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REGIONAL DISTRICT OF CENTRAL OKANAGAN

.....  
**REGIONAL GROWTH STRATEGY  
MONITORING PROGRAM**  
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DRAFT #4

September 26, 2019



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## Executive Summary

### About the Regional District of Central Okanagan's RGS Monitoring Program

The *Local Government Act (LGA) Section 452* requires a regional district that has adopted a regional growth strategy to “establish a program to monitor its implementation and the progress made towards its objectives and actions”. Acknowledging this requirement, the RDCO Regional Growth Strategy (RGS) Section 4.1.4 identified the development of a monitoring program to assess the effectiveness of the RGS. Further, the RGS Priority Projects Plan identified this as a project under the Five-Year Action Plan.

In fulfilling these requirements, and in compliance with the RGS Priority Projects Plan, a project began in December 2018 to develop an RGS Monitoring Program. The RDCO engaged EcoPlan International (EPI) to work with RDCO staff and the RGS Steering Committee (SC) to develop a Monitoring Program. The project was completed in September 2019, and consists of two components:

1. **A framework for monitoring impact on RGS goals** consisting of 22 measures across the 10 RGS Issue Areas; and
2. **A process for tracking Implementation**, both of actionable policies identified in the RGS, as well as other regional and local initiatives that may contribute to the achievement of RGS goals.

The project used a collaborative process that involved RDCO staff, the Regional Growth Strategy Steering Committee, and various other regional partners and organizations, such as the Okanagan Basin Water Board, Central Okanagan Economic Development Commission, Sustainable Transportation Partnership of the Central Okanagan, and Interior Health Authority.

The following steps were taken in order to develop the monitoring program:

1. **Preparation:** research into comparable regional monitoring programs and discussion with RGS Steering Committee members to clarify expectations and objectives
2. **Establish the Monitoring Program framework:** using the RGS Issue Areas and associated goals to organize measure research and selection
3. **Populate the framework with a long list of indicators:** researching potential indicators and measures as candidates for tracking progress toward RGS goals
4. **Evaluate, screen, and revise in order to make a shorter list of indicators:** development and application of a set of eight criteria for determining the most suitable measures
5. **Report, review and refine:** an iterative cycle of draft frameworks and review involving RDCO staff, RGS SC members, and representatives from other organizations.

### Outcome Monitoring – Framework

At the core of the RGS Monitoring Program are 22 outcome measures for tracking progress on each of the ten RGS Issue Areas. These are summarized in the table below, indicating if they will be part of intermediate monitoring (every two or three years) or comprehensive monitoring (every five years).

Table: Outcome Monitoring Measures

<b>Intermediate (~2-3 years)</b>	<b>Comprehensive (5 years)</b>
<b>Context</b>	
	C1) Total and % change in population cohorts (5-year age categories)
<b>1) Our Land:</b> <i>to manage the land base effectively to protect natural resources and limit urban sprawl.</i>	
1.1) % of all new regional housing located outside municipal boundaries (i.e. in Electoral Areas) 1.2) # of new onsite sewerage systems to service development	
<b>2) Our Economy:</b> <i>to develop and enhance a positive business enabling environment in the region to achieve a dynamic, resilient, and sustainable economy.</i>	
2.1) % growth in number of businesses with employees compared to provincial growth 2.2) Hectares of vacant /under-developed industrial lands	
<b>3) Our Water:</b> <i>to manage and protect water resources.</i>	
3.1) Total person-days of Water System Public Notifications 3.2) Average annual water consumption per dwelling	
<b>4) Our Health:</b> <i>to contribute to the improvement of community health, safety, and social wellbeing.</i>	
4.1) Average annual air pollutants for fine particulate matter 4.2) Average annual air pollutants for ground-level ozone	4.3) % of commute and overall trips by walking and biking
<b>5) Our Food:</b> <i>to support a regional food system that is healthy, resilient, and sustainable.</i>	
5.1) % change in Agricultural Land Reserve annually and cumulatively 5.2) % of total regional land base that has farm status	
<b>6) Our Housing:</b> <i>to improve the range of housing opportunities to meet the social and economic needs of the region.</i>	
6.1) % of new units by structural type 6.2) Average rent for purpose-built rentals compared to provincial average	6.3) % of households (owner/renter) spending 30% or more of their gross income on housing



<b>Intermediate (~2-3 years)</b>	<b>Comprehensive (5 years)</b>
<b>7) Our Climate:</b> <i>to minimize regional greenhouse gas emissions and respond to the impacts of climate change.</i>	
7.1) Total GHG emissions by major sector (transportation, buildings, solid waste) 7.2) Municipal solid waste per capita	
<b>8) Our Ecosystem:</b> <i>to be responsible stewards of natural ecosystems to protect, enhance, and restore biodiversity in the region.</i>	
	8.1) Change (% and linear meters) in Okanagan Lake shoreline from natural to disturbed 8.2) % and hectares of the Okanagan Ecosystem Connectivity Corridor within Development Permit Areas
<b>9) Our Transportation:</b> <i>to enhance the regional transportation system to ensure that it is accessible, affordable, and efficient.</i>	
	9.1) % of weekday trips by single automobile driver 9.2) Average commute time
<b>10) Our Governance:</b> <i>to respond to the needs of the region with an effective and efficient governance service model.</i>	
10.1) # of regional labs held annually	

### Implementation

The directive to develop a monitoring program came from the *Local Government Act* and was further identified in the RGS Priority Project Plan. However, monitoring can be much more than a policy and regulatory requirement. As a crucial part of responsible planning practice, monitoring attempts to answer two main questions about policy: 1) Are we doing what we said we would do? and 2) Is it having the impact we want? These questions correspond to the complementary activities of implementation and outcome monitoring.

In addition to this core role of tracking policy success, ongoing monitoring can support the decision-making processes and collaborations that are foundational to successful policy work at the regional level. A strong monitoring framework supports identification of regional priorities. It can communicate progress and achievements to the public, thereby promoting better understanding of the role of the RGS and planning at a regional scale. Monitoring can also improve collaboration at the staff level. As most of the measures have data available at the sub-regional level, monitoring can support the identification of policy topics where different jurisdictions can collaborate, as well as finding policies adopted by one jurisdiction that are especially effective in addressing a shared challenge.

## 1. Introduction

### 1.1 Overview and Purpose

This report summarizes the Regional District of Central Okanagan (RDCO) Regional Growth Strategy Monitoring Program and its development. The purpose of this project was to develop a set of measures that can be used to monitor progress being made on the RDCO Regional Growth Strategy.

In accordance with the *Local Government Act (LGA) Section 452*, a regional district that has adopted a regional growth strategy must “establish a program to monitor its implementation and the progress made towards its objectives and actions”. Acknowledging this requirement, the RDCO Regional Growth Strategy (RGS) Section 4.1.4 identified the development of a monitoring program to assess the effectiveness of the RGS, and “review the conditions, trend or emerging questions under the regional issue areas.” Section 4.1.4 also stipulates that the monitoring program be developed with input and discussion between the Regional District and regional partners. Further, the RGS Priority Projects Plan identified this as a project under the Five-Year Action Plan.

The project began in December 2018 and a final draft was completed in September 2019. The final deliverable is the RGS Monitoring Program, which consists of two components:

1. **A framework for monitoring impact on RGS goals** consisting of 22 measures across the 10 RGS Issue Areas; and
2. **A process for tracking Implementation**, both of actionable policies identified in the RGS, as well as other regional and local initiatives that may contribute to the achievement of RGS goals.

### 1.2 Regional Context

The Regional District of Central Okanagan, member municipalities and First Nations is home to 194,882 people (2016 Census). It is made up of two unincorporated electoral areas (Central Okanagan West and Central Okanagan East), four member municipalities (Peachland, West Kelowna, Kelowna and Lake Country), and six Indian Reserves (Westbank First Nation and Okanagan Indian Band) which covers over 314,000 hectares. The Regional District provides basic services such as recreation, park facilities, sewer and garbage collection to the 10,000 homes and businesses located within the Electoral Areas.

### 1.3 Regional Growth Strategy

The Regional Growth Strategy Bylaw No. 1336, adopted June 23, 2014, is a long-range planning tool that assists the Regional District and member municipalities to plan a coordinated future for their communities, while dealing with regional issues and decisions that cross local political boundaries.

The RDCO RGS is structured around ten Regional Issue Areas, each with a goal, synopsis of the issue, and policies. Table 1 lists the RGS Issue Areas and associated goals.

Table 1: RGS Issue Areas and Goals

RGS Issue Area	Goal
Our Land	To manage the land base effectively to protect natural resources and limit urban sprawl
Our Economy	To develop and enhance a positive business environment in the region to achieve a dynamic, resilient, and sustainable economy
Our Water Resources	To manage and protect water resources
Our Health	To contribute to the improvement of community health, safety, and social wellbeing
Our Food	To support a regional food system that is healthy, resilient, and sustainable
Our Housing	To improve the range of housing opportunities to meet the social and economic needs of the region
Our Climate	To minimize regional greenhouse gas emissions and respond to the impacts of climate change
Our Ecosystem	Be responsible stewards of natural ecosystems to protect, enhance, and restore biodiversity in the region
Our Transportation	To enhance the regional transportation system to ensure that it is accessible, affordable, and efficient
Our Governance	To respond to the needs of the region with an effective and efficient governance service model

## 2. Process & Approach

### 2.1 Background

This project’s approach employed various communications and analytic tools to support a collaborative process that involved RDCO staff, the Regional Growth Strategy Steering Committee, and various other regional partners and organizations, such as the Okanagan Basin Water Board, Central Okanagan Economic Development Commission, Sustainable Transportation Partnership of the Central Okanagan, and the Interior Health Authority.

### 2.2 Methodology

The following steps were taken in order to develop the monitoring program:

1. **Preparation:** background research and discussion with RGS Steering Committee members to clarify expectations and objectives
2. **Establish the Monitoring Program framework:** using the RGS Issue Areas and associated goals to organize measure research and selection
3. **Populate the framework with a long list of indicators:** exploring potential indicators and measures as candidates for tracking progress toward RGS goals
4. **Evaluate, screen, and revise in order to make a shorter list of indicators:** development and application of a set of eight criteria for determining the most suitable measures



5. **Report, review and refine:** an iterative cycle of draft frameworks and review involving RDCO staff, RGS SC members, and representatives from other organizations.

Each step is described in more detail below.

#### *Step 1: Preparation*

Background research included the review of relevant documents from RDCO municipalities, First Nations and affected agencies/organizations.

In preparation for the project, EcoPlan worked with the RGS Steering Committee to clarify purpose and objectives for the monitoring program. This was completed through calls and questionnaires with each member jurisdiction as well as a group discussion at a RGS Steering Committee meeting.

External consultation consisted of interviewing planners from regional districts with active RGS monitoring programs to draw lesson-learned from their experience that could guide the development of the RDCO's program. Planners at the following jurisdictions were interviewed:

- Regional District North Okanagan
- Regional District Okanagan Similkameen
- Squamish-Lillooet Regional District
- Thomson Nicola Regional District
- Regional District Nanaimo

#### *Step 2: Establish the Monitoring Program Framework*

The goals under each Issue Area were used as framework under which possible indicators and measures were organized. A distinction is made between indicators – more general descriptions of the desired outcome – and measures, which are specific descriptions of how the indicator will be measured, in terms of scales and units. There are multiple possible measures for any given indicator. For example, within *Our Housing* the indicator “affordable housing” could be measured by the “percent of owners and renters paying 30% or more on shelter costs” or by the “number of residents in Core Housing Need”.

Indicators provide a helpful bridge between the broad language used in strategic goals and the practical constraints presented by specific measures (e.g., data definitions and limitations). Indicators were used in the process to organize candidate measures, support efficient refinement of the list of candidate measures, and to support discussion with the RGS Steering Committee around the essence of what was being tracked. While indicators are listed as part of the final Outcome Monitoring program (Section 4.3), the primary goal is to establish measures: a set of detailed descriptions of how RGS progress will actually be tracked.

Feedback through a workshop with the RGS Steering Committee was collected on the key elements of each RGS goal that they felt should be the focus of monitoring.

#### *Step 3: Populate the Framework with a long list of indicators*

This framework was then populated with a long list of indicators and measures related to each goal area under RDCO's RGS. A total of 85 municipal, regional, and organizational plans, strategies, and documents were reviewed in order to compile a list of 95 indicators with 171 supporting measures.

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Figures 1 and 2 showing the number of documents reviewed and the number of indicators and measures found related to the goals within the RGS.

Figure 1: Number of strategies, plans, and monitoring programs reviewed

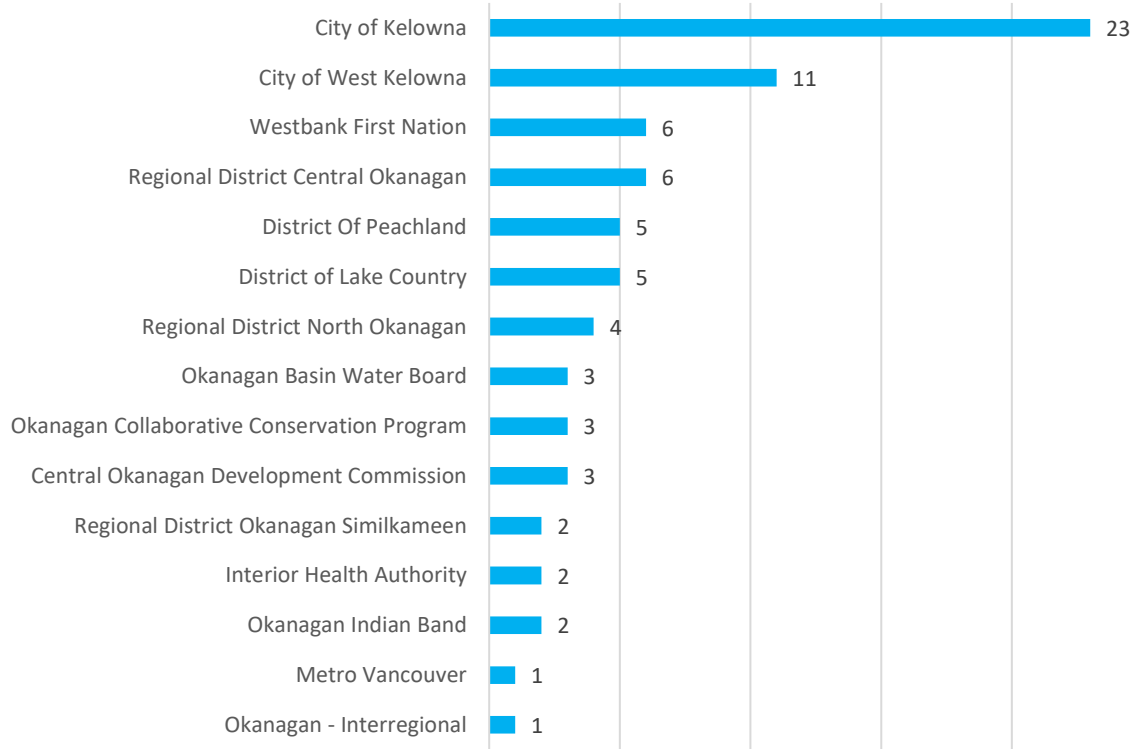
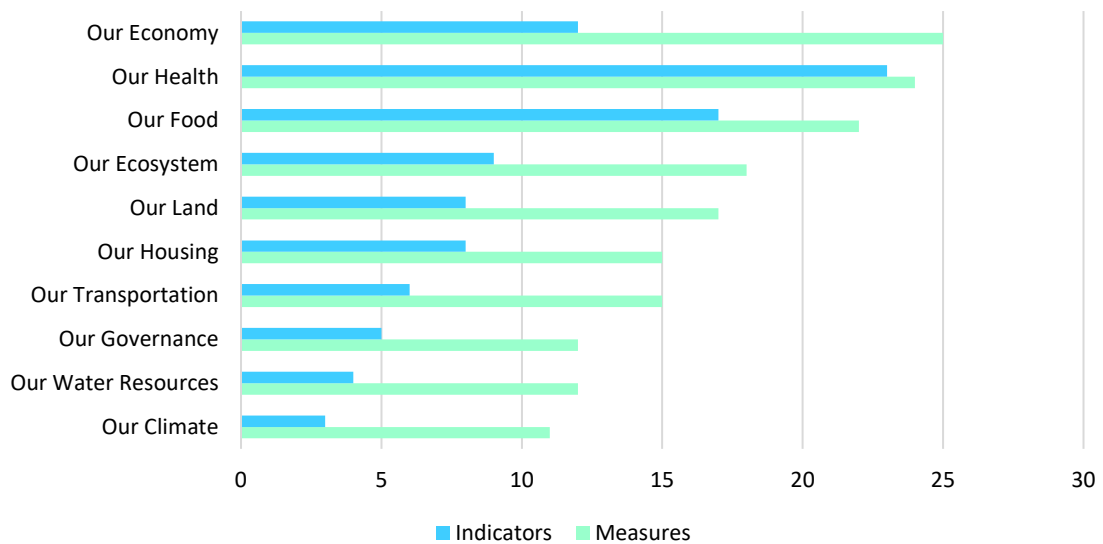


Figure 2: Number of long-list indicators and measures by RGS Issue Area



*Step 4: Evaluate, Screen, and Revise Indicators*

With input from the RGS Steering Committee, a set of eight criteria were developed to support evaluation of the long-list of potential indicators and associated measures. The criteria included:

1. Data are available with high frequency
2. Data can be disaggregated for local areas
3. Data are freely and readily available from authoritative sources
4. Are a direct and clear expression of RGS goals
5. Are well-aligned with monitoring programs/plans at local level
6. Actionable/Are something within our control
7. Are easily understandable to a general audience
8. Can be compared to indicators from other jurisdictions outside the RDCO

These criteria were employed in an iterative process, beginning with a methodical application of five of the eight criteria related to alignment with RGS goals and data availability. During the first review, these five were used by the consultant team to produce a “fit score” and a “data availability score” for each measure. The remaining three criteria were used as needed once the long-list had been substantially reduced (described below). Table 2 contains the score and scale of ranking that was applied in the analysis of measures.

*Table 2: 'Fit' and 'Data' Criteria*

Score	Scale
<b>Fit Score</b>	
Are a direct and clear expression of RGS goals	<b>High</b> – Directly related and represents all parts of goal <b>Medium</b> – Measure is an aspect of goal; is a proxy for change intended <b>Low</b> – Tenuously connected to goal; does not reflect intent
Actionable / are something within our control	<b>High</b> – Significantly affected by potential actions of RD and partners <b>Medium</b> – RD and partner actions have some affect <b>Low</b> – Primarily affected by forces outside RD and partner jurisdiction or influence
<b>Data Availability Score</b>	
Data are available with high frequency	<b>High</b> – Annually or more often <b>Medium</b> – Every 5 years <b>Low</b> – Only when a study is commissioned
Data can be disaggregated for local areas	<b>High</b> – Available at local level for all jurisdictions <b>Medium</b> – Available at local level for some jurisdictions <b>Low</b> – Only available at the regional level
Data are freely and readily available from authoritative sources	<b>High</b> – Data available from respected institution free of cost and with little effort <b>Medium</b> – Data is available for some cost and demands / has limited availability <b>Low</b> – Data must be collected and analyzed for considerable expense / does not exist

Depending on “fit” and “data” scores, long-list measures were categorized as “keep”, “maybe keep”, and “measures to cut”. The evaluation tool was shared with planners from RDCO and

member jurisdictions who were asked to adjust evaluations based on the initial results from EcoPlan's analysis. Participants were asked to review EcoPlan's evaluation and provide input on measures to be kept or discarded. Including considerations of how well aligned they were to their own local plans (a sixth criteria).

*Step 5: Report, review and refine*

Responses from the RGS Steering Committee collected through the evaluation tool were synthesized, identifying areas of high and low consensus for measures to be kept or discarded. The two remaining criteria (measures are easily understandable and used by other jurisdictions) were used as needed to select between alternatives.

This synthesis was supplemented with additional input from topic area experts from the Okanagan Basin Water Board, the Central Okanagan Economic Development Commission, the Sustainable Transportation Partnership of the Central Okanagan, Interior Health Authority, and staff from the B.C. Ministry of Environment and Climate Change Strategy.

The synthesis and additional consultation resulted in a draft process for implementation monitoring and set of 26 measures for outcome monitoring. The RGS Steering Committee and representatives from other organizations provided review and feedback.

### 3. Consultation

Early input from the RGS Steering Committee and planners for other Regional Districts provided important guidance on the scope, purpose and general design of the Monitoring Program. These findings are summarized here.

#### 3.1 RGS Steering Committee

The Purpose of the RGS Steering Committee is to provide a forum for senior representatives of regional and municipal planning departments, First Nation and agencies with an interest in regional planning to coordinate the strategic priorities around the Region and align the priorities with the goals and policies of the RGS.

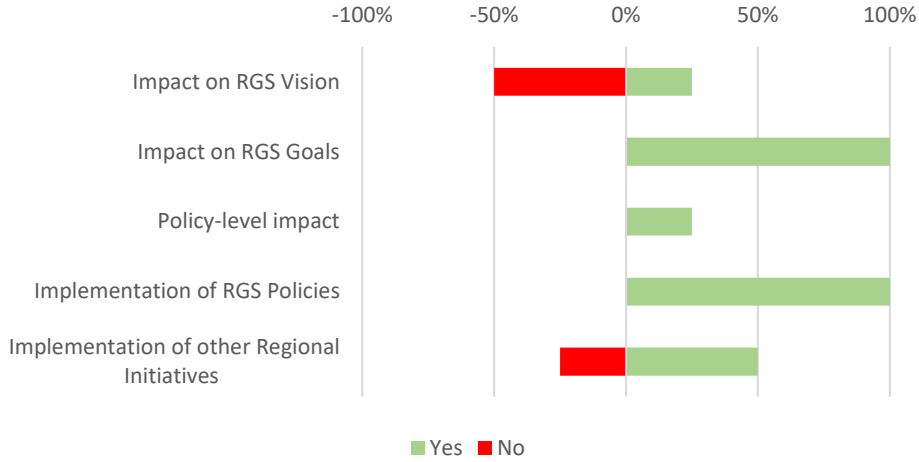
The RGS Steering Committee's role is advisory. The Committee provides RDCO staff and others with technical advice and comments. The Committee members are the Directors of Planning or their designates from each of the RDCO member municipalities, Westbank First Nation, Okanagan Indian Band, as well as the RDCO Manager of Planning or their designate.

Consultation with the RGS Steering Committee helped provide focus on the purpose of the Monitoring Program and relative importance of the evaluation criteria to be used.

Generally, monitoring can be used to track implementation (Are we doing what we said we would do?) and impact (Are our actions/policies producing the desired outcomes?). Impact monitoring can be conducted at different policy levels, from vision, to goals, down to specific policies. In the discussion on scope, the RGS Steering Committee generally preferred to track impact on RGS goals and implementation on RGS policies and other regional initiatives (Figure 5).

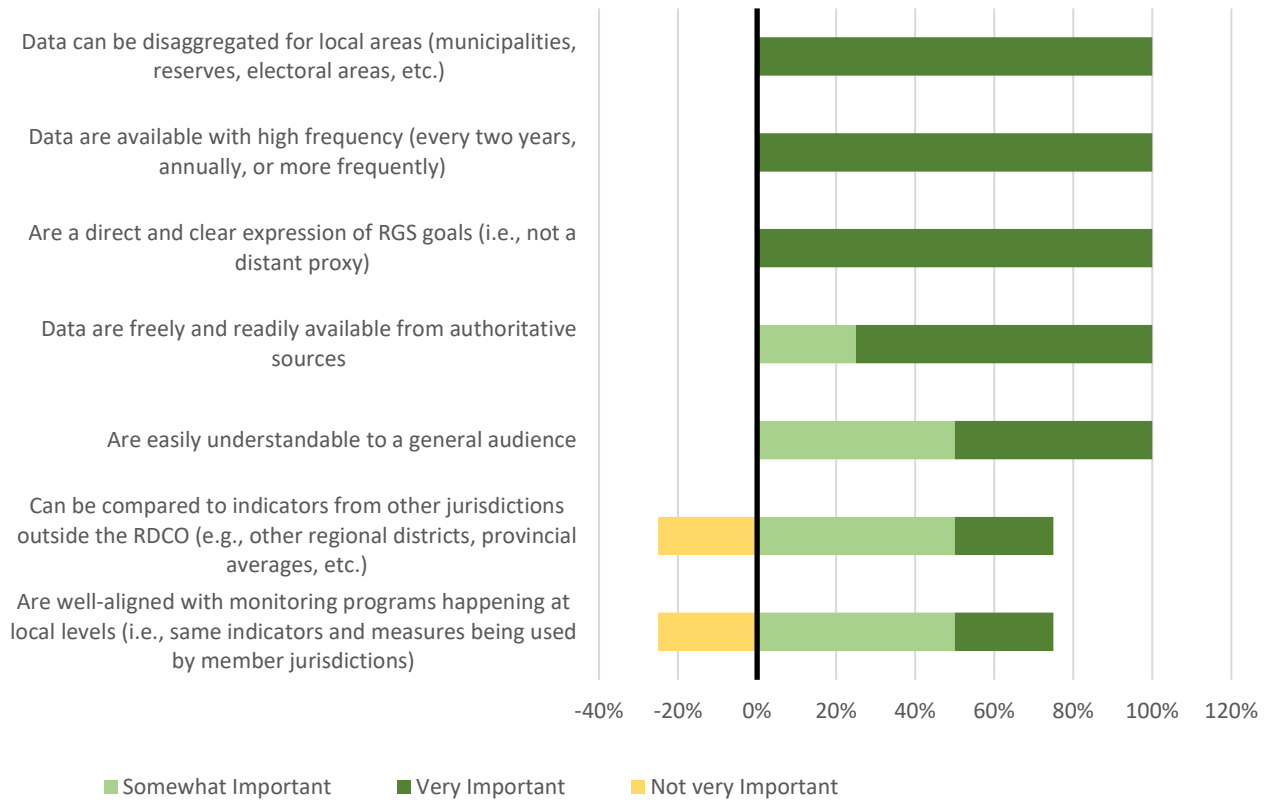
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Figure 3: RGS Steering Committee Questionnaire Results – Monitoring Program Focus



When asked about how to assess potential indicators and measures, there was highest weighting for criteria that spoke to alignment with the RGS and data availability (Figure 6).

Figure 4: RGS Steering Committee Questionnaire Results – Evaluation Criteria



### 3.2 Topic-based Consultations

As part of measure development, a number of other agencies and organizations were consulted to better understand the specifics and limitations around data. This involved consultation with external government agencies, organizations specifically related to data production (e.g. Statistics Canada and BC Stats), and staff from regional member jurisdictions, RDCO, and other regional services.

These groups were typically consulted based on their specialized knowledge or activity in specific policy areas. Their input was used to refine selected measures based on data availability or to seek expert opinion on which measures from a set of alternatives most effectively captured the policy objectives.

### 3.3 RGS Monitoring – Lesson-Learned from other Regional Districts

The following findings were common themes or important lessons-learned from conversations with planners from other regional districts in British Columbia.

- **Data collection is a major challenge:** This was the top issue identified and nearly all planners consulted noted the resource requirements of collecting, collating and reporting for RGS monitoring. Even for regional districts with well-developed programs that have high buy-in from member jurisdictions found it very difficult to get a complete set of comparable data for all jurisdictions within the regional district. In addition to the volume of data, there are regularly challenges of data quality and comparability that have to be addressed before the data can be used. Some ways at addressing these challenges are:
  - *Limit the number of measures:* Between 20 and 30 measures.
  - *Reduce frequency of reporting:* All regional district staff felt annual reporting on impact monitoring was too onerous. Further, it was sometimes noted that most policy related change occurs slowly, and is only visible after several years. While many began with annual collection, one has shifted to a biennial cycle and another is exploring the doing the same. In place of annual impact monitoring, most do annual implementation monitoring. However, some felt that there are important changes to be identified on a shorter time frame.
  - *Prioritize low demand measures:* Many regional planners suggested heavily weighting the data collection criteria and selecting measures that have readily available and easily accessible data. While some felt internal data sources were best, others felt that external sources were fine so long as the body was trusted to maintain consistent collection and methodologies.
  - *Build buy-in with regional member jurisdictions:* For some, data collection placed demands on staff from member jurisdictions to collect and report data in a timely way. Building buy-in through a collaborative process and demonstrating value from the measures was seen as an important aspect in a successful regional monitoring program.
- **The monitoring program is valuable for identifying new priorities for regional action:** While not all regional planners found their monitoring program useful, most found it very helpful for identifying topics for further exploration and helping the respective Regional Boards to establish priorities. Some felt the monitoring program was especially useful for



RGS updates or the orientation of a new Board (i.e., it could be used to establish priorities for the next planning or political cycle). The Thompson-Nicola Regional District has a unique approach in including a set of measures that vary between reporting cycles, complementing a stable core, to allow for additional focus on emerging priorities.

- **Implementation is very difficult to quantify:** Many regions used quantitative data for impact monitoring but used a more narrative style for implementation monitoring. While the narratives can include quantitative metrics (i.e. numbers of initiatives of different types), the variability and diversity of initiatives don't lend to annual counts that can be meaningfully compared.
- **Jurisdiction and focus on Regional Growth Strategy:** Some of those interviewed discussed the challenges of using measures that are influenced by forces (e.g. global economy, climate change) beyond regional district control. One recommendation was to tie the monitoring program as closely as possible to the RGS.

Table 3 provides summary statistics on the monitoring programs of the five regional districts interviewed. More detail on discussions can be found in the appendix.

*Table 3: BC Regional District Monitoring Programs – Summary Stats*

Regional District	# of Policy/Goal Areas	# of Measures	Reporting cycle	# of reporting cycles
Regional District North Okanagan	8	27	5-year; annual for implementation (narrative)	1
Regional District Okanagan Similkameen	7	18	Annual	8
Squamish-Lillooet Regional District	9	29	Biennial (formerly annual); implementation in alternate years	3
Thomson Nicola Regional District	10	~30 (fluctuates)	Biennial	2
Regional District Nanaimo	11	22	Annual; considering shift away from annual	6 (with more in previous periods)

## 4. Monitoring Program

### 4.1 Summary

The Monitoring Program that has been developed as part of this project will support tracking of two aspects of the RGS:

1. **Implementation Monitoring:** A description of a recommended process for implementation monitoring based.
2. **Outcome Monitoring:** A set of 22 measures to be collected at various intervals (every two to three years or every five years) tracking progress on key aspects of the RGS goals.

The Monitoring Program consists of five components, combining a mix of annual, biennial and five-year reporting cycles, utilizing both quantitative and qualitative data. Table 4 summarizes the components of monitoring and associated schedules.

Table 4: Summary of Monitoring Procedures and Schedule

Monitoring Program	Frequency	Timing
<b>Implementation Monitoring Report</b>	Annual	1 <sup>st</sup> Quarter
a) Narrative of work accomplished relating to goals of the RGS	Annual	4 <sup>th</sup> Quarter
b) RGS Priority Projects Plan	Annual	4 <sup>th</sup> Quarter
c) RGS Steering Committee Review and Assessment	Annual	4 <sup>th</sup> Quarter
<b>Outcome Monitoring</b>		
d) Intermediate Report (15 measures)	2-3 years	1 <sup>st</sup> Quarter
e) Comprehensive Report (22 measures)	5-years	1 <sup>st</sup> Quarter
f) Updates for critical trends (select measures as needed)	As needed	1 <sup>st</sup> Quarter

### 4.2 Implementation Monitoring Report

Implementation monitoring options were developed with the following considerations in mind:

- Feedback from other regional districts and past EcoPlan experience suggests that a narrative description of work accomplished will be the core of RGS Implementation monitoring.
- The RGS Steering Committee requested exploration of more quantitative measures for tracking RGS implementation.
- In reviewing the RGS policy and consulting with RDCO staff, it was determined that the language of the policy (e.g., ‘encourage’, ‘support’) did not lend itself to direct quantification (e.g., “% of policies implemented for each goal area”). Essentially, the policies are not specific enough nor framed in ways to quantitatively assess their completion status.
- The RGS Priority Projects Plan has specific projects with timelines attached that lend itself to implementation tracking.

Implementation Monitoring results would be compiled into a report provided to the Regional Board in the first quarter of each year. The report would consist of three components, integrating

qualitative descriptions, quantitative tracking, and informed judgements of progress and upcoming priorities from the RGS Steering Committee. Producing the report would involve the following:

- a) ***Narrative of work accomplished relating to goals of the RGS:*** RDCO staff will assemble narrative descriptions of work that has been accomplished toward the achievement of RGS goals. These summaries would be completed and brought forward to the RGS Steering Committee during the fourth quarter of each year.
- b) ***Implementation of RGS Priority Projects Plan*** is ongoing with recommended projects reviewed and considered annually by the Regional Board. As new opportunities or unexpected demands rise, the projects in the plan can be revised, re-sequenced or replaced as needed. For Implementation monitoring, an updated description of the status of initiatives described in the *RGS Priority Projects Plan* (e.g., complete, in progress, delayed, etc.) would be compiled for review by the RGS Steering Committee during the fourth quarter of each year.
- c) ***RGS Steering Committee Annual Review and Assessment:*** The RGS Steering Committee is an ideal mechanism for analyzing work accomplished toward achieving components of the RGS. A simple annual activity would be to conduct an in-meeting assessment of how much has been done to achieve the RGS goals and policies. The review and assessment would be completed during the fourth quarter of each year, at a regularly scheduled RGS Steering Committee meeting

At this meeting, RGS Steering Committee members would be presented with the above described components of Implementation Monitoring (i.e., the goal narratives and *RGS Priority Projects Plan* status). They would then be asked to provide judgements about the work being done on each goal area, and where they feel more work could be done (e.g., gaps, or high priority areas where more needs to be done).

This could involve the use of a simple likert scale with defined endpoints, for example:

- *Lots being done:* Significant resources and/or major policy initiatives directed to the goal area
- *Moderate amount being done*
- *Little/nothing being done:* No resources or major policies dedicated to the goal area

Individual assessments would be compared and discussed, and the group would work to reconcile divergent scores for each RGS goal, identifying new priorities from their perspective. Note that it is possible to have areas where there is little being done and no more work needs to be done, or areas where a lot is being done but more still needs to be done.

These three components would be integrated into an *Implementation Monitoring Report* for presentation to the Regional Board in the first quarter of every year.

## 4.3 Outcome Monitoring

### 4.3.1 Overview

Two to three measures have been developed for each Issue Area of the RGS. There are 22 measures total, 15 of which can be collected as frequently as every two years and an additional 7 measures that are available every five years. There are 15 measures where data is available at the sub-regional level, i.e., at the level of municipalities, Westbank First Nation, and/or Electoral Areas. These sub-regional levels correspond to Stats Canada's "census subdivision" (CSD). Depending on the source, data may not be available for all sub-regional areas. Other measures only have available data at a regional level. Table 5 summarizes the count of measures across Issue Areas, frequency and geographies.

Table 5: Summary of Measure Counts and Data Availability

	Total	Frequency		Geography	
		Inter. (~2-3 yrs)	Comp. (~5 yrs)	Regional only	Regional and Sub regional
<b>Context</b>	1		1		1
<b>Our Land</b>	2	2		1	1
<b>Our Economy</b>	2	2			2
<b>Our Water Resources</b>	2	2			2
<b>Our Health</b>	3	2	1	2	1
<b>Our Food</b>	2	2		1	1
<b>Our Housing</b>	3	2	1		3
<b>Our Climate</b>	2	2		1	1
<b>Our Ecosystem</b>	2		2		2
<b>Our Transportation</b>	2		2		2
<b>Our Governance</b>	1	1		1	1
<b>TOTAL</b>	22	15	7	8	17

A key issue around outcome reporting was around frequency and the balance between resource demands and the ability to closely track trends. The following outcome monitoring components strike that balance:

- a) **Intermediate Report:** Approximately every two or three years an intermediate picture using select measures from across most Issue Areas will be assembled.
- b) **Comprehensive Report:** Approximately every five years, a more comprehensive picture of outcomes would be assembled using the intermediate measures, supplemented with additional measures drawn from data sources like the Canadian Census.
- c) **Updating on critical trends:** If Intermediate Reporting identifies concerning trends in any Issue Area, an update for select measures can be appended to the intermediate report. This would ensure the close monitoring of any more sensitive policy concerns without unnecessary allocation of resources.

#### 4.3.2 Selected Outcome Measures

This section details the selected measures to be used in Outcome Monitoring and provides information on data source, methodology, and rationale for the selection. These measures are organized by the goal of each Issue Area, identifying measures that would be used for Intermediate (every two to three years) and Comprehensive (every five years) reporting cycles.

##### Context

<b>Indicator:</b> Overall growth and change (context)	
<b>Measure:</b> C1) Total and % change in population cohorts (5-year age categories)	
<b>Collection frequency:</b> Comprehensive (every five years)	<b>Geography:</b> Sub-regional (CSD)
<b>Data source:</b> Statistics Canada – Census data	

##### Methodology information:

- Stats Canada website
- Home > Census Program > Data Products, 2016 (2021) Census > Census Profile, 2016 Census
- Use the Place name search box to find data for each jurisdiction
  - o Central Okanagan, RD [CD], B.C.
  - o West Kelowna, DM
  - o Peachland, DM
  - o Central Okanagan J, RDA (Central Okanagan West Electoral Area)
  - o Central Okanagan RDA (Central Okanagan East Electoral Area)
  - o Tsinstikeptum 9, IRI and Tsinstikeptum 9, RDI (Combine data from these jurisdictions and label Westbank First Nation)
  - o Kelowna, CY
  - o Lake Country, DM
- Select topic: Population
- Scroll to find data in table.
- Record data in five-year increments until 85+ (0-4, 5-9,10-14,15-19 etc.)

**Rationale for selection and additional details:** Overall population growth provides important context for interpreting many other measures. Including details about five-year age cohorts can provide additional context that may be relevant to other measures (e.g., changes in employment or use of transportation mode can be affected by the age of the population).

1) *Our Land: to manage the land base effectively to protect natural resources and limit urban sprawl*

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<b>Indicator:</b> Urban sprawl and Rural land conversion	
<b>Measure:</b> 1.1) % of all new residential development located outside municipal boundaries (i.e. in Electoral Areas)	
<b>Collection frequency:</b> Intermediate (2/3 years)	<b>Geography:</b> Regional
<b>Data source:</b> BC Stats, Residential Building Permits data and Westbank First Nation	
<b>Methodology information:</b>	
<ul style="list-style-type: none"><li>- BC Stats website</li><li>- Home &gt; Data &gt; Statistics &gt; Economy &gt; Building Permits, Housing Starts &amp; Sales</li><li>- Click on the link “Residential Units, total, all types (CSV)”</li><li>- Request building permit data from Westbank First Nation and incorporate it into the building permit data from the BC Stats<ul style="list-style-type: none"><li>o Add the Total Number of New Residential Units in Westbank First Nation for a given year to the Total Number of New Residential Units in the RDCO from BC Stats data</li></ul></li><li>- Divide the amount for Central Okanagan rural areas (RDR) by the Central Okanagan Total (RD)</li></ul>	

Building permit data is not available from BC Stats for Westbank First Nation and must be obtained directly from staff.

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**Rationale for selection and additional details:** Promoting sustainable growth and development patterns is a key aspect of any RGS. For the RDCO RGS, this is captured in a goal to “limit sprawl”, policy 3.2.1.1: “Support logical and sequential growth patterns that minimize urban encroachment into rural areas” and policy 3.2.1.2: “Proposals for new growth areas should consider the impacts on existing services and facilities in the community”.

Development that occurs outside municipal boundaries would encroach on rural landscapes and contribute to a form of development that could be characterized as sprawl.

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<b>Indicator:</b> Urban sprawl and Rural land conversion	
<b>Measure:</b> 1.2) # of new onsite sewerage systems to service development	
<b>Collection frequency:</b> Intermediate (2/3 years)	<b>Geography:</b> Sub-regional (CSD)
<b>Data source:</b> Interior Health Authority and Westbank First Nation	
<b>Methodology information:</b> Request from Interior Health Authority through a Freedom of Information and Protection of Privacy submission. This request is reviewed by Interior Health staff and addressed accordingly. Sewerage system data for Westbank First Nation must be obtained directly from First Nations Health Authority.	

**Rationale for selection and additional details:**



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There are areas throughout the Central Okanagan that rely on onsite sewerage systems for domestic sewage. Development utilizing these systems are generally located in rural areas and not able to connect to community sewer. The use of onsite sewerage systems are not exclusively located within electoral areas and may support development within member jurisdictions.

By tracking the number of new, onsite sewerage systems established, a general picture of the rate and scale of residential development into previously undeveloped areas or away from urban centres can be attained. While not all septic installations will represent rural encroachment or urban sprawl, an aggregate of these developments over several years may provide a picture of where pressure for new development is occurring. This pressure could lead to sprawl in the future.

Onsite sewerage systems must be sited, designed and maintained properly for public and environmental health protection.

Given the lack of policy definition around 'growth areas', what constitutes 'sprawl', 'urban encroachment' or 'rural areas', measures 1.1 and 1.2 were considered the best way to track how growth is being managed. Tracking of this core policy topic of the RGS could be strengthened in the future with clearer definitions.

*2) Our Economy: to develop and enhance a positive business enabling environment in the region to achieve a dynamic, resilient, and sustainable economy.*

<b>Indicator:</b> Dynamic and prosperous economy	
<b>Measure:</b> 2.1) % growth in number of businesses with employees compared to provincial growth	
<b>Collection frequency:</b> Intermediate (2/3 years)	<b>Geography:</b> Sub-regional (CSD)
<b>Data source:</b> BC Stats	
<b>Methodology information:</b>	
<ul style="list-style-type: none"><li>- BC Stats website</li><li>- Home &gt; Data &gt; Statistics &gt; Business, Industry, Trade</li><li>- Click on the link "Business Locations by Census Subdivision (municipalities and non-incorporated areas) (XLSX)"</li><li>- Calculate annual growth rate (%) from previous to current year in number of businesses with employees ("Sub-Total With Employees") for RDCO (CD), all CSDs, and BC</li><li>- For RDCO total, add numbers from each member municipality + electoral area together (there is no row for RDCO)</li></ul>	

**Rational for selection and additional details:** Businesses growth and development is directly tied to a dynamic and sustainable regional economy. This measure is preferred over other common measures such as employment, because it can be confidently located in the region (employed people can sometimes live in an area and work elsewhere), and because it is available annually.

Businesses with employees is specified because some people maintain business licenses (the source of the data) even when the business may no longer be active (e.g., in retirement). This is not the case for businesses with employees.

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<b>Indicator:</b> Resilience: Supply of employment lands	
<b>Measure:</b> 2.2) Hectares of vacant/under-developed industrial lands	
<b>Collection frequency:</b> Intermediate (2/3 years)	<b>Geography:</b> Sub-regional (CSD)
<b>Data source:</b> <ul style="list-style-type: none"><li>• Kelowna Zoning &amp; Parcels</li><li>• West Kelowna Zoning &amp; Parcels</li><li>• Lake Country, Peachland, Westbank First Nation &amp; RDCO Electoral Areas; Zoning &amp; Parcels</li><li>• BC Assessment data (Vacancy and Gross Improvement)</li></ul>	
<b>Methodology information:</b> RDCO GIS query. Sum hectares of all industrially zoned land that are vacant or have an assessed improvement value of less than \$20,000.	

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**Rational for selection and additional details:** This measure focuses on the land use aspect of the economy, particularly around resilience to future economic change. Having sufficient, appropriately zoned land is critical to supporting economic growth, especially with an economy that restructures rapidly.

As tracking change to a broad definition of employment lands introduces a much higher level of complexity, it was decided to focus on industrial land for this measure. Compared to office or commercial, there tends to be a clearer definition of what constitute industrial land, and there are fewer instances of mixed-use development which can make developing estimates difficult more resource demanding. Among employment lands, industrial land also has the most restrictive requirements – plots must be large, generally flat, with good transportation access, and minimize compatibility issues with adjacent land uses. Industrial land is also under high pressure to redevelop as the limitations on development make for a substantial economic benefit if it can be successfully redeveloped to a higher earning use (such as residential or office). Thus, industrial lands are rare, under threat, and difficult to replace.

The \$20,000 threshold is to capture "underdeveloped" land - some land may not be completely vacant, but will be available for redevelopment at some point. This threshold comes from an Employment Lands Study from the District of Squamish.

3) *Our Water Resources: to manage and protect water resources.*

<b>Indicator:</b> Water quality	
<b>Measure:</b> 3.1) Total person-days of Water System Public Notifications	
<b>Collection frequency:</b> Intermediate (2/3 years)	<b>Geography:</b> Regional
<b>Data source:</b> Interior Health Authority and Westbank First Nation	
<b>Methodology information:</b> Request from Interior Health Authority through a Freedom of Information and Protection of Privacy submission. This request is reviewed by Interior Health staff and addressed accordingly. Water system data for Westbank First Nation must be obtained directly from Utility Services.	

**Rational for selection and additional details:** Water quality is a key aspect of well protected water source and is crucial to the health of RDCO residents. This measure tracks the number of various types of water system notifications on drinking water tracked by Interior Health for potable water systems in the region. The four types include: Boil Water Notification, Water Quality Advisory, Do not Consume, and Do not Use.

According to an Interior Health Drinking Water Report, “Access to clean, safe, reliable tap water for all people at all times is the ultimate goal of the drinking water program at Interior Health.” Individual drinking water notifications are used by Interior Health as a means of empowering consumers to reduce their risk of negative health impact<sup>1</sup>. In the aggregate, they can help identify locations where water management can be improved.

Notifications for larger systems serving more people have a larger impact than smaller systems. The length of time a notification is in place also defines the size of impact. This measure takes both into account by multiplying the number of people and length of time for each notification (Days of Notification multiplied by the Number of people impacted). These totals are then summed, giving a total count of “person-days” of water system public notifications.

<b>Indicator:</b> Water consumption	
<b>Measure:</b> 3.2) Average annual water consumption per dwelling	
<b>Collection frequency:</b> Intermediate (2/3 years)	<b>Geography:</b> Sub-regional (CSD)
<b>Data source:</b> BC Assessment and OBWB Calculations (2015/2016) for average total water consumption by dwelling type	
<b>Methodology information:</b> Calculated by using OBWB median consumption and BC Assessment counts of residences by BCA Code.	
<b>(1)</b> Get total consumption by each residential type: Multiply the count of properties for each BCA Code by the 2015/2016 median consumption factors (i.e. OBWB daily use estimates) those BCA codes	
<b>(2)</b> Get total residential consumption: Sum the total consumption for each residential type	

<sup>1</sup> “Drinking Water in Interior Health: An Assessment of Drinking Water Systems, Risks to Public Health, and Recommendations for Improvement”, Interior Health, 2017.

**(3)** Get average consumption per dwelling: Divide total residential consumption by total number of properties.

**NOTE:** All the data is per unit, except for the fourplex and triplex which is per parcel - be sure to multiply fourplex and triplex properties by 4 and 3 to get the correct total number of dwellings (units)

**Rational for selection and additional details:** 'Average' here is actually the average of weighted medians. While not ideal, it is the best estimate that can (easily) be produced given data restrictions. The water consumption is for indoor and outdoor consumption combined. OBWB median daily use (m<sup>3</sup>/day) factors are calculated using water meter data from City of Kelowna and District of Peachland in 2015/2016.

The level of water consumption by residents in the valley has a big impact on how we manage our resources. The composition of the regional housing stock has a big impact on total consumption as some housing types have different water consumption profiles.

There are significant challenges to collecting this data regularly, so an alternate method has been selected to allow for tracking water consumption as a function of dwelling type.

This measure is calculated using a median water consumption for different residential dwelling types calculated by the OBWB using water meter data from City of Kelowna and Peachland in 2015/2016. These median consumption levels are applied as a factor to the count of residential units by each type.

The result is that as higher density housing is built, average water consumption per dwelling will decline

*4) Our Health: to contribute to the improvement of community health, safety, and social wellbeing.*

<b>Indicator:</b> Air quality	
<b>Measure:</b> 4.1) Average annual air pollutants for fine particulate matter.	
<b>Collection frequency:</b> Intermediate (2/3 years)	<b>Geography:</b> Regional
<b>Data source:</b> Ministry of Environment and Climate Change Strategy	
<b>Methodology information:</b> Request from Regional Air Quality Coordinator – Data from Southern Interior Air Zone Report	

**Rational for selection and additional details:** Increased levels of particulate matter sized two microns and under (PM<sub>2.5</sub>) has a major impact on human health and is an ongoing concern in the Central Okanagan. PM<sub>2.5</sub> are small enough to enter the lungs and are associated with a range of health problems; it is considered the worst public health problems from air pollution in the province.<sup>2</sup>

<sup>2</sup> "Common Air Pollutants", <https://www2.gov.bc.ca/gov/content/environment/air-land-water/air/air-pollution/pollutants/common>

This is a measure relating to air zone management levels with a goal to prevent Canadian Ambient Air Quality Standards (CAAQS) Exceedance. There is one monitoring station for Central Okanagan which is located in Kelowna.

Origins of pollutants are not always local and can be poor air quality can sometimes be the results of exceptional events, such as wildfires. The data used for this measure uses concentrations from within the air zone, excluding air pollutants that flow in from outside locations (i.e., transboundary flows) and exceptional events.

Evidence shows that prolonged exposure to moderate air quality is worse for our health than short exposure to acute air quality issues (e.g., wildfires). As such, this measure, capturing average trends, is more relevant to human health than frequency of air quality advisories.

<b>Indicator:</b> Air quality	
<b>Measure:</b> 4.2) Average annual air pollutant concentrations for ground-level ozone.	
<b>Collection frequency:</b> Intermediate (2/3 years)	<b>Geography:</b> Regional
<b>Data source:</b> Ministry of Environment and Climate Change Strategy	
<b>Methodology information:</b> Request from Regional Air Quality Coordinator – Data from Southern Interior Air Zone Report	

**Rational for selection and additional details:** Similar to the PM<sub>2.5</sub> in measure 4.1, ground level ozone can have serious implications to human health, especially for people with heart or lung problems.

Like 4.1, this is a measure relating to air zone management levels with a goal to prevent Canadian Ambient Air Quality Standards (CAAQS) Exceedance. There is one monitoring station for Central Okanagan which is located in Kelowna. Other details for this measure are the same as for PM<sub>2.5</sub> and are described above under measure 4.2.

<b>Indicator:</b> Healthy built environment	
<b>Measure:</b> 4.3) % of commute and overall trips by walking and biking	
<b>Collection frequency:</b> Comprehensive (every five years)	<b>Geography:</b> Sub-regional (CSD), Census data for "commute" available at CSD; HST for "overall trips" available at sub-regional level, however, the sample in the electoral areas is not always good enough to separate out. West Kelowna and Westbank First Nation are merged as 'Westside' because of the complexity of the boundaries; they can be disaggregated if necessary.
<b>Data source:</b> Census for "commute" data and Household Travel Survey (HST) for "overall trips" data. HST is collected and maintained by the Integrated Transportation Department.	
<b>Methodology information:</b> Request data from staff in the Integrated Transportation Department	

**Rational for selection and additional details:** Many aspects of a healthy built environment (connectivity, comfortable streets, mixed uses allowing for proximity to shops and amenities) result in more people walking riding and rolling instead of using automobiles. Choosing active transportation more often also contributes to better health by increasing people’s physical activity levels. As such, this measure is both a proxy for tracking a healthy built environment, and a direct measure of exercise.

This measure draws from the census for commute data and the regional Household Travel Survey for other daily trips to track changes in mode share.

*5) Our Food: to support a regional food system that is healthy, resilient, and sustainable.*

<b>Indicator:</b> Protection of agricultural land	
<b>Measure:</b> 5.1) % change in Agricultural Land Reserve annually and cumulatively	
<b>Collection frequency:</b> Intermediate (2/3 years)	<b>Geography:</b> Regional
<b>Data source:</b> Agricultural Land Commission	
<b>Methodology information:</b> RDCO GIS query. Sum Agricultural Land Reserve (ALR) for each new year and cumulatively since baseline year (2011) and divide by total ALR land in the Central Okanagan.	

**Rational for selection and additional details:** Having a supply of suitable, affordable agricultural land is central to a thriving agricultural sector and food system. The Agricultural Land Reserve (ALR) is one of the principal measures for protecting agricultural land in British Columbia from the pressures of conversion to other uses (residential, commercial, etc.) through redevelopment. ALR boundaries change if land is excluded or placed in to the ALR. While ALR exclusions (removal of land from the ALR to allow for redevelopment) is not a simple task, it does happen.

Monitoring the rates of ALR exclusions though this measure can support tracking of threats to agriculture and the success of policies to preserve farmland.

<b>Indicator:</b> Food sector viability	
<b>Measure:</b> 5.2) % of total regional land base that has farm status	
<b>Collection frequency:</b> Intermediate (2/3 years)	<b>Geography:</b> Sub-regional (CSD), BCA data doesn't cover Band member-owned on Indian Reserves as land is not assessed.
<b>Data source:</b> BC Assessment and Westbank First Nation	
<b>Methodology information:</b> RDCO GIS query. Request to BC Assessment: The number of hectares of land that are in farm class (class 9) for all regional jurisdictions. Westbank First Nation has provided data on land that is used for agriculture/farming to include for this measure.	

**Rational for selection and additional details:** There is no guarantee that having agriculturally zoned land produces active farms. There are many factors that contribute to a viable food sector. Tracking



how much regional farmland is actively used for farming can help monitor the vitality and viability of farming and the local food system.

This measure uses “farm status” from BC Assessment, which combines farm gate revenue and observations of actual use to identify properties that are actively used as farms.

*6) Our Housing: to improve the range of housing opportunities to meet the social and economic needs of the region.*

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<b>Indicator:</b> Range of housing opportunities	
<b>Measure:</b> 6.1) % of new units by structural type	
<b>Collection frequency:</b> Intermediate (2/3 years)	<b>Geography:</b> Sub-regional (CSD)
<b>Data source:</b> BC Assessment	

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**Methodology information:**

Baseline data is for 2019. New units will be derived from the difference between annual totals and calculated as a percentage.

Defining Structure Type:

Used suggested BCA Actual Use Codes to categorize:

- Apartments – Actual Use Codes: '030', '050', '051', '054', '055', '056', '058', '059'
- Row Housing – Actual Use Codes: '033', '034', '035', '036', '039', '041', '047', '049', '052', '053', '057'
- Single Family – Actual Use Codes: '000', '001', '032', '037', '038', '060', '061', '063'

Producing Unit Counts:

- All properties calculated to '1' to start with
- Summarized BCA Folio Address table on Folio Count to gather Unit Counts of properties with multiple addresses
  - o Calculated this into property Unit Counts to override the default '1'
- Summarized BCA Building Info table on Number of Units per Folio
  - o Calculated this into property Unit Counts to override anything previous

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**Rational for selection and additional details:** A diverse housing stock can better meet the needs of a diverse population. This can support residents at different life stages, with affordability challenges, and allow for aging in place. A diverse housing stock is also more suited to shifting needs over time as the demographic composition of the population changes.

This measure tracks the proportion of new dwellings in the categories of “single family”, “row-housing”, or “apartment”. These categories were selected to bridge two data sets – the Census and Building Permits data on BC Stats – so that new additions can be compared to the composition of the entire existing stock. This will help track if diversity in housing options is increasing.

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**Indicator:** Housing affordability

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**Measure:** 6.2) Average rent for purpose-built rentals compared to provincial average

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<b>Collection frequency:</b> Intermediate (2/3 years)	<b>Geography:</b> Sub-regional (CSD) for Kelowna and West Kelowna only
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**Data source:** CMHC "Urban Rental Market Survey Data: Average Rents in Urban Centres".

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**Methodology information:**

- Canadian Mortgage and Housing Corporation (CMHC).
- Type in the Search Bar: 'Urban Rental Market Survey Data: Average Rents in Urban Centres' and click on the link when it populates
- Download the appropriate edition of excel data
- Get the Total Average rents for each jurisdiction (only jurisdictions with values)
  - o Kelowna Total
  - o Kelowna City Kelowna (CY)
  - o West Kelowna West Kelowna (DM)
- Divide each jurisdictions Total average rent by provincial average rent to produce ratio.
- 1.0 means equal rents; more than 1.0 means local rents are higher than provincial average; less than 1.0 means local rents are less than provincial average.

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**Rational for selection and additional details:** Housing affordability is a critical aspect of meeting the needs of the region's residents. Rental housing is a core component of an affordable housing stock. Since prices are likely to go up over time, tracking against a provincial average helps provide a standard against which to judge that increase (i.e., is it growing at a 'normal' rate, or not?).

CMHC data provides easy comparison with a provincial average for purpose-built rentals; while data for secondary rental stock is available for the RDCO, there is no provincial comparison that would allow for meaningful tracking overtime.

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**Indicator:** Housing affordability

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**Measure:** 6.3) % of households (owner/renter) spending 30% or more of their gross income on housing

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<b>Collection frequency:</b> Comprehensive (every five years)	<b>Geography:</b> Region and sub-regions (CSD); smaller regions may be suppressed
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**Data source:** Stats Canada, Census

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Methodology information:

- Stats Canada
- Home > Census Program > Data Products, 2016 (2021) Census > Census Profile, 2016 Census
- Use the Place name search box to find data for each jurisdiction
  - o Central Okanagan, RD [CD], B.C.
  - o West Kelowna, DM
  - o Peachland, DM
  - o Central Okanagan J, RDA (Central Okanagan West Electoral Area)

## Regional District Central Okanagan

- Central Okanagan RDA (Central Okanagan East Electoral Area)
- Tsinstikeptum 9, IRI and Tsinstikeptum 9, RDI (Combine data from these jurisdictions and label Westbank First Nation)
- Kelowna, CY
- Lake Country, DM
- Select topic: Housing
- Scroll to find data in table.

**Rational for selection and additional details:** The “30% of income” threshold is a broadly used convention for tracking overall housing affordability. While the validity of this threshold has been called into question as a definition of affordability, as a relative measure (i.e. for tracking change over time and comparing against other regions) is the strongest option. Further, as the proportion of households falling within that definition grows or shrinks, it will accurately track the trend in affordability, regardless of where the threshold is placed.

*7) Our Climate: to minimize regional greenhouse gas emissions and respond to the impacts of climate change.*

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<b>Indicator:</b> GHG emissions	
<b>Measure:</b> 7.1) Total GHG emissions by major sector (transportation, buildings, solid waste)	
<b>Collection frequency:</b> Intermediate (2/3 years)	<b>Geography:</b> Sub-regional (CSD)
<b>Data source:</b> Provincial Greenhouse Gas Emissions Inventory	

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**Methodology information:** Model still under development as province finalizes new GHG Emissions model.

The Province is currently updating their emissions calculation model, and expect a new version to be operational within 1 to 2 years, which will include emissions for all major sectors (including transportation, the biggest source and currently missing). Depending on the province's ability to secure Vehicle-Kilometers Travelled (VKT) data, the short-term version of the model may involve one of two options:

- Third party VKT data secured: In this version, the province successfully secures a reliable source of community level VKT and can provide robust community level GHGs for major sectors on a recurring and relatively frequent basis
- Community provided VKT: In this version, the province is unable to secure a reliable and regular source of VKT, but the model allows for communities to provide their own VKT. In this case, transportation emissions could be calculated using the Household Transportation Survey (every five years). The quality of the calculation will depend upon the VKT data provided. For example, a gross total VKT for all vehicles will be less accurate than using VKT per automobile type (e.g. SUVs, compact cars, hybrids, etc.).

A longer-term plan (~10 years) will produce a full model with all sectors and sub-sectors at the community level.

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**Rational for selection and additional details:** Climate change is caused by increase in concentrations of greenhouse gas emissions (GHGs) in our atmosphere. Tracking the amount of solid waste and building GHG emissions (industrial / commercial / residential) enables the RDCO to track and measure their direct contributions to climate change. By understanding where our greatest emissions are produced, we can plan accordingly for future development and adjust current waste and development practices that contribute GHG emissions.

The Province is currently updating their program for tracking community level GHG emissions, and it is expected to be available within the next year. More details can be found in Section 6.

<b>Indicator:</b> Waste produced in the community	
<b>Measure:</b> 7.2) Municipal solid waste per capita	
<b>Collection frequency:</b> Intermediate (2/3 years)	<b>Geography:</b> Regional
<b>Data source:</b> Regional Waste Reduction Office; population data from BC Development Region, Regional District and Municipal Population Estimates 2011 - 2018 (Government of BC)	
<b>Methodology information:</b> Divide total waste (metric tonnes) by population. The statistics are based off of landfill data.	

**Rational for selection and additional details:** As municipal solid waste breaks down in landfills, methane is produced, which is a GHG contributing to climate change. Waste disposal also contributes to habitat destruction, groundwater and surface pollution, and other forms of contamination. Tracking per capita waste allows the RDCO to understand the impacts occurring and adjust future development and waste management practices to reduce GHG emissions. It is also a proxy for consumption levels within the region, which underly the production of GHG emissions globally.

*8) Our Ecosystem: to be responsible stewards of natural ecosystems to protect, enhance, and restore biodiversity in the region.*

<b>Indicator:</b> Impacts of development on the natural environment (ecosystem health)	
<b>Measure:</b> 8.1) Kilometres of Okanagan Lake shoreline of high ecological value (AHI Very High and High) that has been 'disturbed'	
<b>Collection frequency:</b> Comprehensive (every five years)	<b>Geography:</b> Sub-regional (CSD)
<b>Data source:</b> Okanagan Lake Foreshore Inventory and Mapping 2016 Update Report, Ecoscape Environmental Consultants Ltd. Prepared for the Regional District Central Okanagan, 2017. Foreshore Inventory and Mapping (FIM) and Aquatic Habitat Index (AHI)	
<b>Methodology information:</b> Data extrapolation which includes a breakdown regarding ecosystem health as it relates to relative habitat value of the shoreline was completed by Ecoscape Environmental Consultants Ltd. from the Okanagan Lake Foreshore Inventory and Mapping 2016 Update Report,	

**Rational for selection and additional details:** The health of our water systems are directly affected by how we live, develop, and grow as a region. As the region grows, tracking the impact that development has on the Okanagan Lake shoreline will be critical to ensure sensitive ecosystems are being protected.

The measure definition and data come from the periodic updates to the Okanagan Foreshore Inventory Mapping (FIM) project. The data represents the kilometres of natural and disturbed foreshore for each Aquatic Habitat Index (AHI) class present, per member municipality.

An AHI is generated using the Foreshore Inventory and Mapping (FIM) data to determine the relative habitat value of the shoreline. The AHI is a categorical scale of relative habitat value that ranks shoreline segments in a range between Very High and Very Low (Very High, High, Moderate, Low, and Very Low). The index is relative, because it only assesses the sensitivity of one shoreline area relative to another and is not directly transferable to other lake systems.

This measure specifically focuses on AHI classes of 'Very High' and 'High' as these are areas of highest importance and most difficult to recover once impacted.

Foreshore Inventory and Mapping (FIM) is a method of collecting information on the current state of the foreshore, shoreline, of a lake. It is relevant data to have from the past and present to help make informed decisions for the future. FIM provides agencies with an easily accessible inventory of land use, shore type, and existing riparian conditions to implement better shoreline management.

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**Measure:** 8.1) Change (% and linear meters) in Okanagan Lake shoreline from natural to disturbed

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**Related Indicator:** Impacts of development on the natural environment (ecosystem health)

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**Collection frequency:** Comprehensive (every five years)      **Geography:** Sub-regional (CSD)

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**Data source:**

Schleppe, J., 2010. Okanagan Lake Foreshore Inventory and Mapping. Ecoscape Environmental Consultants Ltd.. Project File: 10-596. 2011. Prepared for: Okanagan Collaborative Conservation Program

Schleppe, J. 2016. Okanagan Lake Foreshore Inventory and Mapping 2016 Update Report, Ecoscape Environmental Consultants Ltd. Prepared for the Regional District Central Okanagan, 2017. Foreshore Inventory and Mapping (FIM) and Aquatic Habitat Index (AHI).

The measure definition and data come from the periodic updates to the Okanagan Foreshore Inventory Mapping (FIM) project.

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**Methodology information:**

Foreshore Inventory and Mapping (FIM) collects information on the current state of the shoreline of a lake and is a standardized shoreline assessment recognized by Provincial and Federal agencies. FIM provides all levels of government with an easily accessible inventory of land use, shore characteristics, and condition of existing riparian areas to implement better shoreline management and policy.

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An Aquatic Habitat Index (AHI) is generated using the Foreshore Inventory and Mapping (FIM) and other habitat or fisheries data sets (e.g., Kokanee shore spawning locations) to determine the relative habitat value of the shoreline. For example, the AHI index considers numerous habitat and condition values such as disturbance level, riparian condition, substrates, and fisheries spawning and/or rearing habitats. The AHI is a categorical scale that ranks shoreline segments as Very High to Very Low (Very High, High, Moderate, Low, and Very Low), where the rankings are relative only to other shorelines within the same lake. The means that the AHI can only assess the sensitivity of one shoreline area relative to another within any given lake and is not directly transferable to other lake systems.

The 2010 and 2016 reports should be referenced for specific field collection and data processing methods, and the criteria used to determine the Aquatic Habitat Index Values. Briefly, natural shoreline refers to areas that are generally free from anthropogenic alterations including riparian vegetation removal, landscaping (e.g., turf), substrate alterations (e.g., beach grooming), and other types of modifications such as retaining walls, docks, and groynes. Disturbed shorelines would have a predominance of these same features. Thus, for any given shoreline segment or area, the total length of natural (and disturbed) shoreline was recorded, where the percent natural and percent disturbed would tally to 100%.

The data from the 2010 and 2016 inventories used the percentage of natural (and disturbed) shoreline within any given segment to determine the approximate length of natural shorelines that were present. Differences in natural shoreline between years were used to estimate a rates of loss. In cases where restoration was observed, disturbed shoreline areas were documented as transitioning to a natural shoreline area typically on sites where redevelopment was occurring. Using the data, the rate of loss was determined for each different AHI value class

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***Rational for selection and additional details:*** The health of our watersheds are directly affected by how we live, develop, recreate, and grow as a region. As the region grows, tracking the impact that development has on the Okanagan Lake shoreline will be critical to ensure sensitive ecosystems are being protected.

Differences observed are compared using liner length of shoreline (meters) and as a percentage to reflect the observed losses or gains between the two different inventory years (2010 vs. 2016). Each AHI habitat class is important because even areas with lower relative habitat values still contribute to a productive and healthy ecosystem. The lower value areas are generally where habitat gains through restoration. Finally, it is acknowledged that this metric assumes natural shoreline areas are more indicative of a functioning and productive, healthy ecosystem. This metric does not infer that disturbed shorelines are of lesser importance or that they do not contribute to habitat function or health in some way. It should be noted that this metric is challenging to directly attribute to actual biological productivity, diversity, or value, because it is a simple measure used to help with policy and planning development. This metric should not be used as a direct measure of the absolute or explicit ecosystem health because it cannot be used to make site specific inferences about habitats, diversity, ecosystem productivity, or specific risks associated with losses of natural shoreline areas.

9) *Our Transportation: to enhance the regional transportation system to ensure that it is accessible, affordable, and efficient.*

<b>Indicator:</b> Dependence on automobiles (auto-dependence)	
<b>Measure:</b> 9.1) % of weekday trips by single automobile driver	
<b>Collection frequency:</b> Comprehensive (every five years)	<b>Geography:</b> Sub-regional (CSD). However, the sample in the electoral areas is not always good enough to separate out. West Kelowna and WFN reserve boundaries are merged as 'Westside' because of the complexity of the boundaries; they can be disaggregated if necessary.
<b>Data source:</b> From Canadian Household Travel Survey (HST); input from Integrated Transportation Department	
<b>Methodology information:</b> Request data from staff in the Integrated Transportation Department.	

**Rational for selection and additional details:** Single-driver car use leads to greater amounts of greenhouse gas emissions (GHGs), high volumes of traffic, pollution that generates smog, and high costs for building and repairing roads. By tracking overall % of weekday trips by drivers, RDCO can build understanding of how car-dependent people living in the region are. This can then lead to transportation initiatives and decision making that provides alternative modes of transit to support an efficient, accessible, and affordable regional transportation system.

This measure will be sourced from the Household Travel Survey, with supplementary input from Integrated Transportation Department.

<b>Indicator:</b> Transportation network efficiency	
<b>Measure:</b> 9.2) Average commute time	
<b>Collection frequency:</b> Comprehensive (every five years)	<b>Geography:</b> Sub-regional (CSD)
<b>Data source:</b> Census 2016 Data tables: Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016324.	
<b>Methodology information:</b>	
<ul style="list-style-type: none"> <li>- Go to the Stats Canada Website</li> <li>- Home &gt; Census Program &gt; Data Products, 2016 (2021) Census &gt; Data Tables</li> <li>- Select Topic: Journey to Work</li> <li>- Select Catalogue no. 98-400-X2016324</li> <li>- Use the Geographic index name search box to find data for each jurisdiction                             <ul style="list-style-type: none"> <li>o Central Okanagan, RD [CD], B.C.</li> <li>o West Kelowna, DM</li> <li>o Peachland, DM</li> </ul> </li> </ul>	

- Central Okanagan J, RDA (Central Okanagan West Electoral Area)
- Central Okanagan RDA (Central Okanagan East Electoral Area)
- Tsinstikeptum 9, IRI and Tsinstikeptum 9, RDI (Combine data from these jurisdictions and label Westbank First Nation)
- Kelowna, CY
- Lake Country, DM

**Rational for selection and additional details:** Average commute time shows the amount of time people spend in transit from home to work. Inclusive of all transit types, this measure allows the region to track how efficient the overall transportation network is in terms of congestion, with all modes taken into account. Overall, multi-modal transportation efficiency has a number of important implications for the economic activity and the health and well being of residents.

Average commute time is also affected by a number of key policy levers, including investments in transit and transportation infrastructure, transportation policy, support of alternative modes of transportation (e.g. active transportation), and the coordination of regional land use with regional transportation.

*10) Our Governance: to respond to the needs of the region with an effective and efficient governance service model.*

<b>Related Indicator:</b> Collaborative governance	
<b>Measure:</b> 10.1) # of regional labs held annually	
<b>Collection frequency:</b> Annually (1 year)	<b>Geography:</b> Regional
<b>Data source:</b> RDCO staff	
<b>Methodology information:</b> Count of regional planning labs held in a particular year	

**Rational for selection and additional details:** Regional planning labs allow for direct collaboration between staff from member jurisdictions. This is a developing initiative from the Regional Priority Projects Plan to improve collaboration, knowledge, and ideas among policy professionals from across the region. A planning lab is a forum for discussion, relationship building, and a space to identify and work towards solutions to the region’s greatest challenges. Topics are varied and selected based on feedback and recommendation collected from previous labs. The ongoing success of planning labs is a measure of the depth of and commitment to collaboration among regional partners.



## 5. Eliminated Measures and Evaluation Results

As part of the review and evaluation process, nearly 150 candidate measures were eliminated. Eliminated measures are organized under two categories:

- **Candidate Measures:** measures that received good or mixed scoring in the technical evaluation and where there was at least some support during the RGS Steering Committee review. These measures were eliminated after closer consideration. Rationale is provided for the elimination of each of these measures in the sections that follow.
- **Score-based Eliminations:** measures that scored poorly in the technical evaluation and/or were identified with high consensus by RGS Steering Committee members as ‘measures to be cut’. No further rationale is given for the elimination of these measures.

All candidate measures and the rationale for elimination are included in Appendix C.

## 6. Project Challenges and Recommendations

Development of the RGS Monitoring Program surfaced some challenges with the RGS and lessons-learned that can be carried forward to future RGS reviews.

Two principal challenges related to the formulation and selection of appropriate measures include:

- **Data collection and availability:** Data collection was a primary concern of measure selection. Sometimes the preferred or ideal measure could not be selected given data availability restrictions. Outside of academic research, the ideal piece of data is rarely available. For the most part, all measures selected took data availability constraints into account. However, some measures were selected as the best fit with regional goal monitoring despite persistent data collection challenges. They are:
  - **3.2) Water Quality Advisories:** Multiple classes of water advisories are monitored by the Interior Health Authority for all water purveyors in the Central Okanagan. Limited information on current advisories are publicly available online. However, compiled data for a given time period that details the type and length of advisory for each water purveyor is only available through an official *Freedom of Information and Protection of Privacy* request. This type of process may have financial implications and take time to process.
  - **7.1) Total GHG Emissions:** This measure is connected to a provincial requirement. Previously, the province had provided this data for all communities through the *Community Energy and Emissions Inventory* (CEEI). With the end of the provincial Air Care Program, critical data for calculating transportation emissions became unavailable (i.e., vehicle kilometers travelled, or ‘VKT’ for individual vehicles). The updated emissions and energy tracking program created by the province is much more limited in scope (if more frequent than the old model), and only provides community level data on solid waste emissions and energy consumption for regulated utilities. Based on conversations with Provincial staff, the model is currently being updated, with an attempt to confirm new data sources for VKT. This new program is expected to be operational in the next year or two, with plans to

continue expanding the model to include an increasingly detailed set of sub-sectors (e.g., types of industry, housing, or transportation) over the coming years.

As such, it is recommended to hold off on data collection on this measure until the provincial emissions tracking program has been updated.

- **Lack of policy definition and detail:** A lack of policy definition and detail restricts the ability to select workable measures. For most Issue Areas, acceptable measures could be identified. However, the goal for *Our Land*, is “to manage the land base effectively to protect natural resources and limit urban sprawl”; which lacks defined supporting policy regarding growth. The RGS contains policy which refers to “growth patterns that minimize urban encroachment into rural areas”. But the policy lacks definition of what constitutes ‘sprawl’, or how to define ‘urban encroachment’, ‘rural lands’ or ‘serviced areas’ in a way that tracks anything beyond development outside municipal boundaries. Essentially, direction is not provided regarding what constitutes preferred forms or locations for growth.

The policy gap that this challenge reveals could be a priority topic of discussion during future review of the RGS.

Responding to the impacts of climate change is another potential policy gap. Since the RGS was first adopted, attention to climate change has grown enormously – it has also developed. While GHG reductions was the primary focus, adaptation and resilience have risen significantly in profile among policy makers. Though the RGS goal under *Our Climate* is explicit about ‘respond[ing] to the impacts of climate change’, the supporting policy provide less detail and direction than it does around mitigation (i.e. GHG reductions). In recent years, various projects that have resulted from the RGS have been focusing on climate change and planning for resiliency such as the Regional Floodplain Management Plan. Through projects like this, it may be possible to develop a measure of regional vulnerability adaptive capacity, or resilience.

Beyond these challenges, there were a number of lesson-learned from the process and consultation with planners from other regions that should be carried forward during use of the Monitoring Program:

- **Utilize the monitoring results to build profile of the RGS and regional planning:** During consultation, planners indicated that a well-used monitoring program can support more effective identification of regional priorities and understanding of the benefits of the RGS. This can involve engaging different groups on specific measures, and developing creative communications tools to leverage the results.
- **Integrate with other major regional initiatives and associated monitoring activities:** As the RGS is in many ways an overarching strategic planning document, the measures collectively provide a high-level snapshot of the state of the region. This can make it a useful bridge to other initiatives and associated monitoring programs covering topics like transportation,

economic development, air quality, and ecological connectivity. The RGS monitoring program could connect to these initiatives as a means of further detailing some of the trends that emerge (e.g. through linking to other websites or plans, or inviting outside experts to support interpretation of high-level findings).

A key complement to the outcome measures could also be a future Citizen Survey, which would allow perception from residents to be compared to objective measures of RGS progress. This could point to communications priorities (i.e. where there is a gap between perception and measured progress), or a deficiency in selected measures.

- **Maintain “buy-in” from member jurisdictions and other partners:** This program has been developed collaboratively, with input from RDCO member jurisdictions and a number of other organizations. Several of the measures involve data sharing with several of these groups. The Monitoring Program that has been developed requires annual participation from all member jurisdictions. Input from regional planners at other jurisdictions has indicated that ongoing involvement from these groups in using the outputs from monitoring is the best way to realize the potential benefits of having such a program in place.
- **Refine the monitoring framework over time:** While these measures were selected through a methodical and thoughtful process, using the best available data, it is only through application that the effectiveness will be confirmed. As data is collected and reported on, issues, deficiencies and potential improvements will become clear. Further, as data sources improve, better measures may become available.

## 7. Conclusion

Monitoring and assessment of policy implementation is much more than a regulatory requirement. As a crucial part of responsible planning practice, monitoring attempts to answer two main questions about policy: 1) Are we doing what we said we would do? and 2) Is it having the impact we want? These questions correspond to the complementary activities of implementation and outcome monitoring.

In addition to the core role of tracking policy success, ongoing monitoring can support the decision-making processes and collaborations that are foundational to successful policy work at the regional level. A strong monitoring framework can support identification of priorities for the Regional Board. It can communicate progress and achievements to the public, thereby promoting better understanding of the role of the RGS and regional planning. Monitoring can also improve collaboration at the staff level. As most of the measures have data available at the sub-regional level, monitoring can support the identification of policy topics where different jurisdictions can collaborate, as well as finding policies adopted by one jurisdiction that are especially effective in addressing a shared challenge.

## Appendices

### Appendix A: List of Reviewed Documents

List of Related Documents by Area	
Year	Document Title
<b>Regional District of Central Okanagan</b>	
2013	Regional District of Central Okanagan Regional Growth Strategy
2011	Transit Future Plan
2006	Ellison Official Community Plan
2012	Brent Road and Trepanier Official Community Plan
2014	Rural Westside Official Community Plan
2012	South Slopes Official Community Plan
<b>District of Peachland</b>	
2012	Community Energy and Emissions Plan
2018	Corporate Strategic Plan
2018	Annual Report
2015	Hwy97 Socio-Economic Impact Assessment Final Report
2018	Official Community Plan
<b>Regional District North Okanagan</b>	
2016	State of the Region Report - RGS M&E
2011	Regional Growth Strategy
2013	Monitoring and Evaluation Report
2015	Regional Agricultural Plan
<b>Regional Districts of North Okanagan, Central Okanagan, and Okanagan-Similkameen</b>	
2017	State of the Region Report - Interregional Monitoring and Eval Framework
<b>Regional District of Okanagan-Similkameen / South Okanagan</b>	
2017	Regional Growth Strategy
2016	Regional Snapshot
<b>City / District of West Kelowna</b>	
2011	Official Community Plan
2011	Agricultural Plan
2009	Community Wildfire Protection Plan
2015	Economic Development and Tourism Strategy
2014	Transportation Master Plan
2013	Recreational Trails Master Plan
2011	Waterfront Master Plan
2016	Parks Master Plan
2014	Sanitary Sewer Master Plan
2013	Water Conservation Plan
2011	Westbank Centre Revitalization Plan
<b>City of Kelowna</b>	
2011	Kelowna 2030 - Official Community Plan
2018	Healthy Housing Strategy (Healthy City)
2012	Housing Strategy
2011	Cultural Plan

Regional District Central Okanagan

2012	'My Downtown' City of Kelowna Downtown Plan
2016	Urban Centres Roadmap
2018	Corporate Energy and GHG Emissions Plan
2018	Community Climate Action Plan
2017	Agricultural Plan
2016	Official Community Plan Indicators Report
2016	Community for All Strategy (Healthy City)
2016	Pedestrian and Bicycle Master Plan
2009	Linear Parks Master Plan
2011	20 Year Servicing Plan
1997	Sutherland Bay Concept Plan
2016	Civic Precinct Plan
2014	North Clifton Area Structure Plan
2013	Environmental Directory
2013	Economic Directory
1998	Wetland Management Strategy
2015	Heritage Strategy
2013	Cultural Directory
2012	Social Framework
<b>Westbank First Nation</b>	
2017	Government Strategic Plan (2016 - 2019)
2015	Comprehensive Community Plan
2010	Community Economic Development Plan
2015	Economic Development Commission Strategic Plan 2016 - 2019
2015	Parks and Trails Master Plan
2011	The 2011 Housing Strategy
<b>Okanagan Indian Band</b>	
2012	Strategic Plan
2014	Chief and Council Strategic Plan 2014 - 2018
<b>District of Lake Country</b>	
2018	Official Community Plan (2018 - 2038)
2014	Integrated Community Sustainability Plan
2008	Community Agriculture Plan
2018	Parks and Recreation Master Plan
2012	Water Master Plan
<b>Interior Health Authority</b>	
2018	Service Plan 2017/18 - 2019/20
2015	Aboriginal Health and Wellness Strategy (2015 - 2019)
<b>Okanagan Collaborative Conservation Program</b>	
2010	Strategy for a Sustainable Similkameen Valley (2011 - 2020)
2012	Greenhouse Gas Implications of Land Use Scenarios for the Regional Growth Strategy
2014	A Biodiversity Conservation Strategy for the Okanagan Region
<b>Central Okanagan Development Commission</b>	
2018	Economic Indicators Q3 2018
2018	Economic Profile 2018
?	Economic Opportunities to 2020 Strategy for the Central Okanagan Region

<b>Okanagan Basin Water Board</b>	
2018	Constructed Wetlands for Stormwater Management: An Okanagan Guidebook
2014	Okanagan Wetlands Strategy: Phase 1
2008	Okanagan Sustainable Water Strategy
<b>Metro Vancouver RGS Performance Measures</b>	
2017	Metro Vancouver 2040: Performance Monitoring Guideline
?	Health Impact Assessment
<b>Regional District of Nanaimo</b>	
2015	Regional Growth Strategy Monitoring Summary
<b>Squamish Lillooet Regional District</b>	
2015	SLRD Monitoring Report
<b>Thompson Nicola Regional District</b>	
2017	Regional Growth Strategy Monitoring Report
<b>Comox Valley Regional District</b>	
2016	RGS Annual Report
<b>Provincial Health Services Authority</b>	
2008	Indicators for a Healthy Build Environment in BC
<b>Fraser Basin Council</b>	
2014	Indicators to Assess Watershed Health in British Columbia

## Appendix B: Additional Findings from External Consultation

<b>Regional District North Okanagan</b>	
<ul style="list-style-type: none"> <li>• 27 indicators across 7 policy areas with 19 goals (8<sup>th</sup> policy area – Governance – uses narrative reporting)</li> <li>• Implementation monitoring is narrative (annual)</li> <li>• Five-year reporting cycle (for impacts)</li> <li>• Focused on RGS review and update process             <ul style="list-style-type: none"> <li>○ Use to establish priority areas of review</li> </ul> </li> <li>• Used “daily” by this planner (data pulled for various presentations, reports, etc.)</li> <li>• Provides indication of where attention is needed, not a full analysis and story of the policy issue</li> <li>• It starts the process or initiates the dialogue (though some tell the whole story)</li> <li>• Data collection from community partners is very challenging</li> <li>• Using reliable datasets (e.g., census) is essential – you know it’ll be there in the future</li> </ul>	
<b>Regional District Okanagan Similkameen</b>	
<ul style="list-style-type: none"> <li>• 16* indicators across 7 policy areas (+2 context indicators)</li> <li>• Collected annually</li> <li>• Only regional data (no local level)</li> <li>• Completed 8 cycles</li> <li>• Used with Regional Board (but low interest)</li> <li>• Free, easily available data only scratches surface             <ul style="list-style-type: none"> <li>○ Costs more to drill down</li> </ul> </li> <li>• Very time-consuming to assemble (annual)</li> <li>• Regional capacity and reporting differences a challenge (try to find consistency)</li> </ul>	

<ul style="list-style-type: none"> <li>• Be very careful about sources</li> <li>• Be clear on methodologies &amp; measures (collection/calculation)</li> <li>• Could be useful to emphasize regional lens (i.e., looking beyond municipal concerns)</li> </ul>
<p><b>Squamish-Lillooet Regional District</b></p> <ul style="list-style-type: none"> <li>• 29 indicators across 9 goals (new additions coming)</li> <li>• Three cycles (two annual, shifted to biennial)             <ul style="list-style-type: none"> <li>○ 7 indicators not updated since 2012</li> <li>○ Implementation reporting in ‘off’ years – might do narrative</li> </ul> </li> <li>• Considering shifting to longer than two years cycles             <ul style="list-style-type: none"> <li>○ Annual (even biennial) change is minimal</li> </ul> </li> <li>• Generally not well used</li> <li>• “We have no control over this”</li> <li>• Considering focused meetings with key people on different indicators</li> <li>• Ideally for decision-makers to set priorities during their term</li> <li>• Regional diversity lost with “averages”</li> <li>• About effectiveness of bylaw, or “picture” of our communities?</li> <li>• Could be more useful and interesting if attached to bylaw</li> <li>• Most interesting indicators are where there is influence</li> <li>• Wants to shift focus to RGS bylaw, away from local community conditions/ “relevance”</li> <li>• Tie back to purpose of RGS – managing growth             <ul style="list-style-type: none"> <li>○ Key questions, e.g. Are our urban areas expanding?</li> </ul> </li> </ul>
<p><b>Thomson Nicola Regional District</b></p> <ul style="list-style-type: none"> <li>• 10 indicator areas; ~30 indicators</li> <li>• Biennial; two cycles (2015;2017)</li> <li>• Have some permanent indicators, but adjusts to speak to new priorities/concerns             <ul style="list-style-type: none"> <li>○ Want to keep it flexible</li> </ul> </li> <li>• “Best part” of RGS</li> <li>• Present to the Board and always great interest             <ul style="list-style-type: none"> <li>○ Hire/involve experts as needed</li> </ul> </li> <li>• Use them to assess development application</li> <li>• We have used experts speak to specific indicators:             <ul style="list-style-type: none"> <li>○ When something is flagged</li> <li>○ Staff presents them, but can only speak critically to certain ones</li> <li>○ Hire consultants to do detailed assessments</li> </ul> </li> <li>• Biggest issue is time (thus biennial)</li> <li>• Order is important – tell a story</li> </ul>
<p><b>Regional District Nanaimo</b></p> <ul style="list-style-type: none"> <li>• 22 indicators and related targets for 11 goals</li> <li>• Detailed Implementation narrative</li> <li>• Annual reports             <ul style="list-style-type: none"> <li>○ 2012 to 2017</li> <li>○ 1997 to 2004; 2006</li> </ul> </li> </ul>

- Extensive documentation and web-based reporting
- Finds annual reporting very challenging
  - Discussing alternatives internally
- Struggled to established baseline (i.e., complete data set for all indicators for all jurisdictions)
- Incredibly time consuming
  - Will change process for collecting data from members
  - Want to move away from annual
- Done a lot of work on relationship building with members
- Have used it to focus attention on areas needing more study (e.g., affordable housing)
- Opens door to ask if policies are adequate
- Useful communications tool
  - Allows region and partners to ‘take stock’
  - Shows impact of day-to-day planning work
- Be sure to do relationship-building/education with members
- Report must have value
- Develop indicators collaboratively
- Make sure data exists first; weight this highly

### Appendix C. Eliminated Measures and Evaluation Results

This section includes measures that were considered as part of the long-list but eliminated from the final outcome monitoring program. Eliminated measures are organized under two categories:

- **Candidate Measures:** measures that received good or mixed scoring in the technical evaluation and where there was at least some support during the RGS Steering Committee review. These measures were eliminated after closer consideration. Rationale is provided for the elimination of each of these measures in the sections that follow.
- **Score-based Eliminations:** measures that scored poorly in the technical evaluation and/or were identified with high consensus by RGS Steering Committee members as ‘measures to be cut’. No further rationale is given for the elimination of these measures.

Eliminated measures are detailed below under the relevant RGS Issue Area

#### C.1 Our Land

##### *Candidate measures*

<b>Indicators/Measures</b>	<b>Rationale for Elimination</b>
<i>Amount of sprawl</i> <ul style="list-style-type: none"> <li>• % new and total residential units developed inside/outside existing serviced areas</li> </ul>	Definition of servicing that suitably separates “sprawl” from desired development is not in the RGS and could not be identified; selected measure uses RGS ‘Preliminary Constraint Areas’ (RGS A-4)
<i>Protection of rural areas</i>	Definition of rural that suitably separates undesirable from desirable development



<ul style="list-style-type: none"> <li>Hectares of rural land rezoned to non-rural designations; measuring the amount of new growth happening in rural areas</li> </ul>	is not in the RGS and could not be identified; selected measure uses RGS 'Preliminary Constraint Areas' (RGS A-4)
<p><i>Amount of sprawl</i></p> <ul style="list-style-type: none"> <li>% of new housing located inside designated growth areas</li> </ul>	No policy definition of 'designated growth areas' beyond municipal boundaries; selected measure uses RGS 'Preliminary Constraint Areas' (RGS A-4)
<p><i>Amount of sprawl</i></p> <ul style="list-style-type: none"> <li>Population inside and outside the growth containment boundary</li> </ul>	RGS has no containment boundary; selected measure uses RGS 'Preliminary Constraint Areas' (RGS A-4)
<p><i>Undeveloped Land Remaining</i></p> <ul style="list-style-type: none"> <li>Hectares of land that is undeveloped (overviews growth and development potential)</li> </ul>	Insufficiently related to sprawl (from Goal) relates more to development potential
<p><i>Undeveloped Land Remaining</i></p> <ul style="list-style-type: none"> <li>Hectares of undeveloped/ underdeveloped (below some assessed value threshold) land within designated urban and village centres by land use type</li> </ul>	<ul style="list-style-type: none"> <li>Insufficiently related to sprawl (from Goal) relates more to development potential</li> <li>No policies defining urban/village centres at regional level</li> </ul>
<p><i>Change in amount / loss of rural land</i></p> <ul style="list-style-type: none"> <li>Number of units developed outside designated urban and village centres that are "non-rural" in character (e.g., above a density threshold)</li> </ul>	<ul style="list-style-type: none"> <li>No policy designating urban/village centres</li> <li>No policy defining development appropriate for rural</li> </ul>

*Score-Based Eliminations*

- Amount of servicing outside of growth containment boundary
  - % of infrastructure outside vs % inside of containment zone
  - km of new infrastructure outside of containment boundary

C.2 Our Economy

*Candidate measures*

<b>Indicators/Measures</b>	<b>Rationale for Elimination</b>
<p><i>Dynamic / prosperous economy</i></p> <ul style="list-style-type: none"> <li>Median household income relative to provincial median</li> </ul>	Compared to tracking business growth, seen as less relevant to local circumstances; also an annual measures was preferred over five-year
<p><i>Dynamic / prosperous economy</i></p> <ul style="list-style-type: none"> <li>% growth in number of businesses with employees</li> </ul>	Renamed and kept as " <i>% growth in number of businesses with employees compared to provincial growth</i> "

<p><i>Diversity</i></p> <ul style="list-style-type: none"> <li>• % of employed people that are working in each sector as an indication of the employment diversity in the region</li> </ul>	No policy definitions of sector-based diversity to compare against; other resilience measure selected.
<p><i>Diversity</i></p> <ul style="list-style-type: none"> <li>• % of firms by Industry (NAICS)</li> </ul>	No policy definitions of sector-based diversity to compare against; other resilience measure selected.
<p><i>Competitiveness</i></p> <ul style="list-style-type: none"> <li>• Industrial / commercial tax rates (with benchmarking)</li> </ul>	Tax rates fluctuate for multiple reasons, connected to different services; difficult to make direct comparisons
<p><i>Employment and income measures</i></p> <ul style="list-style-type: none"> <li>• Number / % of persons employed (15yrs and older) working</li> </ul>	Impacted by outside (macroeconomic) forces
<p><i>Employment and income measures</i></p> <ul style="list-style-type: none"> <li>• Median household income</li> </ul>	Compared to tracking business growth, seen as less relevant to local circumstances; also an annual measures was preferred over five-year
<p><i>Employment and income measures</i></p> <ul style="list-style-type: none"> <li>• % employment growth compared to % population growth</li> </ul>	This can be derived from measures selected for economy indicators and context indicators
<p><i>Employment and income measures</i></p> <ul style="list-style-type: none"> <li>• % growth in employment</li> </ul>	Similar to business growth, but businesses can be better connected to local area (employed people living in RDCO can work many places) and tracked annually.
<p><i>Development activity</i></p> <ul style="list-style-type: none"> <li>• Number of building permits issued for residential, commercial, industrial, and institutional</li> </ul>	Scored relatively low compared to other measures to keep
<p><i>Development activity</i></p> <ul style="list-style-type: none"> <li>• % change in housing starts over past year (period)</li> </ul>	Volatile and can be misleading
<p><i>Resilience/ long-term sustainability: amount of employment lands</i></p> <ul style="list-style-type: none"> <li>• Hectares of land zoned for industrial and commercial activities</li> </ul>	Similar but inferior to selected measure – does not indicate supply.
<p><i>Resilience/ long-term sustainability: amount of employment lands</i></p> <ul style="list-style-type: none"> <li>• Estimated years of employment land remaining</li> </ul>	Would involve a dedicated study to determine and extrapolate trends for absorption; can be accomplished in future years using data from chosen measure

*Score-Based Eliminations*

- *Dynamic and prosperous economy*

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- Ratio of new business licenses to population growth
- Total building permit value per land use
- *Employment accessibility*
  - Average # of kms travelled for commute region-wide
  - Average # of minutes travelled for commute region-wide
- *Competitiveness*
  - *Permit processing times*
- *Green economy*
  - #/% of business per year investing in "greening" (needs further defining)
  - GHG emissions/energy consumption of industrial/commercial buildings
  - % of businesses/employment in "green" sectors

### C.3 Our Water

#### *Candidate measures*

<b>Indicators/Measures</b>	<b>Rationale for Elimination</b>
<i>Water consumption</i> <ul style="list-style-type: none"> <li>● Water consumption by customer type (agricultural, residential, parks, etc.)</li> </ul>	Scored relatively low compared to similar measures – less meaningful than consumption per dwelling
<i>Water consumption</i> <ul style="list-style-type: none"> <li>● percent of agricultural land that is irrigated (available through Ministry of Agriculture assessment done every 5 - 10 years)</li> </ul>	Too specific; overview measures preferred
<i>Groundwater levels</i> <ul style="list-style-type: none"> <li>● % of observation wells that showed declining levels</li> </ul>	Too volatile; not helpful for long-term policy progress
<i>Water quality</i> <ul style="list-style-type: none"> <li>● Surface water quality</li> </ul>	Drinking water system advisories identified as preferred through SC input
<i>Source watershed health</i> <ul style="list-style-type: none"> <li>● Hectares of watersheds under protection</li> </ul>	Partially tracked through <i>Our Ecosystem</i> measures, but generally felt that data would show no change as new protection tools (watershed plans, parks, etc.) rarely introduced.

#### *Score-Based Eliminations*

- *Water consumption*
  - Unaccounted for water (% of unaccounted for water averaged m3)
  - Total area (hectares) of irrigation compared to irrigated areas with reclaimed water
- *Groundwater levels*
  - Average change across all wells
- *Drinking water quality*
  - # of water systems registered with local health authority
  - Proportion of systems reporting low hazard rating

C.4 Our Health Ranking Results

*Candidate measures*

<b>Indicators/Measures</b>	<b>Rationale for Elimination</b>
<p><i>Air quality</i></p> <ul style="list-style-type: none"> <li>• # of times air quality exceeds the Canada-Wide Standards (for PM 2.5 &amp; Ground level Ozone)</li> </ul>	Selected measure identified as more relevant to human health
<p><i>Mode Share</i></p> <ul style="list-style-type: none"> <li>• % of commute by automobile</li> </ul>	Used as part of transportation section in the following form: “% of weekday trips by single automobile driver”
<p><i>Crime rates</i></p> <ul style="list-style-type: none"> <li>• # of criminal offences that have occurred in a community</li> </ul>	Preference was for health measures (not safety)
<p><i>General Health</i></p> <ul style="list-style-type: none"> <li>• Self-reported mental health</li> </ul>	Affected by many forces outside regional and local government control
<p><i>General health</i></p> <ul style="list-style-type: none"> <li>• Self-reported health</li> </ul>	Affected by many forces outside regional and local government control
<p><i>Physical activity levels</i></p> <ul style="list-style-type: none"> <li>• % of individual reporting they are moderately active or active (Okanagan relative to BC)</li> </ul>	Affected by many forces outside regional and local government control; Active transportation (in chosen measure) is aspect of physical activity regional and local government can influence more
<p><i>Age distribution</i></p> <ul style="list-style-type: none"> <li>• % distribution of age ranges (both current and projected)</li> </ul>	Not relevant to goal (context indicator)
<p><i>Life expectancy at birth</i></p> <ul style="list-style-type: none"> <li>• Average number of years a newborn can be expected to live based on mortality rates in the region</li> </ul>	Affected by many forces outside regional and local government control
<p><i>Development by location</i></p> <ul style="list-style-type: none"> <li>• Proximity to transit, recreation, and commercial services</li> </ul>	Challenge in defining which recreation and services to include, and how to define ‘proximity’ (i.e., close enough) for each.
<p><i>Traffic safety</i></p> <ul style="list-style-type: none"> <li>• # of traffic accidents (fatal and non-fatal incidents)</li> </ul>	Preference was for health measures (not safety)
<p><i>Child development</i></p> <ul style="list-style-type: none"> <li>• Proportion of total kindergarten children considered vulnerable based on the Early Childhood Development Index (EDI)</li> </ul>	Affected by many forces outside regional and local government control
<p><i>Access to recreational and green space</i></p> <ul style="list-style-type: none"> <li>• # of homes located within 2km of park and recreational site</li> </ul>	Parks and recreation areas do not sufficiently represent the access to green spaces in suburban and rural forms; many residents have yards, and so park access may be less important than in more urban context.

<p><i>Auto dependence vs active transportation</i></p> <ul style="list-style-type: none"> <li>• # of vehicles per capita</li> </ul>	<p>Captures auto-dependence/active transportation less well than chosen measures.</p>
<p><i>Auto dependence vs active transportation</i></p> <ul style="list-style-type: none"> <li>• # km of streets with pedestrian and cycling facilities, # km of cycling infrastructure, # km of sidewalks</li> </ul>	<p>Challenge in collecting comparable data across multiple jurisdictions; chosen measure captures outcome of AT network expansion (as well as other policy responses).</p>

*Score-Based Eliminations*

- *Common and Chronic Diseases*
  - # of people with chronic disease admitted to KGH
  - # of people with common diseases across the region
- *Obesity Rates*
  - Body Mass Index: Self Reported as 'Overweight' or 'Obese' (Okanagan relative to BC)
- *Stress levels*
  - % individuals reporting stress levels as 'quite a lot' (Okanagan relative to BC)
- *Joint Use Agreements / Projects / Programs / Facilities*
  - Agreements between two or more government entities that set out terms and conditions for use of public property or facilities
- *Health Strategies*
  - % of communities that have completed healthy living strategic plans
- *Passenger vehicles on the road*
  - % of ICBC insurance holders by type (daily commuter, non-commuter)
- *Social wellbeing*
  - Non-Self reported metrics of cohesion / wellbeing

C.5 Our Food

*Candidate measures*

<b>Indicators/Measures</b>	<b>Rationale for Elimination</b>
<p><i>Change to ALR</i></p> <ul style="list-style-type: none"> <li>• Net hectares of ALR Exclusions and Inclusions annually</li> <li>• Hectares of total ALR land</li> </ul>	<ul style="list-style-type: none"> <li>• Combined, renamed, and kept as “<i>Percent change in Agricultural land reserve annually and cumulatively</i>”</li> </ul>
<p><i>Agricultural farm receipts</i></p> <ul style="list-style-type: none"> <li>• Total value of gross farm receipts (\$)</li> </ul>	<p>Not as closely linked to land protection aspect of vitality</p>
<p><i>Total land base actively farmed</i></p> <ul style="list-style-type: none"> <li>• Ratio of actively farmed land to total ALR land</li> </ul>	<p>There is farmland outside ALR that would be missed in this version.</p>
<p><i>Total land base actively farmed</i></p> <ul style="list-style-type: none"> <li>• Hectares of land in production within ALR and agriculturally zoned lands</li> </ul>	<p>Similar measure selected – “in production” not a term used by existing data sources.</p>

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<p><i>Community gardens</i></p> <ul style="list-style-type: none"> <li>• # of community gardens and plots in the region / district / municipality</li> </ul>	Too specific a topic – doesn't contribute to larger picture of Issue Area; data collection concerns
<p><i>Agricultural Employment</i></p> <ul style="list-style-type: none"> <li>• % of total employment in agriculture, fishing, and hunting</li> </ul>	Insufficiently captures vitality of sector – dependent on too many other factors (e.g., growth of other sectors).
<p><i>Entry of new farmers</i></p> <ul style="list-style-type: none"> <li>• Average age of farmers in region measured over time</li> </ul>	Too specific a topic – doesn't contribute to larger picture of Issue Area
<p><i>Entry of new farmers</i></p> <ul style="list-style-type: none"> <li>• % of farm operators aged under 35 (or under 54)</li> </ul>	Too specific a topic – doesn't contribute to larger picture of Issue Area
<p><i>Diversity of farms</i></p> <ul style="list-style-type: none"> <li>• Average farm size</li> </ul>	No policy definitions that determine progress (i.e., increase or decrease as good or bad).

### Score-Based Eliminations

- *Amount of protected land*
  - hectares of agricultural development permit area by jurisdiction
- *Profitability for all agriculture*
  - % gross margin for all
- *Entry of new farmers*
  - % of farms with written farm succession plans
- *“Observations related to diversification and processing on farms”*
  - Ratio of food manufacturing businesses relative to number of active farms
- *Investment in farming*
  - % growth in farm capital compared to BC baseline
- *Agricultural Education Availability*
  - # of mentoring programs, post-secondary education sources in local universities and colleges, attendance % change over time
- *Diversity of Farmland Under Cultivation by Crop Type*
  - Diversity indices (calculating distribution of data across a set of categories)
- *Access to Local Agriculture*
  - % of all farms selling directly to consumer
- *Use of Chemical Land Inputs*
  - % of total farmland applying herbicides, insecticides, fungicides, commercial fertilizer
- *Organic Products for Sale*
  - % of total farms offering organics products

## C.6 Our Housing

### Candidate measures

<b>Indicators/Measures</b>	<b>Rationale for Elimination</b>
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<p><i>Housing affordability</i></p> <ul style="list-style-type: none"> <li>• Median home prices compared to provincial median</li> </ul>	Rental prices chosen as measure, considered to be more important for affordability
<p><i>Housing affordability</i></p> <ul style="list-style-type: none"> <li>• # / % of owner households in core housing need in (municipality/region) by household type</li> </ul>	Used more general measure of affordability (Core Housing Need includes factors beyond price).
<p><i>General affordability</i></p> <p># / % of owner households in core housing need in (municipality/region) by age groups</p>	Used more general measure of affordability (Core Housing Need includes factors beyond price).
<p><i>Housing availability</i></p> <ul style="list-style-type: none"> <li>• Availability rate of rental housing</li> </ul>	Affordability measures preferred
<p><i>Diversity of housing</i></p> <ul style="list-style-type: none"> <li>• # of new units by number of bedrooms</li> </ul>	Too specific; general diversity of housing stock preferred
<p><i>Diversity of housing</i></p> <ul style="list-style-type: none"> <li>• Diversity index of housing types</li> </ul>	Too complex compared to straight stats about share of each new housing type
<p><i>Well located residential development (active transportation and access to resources)</i></p> <ul style="list-style-type: none"> <li>• Walk score from key locations/ of subareas</li> </ul>	Definition of “well located” not established in policy; some concerns around use of external data source

*Score-Based Eliminations*

- *Diversity of Housing*
  - Average residential dwelling unit size (number of bedrooms)
- *General affordability*
  - # / % of renter households in core housing need in (municipality/region) by household type
- *Housing availability*
  - # of homes available for sale

C.7 Our Climate

*Candidate measures*

<b>Indicators/Measures</b>	<b>Rationale for Elimination</b>
<p><i>Community Energy and Emissions Inventory</i></p> <ul style="list-style-type: none"> <li>• Multi-sector GHG emissions for the region (including transportation, buildings, waste)</li> </ul>	Provincial modelling does not currently support this; expected to in the future (between 1 and 10 years away, depending on level of detail required)
<p><i>Transportation GHG Emissions</i></p> <ul style="list-style-type: none"> <li>• Composition of vehicle stock</li> </ul>	Too indirect – not enough info about how much vehicles being driven
<p><i>Transportation GHG Emissions</i></p> <ul style="list-style-type: none"> <li>• Total Vehicle Kilometers Travelled (VKT)</li> </ul>	Emissions depends on the type of vehicles being driven
<p><i>Risk/vulnerability</i></p> <ul style="list-style-type: none"> <li>• # of days of drought or flood annually</li> </ul>	Doesn't capture risk/vulnerability of people and assets – this tracks climate change, not adaptation/resilience

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<i>Risk/vulnerability</i> <ul style="list-style-type: none"> <li>• # of dwellings in hazard areas</li> </ul>	Hazard areas and level of risk to dwellings within them still being determined as part of Flood Management Strategy.
<i>Risk/vulnerability</i> <ul style="list-style-type: none"> <li>• # of dwellings in wildfire risk zone</li> </ul>	Not expected to change over time.
<i>Drought Response Plans</i> <ul style="list-style-type: none"> <li>• # of drought response plans in place within the RDCO</li> </ul>	Measure would become stagnant once plans completed. Also, too narrow an aspect of overall resilience.

### Score-Based Eliminations

- *Community Energy and Emissions Inventory*
  - Per capita GHG emissions from use of major utility energy
  - Per capita energy consumption from major utilities
- *Natural Disaster Resilience*
  - # of dwellings in flood risk (hazard) zone

## C.8 Our Ecosystem

### Candidate measures

<b>Indicators/Measures</b>	<b>Rationale for Elimination</b>
<i>Annual and Cumulative Area of Parkland and Protected Area</i> <ul style="list-style-type: none"> <li>• % of total Sensitive Habitat under protected status (Park designation, DP, etc.)</li> </ul>	Protections not expected to change significantly; Sensitive Habitat mapping is a resource intensive activity.
<i>Annual and Cumulative Area of Parkland and Protected Area</i> <ul style="list-style-type: none"> <li>• % of total wetland under protected status (Park designation, DP, etc.)</li> </ul>	Protections not expected to change significantly
<i>Annual and Cumulative Area of Parkland and Protected Area</i> <ul style="list-style-type: none"> <li>• % of total Okanagan Lake Shoreline under protected status (Park designation, DP, etc.)</li> </ul>	Protections not expected to change significantly; measure of shoreline disturbance preferred
<i>Municipal Solid Waste Disposal Per Capita</i> <ul style="list-style-type: none"> <li>• Annual amount of municipal solid waste (MSW) disposed in landfills or incinerated by residential, commercial, institutional, demolition, land clearing, or construction source</li> </ul>	Too indirectly related to ecosystem protection and quality. Similar measure selected for <i>our climate</i> section
<i>Integrity and extent of ecologically important land</i> <ul style="list-style-type: none"> <li>• % of Okanagan lake Foreshore classed Very High or High in Aquatic Habitat Indices (AHI)</li> </ul>	Shoreline disturbance measure preferred as it is already well-known and more intelligible to general audience.
<i>Integrity and extent of ecologically important land</i>	Sensitive Habitat mapping is a resource intensive activity.



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<ul style="list-style-type: none"> <li>• % of total Sensitive Habitat and Inventory Mapping land classified as "impacted"</li> </ul>	
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### Score-Based Eliminations

- *Integrity & Extent of Ecologically Important Land*
  - % change in tree canopy cover
  - # of trees / trees planted in urban areas
  - % of total Wetland Inventory Mapping (WIM) land classified as "impacted"
- *Overall Biodiversity*
  - Hectares of Conservation Ranking 'high' and 'very high' from OCCP Biodiversity Strategy
  - Hectares of Relative Biodiversity ranking 'high' and 'very high' from OCCP Biodiversity Strategy
- *Species at risk*
  - # of species at risk within the RGS district
- *Green Space Connectivity Index*
  - # of wildlife corridors in each municipality / regional district
- *Development within important ecosystems*
  - # of Development Permits issued (by area)
- *Municipal Solid Waste Disposal Per Capita*
  - Total annual waste generated and recycled
- *Reclaimed Wastewater Discharge*
  - Annual volume of wastewater discharged to Okanagan Lake from water reclamation plants

## C.9 Our Transportation

### Candidate measures

<b>Indicators/Measures</b>	<b>Rationale for Elimination</b>
<i>Active Transportation, Streets</i> <ul style="list-style-type: none"> <li>• % km of infrastructure built by type (road, sidewalk, bike lane)</li> </ul>	More land use related measures selected
<i>Active Transportation, Streets</i> <ul style="list-style-type: none"> <li>• % km of streets with pedestrian and cycling facilities</li> </ul>	More land use related measures selected
<i>Transit Usage</i> <ul style="list-style-type: none"> <li>• Annual transit trips per community/route</li> </ul>	Key aspect of mode share (trips by single occupant automobile) preferred as general measure
<i>Transit Usage</i> <ul style="list-style-type: none"> <li>• Transit mode share % for commute</li> </ul>	Key aspect of mode share (trips by single occupant automobile) preferred as general measure
<i>Transit Affordability</i> <ul style="list-style-type: none"> <li>• Average expenditure per household on transportation (\$) and % of total percent of household consumption on transportation</li> </ul>	More overview measure selected; also, would require more resources to collect and prepare data

<p><i>Transit Accessibility</i></p> <ul style="list-style-type: none"> <li>• # of buses and shuttles accessible to disabled riders in area</li> </ul>	<p>Too specific to provide overview</p>
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*Score-Based Eliminations*

- *Transit Usage*
  - Boardings per service hour and per service km
  - Traffic counts
- *Passenger Vehicles on the Road*
  - # of vehicles per capita
- *Efficiency*
  - % of ICBC insurance holders by type (daily commuter, non-commuter)
- *Travel Cost*
  - Cost of time, fuel and operation for travellers
  - Cost per passenger trip (measures how expensive a service is to operate relative to the volume of people using the service)
  - Cost recovery = cost of providing service vs the rate of return through the fare box

C.10 Our Governance Ranking Results

*Candidate measures*

<b>Indicators/Measures</b>	<b>Rationale for Elimination</b>
<p><i>Collaborative governance</i></p> <ul style="list-style-type: none"> <li>• # of shared services delivered to municipalities</li> </ul>	<p>Core purpose of regional district, not indicative of new collaboration</p>
<p><i>Collaborative governance</i></p> <ul style="list-style-type: none"> <li>• # of regional partnership initiatives</li> </ul>	<p>'Initiatives' considered to be too broad a term for reporting, difficult to define what projects fall under initiatives</p>
<p><i>Regional Coordination</i></p> <ul style="list-style-type: none"> <li>• # of RGS steering committee meetings</li> </ul>	<p>Not considered sufficiently indicative of level of collaboration</p>

*Score-Based Eliminations*

- *Service Efficiency and Approval*
  - measure for efficiency and delivery
- *Voter participation*
  - % of eligible voters who voted in municipal elections

Appendix D: Monitoring Program Procedures and Schedule

<b>Monitoring Program</b>	<b>Frequency</b>	<b>Timing</b>
<b><i>Implementation Monitoring Report</i></b>	Annual	1 <sup>st</sup> Quarter
g) Narrative Report of work accomplished relating to goals of the RGS	Annual	4 <sup>th</sup> Quarter
h) Implementation of RGS Priority Projects Plan	Annual	4 <sup>th</sup> Quarter
i) RGS Steering Committee Review and Assessment	Annual	4 <sup>th</sup> Quarter
<b><i>Outcome Monitoring</i></b>		
j) Intermediate Report (15 measures)	2-3 years	1 <sup>st</sup> Quarter
k) Comprehensive Report (22 measures)	5-years	1 <sup>st</sup> Quarter
l) Updates for critical trends (select measures as needed)	As needed	1 <sup>st</sup> Quarter

Appendix E: Outcome Monitoring Template

Intermediate Reporting (2-3 Years)									
Issue Area	Indicator	Measure	Electoral Areas	City of Kelowna	City of West Kelowna	Westbank First Nation	District of Peachland	District of Lake Country	RDCO
Our Land	Urban sprawl and Rural land conversion	1.1) % of all new regional housing located outside municipal boundaries (i.e. in electoral areas)							
	Urban sprawl and Rural land conversion	1.2) # of new onsite sewerage systems to service development							
Our Economy	Dynamic and prosperous economy	2.1) % growth in number of businesses with employees compared to provincial growth							
	Resilience: Supply of employment lands	2.2) Hectares of vacant /under-developed industrial lands							
Our Water Resources	Water Quality	3.1) Total person-days of Water System Public Notifications							
	Water Consumption	3.2) Average annual water consumption per dwelling							
Our Health	Air Quality	4.1) Average annual air pollutants for fine particulate matter							

Intermediate Reporting (2-3 Years)								
	Air Quality	4.2) Average annual air pollutants for ground-level ozone						
Our Food	Protection of agricultural land	5.1) Percent change in Agricultural Land Reserve annually and cumulatively						
	Food sector viability	5.2) % of total regional land base that has farm status						
Our Housing	Range of housing opportunities	6.1) % of new units by structural type						
	Housing affordability	6.2) Average rent for purpose-built rentals compared to provincial average						
Our Climate	GHG emissions	7.1) Total GHG emissions by major sector (transportation, buildings, solid waste)						
	Waste	7.2) Municipal solid waste per capita						
Governance	Collaborative governance	10.1) # of regional labs held annually						

Comprehensive Reporting (5 Years)									
Issue Area	Indicator	Measure	Electoral Areas	City of Kelowna	City of West Kelowna	Westbank First Nation	District of Peachland	District of Lake Country	RDCO
Context	Overall growth and change	C1) Total and % change in population cohorts (5-year age categories)							
Our Health	Healthy built environment	4.3) % of commute and overall trips by walking and biking							
Our Housing	Housing affordability	6.3) % of households (owner/renter) spending 30% or more of their gross income on housing							
Our Ecosystem	Impacts of development on the natural environment	8.1) Change (% and linear meters) in Okanagan Lake shoreline from natural to disturbed							
	Impacts of development on the natural environment	8.2) % and hectares of the Okanagan Ecosystem Connectivity Corridor within Development Permit Areas							
Our Transportation	Auto-dependence	9.1) % of weekday trips by single automobile driver							
	Transportation network efficiency	9.2) Average commute time							

