenue, Route 3 Uplands/Skaha Lake, Route 4 West Side/Duncan East, Route 5 Main Street, Route 11 West Bench/Penticton, Route 15 Night Route, Route 16 Lake to Lake and Route 70 Kelowna/Penticton

Since the 2017 snapshot, old Route 90 Osoyoos has been removed and new Route 70 Kelowna/Penticton (added 2020) and Route 11 West Bench (added January 2022) have been added.

SECTION 3: INFRASTRUCTURE AND TRANSPORTATION

This indicator only looks at "conventional" routes, and does not include rides taken by specialty services (e.g. handyDART).

In 2023, the regional growth strategy area saw a notable increase in annual bus ridership. Penticton recorded 361,371 riders in 2022, which rose significantly to 420,894 in 2023, marking a 17% increase. Osoyoos also experienced a sharp rise to 13,035 in 2023, a 38.4% jump. Similarly, Summerland saw a substantial 45.6% increase, with ridership growing from 14,325 in 2022 to 20,858 in 2023. Okanagan Similkameen showed a modest growth, with ridership increasing from 10,715 in 2022 to 11,269 in 2023, a 5.2% rise.

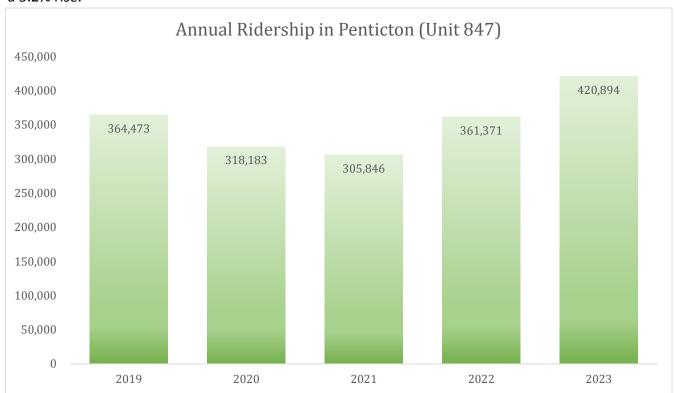


Figure 9: Comparison of Annual bus ridership in Penticton (Unit 847)

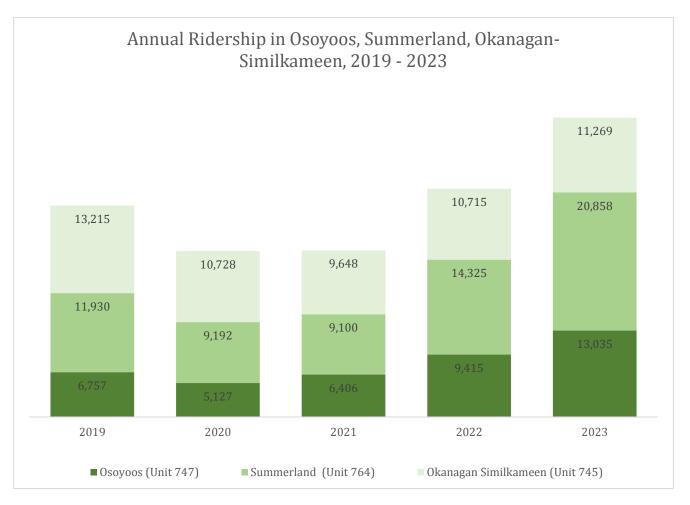


Figure 10: Comparison of bus ridership in Osoyoos, Summerland, and Okanagan-Similkameen





COMMUNITY HEALTH AND WELLBEING

GOAL

Foster healthy, safe communities that provide accessible recreational, educational and cultural opportunities.

INDICATOR

HOW ARE WE DOING: Change since last period

4.1) Annual crime rates per 1000 residents



Poor: average crime rates overall between 2021 and 2022 increased by 2.9% per 1,000 population

4.2) Regional health outcomes



NA: This is a sample of health outcome data from Interior Health

4.1) Annual crime rates per 1000 residents

This indicator measures the number of Criminal Code offences (excluding traffic offences) per 1000 population. Jurisdictions included are Penticton Municipal, Penticton Provincial, Osoyoos Municipal, Osoyoos Provincial, and Summerland Municipal⁹.

Oliver Provincial increased from 81 to 145.2 per 1,000 population. In contrast, Penticton Provincial decreased from 68.5 to 57.4. Additionally, Summerland Municipal decreased from 69 to 51.6. Despite decreases in some areas, the sharp increase in Oliver Provincial contributed to a net increase.

Crime rates for all of BC overall decreased by 1.6% between 2021-2022, from 74.9 per 1,000 population in 2021 to 73.7 per 1,000 population in 2022. While between 2021 and 2022 crime rates in RGS area increased by 2.9% per 1,000 persons. The data has not been updated for 2023.

⁹ Statistics from policing jurisdictions include several areas outside of the South Okanagan RGS area. Crime rate statistics are obtained from the Ministry of Justice Police Services Division, which includes a qualifier that crime data from previous years are revised to reflect any updates, therefore crime statistics may vary for year to year.

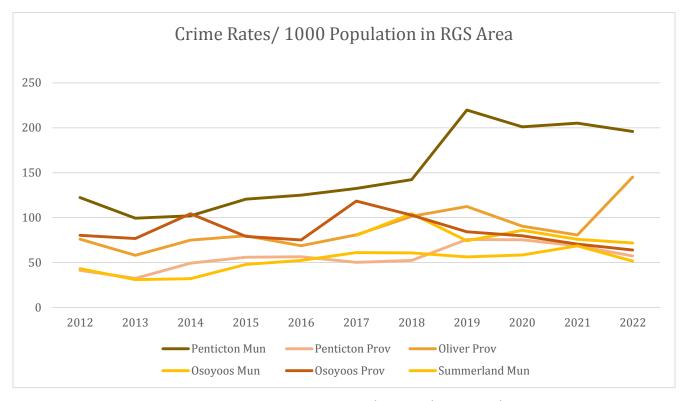


Figure 11: Crime rates per 1,000 population in the RGS Study Area

4.2) Regional Health Outcomes

BC Centre for Disease Control has a large amount of health related data for BC communities in an online dashboard called the Chronic Disease Dashboard. The Public Health Services Authority (PHSA) has aggregated this data by Community Health Service Areas (CHSAs) and created health profiles for individual communities which contain information about the community's demographics, socioeconomic and health/disease status as represented through various community health indicators. The RGS area is roughly contiguous with three CHSAs which include Penticton, Summerland, and Southern Okanagan (an area that includes Oliver and Osoyoos). The following are a selection of health outcomes indicators.

Interior Health published Local Health Area Profiles. This data has been aggregated by Local Health Area (LHA). The Health Profile provides an overview of the Southern Okanagan Local Health Area population in the areas of Population Health, Health and Social Status, Acute Care Home and Community Care, Mental Health and Substance Use and Health Characteristics. The RGS area is roughly contiguous with three LHAs which include Penticton, Summerland, and Southern Okanagan (an area that includes Oliver and Osoyoos). The following are a selection of health outcomes indicators.

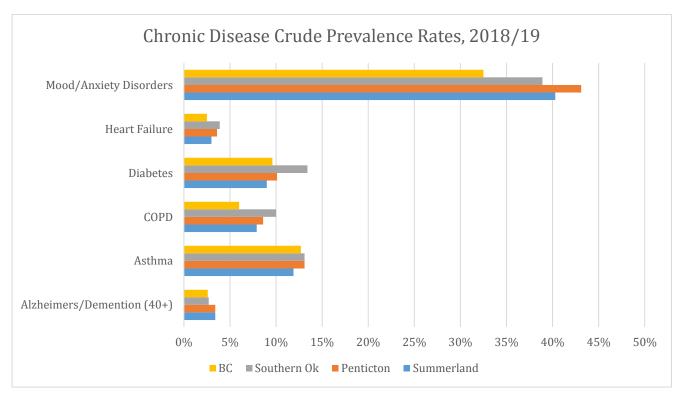


Figure 12: Chronic Disease Crude Prevalence Rates for 2018/2019 by Local Health Area

Crude prevalence rates are not adjusted to the standard population, and represent the number of cases in a specific geographic region divided by the population/population-at-risk in that region. Crude rates are representative of the burden of disease in the population.

As the figure above shows, the RGS Area has in general higher Crude Prevalence Rates than BC as a whole. The incidence of chronic diseases typically increases with an older population. On average, the three RGS Area LHAs have a median age 13 years higher than the provincial median age (55 vs 42) which may be one factor which contributes to the higher prevalence rates of chronic disease seen in Figure 11¹⁰.

 $^{^{10}}$ The latest available data for chronic disease's crude prevalence rate by local health area is from 2019 and has not been updated for 2023.



REGIONAL ECONOMIC DEVELOPMENT

GOAL

Achieve a sustainable, resilient and prosperous South Okanagan regional economy.

INDICATOR

HOW ARE WE DOING: Change since last period

5.1) % growth in # of businesses with employees



Poor: number of businesses with employees decreased slightly from 2022 to 2023.

5.2) Total value of building permits issued for residential, commercial, industrial and institutional



Poor: total value of building permits decreased between 2022 and 2023.

5.1) Percent growth in number of businesses with employees

This indicator measures the number of businesses within the RGS area that have employees (i.e.; employ more than just the business owner). A healthy, diverse regional economy is one of the cornerstones of more sustainable, resilient communities. The RGS provides an opportunity to encourage and support the development of a more diverse and healthier regional economy, which in turn will help support the South Okanagan on its journey to become a more sustainable region.

Between 2022 and 2023, the number of businesses with employees in the RGS Area decreased slightly by 6 businesses, representing a -0.2% change (from 3,534 in 2022 to 3,528 in 2023)¹¹. This reflects a 2% increase since 2021 and a 2% decrease from 2017.

¹¹ BC Stats – Business Counts – RGS Study Area

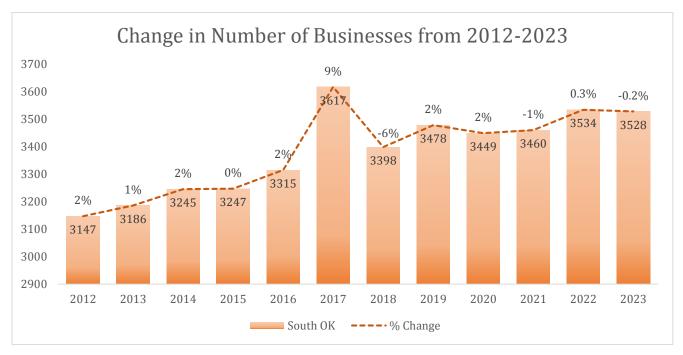


Figure 13: Percent Change in Number of Businesses with Employees in RGS Study Area

5.2) Total value of building permits issued for residential, commercial, industrial, and institutional

As an indicator, the total value of building permits gives some idea as to the amount of development and investment in building within the RDOS (including the Similkameen). This measure includes permits for residential, commercial, industrial and institutional developments.

The total value of building permits within the RDOS peaked in 2022 at \$382,164 but saw a decline in 2023, with the total dropping to \$292,616¹². The trend of substantial increase from 2021 (\$368,611) to 2022 is reversed in 2023, marking a 23.43% decrease from 2022.

21

¹² BC Stats - Building Permits, Housing Starts & Sales - RDOS

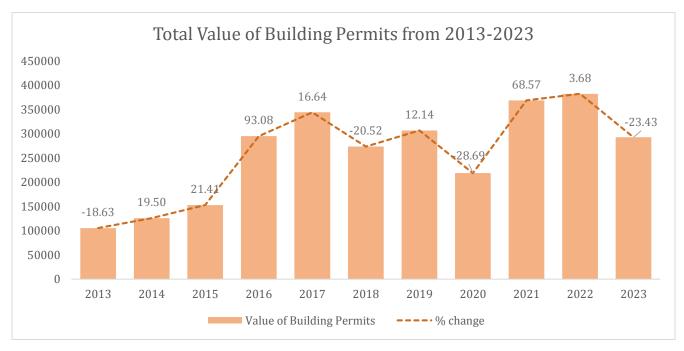


Figure 14: Total value of building permits (residential, commercial, industrial, and institutional) in the RDOS



ENGAGEMENT AND COLLABORATION

GOAL

Foster and support regional cooperation, collaboration and civic engagement.

INDICATOR

HOW ARE WE DOING: Change since last period

6.1) Regional survey on engagement and collaboration for member communities and Regional Directors.



Well: A Regional Survey was completed in 2024 gather feedback on services and programs.

6.1) Regional survey on engagement and collaboration

Ongoing coordination, collaboration, and communication remain critical ingredients to RGS implementation and planning. Inclusive, transparent regional planning and governance also supports and facilitates community engagement and involvement, another critical ingredient to effective, accountable regional planning and development.

Ongoing collaborative activities and partnerships includes the OBWB, Okanagan Regional Library, Sterile Insect release Program, Starling Control Program, Regional Transit, and the South Okanagan Similkameen Conservation Program.

This indicator will measure regional engagement and collaboration activity through a self-reporting annual survey for member communities and Regional Directors on collaborative planning and projects, including servicing agreements, protocol agreement activities with First Nations, and regional planning initiatives.

The Regional District of Okanagan-Similkameen (RDOS) has launched the 2024 Regional Survey to gather feedback on services and programs. The survey aims to identify areas for improvement and assess satisfaction with regional services, facilities, communication methods, and public engagement opportunities. The 2024 survey collected 224 responses from mailed invitations and 327¹³ general responses through online and paper submissions. It was available online via access codes and was

¹³ 2024 Regional Survey Result Report

promoted across RDOS digital channels, media, and advertisements. Figures 13-16 below summarize key findings from the survey.

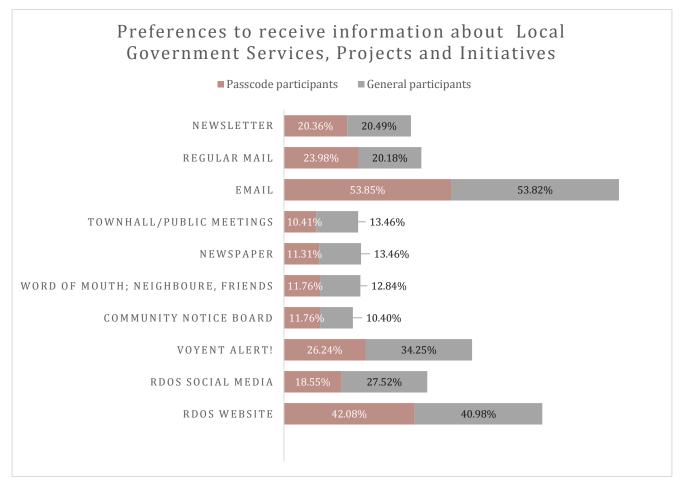


Figure 15: Preference to receive information about local government services, projects and initiatives

Figure 14 shows that email remains the preferred communication method for both pass-code respondents and general respondents. This is followed by the RDOS website and Voyent Alert.

Figure 15 shows that the most important local issue identified was health care, followed by water quality and protection, homelessness, and taxes.

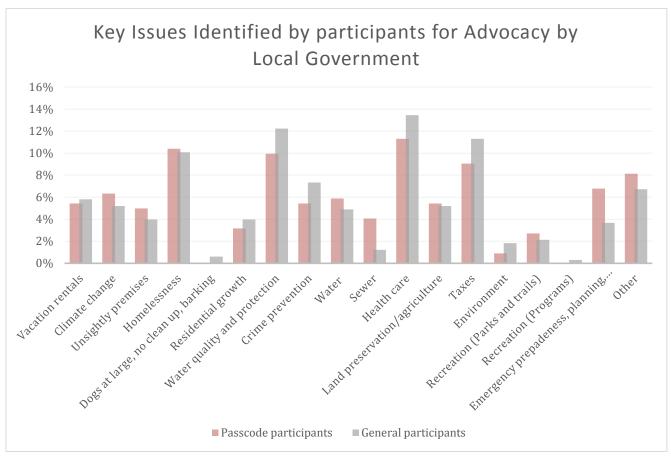


Figure 16: Key issues identified by the Participants in the Survey

Community Satisfaction Survey Results: Quality of Life, Services, and Engagement

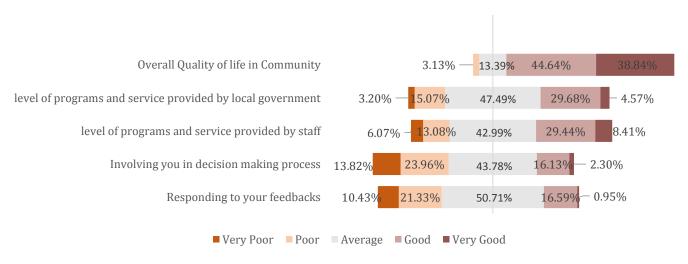


Figure 17: Community Satisfaction result across different sectors

Figure 16 shows that the majority of respondents ranked their overall quality of life in their community as good or very good. The majority of respondents ranked the level of satisfaction with services provided by staff and local government as average or good. Conversely, the majority of respondents scored involvement in the decision making process and response to feedback as average or poor.

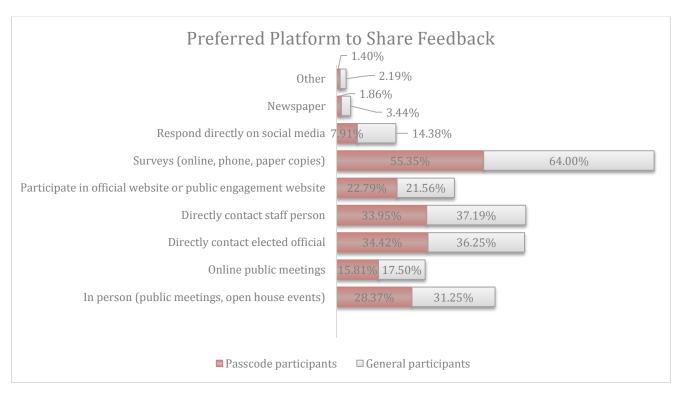


Figure 18: Preferred platform to share feedbacks to the local government by the participants

Figure 17 shows that the preferred platform to provide feedback is through surveys, followed by direct contact with staff, direct contact with elected officials and in person public meetings or events.



ENERGY EMISSIONS AND CLIMATE CHANGE

GOAL

Reduce energy emissions and ensure the South Okanagan is prepared for a changing climate.

INDICATOR

HOW ARE WE DOING: Change since last period

7.1) Tonnes of GHGs (tCO₂e) by source type (residential/ commercial buildings, vehicles)



Well: GHG emissions decreased by 2.39% between 2018 and 2020, likely due to COVID. However, between 2010 and 2020 the GHG emissions have increased by 3.66%

7.2) Average residential energy consumption/resident



Poor: Consumption appears to have increased from 2016-2021

7.1) Tons of greenhouse gases (GHGs) by source type (residential/commercial buildings, vehicles)

This indicator measures the amount of GHGs produced by different sectors in the RGS Area. The global scientific community has reached consensus that the increasing emissions of human caused GHGs are rapidly changing the earth's climate. With more extreme weather conditions, including more intense drought years and heavier rainfalls, the South Okanagan is particularly vulnerable to the anticipated impacts a warming climate will have.

As one of 187 local governments that are signatory to the B.C. Climate Action Charter, the RDOS along with the City of Penticton, District of Summerland, Town of Osoyoos and Town of Oliver are committed to reducing GHGs and has agreed to take actions to achieve certain goals. Under the Climate Change Accountability Act, B.C.'s GHG emissions are to be reduced by at least 40% below 2007 levels by 2030, at least 60% below 2007 levels by 2040 and by at least 80% by 2050.

Each Municipality and RDOS Electoral Area also has its own targets set to reach the overall goal of a 40 percent reduction per person by 2030 across the region.

Data for this indicator was obtained from the Regional District of Okanagan-Similkameen Community GHG Inventory which was informed by Provincial Community Energy Emissions Inventory (CEEI) data. The RDOS Community GHG Inventory was developed by RDOS Community Services Staff in order to have baseline GHG inventory data against which to compare future performance and efficiency of actions. The inventory encompasses GHG emissions from residential, commercial buildings (including business and government), small/medium industrial buildings, passenger vehicles, commercial vehicles, and solid waste within the Regional District's geographical boundaries (including the five member Municipalities).¹⁴

The last complete inventory year dataset available is from 2020. RDOS Community Services Staff used RDOS GHG Inventory data alongside provincial utility and waste data and local transportation data (from retail gas stations within the RDOS geographical boundary) to describe the current energy consumption and emission levels in the region.

In 2019, the majority of emissions in the RDOS were due to the use of mobility fuels (gasoline & diesel from both passenger and commercial vehicles) (50.8%) and natural gas (28.4%). Waste contributed a moderate proportion at 12.8%, while electricity, propane, and heating oil emissions were more minor, with a combined proportion of 8%. Proportions by emission source are similar between 2019 and 2020. Notably, between 2019 and 2020 the RDOS saw a reduction in mobility fuels consumption of about 20,500 GJ or approximately 6%. This reduction may be attributed to COVID and the guidance from British Columbia's Provincial Health Officer to limit non-essential travel.

7.2) Average residential energy consumption per resident

Residential energy consumption shows how much energy residents of the South Okanagan consume, on average. This indicator takes the total am consumption of energy (Fortis Gas, Fortis Electric, and BC Hydro) and divides that number by the population. In the South Okanagan, the two primary sources for energy are electricity and natural gas. Data is calculated in Giga Joules (GJ).¹⁵

The RGS supports that efficient management of community energy use and carbon emissions is one aspect of building sustainable communities. The generation of energy is associated with environmental impacts to land, air and water resources. However, different sources of energy have different environmental impacts. For instance, natural gas results in significant GHG emissions and other air emissions, while hydroelectric power generation may cause harm to water resources and to habitat. The reliance on non-renewable fossil fuels poses serious challenges to our long-term sustainability.

Data for this indicator was obtained from the Regional District of Okanagan-Similkameen Community GHG Inventory. The latest available data is from 2021 so between 2016 and 2021, average residential energy use increased by 7.19 GJ per dwelling unit.

¹⁴ The full RDOS GHG inventory report will be made available in 2024.

¹⁵ One GJ is equal to 277.8 kWh of electricity or 26.1 m3 of natural gas, or 25.8 litres of heating oil. One Gigajoule (GJ) of gas will cook over 2500 burgers, or, keep a 60-watt bulb lit continuously for 6 months.