2020 Corporate Strategic Asset Management Plan

Appendix F
Levels of Service Framework

COWICHAN VALLEY REGIONAL DISTRICT
REPORT NUMBER: 18P-00144-00

DEFINING LEVELS OF SERVICE

FINAL REPORT

SEPTEMBER 26, 2019

DEFINING LEVELS OF SERVICE

FINAL REPORT

COWICHAN VALLEY REGIONAL DISTRICT

VERSION 1.1

PROJECT NO.: 18P-00144-00.
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September 26, 2019

Cowichan Valley Regional District
175 Ingram Street
Duncan, BC
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Attention: Austin Tokarek, Asset Coordinator

Dear Sir,

Subject: Defining Levels of Service – Final Report

Attached is the Final Report summarizing the results of the Defining Levels of Service project undertaken with the regional district. This report brings together the work of staff from WSP and the Cowichan Valley Regional District (CVRD) in defining levels of service for the infrastructure and services that the regional district provides to the community.

The report summarizes the work over the past year to develop a consistent format for describing the key components and attributes of the services provided by the various service areas in the CVRD. We have incorporated the review comments from the CVRD in this final revision. We believe this will be a strong foundation for the CVRD to further develop and define the levels of service that the regional district strives to provide to the residents in the region.

Yours sincerely,

Doug Manarin, P.Eng.
Senior Consultant, Asset Management

DM/dm
Encl.
WSP ref.: 18P-00144-00

REVISION HISTORY

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2019-09-05	Final Report (Client Review)
Prepared by	Reviewed by
Doug Manarin, P.Eng.	Raphaelle Cardyn

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2019-09-26	Final Report (Revised)
Prepared by	Reviewed by
Doug Manarin, P.Eng.	Raphaelle Cardyn

SIGNATURES

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2019-09-26

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1.1 OVERVIEW

Levels of Service (LoS) are the outcomes that an organization delivers. They are the key drivers for decisions on future investments in infrastructure assets. As such, they need to be clearly articulated in terms that end users and decision makers can understand. Having well defined LoS will allow the Cowichan Valley Regional District (CVRD) to work with its ratepayers and other stakeholders to find an appropriate balance between affordability and community expectations for level of service.

This document defines the current understanding for LoS and establishes the path forward for the organisation to determine ideal/future/desired LoS which has been developed with CVRD staff from each service area. The key components of this Levels of Service framework in this project were developed in a series of workshops designed to identify the overall scope of services and stakeholders for these services. The details of the workshops have been summarized for each service area into:

- Service Statements;
- Performance Measures; and
- Future Factors.

The intent of this project was to define and document the current Levels of Service delivered by the CVRD and provide a roadmap for the CVRD to determine future levels of services, communications requirements, and desired performance metrics to measure future performance of service delivery to all of the stakeholders serviced by these CVRD services.

The CVRD recently completed a Climate Risk Assessment in 2018 which assessed the vulnerability and risk of CVRD's asset systems to changing climate. Unplanned events due to climate change poses a risk not only to CVRD's infrastructure, but also the LoS they currently provide. The projected climate change risks identified in the 2018 Climate Risk Assessment were analyzed for anticipated service area impacts and resulting potential LoS impacts. Mitigation and Adaptation strategies to offset the impacts of climate change may become a requirement or best practice in the future. Therefore, mitigation and adaptation strategies and actions have also been included in this report, as well as their potential impacts on CVRD's LoS.

1.2 DEFINING LEVELS OF SERVICE

Table 1 describes the approach for defining levels of service, selecting performance measures, and identifying performance targets and future forecasts.

Table 1 Levels of Services Key Concepts

Concept	Definition	Example
Stakeholder Groups	Groupings of stakeholders that have similar association with the service	Service Users: people who are connected to the water system Other Service Providers: Fire Fighters connecting to a water hydrant Regulators: Health Authority that sets out conditions and approvals for operating the system

Concept	Definition	Example
		Wider community: a community group concerned about the watershed the water system uses Neighbouring Communities: another municipality that draws water from the same watershed
Levels of Service (LoS) / Service Statements	Specific attributes of the service the organization intends to deliver from the **stakeholder's point of view**. LoS attributes provide the link between higher level corporate and asset management objectives and more detailed technical and operational objectives. They must all align to give the customer the intended experience of the service.	Water Systems - Reliable access to safe water that has acceptable pressure, odour, colour, and taste.
Performance Criteria	Characteristics describing the types of values or attributes that would describe the performance measures related to the LoS attributes such as: -Access; -Financial; -Quality; -Reliability; -Safety; -Satisfaction; and -Sustainability.	Water System – LoS Performance Criteria: -Safety; -Access; and -Reliability.
Performance Measure Type	The performance measure type identifies if the key driver of the performance measure is Customer or Technical. **Customer** performance measures are driven by how the stakeholder receives or experiences the service. Customer measures are generally those that would be used in public documents and should be aimed at a layperson. **Technical** performance measures are driven by what CVRD does to deliver a service. These measures support customer measures and tend to be used internally to measure performance against service levels and technical performance expectations for infrastructure.	*Customer Examples:* Number of annual complaints or service requests – failures or service interruptions Average Time to complete a service connection *Technical Examples:* Facility Condition Index rating % Condition (very good, good, fair, poor, very poor, unknown) for each asset class Number of main breaks or leaks per network length
Performance Measures / Key Performance Indicators (KPI)	Performance Measures or KPI are criteria that can be measured and provide an indication of how the organization is doing	Number of water systems Length of water network Number of times where customers' water service was interrupted

Concept	Definition	Example
	in delivering the intended LoS. These can be defined as: Measures or indicators describing how the customer receives or experiences the service. Measures or indicators describing the technical criteria the organization can measure to indicate how the well the service is being delivered (e.g. technical assessments, financial indicators, operating trends)	Number of water main breaks per km of pipe Number of boil water advisories issued Annual change in utility rates Annual cost of water treatment & supply Annual volume of water supplied
Performance Targets	The desired or required value (target), for each criterion that is being used as a performance measure. The expectation is that the intended LoS will be achieved if these targets are met.	>75% customer satisfaction rating from annual survey 100% compliance with drinking water test results
Future Forecasts	How future changes may impact the provision of service and costs in the future.	Forecast Population and Demographic changes Anticipated changes to regulations, service expectations Performance of existing infrastructure Impacts of climate change

1.3 ASSET PORTFOLIO

The CVRD has ten primary services areas identified as having infrastructure asset portfolios that have been included in this analysis. Dams, Flood Protection, IT infrastructure and Fleet, will be included in future iterations of this plan These services primarily provide direct services to customers or support the operations of the CVRD. A summary of the Service Areas is included in Table 2.

Table 2 CVRD Primary Infrastructure Service Areas

Service Area	Purpose	Description of Assets
Water Services	Supply potable water to utility customers	Water Sources, Water Supply and Treatment Plants, Water Distribution Pipe Networks, Fire Hydrants, and Customer Connections
Sewer Services	Collect and treat sanitary wastewater from utility customers	Sanitary and Storm Wastewater Collection Systems (Pipes), Treatment Plants, Outfalls and Discharge
Drainage Services	Provide stormwater drainage for designated developed areas	Stormwater Collection Systems (Pipes and Ditches), Retention Ponds
Ornamental Street Lighting Services	Provide lighting for public areas in designated neighbourhoods	Ornamental Street Lights, Power Connections and Supply

Service Area	Purpose	Description of Assets
Transit	Provide bus stops and bus stop improvements for the regional transit service	Bus Stop Improvements, Bus Shelters
Administration*	Provide office space and operations buildings for Regional District functions	Buildings providing staff office space and operations facilities, and public access to CVRD administrative and legislative services
Recreation Centres, Community Centres, and Community Halls*	Provides facilities for recreational, social, and cultural services, activities, and events	Recreation spaces (e.g. gyms, ice rinks, curling rinks), activity spaces, art and performance spaces, daycare spaces, major event spaces, and spaces for community partners and other services
Parks and Trails	Provide recreational and ecological spaces for residents	Park land, developed park spaces including playing fields, playgrounds, recreational spaces, wharfs, docks, and trails. Protected lands for environmental or ecological reserves. Historic sites.
Recycling and Waste Management*	Provide collection and processing services for solid waste, and manage legacy landfill areas	Buildings for solid waste, sites for processing waste and recycling, transfer stations, landfill monitoring equipment, and equipment for curb-side waste collections.
Public Safety*	Provide emergency services support, and fire protection services to designated fire protection areas	Buildings including fire halls, equipment for fire protection (fire trucks and fire apparatus), and emergency communications network.

** Note - A number of typical "Buildings and Facilities" LoS statements, performance metrics, and future forecast factors were developed that would apply to most buildings in these service areas. A separate set of "Buildings and Facilities" LoS statements, Performance Measures, and Future Factors was developed for non-typical buildings.*

1.4 DEVELOPMENT METHODOLOGY

Workshops were conducted with CVRD staff for each of the major service areas in Table 2. The discussions with staff covered:

- Grouping stakeholders into relevant groups;
- Defining service statements to define the types of services provided for user groups;
- Developing performance measures that could be used to quantify or qualify the delivery of services;
- Identifying factors that could influence future forecasts related to the types, quantities, or quality of services provided; and
- Reviewing historical surveys and consultations to gauge customer satisfaction.

The outcomes of the workshops were tabulated and reviewed with each staff group to produce updated service statements, key performance indicators, and future forecasts.

Specific targets for performance indicators have not been defined during this process. CVRD staff will need to further quantify specific targets for the various services based on current service levels and inputs from public consultation processes.

1.4.1 STAKEHOLDERS GROUPS

As part of defining the Levels of Service, five broad types of stakeholder groups were defined for those who either use or who are impacted by the service:

- **Users** – customers, current or future, who lives, works, or visits in the community, and makes use of the provided service. This typically includes the public, residents and businesses.
- **Service Providers** – typically staff, organizations or other businesses that use the infrastructure or service to undertake their organization's activities or business. For example, a community sports association would be a service provider who would use CVRD playing fields for their league's activities.
- **Regulators** – Provincial and Federal Government and other governing agencies or bodies expressing their influence through legislation, regulations, certifications, and higher-level plans. For example, Ministry of Transportation, Ministry of Environment, WorkSafeBC, etc.
- **Wider Community** – other stakeholders in the community outside of those directly receiving the service who may be impacted or have an interest in the service. For example, people outside of the water service area, such as community interest groups, neighbouring residents, etc., who are concerned about how the water service area may impact the source watershed would be wider community stakeholders
- **Neighbouring Communities** – adjacent communities that may have an interest in the service. For example, if a wastewater system discharges into a watershed that is used by a neighbouring municipality, that municipality could be a Neighbouring Communities stakeholder since the CVRD wastewater system could impact their use of the watershed.

Specific user types were identified and grouped into the appropriate stakeholder group for each service area.

1.4.2 SERVICE STATEMENTS

Service statements are intended to help align services with the overall goals and objectives of the organization. They were developed for each stakeholder group to describe specific attributes of the service the organization intends to deliver. The statements reflect the expectations from each stakeholder group's perspective. Each stakeholder group may have different needs or requirements.

The service statements are linked to performance criteria or objectives, and the performance measures that quantifies if these objectives or criteria are met.

1.4.3 PERFORMANCE CRITERIA AND PERFORMANCE MEASURES

The Performance Criteria may be defined by one or more performance measures. For each service, the performance criteria listed for the various service statements were developed and specific performance measures were identified.

WSP summarized the various service statements based on key Performance Criteria that would describe the key intent that these service statements would represent and the kinds of Performance Measures that would relate to these criteria. The following are the Performance Criteria used in this document:

- **Access** - Statements that speak to access to the service for users, including availability of the service, scope of the service, and other factors that would enable users to utilize the infrastructure
- **Financial** - Statements that speak to financial aspects of the service, including costs, budgets, affordability, and rates
- **Quality** - Statements related to the quality of the service
- **Reliability** - Statements related to how reliable the service or infrastructure is in the community
- **Safety** - Statements that speak to the safety related criteria or expectations
- **Satisfaction** - Statements relating to how satisfied the users are with the service

- **Sustainability** - Statements that speak to the environmental, social, cultural, or financial sustainability of the service, including climate change considerations.

These performance criteria were used to categorize the specific performance measures. Performance measures indicate what the stakeholders experience from the service that is delivered. Some performance measures reflect how the customer perceives the service (e.g. how often is my waste collected, how often is my water service interrupted, how many community centres can I access in my neighbourhood). Other performance measures reflect technical evaluations of how the service is delivered, or how well the supporting infrastructure can deliver the service to the users (e.g. we collect "X" tonnes of waste per resident annually; we average "Y" number of water main breaks annually per 1 km of water main; we have "Z" recreation facilities per 10,000 people).

Potential performance measures were identified for each service area and linked to the appropriate stakeholder group(s). Many of these measures are currently tracked or can be tracked from current operating data or inventory records. Some measures may require additional information to be collected or processed to monitor the performance measures. Further work will be required to identify the metrics and values representing current service levels, and to identify the target metrics that will define future Levels of Service for each service area.

The final list of performance measures will need to be detailed by each service area to identify:

- Key measures that will be reported corporately, and measures that will be used internally by the service area to measure specific aspects of service delivery;
- If the required data to evaluate the performance measure is currently collected or recorded;
- Where the data currently resides (if available) and how it would be evaluated;
- What is the current level of performance;
- What is the target or desired level of performance; and
- How the indicator for the target level of performance was established, including the rational and references for that measures (e.g. internal benchmark, industry standard indicator, comparison to other service providers).

1.4.4 FUTURE FORECASTS

The existing or current levels of services may not reflect future needs or future conditions in the community. There may be changes or future events that could impact the quantity, quality, or types of services needed in the community.

For each service area, Future Factors were identified to anticipate potential changes that could impact the levels of service needed or provided in the community. These future factors included potential or anticipated changes related to:

- Population Growth;
- Aging Populations and Demographic Changes;
- Development;
- Future Regulations;
- Changing Community Needs;
- External Factors; and
- Climate Change.

A description of each Future Forecast item was developed, and the anticipated impacts or strategy to address the potential changes to LoS were identified for each service area.

1.5 CUSTOMER SURVEYS

The CVRD undertakes a number of periodic customer satisfaction surveys that identify how services are used, and how satisfied customers are with the services. These surveys are usually undertaken to inform annual service planning and budget discussion for the CVRD.

The 2016 NRG Research Group's Community Satisfaction Survey Report provides information on how residents view a number of the service areas, and sub-areas included in this project. While the survey did not explicitly focus on the infrastructure that supports the service areas, the satisfaction for services that depend on infrastructure is a good indicator of how well these assets support service delivery to stakeholders. Satisfaction with services was rated on a 5-point scale, with five representing "Very Satisfied" and one representing "Not Satisfied at all".

Figure 1 shows a summary of the 2016 survey results, aligned with the service areas.

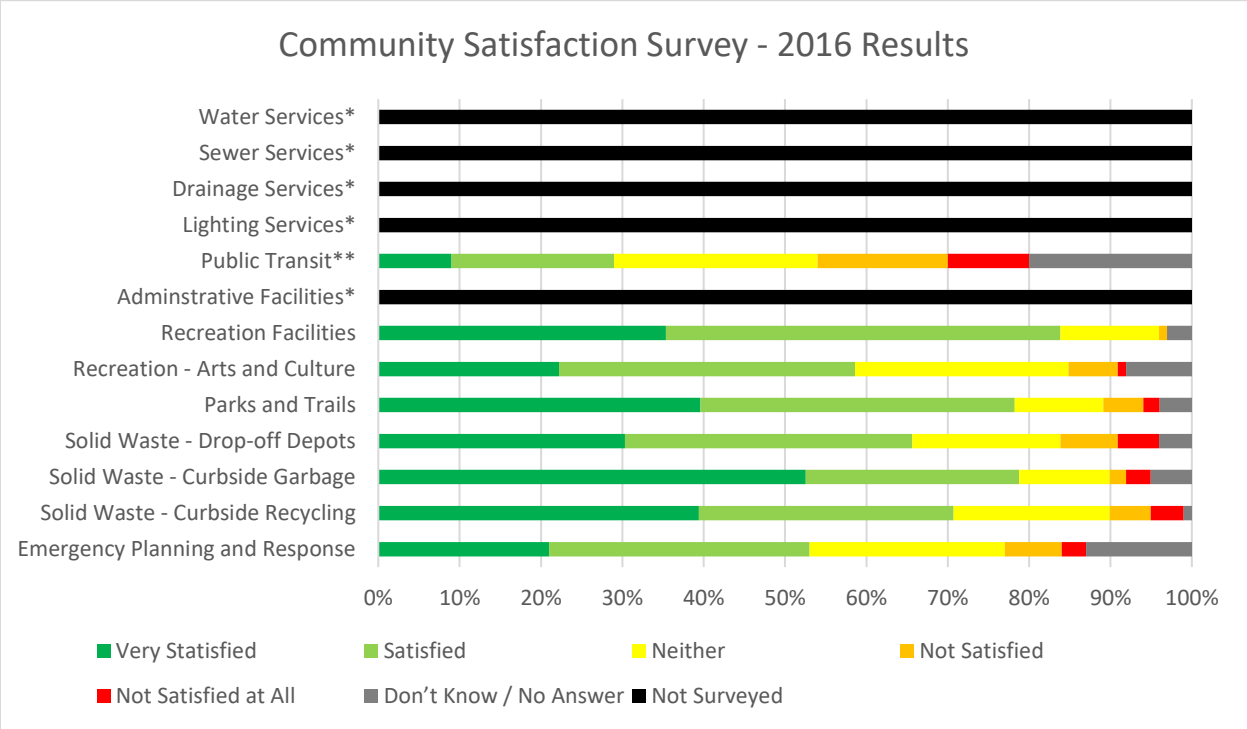

Figure 1 2016 community satisfaction survey results

Notes: ** Service not included in reported 2016 survey results*
*** Results likely do not reflect satisfaction with bus stop infrastructure directly managed by CVRD*

Figure 2 2016 Community Satisfaction Survey Results

Another customer survey measure that can be used to gauge customer satisfaction is the Net Promoter Score (NPS). A NPS looks at how many people would give a positive recommendation of a company to a friend or colleague (promoters) versus how many people are would give a negative score (detractors), as shown in Figure 3. Responses that are neutral (i.e. "Satisfied") are excluded from the NPS. An NPS score greater than zero is generally considered good. The CVRD could develop a survey to provide additional insight into how well each service would be recommended by service users.

Detractors	Passives	Promoters

Figure 3 Net Promoter Score Calculation

While previous studies have not specifically asked this type of question, based on the above 2016 Community Satisfaction Survey Report results and assigning a "promoter" rating to score 5 (Very Satisfied) and "detractor" rating to scores 3-1 (Neither to Not Satisfied at All), a representative Net Promotor Score could be estimated for the eight areas included in the 2016 community survey results, as shown in Figure 4.

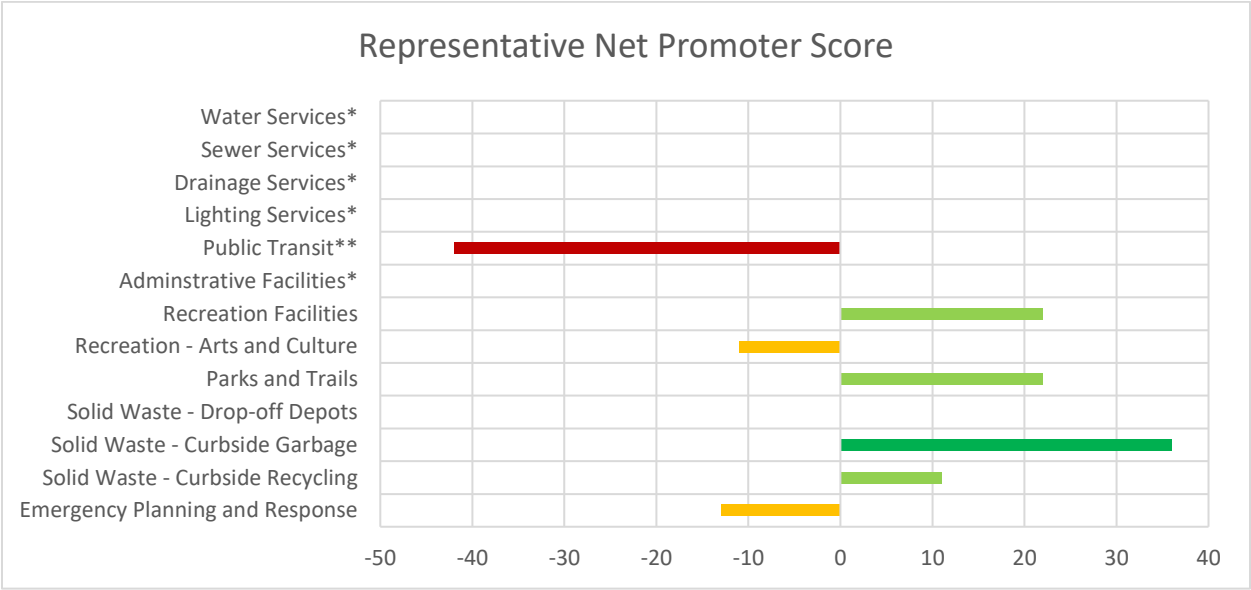

Figure 4 A Representative Assumed Net Promoter Score

A net promotor score can be a useful measure to identify where service improvements are needed, or where unsatisfied customers need to be addressed.

Where services receive "poor" scores, particularly for services that are regulated or that must meet specific requirements to be offered, the NPS could help identify where further consultations are needed to better communicate the specific requirements of that service or identify how that service would better meet the needs of the community. This could help improve the community's understanding of the service, or it could help align community expectations with the requirements and resources available for delivering that service.

Future community surveys should include feedback questions for all service areas that have infrastructure delivering public-facing services, including utility services that were not included in the 2016 NRG survey. Where appropriate, these questions should look to identify the customers satisfaction for each service area provided, the perceived quality of the services provided, the quantity or access to the services provided, where changes to services should be contemplated, and the willingness of customers to pay for any increase in level of services.

Several service areas have undertaken detailed public surveys, focus groups, and consultations as part of master planning and long-range service planning activities. These projects provide opportunities to collect detailed information that will help identify specific types and scopes of services needed in the community, and the

willingness of the community to fund the delivery of these desired services, in particular if the desired levels of service are higher than current levels of service. These detailed surveys can help identify community trends and opportunities to align services to the current and future community needs.

These types of detailed surveys are most valuable to update and inform discussions on service delivery. Where the type, quality, and/or quantity of service is discretionary, detailed surveys will help identify key issues in the community. This will help CVRD and stakeholders understand and balance community desires with the resources available to deliver these services.

1.5.1 CURRENT CUSTOMER UNDERSTANDING

Some service areas will likely need to engage residents and customers to gain their inputs to better understand their LoS needs. For some services that need to meet regulatory requirements, these areas will likely need to educate and inform customers about what is required to meet these regulatory requirements as there are limited opportunities to change many aspects of the LoS for these areas.

Service areas (e.g. Park and Recreation services) that have recently undertaken projects which included extensive feedback and surveys with residents about services and service expectations may not need to undertake extensive consultations in the near term. The exception would be if they have specific needs to address potential changes to LoS.

Some other services (e.g. utilities, solid waste and recycling processing, and fire protection services) have minimum LoS that are prescribed or that have limited abilities to be adjusted based on community feedback. For these areas, the strategy would be to identify where LoS requirements need to be communicated to residents, and to identify what aspects of service delivery can be informed by public input, if any.

An assessment of the current CVRD understanding of customers views on the quality, quantity, access, and funding (ability to pay) is included in Table 3. Overall, there is a good understanding and appreciation of customers views on current services. There are few areas where public engagement will help the CVRD better understand some specific customer needs or help to frame decisions on future changes to Levels of Service that are currently anticipated due to regulatory requirements or future resource needs.

The current CVRD understanding of the community's views for LoS has been rated based on the following criteria:

- Good: Staff and the CVRD Leadership have current information from a representative cross-section of the community and are able to clearly articulate customer's views and understanding of these aspects of LoS. On going consultations with key stakeholders and community surveys align with this level of understanding.
- Fair: Staff and the CVRD Leadership have some current information from key groups in the community and can likely articulate many of the customer's views and understanding of these aspects of LoS. This information may not reflect the wider community views, this information may not be current, or it may not reflect current feedback being received from some groups in the community. Consultations with key stakeholders or the wider community may help to clarify or update this level of understanding.
- Poor: Staff and/or the CVRD Leadership do not have current information from a representative cross-section of the community and are likely unable to clearly articulate customer's views and understanding of these aspects of LoS. Consultations with key stakeholders and the community would be needed to define and articulate the community's needs to develop this level of understanding.

Table 3 Current LoS Understanding Assessment

Service Area	Current CVRD Understanding				Key Gaps	Key Consultation Strategy	Key Objectives
	Quality	Quantity	Access	Funding			
Water Services	Good	Good	Good	Fair	Stakeholder understanding of why upgrades are required, and strategies to fund these works	Information Strategy - Regulatory Requirements	Educate water users of regulatory requirements and identify funding strategies to undertake required upgrade systems
Sewer Services	Good	Good	Good	Fair	Stakeholder understanding of future rehabilitation needs and funding strategies	Information Strategy - Rehabilitation Planning	Develop support for future system renewal plans and understand how risk is viewed in the communities
Drainage Services	Good	Good	Good	Fair	Stakeholder understanding of future rehabilitation needs and funding strategies	Information Strategy - Rehabilitation Planning	Develop support for future system renewal plans and understand how risk is viewed in the communities
Ornamental Street Lighting Services	Fair	Good	Good	Fair	Stakeholder understanding of future rehabilitation needs, and options for service levels	Information Strategy - Rehabilitation Planning	Develop support for future system renewal plans and understand how risk is viewed in the communities
Transit	Good	Fair	Good	Good	Understanding where improvements could help promote transit use and user satisfaction	Engagement Strategy - Bus Stop Improvements	Better understand what bus stop improvements would encourage more transit use, and identify preferred criteria for locating improvements
Administration	Good	Good	Good	Good	Public understanding of future rehabilitation needs to meet CVRD operation requirements	Information Strategy - Rehabilitation Planning	Develop support for future renewal plans and links to CVRD service delivery needs

Service Area	Current CVRD Understanding				Key Gaps	Key Consultation Strategy	Key Objectives
	Quality	Quantity	Access	Funding			
Recreation Centres, Community Centres, and Community Halls	Good	Good	Good	Fair	Allocating available resources with community recreation needs and demand patterns	Engagement Strategy - Service Delivery Priorities	Support for decisions to align recreation services with available funding, and current and future service demands, across various facility types and locations.
Parks and Trails	Good	Good	Good	Good	Stakeholder understanding of future rehabilitation needs	Information Strategy - Rehabilitation Planning	Develop support for future system renewal plans and understand how risk is viewed in the communities
Recycling and Waste Management	Good	Good	Good	Good	Community feedback on waste collection scope and frequency	Engagement Strategy - Service Delivery Priorities	Better understand how changes to collection frequencies and scope of collected materials can help to meet long term waste management goals and costs
Public Safety*	Good	Good	Good	Fair	Stakeholder understanding of future rehabilitation needs and associated costs	Information Strategy - Rehabilitation Planning	Develop support for future system renewal plans to meet the regulatory and future operational needs of Fire Services

1.6 CLIMATE IMPACTS

The CVRD recently completed a Climate Risk Assessment for the Asset Systems in the Regional District *(Urban Systems, 2018)*. The key climate change events identified in that assessment include:

- Warmer summers
- Drier summers
- Longer and more intense storms
- Wetter winters
- Sea level rise

The impact to service levels of these events will depend on the type of assets, the location, the infrastructure's capacity to handle these events, and additional service demands that may results from these events occurring.

Where climate changes will impact physical infrastructure, some potential LoS impacts for the highest risks climate change considerations are listed in Table 4.

Table 4 Potential Level of Service Impacts - Climate Change Risks

Projected Climate Change Risk	Anticipated Service Area Impacts	Potential LoS Impacts
Warmer Summers	Water – Increased demand for water Buildings – Increased energy demands (cooling) Parks and Trails – Impacts to local habitat Public Safety – Increased number of responses	Water – Increased duration and scope of water restrictions Buildings – Increased maintenance and energy costs; increase public demand for access to cooling centres (Emergency Social Services) Parks and Trails – Restricted access to critical habitat areas, habitat losses Public Safety – Increased demand for service calls; limitations due to volunteer availability
Drier Summers	Water – Increased demand for water, reduced recharge of groundwater and watersheds due to decreased precipitation, reduction in the amount of water available for users Parks and Trails – Impacts to natural areas, landscaped recreational areas Public Safety – Increased number of responses	Water – Increased duration and scope of water restrictions; reduced overall system supply capacity Parks and Trails – Restricted access to limit community risks (fire); reduction in field availability or field quality (irrigation restrictions) Public Safety – Increased number of response incidents; change in equipment required to provide fire services; need for additional volunteers or staff to provide service coverage

Projected Climate Change Risk	Anticipated Service Area Impacts	Potential LoS Impacts
Longer and More Intense Storms	Sewer & Drainage – Current system capacity for drainage may be insufficient Buildings – Increased amount of building and/or site damage from intense storms. Parks and Trails – Increased damage due to storm surges, flooding, and severe wind storms Public Safety – Increased number of responses	Sewer & Drainage – localized flooding, system surcharging, and sewer treatment system overflows Buildings – Building closures; loss of access to facilities Parks & Trails – Park Closures; damage to recreation areas and habitats; loss of coastal recreation space. Public Safety – Increased demand for service calls; limitations due to volunteer availability
Sea Level Rise	Sewer – damage or loss of infrastructure due to higher king tides Parks and Trails – damage or flooding of coastal recreation areas	Sewer – sewer system overflows or loss of treatments services; damage to system infrastructure Parks and Trails – loss of coastal lands for recreation

In addition to direct infrastructure impacts of climate change, many of the services could undertake changes to infrastructure or levels of service to help mitigate or offset climate change emissions or impacts. The changes in service could aim to reduce the amount or source of energy used to undertake those services, or to identify ways to reduce or offset greenhouse gas emissions associated with delivering those services. Some of the potential mitigation strategies and associated Levels of Service impacts are listed below.

Table 5 Los Impacts – Climate Change Mitigation and Adaptation

Climate Change Mitigation and Adaptation	Anticipated Strategies	Potential LoS Impacts
Reduce carbon-sourced energy emissions	Elimination of carbon-intensive activities Transition to low-carbon energy sources Reduction in total energy usage	Reduce or eliminate carbon intensive services Increased capital costs to build “net zero” or low carbon facilities. Higher rehabilitation costs or more extensive rehabilitations to convert existing buildings to new low-carbon systems / improved building efficiency.
Increase the capture of carbon in CVRD systems	Increase the number of trees Increase the forestry potential of existing lands Increase the recovery of waste sources to minimize eCO2 emissions	Change in use of recreational or protected areas Increased resources, costs, and/or revenue opportunities for managed forested areas Increased scope of waste collection services

Climate Change Mitigation and Adaptation	Anticipated Strategies	Potential LoS Impacts
Encourage sustainable transportation options	Increased access to transit and active transportation options Site infrastructure for low carbon transportation (e.g. Electric Vehicle charging)	Expansion of current transit service areas and related infrastructure Location of new facilities in areas serviced by transit or active transportation routes Addition of EV chargers and infrastructure at administrative and public facilities
Increase the beneficial use of waste resources, particularly waste water	Improve the re-use of waste water or treated water for beneficial purposes, particularly in summer months.	Improved access to additional water supplies, and potential to reduce water restrictions where recycled water is utilized

1.7 NEXT STEPS

This section describes the steps CVRD may wish to implement to improve how levels of services are tracked. The following are recommended activities or actions that the CVRD should consider for further development of this component of asset management in the organization.

1.7.1 TRACKING CORE PERFORMANCE MEASURES

WSP recommends that the CVRD begins by identifying core performance measures to address for each service. The core performance measures can be selected based on the level of effort to track these indicators and the impact that this information may have on managing service delivery to the community. The core performance measures can help inform staff, board members, and the community on possible strategies to manage the delivery of CVRD's services.

Once procedures are implemented for core performance measures, the CVRD can address the remaining performance measures.

1.7.2 DETERMINE CURRENT PERFORMACE AND TARGET PERFORMANCE

Understanding current performance measures will help to inform how the current service levels relate to future targets for delivering service and will help to forecast how factors may impact how levels of service may change over time. WSP recommends that CVRD begin tracking and calculating the current indicators for key performance measures of each service to formally document the current service level.

Once the current performance is understood, the CVRD should review current levels and determine whether current levels are acceptable, if they can be maintained with current and future funding forecasts, and if service levels should be increased or decreased. Where the CVRD identifies gaps in providing future service levels a review should be undertaken to understand the gap in the provided LoS and gather the public's input on the options to address the gap for delivering those services.

1.7.3 LOS PERFORMANCE REPORTING

LoS performance metrics should be reported on a regular cycle to help inform decision makers and the community on how services are being delivered, and to identify key items that should be considered to maintain LoS targets. Reporting should typically be coordinated with the development of the regional district's financial plans and budgets so that LoS information is available to inform these financial and service decisions.

Metrics should be tracked over time so that trends can be identified and so that this information can be related to the on-going activities undertaken by the regional district. Trends in the key performance measures for each service area can be a power tool to help guide and inform decisions, and to identify areas for improvement.

WSP suggests that key metrics be regularly recorded or summarized and that this process of tracking performance measures be linked with the annual reporting and budget development processes undertaken within the CVRD. There will be some metrics that will only be collected periodically, for example detailed assessments of infrastructure condition or detailed surveys of service users, and the frequency for updating the LoS metrics should be identified as part of the performance reporting processes.

1.7.4 COST OF SERVICE

A key consideration in setting levels of service is the associated costs to deliver that service. The cost of service is therefore related to the on-going operating, maintenance, and renewal costs for the related infrastructure and the activities associated with using those assets. Some of these costs are related to the amount of service delivered (e.g. frequency of waste collection, number of hours a centre is open), and some of these costs are fixed regardless of the amount of service delivered (e.g. cost of annual inspections, costs to build a building replacement reserve). For each service area, the costs associated with delivering services, or changing the amount or quality of services delivered, should be clearly understood. Where possible, the fixed and variable costs for delivering services should be identified so that the impact of changing service levels can be understood and communicated within the community. This level of understanding will help the CVRD identify how changes to service levels can impact, or be impacted by, changes to funding levels in the community.

1.7.5 ENGAGEMENT STRATEGY

Developing an understanding of asset management and levels of service in the community will help guide future discussions on delivering services in the community. In some cases, the goal of these discussions will be to inform and educate the community on the services provided by the CVRD and what needs to be done to continue to deliver these services to the community. In other cases, the CVRD will want to engage with the community to understand what services are needed and desired, and how the community would value those services. Engagement with the community is particularly important when changes to levels of service must be considered to meet external requirements, such as changes to regulations, or when the cost of providing the service may impact funding needs and available resources. Understanding the values, goals, and objectives of the community will help the CVRD align levels of service with the needs and capacity of the community to support the ongoing delivery of those services.

The CVRD currently engages with the community through a number of methods. Additional ideas and tools to support the ongoing communications strategy for the CVRD have been developed as part of this project. In the future, the CVRD will need to engage the community to build an understanding of what asset management is, how asset management informs the activities and decisions of the organization, and how levels of services can be maintained or adjusted to meet the future needs of the community. Some of these strategies will be informational, helping the community to understand what is required to meet certain levels of services that must be provided. Some of these strategies will be engaging to solicit input and direction from the community on how services should be delivered, and how priorities should be set to allocate the resources of the community to create value for the people in the CVRD.

Having an engagement strategy will support CVRD in knowing when to include the community on decisions and when to anticipate LoS triggers that should include the community. Having a more involved community will help the public to understand the level of effort and cost to deliver services and to understand the options and trade offs that need to be considered when allocating resources and setting levels of service.

1.7.6 CUSTOMER SURVEYS

Customer surveys can be a great way to understand your community needs and preferences. In person or online surveys can be completed by the community to understand their preferences on the importance of various infrastructure services provided by the CVRD, and to identify how they would approach the management of these assets to meet the needs of the community. Surveys can help identify the needs of the community and how the community would prioritize allocating resources to meet those needs.

The CVRD undertakes a number of regular surveys that help identify public needs and priorities for service delivery. These results of the surveys should be reviewed to help identify where community needs may be changing, how the community identifies value, and how the community may prioritize investments to change levels of service across the organization.

2 LEVELS OF SERVICE

The following section details the Level of Service documents developed for the CVRD service areas included in this project. Each section details the Service Statements and Performance Criteria, the Level of Service Performance Measures, and the Future Forecasts for each service.

2.1 WATER SERVICES

The CVRD operates 19 water systems in the Regional District. The number of users serviced by each system varies from 33 to 681 customers.

2.1.1 SERVICE STATEMENTS AND PERFORMANCE CRITERIA

Service statements were developed to describe the services and identify the performance criteria for the various stakeholders.

For each service statement, service value categories have been identified to summarize the types of objectives that would be used to evaluate the services delivered to CVRD customers.

Stakeholder Group	User Type	Service Statement	Performance Criteria
Service Users	Public Businesses Irrigation Customers	Users are provided with safe, reliable access to water, meeting the quality and operating needs of users (volumes, pressure, treatment levels)	Quality Safety Satisfaction
Service Providers	CVRD Utility Operators and Staff	Tools, equipment and resources are provided that enable staff to safely and effectively manage and operate utility services	Safety Financial
		Systems have the capacity and processes to treat water efficiently and effectively to meet required treatment levels and standards	Access
	Developers	Requirements for utility systems are clear, fair, and timely provided	Quality
		Access to Regional District utility system connections are provided in a timely manner through the permit process	Satisfaction
	Fire Services	Water Systems provide required access, flows and pressures for fire fighting needs	Quality
	Public Institutions	Services provided are reliable and resilient to meet the facilities needs	Quality

Stakeholder Group	User Type	Service Statement	Performance Criteria
Regulators	Provincial Regulations/Regulators (Building Code, Fire Code, Environmental Regulations) WorkSafeBC (Health and Safety) CVRD internal standards Ministry of Environment Vancouver Island Health Forrest Land and Natural Resources Fisheries and Oceans Ministry of Transportation and Infrastructure	Compliance with required rules, standards, guidelines, and regulations	Safety
	Vancouver Island Health Authority Ministry of Environment FLNR	Water systems are certified and in compliance with health requirements	Safety
	CVRD	Systems are developed to CVRD standards and requirements	Quality Safety
Wider CVRD Community	Rate Payers	Utility systems are effectively managed to deliver value and manage risks to the CVRD	Safety Financial
	Community Interest Groups	Community groups can provide input and are involved in decisions that impact systems	Access Satisfaction
	Strata Organizations	Community involvement, input, and communications related to infrastructure works serving strata communities	Access Satisfaction
Neighbouring Communities	Shared Aquifers or Watersheds	Resources are equitably distributed and managed for all users	Sustainability

2.1.2 LEVEL OF SERVICE PERFORMANCE MEASURES

Performance measures (also called performance indicators or key performance indicators) are used to track if the performance target has been met and thereby provide an indication that the required level of service is being met. A comparison of the measured result to the target identifies if some action needs to be taken.

The following table summarizes the performance measures associated with the identified performance criteria. Some of the identified measures are not currently tracked or may not have systems or processes in place to quantify some of these indicators. Target values for these performance measures will need to be developed that account for current services and the results of the community engagement and feedback on service levels that will be undertaken by the CVRD.

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Access	Technical	Length of Distribution Network (m)	Y	Indicator of system size, complexity
Access	Technical	Number of connection permits requested/issued	Y	Tracking of development related works – system growth
Access	Technical	Number of Fire Hydrants Out of Service	Y	
Access	Technical	Number of Fire Hydrants not meeting current fire flow requirements	Y	From Periodic performance modelling
Access	Technical	Volume of water supplied (m3)	Y	Indicator of system size, complexity, customer use
Access	Technical	Number of infractions, non-conformance or violation notices or findings	Y	
Financial	Technical	Cost to distribute water, $/m3; $/lm of pipe network (O&M; Capital)	Y	Indicator of operating efficiency (O&M) and life cycle management (Capital); highlight impacts of system size – distribution networks
Financial	Technical	Cost to Supply and Treat Water, $/m3 (O&M; Capital)	Y	Indicator of operating efficiency (O&M) and life cycle management (Capital) – water treatment plants and water sources
Financial	Customer	Annual change in utility rates (% change)	Y	Budget metrics

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Financial	Technical	Average Annual Capital Funding - Renewals / Replacements - New Assets / Upgrades - Capital Reserves Contributions	Y	Annual capital funding for current or future infrastructure investments
Financial	Technical	Current Replacement Cost – All Assets	Y	Cost in current dollars to replace infrastructure to current standards or requirements
Quality	Technical	Network Condition Distribution – Average Condition, % Good, Fair, Poor	Y	Condition of distribution and treatment systems
Quality	Customer	Number of annual complaints or service requests – failures or service interruptions	Y	System to track calls and requests/complaints
Quality	Technical	Number main breaks causing damage	Y	Tracking impact of major distribution network failures (breaks)
Quality	Technical	Number of main breaks or leaks	Y	Tracking major distribution network failures (breaks and leaks)
Quality	Technical	Annual lost service connection hours (duration of lost service x number of services affected)	N	Indication of overall system performance, reliability, and service impacts
Safety	Technical	Value of property damaged from main breaks (public / private)	Y	Tracking impact of major distribution network failures (breaks)
Safety	Customer	Number of boil water advisories issued	Y	Tracking of advisories
Safety	Customer	Number of residents impacted by boil water advisories	Y	Tracking of advisories
Satisfaction	Customer	Customer Satisfaction Survey Rating	Y	From regular CVRD surveys

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Satisfaction	Customer	Number of annual complaints or service requests - water quality (taste, colour, odour, turbidity)	Y	System to track calls and requests/complaints
Quality	Customer	Average Time to approve permit (connections)	Y	Tracking of development related works
Quality	Customer	Average Time to complete a service connection	Y	Tracking of development related works

2.1.3 FUTURE FORECASTS

There are several external factors that could impact expected levels of service or the CVRD's ability to meet them.

Future Factor	Description	Impact or Strategy
Performance of existing infrastructure	The physical performance of existing utility infrastructure and improvements could impact the ability and costs to provide the intended services to the community	Undertake on-going monitoring and assessment of the condition and performance of utility infrastructure to manage operations, maintenance, and renewal plans and activities
Variability of assumed infrastructure	Specifications, materials, and construction methods for some systems previously assumed by the CVRD are not consistent with CVRD system standards	Increased challenge managing non-standard systems.
Ability of residents to pay for life cycle renewals and services (affordability)	Economic factors may limit the ability of residents to fund current or future needs for utility services	Develop risk profiles to extend service life of network components as needed to align with the community's ability to pay. Identify opportunities to leverage external funding sources. Review long-term funding strategies including development of reserve funds
Demographic Changes	Population growth or reductions in service areas may change how much water is needed, the system size, or the number of users funding systems	Development and growth policies should be aligned with system capacity and ability to service development sites.

Future Factor	Description	Impact or Strategy
Demographic Changes – maintenance staff resources	Staff members may require different tools, equipment, training, and resources to undertake system activities or to manage new technologies.	Succession planning and recruitment strategies should be developed to manage long-term staffing needs
Technology and systems to track asset and work history	New technologies may be available to support the operation and management of utility networks. Existing monitoring and control systems will become obsolete and availability of replacement parts will be reduced, and this could impact system operations or reliability	Development of a technology renewal plan to maintain currency of critical monitoring and control systems will help reduce risks to systems operations.
Stakeholder expectations for water quality	Stakeholders may desire improved water quality, safety, or aesthetic properties (colour, smell, taste)	Monitor customer satisfaction with the quality of water supplied, and communicate options and costs associated with any desired improvements.
Further restrictions for water conservation	Availability of source water may impact the availability of the systems to deliver potable water, and restrictions may be required to limit consumption, particularly during dry seasons	Support the implementation of low-consumption fixtures and water use practices. Encourage residents to adopt drought-resistant landscaping and plantings.
Change in treatment standards and requirements, revised water quality standards	Regulations may require changes to existing water treatment systems and necessitate the installation of new or revised treatment systems.	Systems may require extensive treatment upgrades to meet new regulations; identify options for revised water sources or opportunities to see external funding for these upgrades. Include system upgrade forecasts as part of long term financial planning and reserve fund analysis.
Impact of climate change on source water quality (drought, extreme weather, lack of supply) and quantity	Changes to rainfall patterns and amounts, aquafer levels, and demand could impact both the quality and quantity of source water for system use.	Review long-term forecasts for system water balances, and identify where demand side changes, water use, and reservoir/aquifer capacity can be adapted to improve water quality and system capacity. Continue to implement programs to encourage responsible water use by residents.

2.2 SEWER SERVICES

The CVRD operates 16 sewer systems in the Regional District. The number of users serviced by each system varies from 47 to 894 customers.

2.2.1 SERVICE STATEMENTS AND PERFORMANCE CRITERIA

Service statements were developed to describe the services and identify the performance criteria for the various stakeholders.

For each service statement, service value categories have been identified to summarize the types of objectives that would be used to evaluate the services delivered to CVRD customers.

Stakeholder Group	User Type	Service Statement	Performance Criteria
Service Users	Public Businesses	Users are provided with safe, reliable sewer services that safely treat and dispose sewage, meeting the quality and operating needs of users (volumes, treatment levels)	Quality Reliability Safety Satisfaction
Service Providers	CVRD Utility Operators and Staff	Tools, equipment and resources are provided that enable staff to safely and effectively manage and operate utility services	Safety Financial
		Systems have the capacity and processes to treat waste water efficiently and effectively to meet required treatment levels and standards	Access
	Developers	Requirements for utility systems are clear, fair, and timely provided	Quality
		Access to Regional District utility system connections are provided in a timely manner through the permit process	Satisfaction
	Public Institutions	Services provided are reliable and resilient to meet the facilities needs	Quality

Stakeholder Group	User Type	Service Statement	Performance Criteria
Regulators	Provincial Regulations/Regulators (Building Code, Fire Code, Environmental Regulations) WorkSafeBC (Health and Safety) CVRD internal standards Ministry of Environment Vancouver Island Health Forrest Land and Natural Resources Fisheries and Oceans Ministry of Transportation and Infrastructure	Compliance with required rules, standards, guidelines, and regulations	Safety
	Vancouver Island Health Authority Ministry of Environment FLNR	Waste water systems are certified and in compliance with health requirements	Safety
	CVRD	Systems are designed and developed to CVRD standards and requirements	Quality Safety
Wider CVRD Community	Rate Payers	Utility systems are effectively managed to deliver value and manage risks to the CVRD	Safety Financial
	Community Interest Groups	Community groups can provide input and are involved in decisions that impact systems	Communications
	Strata Organizations	Community involvement, input, and communications related to infrastructure works serving strata communities	Access Satisfaction
Neighbouring Communities	Shared Aquifers or Watersheds	System discharges are treated appropriately and do not impact the natural environment or water quality of receiving watersheds or water bodies	Sustainability

2.2.2 LEVEL OF SERVICE PERFORMANCE MEASURES

Performance measures (also called performance indicators) are used to track if the performance target has been met and thereby provide an indication that the required level of service is being met. A comparison of the measured result to the target identifies if some action needs to be taken.

The following table identifies the criteria and the associated performance measures for the identified services. Some of the identified measures are not currently tracked or may not have systems or processes in place to quantify some of these indicators. Target values for these performance measures will need to be developed that account for current services and the results of the community engagement and feedback on service levels that will be undertaken by the CVRD.

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Access	Technical	Length of Collection Network (m)	Y	Indicator of system size, complexity
Access	Technical	Number of connection permits requested/issued	Y	Tracking of development related works – system growth
Access	Technical	Volume of waste water treated (m3)	Y	Indicator of system size, complexity, customer use
Safety	Technical	Number of infractions, non-conformance or violation notices or findings	Y	
Financial	Technical	Cost to collect waste water, $/m3; $/lm of pipe network (O&M; Capital)	Y	Indicator of operating efficiency (O&M) and life cycle management (Capital); highlight impacts of system size – distribution networks
Financial	Technical	Cost to treat waste water, $/m3 (O&M; Capital)	Y	Indicator of operating efficiency (O&M) and life cycle management (Capital) – water treatment plants and water sources
Financial	Customer	Annual change in utility rates (% change)	Y	Budget metrics
Financial	Technical	Average Annual Capital Funding - Renewals / Replacements - New Assets / Upgrades - Capital Reserves Contributions	Y	Annual capital funding for current or future infrastructure investments

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Financial	Technical	Current Replacement Cost – All Assets	Y	Cost in current dollars to replace infrastructure to current standards or requirements
Quality	Technical	Network Condition Distribution – Average Condition, % Good, Fair, Poor	Y	Condition of distribution and treatment systems
Quality	Customer	Number of annual complaints or service requests – failures or backups	Y	System to track calls and requests/complaints
Quality	Technical	Number main breaks or backups causing damage	Y	Tracking impact of major distribution network failures (breaks)
Quality	Technical	Number of main breaks or backups	Y	Tracking major distribution network failures (breaks and leaks)
Quality	Technical	Annual lost service connection hours (duration of lost service x number of services affected)	N	Indication of overall system performance, reliability, and service impacts
Safety	Technical	Value of property damaged from main breaks or backups (public / private)	Y	Tracking impact of major distribution network failures (breaks)
Satisfaction	Customer	Customer Satisfaction Survey Rating	Y	From regular CVRD surveys
Satisfaction	Customer	Number of annual complaints or service requests – odours and system performance	Y	System to track calls and requests/complaints
Satisfaction	Customer	Average Time to approve permit (connections)	Y	Tracking of development related works
Satisfaction	Customer	Average Time to complete a service connection	Y	Tracking of development related works

2.2.3 FUTURE FORECASTS

There are several external factors that could impact expected levels of service or the CVRD's ability to meet them.

Future Factor	Description	Impact or Strategy
Performance of existing infrastructure	The physical performance of existing utility infrastructure and improvements could impact the ability and costs to provide the intended services to the community	Undertake on-going monitoring and assessment of the condition and performance of utility infrastructure to manage operations, maintenance, and renewal plans and activities
Variability of assumed infrastructure	Specifications, materials, and construction methods for some systems previously assumed by the CVRD are not consistent with CVRD system standards	Increased challenge managing non-standard systems.
Ability of residents to pay for life cycle renewals and services (affordability)	Economic factors may limit the ability of residents to fund current or future needs for utility services	Adjust risk profiles to extend service life of network components as needed to align with the community's ability to pay. Identify opportunities to leverage external funding sources. Review long-term funding strategies including development of reserve funds
Demographic Changes	Population growth or reductions in the service areas may change how much wastewater is produced, the system size, treatment system capacity, types of discharges, or the number of users funding systems	Development and growth policies should be aligned with system capacity and ability to service development sites.
Demographic Changes – maintenance staff resources	Staff members may require different tools, equipment, training, and resources to undertake system activities or to manage new technologies.	Succession planning and recruitment strategies should be developed to manage long-term staffing needs
Technology and systems to track asset and work history	New technologies may be available to support the operation and management of utility networks. Existing monitoring and control systems will become obsolete and availability of replacement parts will be reduced, and this could impact system operations or reliability	Development of a technology renewal plan to maintain currency of critical monitoring and control systems will help reduce risks to systems operations.

Future Factor	Description	Impact or Strategy
Stakeholder expectations for quality of water treatment	Stakeholders may desire improved waste water treatment to address effluent quality, safety, or aesthetic properties from the conveyance and treatment systems (quality of discharges, odours, environmental impacts)	Monitor customer satisfaction with the quality wastewater treatment systems and processes, and communicate options and costs associated with any desired improvements.
Change in treatment standards and requirements, revised environmental quality standards	Regulations may require changes to existing waste water treatment systems, allowable discharges, and necessitate the installation of new or revised treatment systems.	Systems may require extensive treatment upgrades to meet new regulations. Include system upgrade forecasts as part of long term financial planning, external funding plans, and reserve fund analysis.
Impact of climate change on wastewater quality, treatment processes, volumes, and discharges (drought, extreme weather)	Changes in weather patters affecting temperatures, rainfall, and effluent volumes could impact collection systems, treatment systems, and receiving bodies. Rising sea levels could impact sewer systems and necessitate new infrastructure or the modification or relocation of existing infrastructure. Waste water and treated effluent may become a source for non-potable or potable water uses where existing water sources are not able to provide sufficient volumes.	Monitor impacts of weather on collection and treatment systems, including risks associated with extreme weather events. Something about increased I and I. Monitor the impact that discharges have on receiving bodies and watersheds. Opportunities to utilize treated discharges for beneficial uses that would offset water sourced from aquafers and watersheds. Discharges from sewer systems could be a source to balance water flows within watersheds and receiving bodies during times of drought.

2.3 DRAINAGE SERVICES

The CVRD operates 10 drainage systems in the Regional District. The number of users serviced by each system varies from 17 to 646 customers.

2.3.1 SERVICE STATEMENTS AND PERFORMANCE CRITERIA

Service statements were developed to describe the services and identify the performance criteria for the various stakeholders.

For each service statement, service value categories have been identified to summarize the types of objectives that would be used to evaluate the services delivered to CVRD customers.

Stakeholder Group	Stakeholder	Service Statement	Criteria
Service Users	Public Businesses	Users are provided with safe, reliable access to drainage services that collect and drain run-off, meeting the quality and operating needs of users	Quality Reliability Safety Satisfaction
Service Providers	CVRD Utility Operators and Staff	Tools, equipment and resources are provided that enable staff to safely and effectively manage and operate utility services	Safety Financial
		Systems have the capacity and processes to treat water efficiently and effectively to meet required treatment levels and standards	Access
	Developers	Requirements for utility systems are clear, fair, and timely provided	Quality
		Access to Regional District utility system connections are provided in a timely manner through the permit process	Satisfaction
	Public Institutions	Services provided are reliable and resilient to meet the facilities needs	Quality

Stakeholder Group	Stakeholder	Service Statement	Criteria
Regulators	Provincial Regulations/Regulators (Building Code, Fire Code, Environmental Regulations) WorkSafeBC (Health and Safety) CVRD internal standards Ministry of Environment Vancouver Island Health Forrest Land and Natural Resources Fisheries and Oceans Ministry of Transportation and Infrastructure	Compliance with required rules, standards, guidelines, and regulations	Safety
	Vancouver Island Health Authority Ministry of Environment FLNR	Drainage systems are certified and in compliance with health requirements	Safety
	CVRD	Systems are designed and developed to CVRD standards and requirements	Quality Safety
Wider CVRD Community	Rate Payers	Utility systems are effectively managed to deliver value and manage risks to the CVRD	Safety Financial
	Community Interest Groups	Community groups can provide input and are involved in decisions that impact systems	Access Satisfaction
	Strata Organizations	Community involvement, input, and communications related to infrastructure works serving strata communities	Access Satisfaction
Neighbouring Communities	Shared Aquifers or Watersheds	System discharges are treated appropriately and do not impact the natural environment or water quality of receiving watersheds or water bodies	Sustainability

2.3.2 LEVEL OF SERVICE PERFORMANCE MEASURES

Performance measures (also called performance indicators) are used to track if the performance target has been met and thereby provide an indication that the required level of service is being met. A comparison of the measured result to the target identifies if some action needs to be taken.

The following table identifies the criteria and the associated performance measures for the identified services. Some of the identified measures are not currently tracked or may not have systems or processes in place to quantify some of these indicators. Target values for these performance measures will need to be developed that account for current services and the results of the community engagement and feedback on service levels that will be undertaken by the CVRD.

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Access	Technical	Length of Collection Network (m)	Y	Indicator of system size, complexity
Access	Technical	Number of connection permits requested/issued	Y	Tracking of development related works – system growth
Access	Technical	Volume of drainage water collected (m3) or Area serviced by drainage system (m2)	Y	Indicator of system size, complexity, customer use
Safety	Technical	Number of infractions, non-conformance or violation notices or findings	Y	
Financial	Technical	Cost to collect drainage water, $/lm of pipe network (O&M; Capital)	?	Indicator of operating efficiency (O&M) and life cycle management (Capital); highlight impacts of system size – distribution networks
Financial	Customer	Annual change in utility rates (% change)	Y	Budget metrics
Financial	Technical	Average Annual Capital Funding - Renewals / Replacements - New Assets / Upgrades - Capital Reserves Contributions	Y	Annual capital funding for current or future infrastructure investments
Financial	Technical	Current Replacement Cost – All Assets	Y	Cost in current dollars to replace infrastructure to current standards or requirements

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Quality	Technical	Network Condition Distribution – Average Condition, % Good, Fair, Poor	Y	Condition of distribution and treatment systems
Quality	Customer	Number of annual complaints or service requests – failures or service interruptions	Y	System to track calls and requests/complaints
Quality	Technical	Number main breaks or backups causing damage	Y	Tracking impact of major distribution network failures (breaks)
Quality	Technical	Number of main breaks or backups	Y	Tracking major distribution network failures (breaks and leaks)
Safety	Technical	Value of property damaged from main breaks or backups (public / private)	Y	Tracking impact of major distribution network failures (breaks)
Satisfaction	Customer	Customer Satisfaction Survey Rating	Y	From regular CVRD surveys
Satisfaction	Customer	Number of annual complaints or service requests – flooding or backups	Y	System to track calls and requests/complaints
Satisfaction	Customer	Average Time to approve permit (connections)	Y	Tracking of development related works
Satisfaction	Customer	Average Time to complete a service connection	Y	Tracking of development related works

2.3.3 FUTURE FORECASTS

There are several external factors that could impact expected levels of service or the CVRD's ability to meet them.

Future Factor	Description	Impact or Strategy
Performance of existing infrastructure	The physical performance of existing utility infrastructure and improvements could impact the ability and costs to provide the intended services to the community	Undertake on-going monitoring and assessment of the condition and performance of utility infrastructure to manage operations, maintenance, and renewal plans and activities

Future Factor	Description	Impact or Strategy
Variability of assumed infrastructure	Specifications, materials, and construction methods for some systems previously assumed by the CVRD are not consistent with CVRD system standards	Increased challenge managing non-standard systems.
Ability of residents to pay for life cycle renewals and services (affordability)	Economic factors may limit the ability of residents to fund current or future needs for utility services	Adjust risk profiles to extend service life of network components as needed to align with the community's ability to pay. Identify opportunities to leverage external funding sources. Review long-term funding strategies including development of reserve funds
Demographic Changes	Population growth, development, changes in land use, or expansion of the service area may change drainage volumes, the system size, treatment system capacity, types of discharges, or the number of users funding systems	Development and growth policies should be aligned with system capacity and ability to service development sites.
Demographic Changes – maintenance staff resources	Staff members may require different tools, equipment, training, and resources to undertake system activities or to manage new technologies.	Succession planning and recruitment strategies should be developed to manage long-term staffing needs
Technology and systems to track asset and work history	New technologies may be available to support the operation and management of utility networks. Existing monitoring and control systems will become obsolete and availability of replacement parts will be reduced, and this could impact system operations or reliability	Development of a technology renewal plan to maintain currency of critical monitoring and control systems will help reduce risks to systems operations.
Stakeholder expectations for quality of water treatment	Stakeholders may desire improved drainage water treatment to address quality, safety, or aesthetic properties from the collection and treatment systems (quality of discharges, odours, environmental impacts)	Monitor customer satisfaction with the quality of drainage treatment systems and processes, and communicate options and costs associated with any desired improvements.

Future Factor	Description	Impact or Strategy
Change in treatment standards and requirements, revised environmental quality standards	Regulations may require changes to existing drainage water treatment systems, allowable discharges, and necessitate the installation of new or revised treatment systems.	Systems may require extensive treatment upgrades to meet new regulations. Include system upgrade forecasts as part of long term financial planning, external funding plans, and reserve fund analysis.
Impact of climate change on drainage water quality, treatment processes, volumes, and discharges (rainfall patterns, drought, extreme weather)	Changes in weather patters affecting rainfall and run-off volumes could impact collection systems, treatment systems, and receiving bodies. Extreme weather events and changes to rainfall patterns could result in run-off volumes that exceed system capacity, either on a peak volume basis, or on a seasonal system capacity basis. Rising sea levels could impact discharge systems and necessitate new infrastructure or the modification or relocation of existing infrastructure. Water from drainage systems may become a source for non-potable or potable water uses where existing water sources are not able to provide sufficient volumes.	Monitor impacts of sea level rise and weather pattern changes on collection and treatment systems, including risks associated with extreme weather events. Identify where existing system capacity or system design may not be sufficient to address predicted peak flow rates or volumes. Monitor the impact that discharges have on receiving bodies and watersheds. Opportunities to utilize discharges for beneficial uses that would offset water sourced from aquafers and watersheds. Drainage collection systems could be a source to balance water flows within watersheds and receiving bodies during times of drought.

2.4 ORNAMENTAL STREET LIGHTING SERVICES

The CVRD operates several ornamental lighting systems within the Regional District. These assets enhance the neighbourhoods where they are installed and provide lighting within the roadway or public areas where fixtures are installed.

2.4.1 SERVICE STATEMENTS AND PERFORMANCE CRITERIA

Service statements were developed to describe the services and identify the performance criteria for the various stakeholders.

For each service statement, service value categories have been identified to summarize the types of objectives that would be used to evaluate the services delivered to CVRD customers.

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
Service Users	Public	Lighting that enhances public areas and roadways in community areas, improving safety and visibility	Safety Satisfaction
	Ratepayers	Lighting systems are effectively managed for the CVRD to minimize risk and lifecycle costs	Safety Financial
Service Providers	CVRD Operators and Staff	Staff have the resources and knowledge to operate and maintain systems safely and effectively	Safety Financial
Regulators	Federal regulations Provincial regulations	Compliance with required rules, standards, guidelines, and regulations	Safety
	Ministry of Transportation and Infrastructure	All assets meet, or exceed, legislative guidelines and standards	Safety
	CVRD	All bylaws, policies and practices of the Regional District are met	Safety
	WorkSafeBC Technical Services BC	Occupational Health and Safety standards, regulations, and guidelines are met	Safety
Wider CVRD Community	Public	*No additional service statements*	N/A
Neighbouring Communities	Public	*No additional service statements*	N/A

2.4.2 LEVEL OF SERVICE PERFORMANCE MEASURES

Performance measures (also called performance indicators) are used to track if the performance targets have been met and thereby provide an indication that the required level of service is being met. A comparison of the measured result to the target identifies if some action needs to be taken.

The following table identifies the performance criteria and the associated performance measures for the identified services. Some of the identified measures are not currently tracked or may not have systems or processes in place to quantify them. Target values for these performance measures will need to be developed to account for current services and the results of the community engagement and feedback on service levels that will be undertaken by the CVRD.

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Access	Customer	Number of Lighting Systems	Y	From system records
Access	Customer	Number of properties with lighting service	Y	Tracking from billing records
Access	Technical	Number of lights (poles/luminaires) in network	Y	From inventory records
Access	Technical	Number of staff certified to maintain lighting systems	Y	Staff with appropriate trade qualifications
Safety	Technical	Number of infractions, non-conformance or violation notices or findings	Y	Tracking based on notices issued by regulatory / compliance bodies
Financial	Technical	Cost to operate and maintain lighting ($/light)	Y	Indicator of operating and maintenance efficiency (O&M) and life cycle management (Capital); highlight impacts of system size – distribution networks From financial and inventory records
Financial	Customer	Annual change in lighting budget (% change)	Y	Budget metrics
Financial	Customer	Per-capita funding for Lighting	Y	Budget metrics and census data

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Financial	Technical	Annual Value of Developer Contributions for Lighting	Y	Cash contributions and valuations of in-kind or contributed infrastructure
Financial	Technical	Average Annual Capital Funding - Renewals / Replacements - New Assets / Upgrades - Capital Reserves Contributions	Y	Annual capital funding for current or future infrastructure investments
Financial	Technical	Current Replacement Cost – All Assets	Y	Cost in current dollars to replace infrastructure to current standards or requirements
Quality	Technical	Network Condition Distribution – Average Condition, % Good, Fair, Poor	Y	Condition of park and trail networks (from periodic condition assessments)
Quality	Customer	Number of annual complaints or service requests	Y	System to track calls and requests/complaints
Quality	Technical	Number of luminaries or poles serviced/repaired annually	Y	From maintenance records
Safety	Technical	Number of insurance claims (Open, Processed, Paid)	Y	Tracking from internal records and insurance claims
Safety	Technical	Value of paid claims	Y	Tracking from internal records and insurance claims
Safety	Customer	Lighting is adequate for local needs	Y	Lighting addresses concerns of residents
Safety	Technical	Light levels meet intended design parameters or objectives	Y	Lighting meets specifications for intended service

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Safety	Technical	Number of poles inspected annually	Y	From maintenance records
Satisfaction	Customer	Customer Satisfaction Survey Rating	Y	From regular CVRD surveys

2.4.3 FUTURE FORECASTS

There are several external factors that could impact expected levels of service or the CVRD's ability to meet them.

Future Factor	Description	Impact or Strategy
Performance of existing infrastructure	The physical performance of existing lighting infrastructure and improvements could impact the ability and costs to provide the intended services to the community	Undertake on-going monitoring and assessment of the condition and performance of lighting to manage operations, maintenance, and renewal plans and activities
Changes in regulations	Changes in regulations may change the needs and requirements for operating and managing lighting	Resources may be required to meet new regulatory requirements or regulatory methodologies (e.g. performance based regulations)
Ability of residents to pay (affordability)	Economic factors may limit the ability of residents to fund current or future needs for lighting public areas	Reduce lighting requirements or decommission lighting systems as needed to align with the community's ability to pay
Demographic Changes – aging populations, shifting population demographics	Aging populations may require enhanced lighting levels from current system design requirements to meet the current community expectations of the lighting systems Shifting demographics may change the current demands and expectations for lighting public areas	Upgrades to lighting levels may be desired to address vision deficiencies in aging populations (type of fixtures, placement, light levels) Improvements to portable lighting systems and technology (e.g. user-worn lighting) could be alternatives to providing area lighting.
Climate change and environmental considerations – impacts on infrastructure and management	Extreme weather events could increase the frequency of infrastructure damage. "Dark Sky" initiatives could require changes to lighting strategies and associated infrastructure	As part of future rehabilitation and renewal activities, review existing designs and infrastructure to identify where changes to specifications or components could improve system resiliency or adapt to future performance needs

Future Factor	Description	Impact or Strategy
Conversion to more efficient lighting technology (LED)	The transition to LED and other high-efficiency lighting technologies to reduce power consumption and associated GHG emissions may change maintenance and operating costs and activities.	Monitor costs of new lighting technologies, and available grants, to identify when there could be long-term life cycle cost savings associated with a comprehensive lighting replacement program.

2.5 TRANSIT

The CVRD's transit services are provided by BC Transit under operating agreements with the region. The bus fleet and maintenance facility is owned by BC Transit so those assets are not included as CVRD infrastructure in this analysis.

To support the BC Transit operations funded by the region, the CVRD manages a network of bus stops and transit shelters within the Regional District. These road-side assets enhance and encourage transit use in the communities serviced by transit routes.

2.5.1 SERVICE STATEMENTS AND PERFORMANCE CRITERIA

Service statements were developed to describe the services and identify the performance criteria for the various stakeholders.

For each service statement, service value categories have been identified to summarize the types of objectives that would be used to evaluate the services delivered to CVRD customers.

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
Service Users	Transit Users	Shelters are clean, safe, and accessible for transit users, and make waiting for the bus more pleasurable and comfortable to enhance service.	Satisfaction Safety Access
	Public	Shelters reflect the neighbourhoods and the public realm design guidelines for each area.	Satisfaction
	Rate Payers	Transit Shelters are managed effectively and efficiently for the community.	Financial
Service Providers	Transit Staff (Bus Operators)	Shelters and bus stops are installed to support transit riders and bus operations, according to design standards and guidelines.	Safety Quality
	CVRD Operators and Staff	Tools, equipment and resources are provided that enable staff to safely and effectively manage and maintain shelters and bus stop areas.	Safety Financial
Regulators	Federal regulations Provincial regulations	Compliance with required rules, standards, guidelines, and regulations	Safety
	Ministry of Transportation and Infrastructure	All assets meet, or exceed, legislative guidelines and standards	Safety

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
	CVRD	All bylaws, policies and practices of the Regional District are met	Safety
	WorkSafeBC	Occupational Health and Safety standards, regulations, and guidelines are met	Safety
Wider CVRD Community	Businesses Developers Community Groups / Associations	Locations of shelters promotes commercial and/or neighbourhood access and transit use	Access Financial
Neighbouring Communities	Municipalities and Electoral Areas within the Regional District	Communities served by transit have fair and equitable access to service and supporting infrastructure	Access

2.5.2 LEVEL OF SERVICE PERFORMANCE MEASURES

Performance measures (also called performance indicators) are used to track if the performance targets have been met and thereby provide an indication that the required level of service is being met. A comparison of the measured result to the target identifies if some action needs to be taken.

The following table identifies the performance criteria and the associated performance measures for the identified services. Some of the identified measures are not currently tracked or may not have systems or processes in place to quantify them. Target values for these performance measures will need to be developed to account for current services and the results of the community engagement and feedback on service levels that will be undertaken by the CVRD.

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Access	Customers	Number of Bus Shelters/km per Route	Y	Analysis of routes and shelter inventory
Access	Technical	Number of major transit stops or exchanges with shelters installed	Y	From inventory records
Access	Technical	Percent of population using transit	Y	From census and ridership data
Access	Technical	Percent of population within comfortable walking distance of a bus stop (400 m)	Y	Analysis of bus stops and population data
Access	Technical	Transit Mode Share (% of trips by transportation mode)	Y	From periodic transportation survey
Access	Customer	Number of bus stops Number of bus stops with shelters	Y	From inventory records
Access	Technical	Number of bus stops where ridership numbers would warrant a bus stop / shelter	N	Survey of transit ridership patterns and volumes required
Access	Technical	Number of bus stops where shelters could be installed	N	Review of sites and requirements needed
Safety	Technical	Number of infractions, non-conformance or violation notices or findings	Y	Tracking based on notices issued by regulatory / compliance bodies
Quality	Customer	Number of requests for service (maintenance)	Y	From maintenance records

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Quality	Customer	Number or percent of transit riders serviced by shelters	N	Indicator of assessible trails
Quality	Customer	Percent of bus stops with shelters installed	Y	From inventory records
Financial	Technical	Cost to operate and maintain transit infrastructure ($/Bus Stop, $/Bus Route Length)	Y	Indicator of operating and maintenance efficiency (O&M) and life cycle management (Capital); highlight impacts of system size – distribution networks From financial and inventory records
Quality	Technical	Number of maintenance repairs annually	Y	From maintenance records
Financial	Technical	Staffing Ratio – number of staff per number of bus stops or installed shelters	Y	From HR and inventory records
Financial	Customer	Annual change in transit infrastructure budget (% change)	Y	Budget metrics
Financial	Customer	Per-capita funding for transit infrastructure	Y	Budget metrics and census data
Financial	Technical	Amount of external (grant) funding received for bus stop shelters	Y	From financial records
Financial	Technical	Annual transit funding (all activities) per resident	Y	Budget metrics and census data
Financial	Technical	Average Annual Capital Funding - Renewals / Replacements - New Assets / Upgrades - Capital Reserves Contributions	Y	Annual capital funding for current or future infrastructure investments
Financial	Technical	Current Replacement Cost – All Assets	Y	Cost in current dollars to replace infrastructure to current standards or requirements

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Quality	Technical	Network Condition Distribution – Average Condition, % Good, Fair, Poor	Y	Condition of bus shelters and / or bus stops in network (from periodic condition assessments)
Quality	Customer	Number of annual complaints or service requests	Y	System to track calls and requests/complaints
Safety	Technical	Number and value of damage incident repairs (accidents and vandalism)	Y	Tracking from maintenance records
Safety	Technical	Number of insurance claims (Open, Processed, Paid)	Y	Tracking from internal records and insurance claims
Safety	Technical	Value of paid claims	Y	Tracking from internal records and insurance claims
Safety	Technical	Percent of improved bus stops meeting design standards	Y	From design records
Satisfaction	Customer	Customer Satisfaction Survey Rating	Y	From regular CVRD surveys

2.5.3 FUTURE FORECASTS

There are several external factors that could impact expected levels of service or the CVRD's ability to meet them.

Future Factor	Description	Impact or Strategy
Performance of existing infrastructure	The physical performance of existing transit infrastructure, improvements, and route locations could impact the availability of transit shelters and stops	Undertake on-going monitoring and assessment of the condition and performance of park infrastructure (engineered and natural infrastructure) to manage operations, maintenance, and renewal plans and activities
Usage growth or decline (through change in local population and development); regional growth patterns	Shifts in populations or increased ridership could warrant more shelter and bus stop infrastructure improvements	Monitor transit usage patterns, population changes and development to identify where bus stop improvements are warranted.

Future Factor	Description	Impact or Strategy
Demographic Changes – aging populations, shifting population demographics	Aging populations may require more accessible bus stops and transit amenities Shifting demographics may change the current demands and expectations for transit service locations and amenities	Need to improve or increase accessibility to enable universal access at more bus stops. Demand for improved site amenities to encourage and support transit use
Climate change – impacts on infrastructure and management	Climate mitigation strategies will promote more transit use and active transportation mode share for moving within communities. Changing weather patterns could impact the customer demand for transit shelters to provide comfortable spaces at bus stop locations. Changes to vehicle power systems (e.g. battery electric vehicles) may require installation of on-route charging infrastructure and operational changes that could result in the need for improved bus stop infrastructure	Increased demand for transit services and new routes may require new bus stop locations and amenities. Future zero-emission bus services may require the installation of on-route charging points, related road-side charging infrastructure (overhead charging or wireless in-ground charging systems), and passenger facilities.
Changes in regulations	Changes in regulations may change the needs and requirements for operating and managing transit infrastructure	Resources may be required to meet new regulatory requirements or regulatory methodologies (e.g. performance based regulations)
Changes to other transportation systems and operations	Potential changes to school bus services may result in demand changes for regional transit use	Work with transportation partners to identify changes in their service levels, and the associate impact on regional transit service demands.

2.6 BUILDINGS AND FACILITIES (COMMON)

The CVRD operates a wide variety of buildings and facilities in the Regional District. These assets enable various administrative, operational, and community services in the region. There are a number of common LoS components that would apply to buildings and facilities supporting the various service areas.

2.6.1 SERVICE STATEMENTS AND PERFORMANCE CRITERIA

Service statements were developed to describe the services and identify the performance criteria for the various stakeholders.

For each service statement, service value categories have been identified to summarize the types of objectives that would be used to evaluate the services delivered to CVRD customers.

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
Service Users	Building Occupants	Buildings that meet the requirements of the users or service providers	Quality Satisfaction
	Public	Buildings that are appropriate for the service and that meet the needs of the community	Access Quality
	Rate Payers	Buildings and Facilities are managed effectively and efficiently for the community	Safety Financial
Service Providers	External Users / Groups / Businesses / Associations	Buildings are suitable for desired service being delivered, have appropriate availability, and are affordable	Quality Financial
	CVRD Staff/Users (Operations)	Building that enables staff to safely and effectively provide services	Safety Financial
	CVRD Operators and Staff	Tools, equipment and resources are provided that enable staff to safely and effectively manage facilities and complete building work and activities	Safety Financial

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
	CVRD Project Managers	Able to safely and effectively manager projects for building works	Safety Financial
Regulators	Federal regulations Provincial regulations (Building Code, Fire Code, Environmental Regulations)	Compliance with required rules, standards, guidelines, and regulations	Safety
		All assets meet, or exceed, legislative guidelines and standards	Safety
	Municipal regulations	Buildings comply with regional or municipal building and development bylaws and codes	Safety
	CVRD	All bylaws, policies and practices of the Regional District are met	Safety
	WorkSafeBC Technical Safety BC	Occupational Health and Safety standards, regulations, and guidelines are met	Safety
	Municipal Insurance Association of British Columbia	Management of buildings and facilities promotes public safety and utilizes appropriate risk management strategies	Safety
Wider CVRD Community	Community Partners	Regional Buildings and Facilities support residents and services	Access Financial
Neighbouring Communities	Municipalities with the CVRD	Regional Buildings and Facilities support residents and services	Access Financial

2.6.2 LEVEL OF SERVICE PERFORMANCE MEASURES

Performance measures (also called performance indicators) are used to track if the performance targets have been met and thereby provide an indication that the required level of service is being met. A comparison of the measured result to the target identifies if some action needs to be taken.

The following table identifies the performance criteria and the associated performance measures for the identified services. Some of the identified measures are not currently tracked or may not have systems or processes in place to quantify them. Target values for these performance measures will need to be developed to account for current services and the results of the community engagement and feedback on service levels that will be undertaken by the CVRD.

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Access	Customer	Number of buildings that are within convenient access to Transit Service (within 400 m of a bus stop / route)	Y	Indicator of facilities accessible by transit
Access	Customer	Percent of buildings that are designated as Universally Accessible for all users	N	Indicator of assessible facilities
Access	Technical	Distribution of buildings and facilities by municipality or electoral area	Y	From inventory records
Access	Technical	Number of CVRD facilities by population: - by regional municipal or electoral area - by facility type	Y	Inventory records and census data
Access	Customer	Number of buildings Leased by the CVRD	Y	From inventory records
Access	Customer	Number of buildings managed or maintained by the CVRD	Y	From inventory records
Access	Customer	Number of buildings Owned by the CVRD	Y	From inventory records
Access	Customer	Number of CVRD buildings leased to or operated by 3rd party organizations/agencies	Y	From inventory records
Access	Customer	Total building area managed or maintained by the CVRD	Y	From inventory records

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Access	Technical	Buildings: quantity and area by building/facility type	Y	From inventory records - tracking details of building portfolio
Quality	Technical	Number / hours of scheduled PM services per staff/contractor	Y	From maintenance management records
Quality	Technical	Number of facilities / building area per maintenance staff member	Y	From HR and inventory records
Quality	Technical	Number of facilities / building area per project management or contract management staff member	Y	From HR and inventory records
Quality	Technical	Number of facilities with active major maintenance or capital improvement projects	Y	From contract management and work management records
Financial	Technical	Value of active major maintenance or capital improvement projections	Y	From contract management and work management records
Safety	Technical	Number of infractions, non-conformance or violation notices or findings	Y	Tracking based on notices issued by regulatory / compliance bodies
Financial	Technical	Cost to operate and maintain buildings ($/building, $/building area. $/operating hour)	Y	Indicator of operating and maintenance efficiency (O&M) and life cycle management (Capital); highlight impacts of system size – distribution networks From financial and inventory records
Quality	Technical	Number of Open work orders	Y	From maintenance management records
Quality	Technical	Service requests to staff / contractor ratio	Y	From maintenance management records

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Quality	Technical	Staffing ratio – number of operating staff and maintenance staff per number of buildings or per area of managed buildings	Y	From HR and inventory records
Quality	Technical	Time to complete work order	Y	From maintenance management records
Sustainability	Technical	Annual energy use per facility or per building area of managed buildings Annual GHG emissions per facility or per building area of managed buildings	Y	From inventory and energy records
Sustainability	Technical	Annual water consumption (m3)	Y	From utility meters and/or utility invoices
Sustainability	Technical	Annual amount of waste materials generated (tonnes per year): - Solid Waste - Recyclable Materials - Compostable Materials	Y	Estimate from waste management records or invoices
Financial	Customer	Annual change in facility operating and maintenance budget (% change)	Y	Budget metrics
Financial	Customer	Per-capita funding for Facilities	Y	Budget metrics and census data – where facility costs are separate from service area costs
Financial	Technical	Annual area (municipality, electoral area) contributions to regional facilities funding	Y	From budget and financial records
Financial	Technical	Average Annual Capital Funding - Renewals / Replacements - New Assets / Upgrades - Capital Reserves Contributions	Y	Annual capital funding for current or future infrastructure investments

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Financial	Technical	Current Replacement Cost – All Assets	Y	Cost in current dollars to replace infrastructure to current standards or requirements
Quality	Technical	Facility Condition Distribution – Average Condition, % Good, Fair, Poor	Y	Condition of building portfolio (from periodic condition assessments)
Quality	Technical	Number of Facilities with a condition rating (FCI) below target FCI	N*	Indication of risk or deferred investment backlog
Quality	Customer	Number of annual complaints or service requests	Y	System to track calls and requests/complaints
Quality	Technical	Number and duration of planned maintenance closures or shut-downs per year	Y	From maintenance management records
Quality	Technical	Number and duration of unscheduled facility closures per year	Y	From maintenance management records
Quality	Technical	Number of annual PM or repair work orders completed	Y	From maintenance management records
Safety	Technical	Number of insurance claims (open, processed, paid)	Y	Tracking from internal records and insurance claims
Safety	Technical	Value of paid claims	Y	Tracking from internal records and insurance claims
Satisfaction	Customer	Customer Satisfaction Survey Rating	Y	From regular CVRD surveys
Satisfaction	Technical	Cleaning / servicing frequencies for buildings	Y	From maintenance management records

2.6.3 FUTURE FORECASTS

There are several external factors that could impact expected levels of service or the CVRD's ability to meet them.

Future Factor	Description	Impact or Strategy
Performance of existing infrastructure	The physical performance of existing buildings and improvements could impact the ability of service areas to provide the intended services to the community	Undertake on-going monitoring and assessment of the condition and performance of building systems and components to manage operations, maintenance, and renewal plans and activities
Usage growth or decline (through change in local population and tourism); regional growth patterns	Shifts in populations and users could lead to over or under utilization of facilities	Align building needs across service areas to identify opportunities for coordination or re-purposing facilities.
Ability of residents to pay (affordability)	Economic factors may limit the ability of residents to fund park infrastructure and management	Potential reduction in available budgets for buildings Review opportunities to coordinate building utilization across service areas
Demographic Changes – aging populations, shifting population demographics	Aging populations and shifting demographics may change the current demands and expectations for buildings	Need to improve or increase accessibility to enable universal access at more sites. Existing buildings may become "surplus" and could be repurposed for other Regional District priorities. Land reserves and future strategic building site acquisitions may need to be identified for growth areas.
Climate change – impacts on infrastructure and management	Changes in climate may increase operating costs or impact the expected lifecycle of building systems. Extreme weather events could result in more frequent building damage or structural loading.	Need to review existing site infrastructure to identify where these systems may need to be more resilient to changing climates or where original design criteria differ from latest code requirements (e.g. snow loads) Review building sites to identify opportunities to mitigate or offset the impacts of changing climates or extreme weather events Reduction in available service hours or closures of facilities during extreme weather events

Future Factor	Description	Impact or Strategy
Change in building use / demands	The type of activities users want to undertake in buildings will change over time and existing infrastructure may not support those new demands and service expectations	Monitor the on-going demands for buildings and facility usage, functional needs, and space requirements Develop flexible spaces that are adaptable and configurable for current and future building uses
Changes in regulations	Changes in regulations may change the needs and requirements for operating and managing facilities	Resources may be required to meet new regulatory requirements or regulatory methodologies (e.g. performance based regulations)
Changes to maintenance strategies (in-sourcing, out-sourcing)	Changes to the way services are delivered may impact the staffing and skillsets required to provide effective and efficient service delivery	Need to further define overall performance expectations for service delivery (performance based objectives / specifications) and assessment of overall value and efficiency of the various service delivery options.
Change in demand for staff resources	Staffing needs and skills may change as the type, quantity, and complexity of park services change	Plan to forecast future staffing needs (resources, skills) Succession planning, staff development, and staff attraction and retention plans will need to align with future staffing needs
Change in number of buildings managed	Growth in the size or complexity of the building and facility portfolios may impact operations and management of building services	Additional staff or contractors may be required to manage a larger buildings portfolio, or asset activities need to be adjusted to align with available resources (quantity and/or quality of operations and maintenance works).
Growth in low-carbon commuting – cycling, transit, electric vehicle charging	Increasing use of low-carbon transportation options may require new or improved facility systems or spaces, supporting end-of-trip facilities (bike storage, shower and change rooms), or site improvements (vehicle charging infrastructure, transit infrastructure)	Identify facilities where space or capacity exists to implement low-carbon community improvements in the future. Include provisions for low-carbon transportation support in facility designs (space provisions, power system)

2.7 ADMINISTRATION

The CVRD operates several administration buildings in the Regional District. These facilities enable Regional District staff a workplace to provide and support a wide range of government services, and some locations also provide public-facing access to operational, administrative, and legislative services to the residents of the region.

The following Levels of Service are in addition to the core "Buildings and Facilities" levels of service that are also applicable to these facilities.

2.7.1 SERVICE STATEMENTS AND PERFORMANCE CRITERIA

Service statements were developed to describe the services and identify the performance criteria for the various stakeholders.

For each service statement, service value categories have been identified to summarize the types of objectives that would be used to evaluate the services delivered to CVRD customers.

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
Service Users	Public	Facility is easily accessible and allows users to use the required services	Access Quality
		The building has: suitable access and parking, and provides parking facilities or is in close proximity for public vehicle parking, electric vehicle charging, secure bike storage, and is close to transit	Access Sustainability
	Groups and Associations	Meeting rooms and spaces are available to support community activities	Access Quality
	CVRD Staff	Office areas are suitable and configurable for work activities, meetings, and collaboration	Access Safety Quality

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
		Building provides appropriate space for break rooms, equipment storage, and washroom / change rooms that meets the needs of users and operations	Satisfaction
Service Providers	CVRD Board, Committees, and Volunteer Groups	Building provides rooms and resources to conduct Board and Committee activities that support representatives, staff, and the public	Access Quality
		Meeting rooms have access to required equipment, AV, and broadcast communication services	Quality
	CVRD Operators and Staff	Spaces for public interaction are safe, comfortable, and enable efficient service delivery	Quality
Regulators	Federal regulations Provincial regulations	Compliance with required rules, standards, guidelines, and regulations	Safety
		All assets meet, or exceed, legislative guidelines and standards	Safety
	CVRD	All bylaws, policies and practices of the Regional District are met	Safety
Wider CVRD Community	Ratepayers	Administration buildings reflect the community and are effectively managed to deliver value for the public funds invested	Quality Financial
Neighbouring Communities	Municipalities where facilities are located	Facilities reflect the community and meet the municipalities goals for building infrastructure	Quality

2.7.2 LEVEL OF SERVICE PERFORMANCE MEASURES

Performance measures (also called performance indicators) are used to track if the performance targets have been met and thereby provide an indication that the required level of service is being met. A comparison of the measured result to the target identifies if some action needs to be taken.

The following table identifies the performance criteria and the associated performance measures for the identified services. Some of the identified measures are not currently tracked or may not have systems or processes in place to quantify them. Target values for these performance measures will need to be developed to account for current services and the results of the community engagement and feedback on service levels that will be undertaken by the CVRD.

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Access	Customer	Amount of parking available for vehicles, cyclists, and electric vehicles	Y	Indicator of assessible facility access for users
Access	Technical	Number of transit routes that stop within 400 m of the facility	Y	Indicator of accessibility for transit users
Access	Technical	Number of annual public meeting room bookings	Y	Tracking from bookings
Access	Technical	Number of annual staff meeting room bookings	Y	Tracking from bookings
Access	Technical	Scheduling availability of meeting spaces and public rooms	Y	Tracking from bookings
Access	Technical	Capacity of meeting rooms and public spaces	Y	From inventory records
Access	Technical	Number of meeting rooms configured for broadcasting	Y	From inventory records
Access	Technical	Average office/administration space per staff member	Y	From inventory and HR records
Access	Technical	Ratio of staff members to meeting rooms	Y	Indicator of accessibility to space to meet and collaborate
Quality	Technical	Percent of meeting rooms configured with AV and communication equipment	Y	Indicator of accessibility to space to meet and collaborate
Financial	Technical	Staffing and security costs per hour for public meetings	Y	Cost of providing service

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Financial	Technical	Cost per hour to provide meeting room access to community groups	Y	Cost of providing service after hours
Financial	Customer	Annual change in Administration Buildings budget (% change)	Y	Budget metrics
Financial	Customer	Per-capita funding for Administration Buildings	Y	Budget metrics and census data
Financial	Technical	Average Annual Capital Funding - Renewals / Replacements - New Assets / Upgrades - Capital Reserves Contributions	Y	Annual capital funding for current or future infrastructure investments
Financial	Technical	Current Replacement Cost – All Assets	Y	Cost in current dollars to replace infrastructure to current standards or requirements
Quality	Technical	Facility Condition Distribution – Average Condition, % Good, Fair, Poor	Y	Condition of administration buildings (from periodic condition assessments)
Quality	Customer and Technical	Number of annual complaints or service requests	Y	System to track calls and requests/complaints and work orders
Satisfaction	Customer	Customer satisfaction survey rating	Y	From regular CVRD surveys

2.7.3 FUTURE FORECASTS

There are several external factors that could impact expected levels of service or the CVRD's ability to meet them.

Future Factor	Description	Impact or Strategy
Performance of existing infrastructure	The physical performance and adaptability of existing buildings could impact the ability of the CVRD to provide the services to the community	Space and adaptability of existing building spaces could limit the type or amount of services provided from these facilities.

Future Factor	Description	Impact or Strategy
Demographic Changes – aging populations, shifting population demographics	Shifting demographics of staff and the public may change the current demands and expectations for building needs	Need to improve or increase accessibility to enable universal access at more sites. Building needs and features may need to be updated to meet future need and expectations of building users
Climate change – impacts on infrastructure and management	Increased demands to support climate change mitigation measures and operations. Extreme weather events could limit the use and availability of the facility	Opportunities to enhance the ability of buildings to offset climate change through improved management practices (energy efficiency, low carbon operations) and supporting infrastructure (electrical vehicle charging, low-carbon transportation options). Identify alternative service delivery centres or methods to enable continued services in the event of building closures.
Changes in regulations	Changes in regulations may change the needs and requirements for operating and managing administration buildings	Resources may be required to meet new regulatory requirements or regulatory methodologies (e.g. performance based regulations)
Change in demand for staff resources	Staffing needs and skills may change as the type, quantity, and complexity of CVRD services change	Plan to forecast future staffing needs (resources, skills) Succession planning, staff development, and staff attraction and retention plans will need to align with future staffing needs
Change in number of administration buildings managed	Growth in the size or complexity of the region and services provided may impact operations and management of administration	Additional space or new facilities could be required to provide space for service delivery. Location of administration buildings should consider how public and staff use services and interact.

2.8 RECREATION CENTRES, COMMUNITY CENTRES AND COMMUNITY HALLS

The CVRD operates a network of recreation centres, community centres, and community halls within the Regional District. These assets and enable various community activities and provide spaces for cultural, social, and recreational purposes in the region.

The following Levels of Service are in addition to the core "Buildings and Facilities" levels of service that are also applicable to these facilities.

2.8.1 SERVICE STATEMENTS AND PERFORMANCE CRITERIA

Service statements were developed to describe the services and identify the performance criteria for the various stakeholders.

For each service statement, service value categories have been identified to summarize the types of objectives that would be used to evaluate the services delivered to CVRD customers.

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
Service Users	Public	Communities have access to facilities that support local and regional social, cultural, and recreational activities, needs, and objectives	Access Quality
	Program Users (individuals and groups)	Facility has suitable space and equipment for the program or activity, is readily available when needed at a reasonable cost	Access Quality Financial
	Sporting, Cultural, and Community Groups Schools	Fair and equitable access to facilities for the desired use and scheduling	Access
		Spaces that are available and configurable for the group's activity and equipment	Access Quality
		Access to secure storage for group's equipment	Access
	Spectators	Comfortable, clean and safe to watch events or activities	Quality

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
Service Providers	CVRD Recreation Programs	Flexible space that is available to support community programs and activities provided by the CVRD	Access
	Facility Tenants - Organizations - Library - Sports Teams - Service Clubs - Food Services (internal and external) - External Services (e.g. Post Office)	Dedicated space for organization's administration and storage needs including access to communication networks, security, and services	Access
		Required access for users and operators, including separate entrances, accessible, and loading facilities as may be required	Access Quality
	Daycares	Clean, safe and inviting space for daycares that meets licensing requirements including outdoor playgrounds and room configurations	Access Quality
	Event Rentals	Ability to rent a suitable space that will support the event (staff assistance, access to support equipment like AV, tables, chairs, and loading facilities)	Access Quality Financial
	Major Events Major Sports	Availability of quality facilities with amenities and services that encourage hosting or locating in CVRD	Access Quality Financial
Regulators	Vancouver Island Health Authority Liquor Control Branch	Food and beverage service areas meet and are operated according to health authority and licensing requirements	Safety
	Vancouver Island Health Authority WorkSafeBC Technical Safety BC	Critical building equipment is maintained and operated according to standards, and safety equipment and protocols are in place	Safety
	Sporting Bodies / Associations	Activity spaces meet the requirements for sporting competitions or the requirements of the sporting activity	Safety

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
Wider CVRD Community	Community Groups and Facility Associations / Advisory Committees	Community / user groups have input and access to support the facility and their organization	Access
	Emergency Social Services	Facilities can be activated when required to support social services needs and required functions	Access
		Adequate storage for emergency supplies and mobilization resources	Access
Neighbouring Communities	Municipalities within the Regional District	Regional recreational, social, and cultural facilities are located to support and benefit local communities	Access

2.8.2 PERFORMANCE MEASURES AND INDICATORS

Performance measures (also called performance indicators) are used to track if the performance targets have been met and thereby provide an indication that the required level of service is being met. A comparison of the measured result to the target identifies if some action needs to be taken.

The following table identifies the performance criteria and the associated performance measures for the identified services. Some of the identified measures are not currently tracked or may not have systems or processes in place to quantify them. Target values for these performance measures will need to be developed to account for current services and the results of the community engagement and feedback on service levels that will be undertaken by the CVRD.

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Access	Customer	Total number of days and hours facility is open or available for community use annually – by facility	Y	Planned operating hours
Access	Technical	Amount of parking available for vehicles, cyclists, and electric vehicles	Y	Indicator of assessible facility access for users
Access	Technical	Number of recreation and community facilities per resident – by electoral area / municipality	Y	Periodic updates based on inventory and census data
Sustainability	Technical	Number of transit routes that stop within 400 m of the facility	Y	Indicator of accessibility for transit users
Access	Technical	Percent of residents within easy access of a community or recreation facility (population within 5 minute walking distance for local community facilities; population within designated travel distance/time for regional facilities)	N	Analysis of how close people live and/or work to CVRD community facilities – within walking distance or within a specified driving distance
Access	Customer	Annual availability of spaces for community booking (number of spaces, total hours available to book)	Y	Tracking from booking or operating records
Access	Customer	Annual availability of spaces for CVRD programs (number of spaces, total hours available to book)	Y	Tracking from booking or operating records

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Access	Customer	Annual availability of spaces for event booking rentals (number of spaces, total hours available to book)	Y	Tracking from booking or operating records
Access	Customer	Number of organizations booking recreation and community facilities (number of groups)	Y	Tracking from bookings
Access	Technical	Annual allocation of activity space bookings by user group (CVRD Recreation, Community Groups, Sporting Associations, etc.)	Y	Tracking from booking or operating records
Access	Technical	Number of available activity rooms / spaces by type	Y	From inventory records
Access	Technical	Number of Event Bookings	Y	Tracking from bookings
Access	Technical	Number of facilities with external tenants, total facility area used by external tenants	Y	From inventory records
Access	Technical	Number of Special Events / Sporting Event Bookings (Major Events)	Y	Tracking from bookings
Access	Technical	Population Served by each facility	Y	Periodic update – census data, facility usage tracking
Access	Technical	Size / Capacity of activity rooms / spaces by type	Y	From inventory records
Access	Technical	Utilization of activity rooms / spaces by type - Annual utilization of available space (% of available time space utilized, total hours space utilized/booked)	Y	Tracking from booking or operating records

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Financial	Customer	Number of volunteer hours reported – community facilities Number of people volunteering – community facilities	N	Indicator of community contributions to facilities Method to track reported hours needed
Financial	Technical	Cost to operate and maintain recreation centres ($/centre, $/ area) Cost to operate and maintain community centres ($/centre, $/ area) Cost to operate and maintain community halls ($/centre, $/ area)	Y	Indicator of operating and maintenance efficiency (O&M) and life cycle management (Capital); highlight impacts of system size – distribution networks From financial and inventory records
Access	Technical	Number of annual users per facility (number of user visits or number of visitor-hours)	N (can only estimate)	Indicator of the use of the facility
Financial	Technical	Staffing Ratio – number of staff per number facilities or facility size	Y	From HR and inventory records
Financial	Customer	Annual change in recreation centre budget (% change) Annual change in community centre budget (% change) Annual change in community hall budget (% change)	Y	Budget metrics
Financial	Customer	Per-capita funding for Recreation Facilities Per-capita funding for Community Centre Facilities Per-capita funding for Community Hall Facilities	Y	Budget metrics and census data
Financial	Technical	Annual Booking Fee revenues by facility	Y	From financial records – indicator of revenue to support operations
Financial	Technical	Annual change in event rental fees (% change)		Budget metrics

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Financial	Technical	Annual external funding by facility	Y	From financial records – indicator of community and 3rd party contributions to service
Financial	Technical	Annual Rental or Lease Revenues from external tenants	Y	Financial Records
Financial	Technical	Annual Value of Developer Contributions or public donations for Facilities or Equipment	Y	Cash contributions and valuations of in-kind or contributed infrastructure
Financial	Technical	Asset Renewal Funding Ratio	N	Ratio of planned/budgeted renewals vs forecasted optimal renewal needs – 5 or 10 year forecast Financial records and AM Analysis
Financial	Technical	Cost to operate and maintain facility, $/operating hour; $/m2 of facility space	?	Indicator of the community cost of the facility
Financial	Technical	Lifecycle Funding Ratio Lifecycle Funding Gap	N	Ratio or difference between lifecycle expenditures and the whole of life costs over 10 years (average annual operations, maintenance, and renewal costs vs projected whole of life optimized annual operations, maintenance and asset consumption/depreciation costs) Financial records and AM Analysis
Quality	Technical	Facility Condition Distribution – Average Condition, % Good, Fair, Poor	Y	Condition of recreation and community facilities (from periodic condition assessments)
Quality	Customer	Number of annual complaints or service requests	Y	System to track calls and requests/complaints

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Safety	Technical	Number of insurance claims (Open, Processed, Paid)	Y	Tracking from internal records and insurance claims
Safety	Technical	Value of paid claims	Y	Tracking from internal records and insurance claims
Satisfaction	Customer	Customer Satisfaction Survey Rating	Y	From regular CVRD surveys
Access	Customer	Number of Facilities that are capable of supporting Emergency Social Services (ESS)activations	Y	
Access	Technical	Facility capacity for ESS activations – available space, number of people that can be accommodated	Y	
Access	Technical	Facility storage space available for ESS supplies	Y	

2.8.3 FUTURE FORECASTS

There are several external factors that could impact expected levels of service or the CVRD's ability to meet them.

Future Factor	Description	Impact or Strategy
Ability to adapt spaces to emerging community needs – changes to user groups and type of activities	Social and demographic changes and community preference swill change over time and existing facility spaces will need to be adaptable to future community needs for social, cultural, and recreational services and activities	Existing facility spaces may need to be modified, renovation, or repurposed to meet future community needs and expectations for activities and use of community spaces Design flexible spaces that can adapt to new uses and functions in the future

Future Factor	Description	Impact or Strategy
Usage growth or decline (through change in local population, user groups); regional growth patterns	Shifts in populations and users could lead to over or under utilization of facility spaces	Align facility planning and regional development plans. Monitor changes in local populations and align services to local needs Develop a strategy for evaluating the value and impact of community investments and community benefits when reviewing options for space utilization
Ability of residents to pay (affordability)	Economic factors may limit the ability of residents to fund community infrastructure and management	Potential reduction in available budgets for recreation and community facilities and services Adjust the quantity or quality of services provided in community facilities to align with the community's ability to pay Identify opportunities to increase the utilization of existing facilities to reduce the demands for facility expansions or network growth
Changing demographics may impact local community associations and groups resources and capacity to support or fund community spaces and activities	As communities' change, existing community groups and associations may not be able to continue to support existing facilities and services that they currently contribute to delivering recreational and community services	Reduction in external resources or funding to operate and support community facilities Additional resources may be required to continue operation of some facilities
Demographic Changes – aging populations, shifting population demographics	Aging populations may require community facilities to provide difference services and experiences Shifting demographics may change the current demands and expectations for social, cultural and recreation needs	Need to improve or increase accessibility to enable universal access at more sites. Increased demand or need for activity spaces for services to promote physical, social, and cultural activities

Future Factor	Description	Impact or Strategy
Climate change – impacts on infrastructure demands	Changes in climate may change the operating characteristics of some facilities, resulting in higher energy demands for heating, cooling and refrigeration systems. Extreme weather events and changes to climate patterns (flooding, droughts, extreme heat) could result in additional Emergency Social Services activations to support communities in need	Need to review existing building system infrastructure or seasonal operating periods to make these systems more resilient to changing climates, or to align when seasonal time periods to match system operating parameters. Reduction in available service hours or closures of facilities during extreme weather events or ESS activations
Change in users from competitive to recreation activities	Shift in the types of activities residents are undertaking from competitive activities (organized individual, group or team sports and competitions) to recreational activities (individual pursuits, recreational leagues and physical activities)	Existing facilities and activity spaces may not facilitate the changing recreational needs of the community. Increasing demands for flexible or adaptable spaces for undertaking different types of activities.
Changes in regulations	Changes in regulations may change the needs and requirements for operating and managing recreational spaces	Resources may be required to meet new regulatory requirements or regulatory methodologies (e.g. performance based regulations)

2.9 PARKS AND TRAILS

The CVRD operates a network of parks and trails within the Regional District, with over 12 facilities and a trail network of approximately 167 km. These assets enable various recreational activities and secure land for cultural, social, and environmental purposes in the region.

2.9.1 SERVICE STATEMENTS AND PERFORMANCE CRITERIA

Service statements were developed to describe the services and identify the performance criteria for the various stakeholders.

For each service statement, service value categories have been identified to summarize the types of objectives that would be used to evaluate the services delivered to CVRD customers.

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
Service Users	Public	A network of well-maintained parks and trail facilities is provided for the community's use that is: - safe and fit for purpose - affordable and accessible - clean and aesthetically pleasing - providing a diversity of types of parks and amenities	Access Quality Safety
	Public	Communities have access to parks and trails that support local and regional recreational needs and objectives	Access Quality
Service Providers	Sport and Recreation Groups Schools Social Organizations Daycares	Parks and trails support the requirements of the various users	Access
	Special Event Groups	Parks and trails support and facilitate the undertaking of recreational, social, cultural, and sporting events (public and/or private)	Access

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
	Developers	Parks and trails provided give value to the community and the associated developments	Financial
		Requirements for park contributions and developments are clear, fair, and timely provided	Quality
	CVRD Operators and Staff	Tools, equipment and resources are provided that enable staff to safely and effectively manage and operate parks and trails	Safety Financial
Regulators	Federal regulations Provincial regulations Ministry of Transportation and Infrastructure Vancouver Island Health Authority Sporting associations FLNRORD Standard Associations (CSA)	Compliance with required rules, standards, guidelines, and regulations	Safety
		All assets meet, or exceed, legislative guidelines and standards	Safety
	CVRD	All bylaws, policies and practices of the Regional District are met	Safety
	Municipal Insurance Association of British Columbia	Management of parks and trails promotes public safety and utilizes appropriate risk management strategies	Safety
Wider CVRD Community	Residents	Parks and trails are effectively managed to deliver value for the public funds invested in park assets and infrastructure.	Quality
		Designated parks protect and enhance the natural environment and ecosystems in the region	Sustainability

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
	Community Interest Groups and Volunteer Groups	Volunteers and Community members have opportunities to contribute in meaningful ways to parks and trails	Satisfaction
Neighbouring Communities	Municipalities within the Regional District	Communities have equitable access to regional parks and services	Access
		Shared parks and services are managed and operated according to agreements	Access Financial
	First Nations	Parks or improvements associated with First Nation lands provide direct benefits to First Nations communities	Financial
	Tourists	Parks and attractions provide unique and memorable experiences	Quality Financial

2.9.2 PERFORMANCE MEASURES AND INDICATORS

Performance measures (also called performance indicators) are used to track if the performance targets have been met and thereby provide an indication that the required level of service is being met. A comparison of the measured result to the target identifies if some action needs to be taken.

The following table identifies the performance criteria and the associated performance measures for the identified services. Some of the identified measures are not currently tracked or may not have systems or processes in place to quantify them. Target values for these performance measures will need to be developed to account for current services and the results of the community engagement and feedback on service levels that will be undertaken by the CVRD.

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Access	Customer	Percent of Trail Network that is designated as Universally Accessible for all users	N	Indicator of assessible trails
Access	Technical	Number of parks per resident – by electoral area / municipality	Y	Periodic updates based on park inventory and census data
Access	Technical	Percent of residents within easy access of a park facility (population within 5 minute walking distance for local parks; population within designated travel distance/time for regional facilities)	N	Analysis of how close people live and/or work to CVRD parks and trails – within walking distance or within a specified driving distance
Access	Customer	Number of organizations booking park facilities (number of groups)	Y	Tracking from bookings
Access	Customer	Number of Special Event Bookings	Y	Tracking from bookings
Access	Customer	Number of playgrounds	Y	From inventory records
Access	Customer	Number of sports fields	Y	From inventory records
Access	Customer	Number of hard-surface courts	Y	From inventory records
Access	Customer	Playing Fields –Annual utilization of available field bookings (% of available field time booked)	Y	Tracking from bookings and available timeslots
Access	Technical	Annual Amount of Land Acquired for Park Purposes	Y	Summary of annual acquisitions / contributions

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Access	Technical	Length of Trail Network	Y	From inventory records
Access	Technical	Number and area of developed parks	Y	From inventory records
Sustainability	Technical	Number and area of natural areas and protected ecosystems	Y	From inventory records
Access	Technical	Park improvements, quantity and area by improvement type	Y	From inventory records - tracking courts, playgrounds, playing fields, etc.
Access	Technical	Population Served by each Regional Park	Y	Periodic update – census data, facility usage tracking
Access	Technical	Total Park Area		From inventory records / mapping
Financial	Customer	Number of volunteer hours reported – parks and trails Number of people volunteering – parks and trails	N	Indicator of community contributions to parks Method to track reported hours needed
Safety	Technical	Number of infractions, non-conformance or violation notices or findings	Y	Tracking based on notices issued by regulatory / compliance bodies
Financial	Technical	Cost to operate and maintain parks ($/Park, $/park area) Cost to operate and maintain trail network ($/km)	Y	Indicator of operating and maintenance efficiency (O&M) and life cycle management (Capital); highlight impacts of system size – distribution networks From financial and inventory records
Financial	Technical	Staffing Ratio – number of staff per number of parks or per area of managed parks	Y	From HR and inventory records
Sustainability	Technical	Amount of natural habitat areas and ecosystems in protected park areas vs target (% regional land area)	N	Inventory records of protected areas and target objectives for areas to be protected by policy May include protected areas managed by other organization (e.g. BC Parks)

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Financial	Customer	Annual change in park and trail budget (% change)	Y	Budget metrics
Financial	Customer	Per-capita funding for Parks and Trails	Y	Budget metrics and census data
Financial	Technical	Annual Value of Developer Contributions for Parks	Y	Cash contributions and valuations of in-kind or contributed infrastructure
Financial	Technical	Average Annual Capital Funding - Renewals / Replacements - New Assets / Upgrades - Capital Reserves Contributions	Y	Annual capital funding for current or future infrastructure investments
Financial	Technical	Current Replacement Cost – All Assets	Y	Cost in current dollars to replace infrastructure to current standards or requirements
Quality	Technical	Network Condition Distribution – Average Condition, % Good, Fair, Poor	Y	Condition of park and trail networks (from periodic condition assessments)
Quality	Customer	Number of annual complaints or service requests	Y	System to track calls and requests/complaints
Safety	Technical	Number of insurance claims (Open, Processed, Paid)	Y	Tracking from internal records and insurance claims
Safety	Technical	Value of paid claims	Y	Tracking from internal records and insurance claims
Satisfaction	Customer	Customer Satisfaction Survey Rating	Y	From regular CVRD surveys
Access	Customer	Number of Park Visits by Park or Attraction	Y	Where visits can be counted or estimated

2.9.3 FUTURE FORECASTS

There are several external factors that could impact expected levels of service or the CVRD's ability to meet them.

Future Factor	Description	Impact or Strategy
Performance of existing infrastructure	The physical performance of existing park infrastructure and improvements could impact the ability of park areas to provide the intended services to the community	Undertake on-going monitoring and assessment of the condition and performance of park infrastructure (engineered and natural infrastructure) to manage operations, maintenance, and renewal plans and activities
Usage growth or decline (through change in local population and tourism); regional growth patterns	Shifts in populations and users could lead to over or under utilization of park areas	Align park planning and regional development plans. Monitor changes in local populations and align park services to local needs
Ability of residents to pay (affordability)	Economic factors may limit the ability of residents to fund park infrastructure and management	Potential reduction in available budgets for park services Adjust the quantity or quality of services provided in park areas to align with the community's ability to pay
Demographic Changes – aging populations, shifting population demographics	Aging populations may require parks to provide difference services and experiences Shifting demographics may change the current demands and expectations for park and recreation needs	Need to improve or increase accessibility to enable universal access at more sites. Change in the type of infrastructure needed at parks to promote physical, social, and cultural activities
Climate change – impacts on infrastructure and management	Changes in climate may stress or damage natural and "green" infrastructure in parks. Increased demands to use park space to mitigate climate change impacts Extreme weather events could limit the use and availability of park areas for recreation uses.	Need to review existing "green" infrastructure to make these systems more resilient to changing climates Need to change management practices of natural areas to mitigate the impacts of changing climates or extreme weather events Opportunities to enhance the ability of park areas to offset climate change through improved management practices (carbon sequestration) Reduction in available service hours or closures of park areas during extreme weather events

Future Factor	Description	Impact or Strategy
Invasive species	Invasive plans, insects, and animals could impact existing park ecologies, natural systems, and recreational opportunities	Changes to management practices and strategies
Change in recreational activities / demands	The type of activities users want to undertake in parks and trails will change over time and existing infrastructure may not support those new demands and service expectations	Monitor the on-going demands for activities and related infrastructure use and needs. Develop flexible spaces that are adaptable and configurable for current and future recreational activities
Changes in regulations	Changes in regulations may change the needs and requirements for operating and managing park spaces	Resources may be required to meet new regulatory requirements or regulatory methodologies (e.g. performance based regulations)
Changes to maintenance strategies (in-sourcing, out-sourcing)	Changes to the way services are delivered may impact the staffing and skillsets required to provide effective and efficient service delivery	Need to further define overall performance expectations for service delivery (performance based objectives / specifications) and assessment of overall value and efficiency of the various service delivery options.
Change in demand for staff resources	Staffing needs and skills may change as the type, quantity, and complexity of park services change	Plan to forecast future staffing needs (resources, skills) Succession planning, staff development, and staff attraction and retention plans will need to align with future staffing needs
Change in number of parks managed	Growth in the size or complexity of the park and trail systems may impact operations and management of park services	Additional staff or contractors may be required to manage a larger parks portfolio, or asset activities need to be adjusted to align with available resources (quantity and/or quality of operations and maintenance works).

2.10 RECYLCING AND WASTE MANAGEMENT

The CVRD operates a number of waste management services in the district, including curb site collection services, transfer station and recycling centres, and management of landfill sites. These services and related infrastructure support waste management activities in the region. Solid waste sites also provide operating facilities to other agencies, departments, and work groups within the CVRD organization.

2.10.1 SERVICE STATEMENTS AND PERFORMANCE CRITERIA

Service statements were developed to describe the services and identify the performance criteria for the various stakeholders.

For each service statement, service value categories have been identified to summarize the types of objectives that would be used to evaluate the services delivered to CVRD customers.

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
Service Users	Residential customers - curb-side collection services	Designated materials are collected on schedule, efficiently, and appropriately	Quality Financial
	Residential customers – transfer station and drop-off services	Transfer stations and drop-off facilities are conveniently located and available to drop-off allowable materials in a timely manner	Access Quality
	Community Customers - Transfer Station Collection Services	Waste is collected from the transfer station and processed for the community/customer in a timely and fair manner	Quality Financial
	Community Groups	Community Clean-Up events and civic engagement to support environmental and social cause are supported	Access Satisfaction
Service Providers	Commercial Waste Providers / Haulers Municipal Waste Providers	Haulers have convenient and timely access to disposal facilities at competitive rates	Access Financial

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
	CVRD Staff – Collections	Staff can safely and effectively collect curb side waste	Safety Financial
	CVRD Staff – Operating Sites	Staff can safely and effectively operate sites to manage waste disposal and processing	Safety Financial
	CVRD Facilities Maintenance Staff and Contractors	Staff can safely and effectively complete facility work and activities	Safety Financial
	Facility Tenants (CVRD Agencies)	Facilities meet agencies' operating and service requirements	Quality
Regulators	Federal regulations Provincial regulations Ministry of Environment Vancouver Island Health Authority	Compliance with required rules, standards, guidelines, and regulations	Safety
		All assets meet, or exceed, legislative guidelines and standards	Safety
	CVRD	All bylaws, policies and practices of the Regional District are met	Safety
	WorkSafeBC	Occupational Health and Safety standards, regulations, and guidelines are met	Safety
	Recycle BC	Materials collected under the program are collected appropriately and in compliance with service agreements	Safety
	Ministry of Environment CVRD	Closed landfills are managed and monitored to comply with regulations, compliance plans, and CVRD objectives	Safety
Wider CVRD Community	Residents	Waste is collected, managed, and processed responsibly to recover resources and minimize impacts to the environment	Sustainability

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
	Ratepayers	Transfer stations and drop-off facilities are well managed, clean, and do not disrupt neighbours	Quality
		Closed landfills are managed and monitored to comply with regulations and CVRD objectives	Safety
Neighbouring Communities	Municipalities within the Regional District Regional Groups First Nations	Regional Waste Recovery Services are coordinated, and opportunities are reviewed to improve regional activities	Quality

2.10.2 PERFORMANCE MEASURES AND INDICATORS

Performance measures (also called performance indicators) are used to track if the performance targets have been met and thereby provide an indication that the required level of service is being met. A comparison of the measured result to the target identifies if some action needs to be taken.

The following table identifies the performance criteria and the associated performance measures for the identified services. Some of the identified measures are not currently tracked or may not have systems or processes in place to quantify them. Target values for these performance measures will need to be developed to account for current services and the results of the community engagement and feedback on service levels that will be undertaken by the CVRD.

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Access	Customer	Frequency of waste collection – curbside collection	Y	Access to disposal services
Access	Customer	Type of waste collected at transfer stations and drop-off centres	Y	Access to disposal services
Access	Customer	Types of waste collected for curb-side collection	Y	Access to disposal services
Access	Technical	Number/percent of residents serviced by transfer station / drop-off centres	Y	Access to disposal services
Access	Technical	Number/percent of residents serviced with curb-side collection	Y	Access to disposal services
Access	Technical	Percent of residents within easy access of a transfer station or drop-off facility (population within designated travel distance/time for regional facilities)	N	Analysis of how close people live and/or work to CVRD waste collection facilities – within a specified distance
Access	Customer	Number of days and hours facilities open for commercial haulers	Y	From operating records
Access	Customer	Number of days and hours facilities open for drop-off (residential)	Y	From operating records
Access	Technical	Annual volume / tonnage of waste processed for composting	Y	

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Access	Technical	Annual volume / tonnage of waste processed for disposal	Y	
Access	Technical	Annual volume / tonnage of waste processed for Recycle BC	Y	
Access	Technical	Number of drop-off loads, residential/individual customers	Y	From operating records and revenue systems
Access	Technical	Number of loads, commercial and municipal haulers	Y	From operating records and revenue systems
Access	Technical	Tonnage of materials processed, commercial and municipal haulers	Y	From operating and revenue systems
Access	Technical	Tonnage of materials processed, curbside collections	Y	From operating and revenue systems
Access	Technical	Tonnage of materials processed, drop-off and transfer stations (residential/individuals)	Y	From operating and revenue systems
Access	Technical	Wait times to access facilities (customer hours)	N	Estimated wait time by number of customers
Safety	Technical	Number of compliance tests completed (environmental and landfill monitoring)	Y	From work records
Safety	Technical	Number of infractions, non-conformance or violation notices or findings	Y	Tracking based on notices issued by regulatory / compliance bodies
Financial	Technical	Average contamination rate, commercial and municipal haulers	Y	Tracking from records, samples
Financial	Technical	Average contamination rate, curbside collection services	Y	Tracking from records, samples
Financial	Technical	Average contamination rate, transfer station and drop-off services	Y	Tracking from records, samples

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Financial	Technical	Cost per tonne to process and dispose wastes	Y	From financial and operating records
Financial	Technical	Cost to operate and maintain transfer stations ($/site, $/operating hour) Cost to operate and maintain curbside collection services ($/customer, $/km of route)	Y	Indicator of operating and maintenance efficiency (O&M) and life cycle management (Capital); highlight impacts of system size – distribution networks From financial and inventory records
Access	Technical	Length of curb-side collection routes, km	Y	From route planning records
Quality	Technical	Number of missed pickups	Y	From complaints and work tracking
Quality	Technical	Number of regional initiatives implemented	Y	
Access	Technical	Number of service/pickup location stops, curb-side collection (by route)	Y	From route planning records
Access	Technical	Number of service/pickup stop locations per route km	Y	From route planning records
Financial	Technical	Staffing Ratio – number of staff per tonnes of waste processed or staff per facility	Y	From HR and inventory records
Financial	Technical	Weekly service hours to complete routes (route-hours / week – vehicles and drivers)	Y	From route planning records
Financial	Customer	Annual change in solid waste budget (% change)	Y	Budget metrics
Financial	Customer	Change in annual solid waste utility fees / rates (% change)	Y	From financial records
Financial	Customer	Change in annual tipping fees (% change)	Y	From financial records
Financial	Customer	Per-capita funding for solid waste services	Y	Budget metrics and census data

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Financial	Technical	Annual cost to process waste for composting	Y	
Financial	Technical	Annual cost to process waste for disposal	Y	
Financial	Technical	Annual Cost to process waste for Recycle BC	Y	
Financial	Technical	Annual lease costs and revenues (CVRD tenants)	Y	From financial records
Financial	Technical	Annual revenues to process waste for composting	Y	
Financial	Technical	Annual revenues to process waste for Recycle BC	Y	
Financial	Technical	Average Annual Capital Funding - Renewals / Replacements - New Assets / Upgrades - Capital Reserves Contributions	Y	Annual capital funding for current or future infrastructure investments
Financial	Technical	Cost to collect waste per household – curbside collection	Y	From financial and billing records
Financial	Technical	Cost to collect waste per household – transfer stations and drop-off	Y	From financial and billing records
Financial	Technical	Operating Cost per service hour – curbside collections	Y	From financial and operating records
Financial	Technical	Operating Cost per service hour – transfer stations and drop-off centres	Y	From financial and operating records
Financial	Technical	Value of waived disposal fees for waste processed from free tipping applications and clean-up events	Y	From operating and revenue system records

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Quality	Technical	Infrastructure Condition Distribution – Average Condition, % Good, Fair, Poor	Y	Condition of facilities and equipment networks (from periodic condition assessments)
Quality	Customer	Number of annual complaints or service requests	Y	System to track calls and requests/complaints
Safety	Technical	Number of insurance claims (Open, Processed, Paid)	Y	Tracking from internal records and insurance claims
Safety	Technical	Value of paid claims	Y	Tracking from internal records and insurance claims
Satisfaction	Customer	Customer Satisfaction Survey Rating	Y	From regular CVRD surveys
Satisfaction	Customer	Number of customer complaints (missed collections, mess)	Y	Tracking from records
Social	Customer	Number of free tipping applications and clean-up events	Y	From operating records
Quality	Customer	Number of incidents of abandoned waste	Y	From operating records
Quality	Customer	Volume of waste processed from free tipping applications and clean-up events	Y	From operating records
Quality	Customer	Volume or tonnage of abandoned waste collected	Y	From operating records
Access	Technical	Zero waste events per year tracked and diversion rates measured	Y	From operating records

2.10.3 FUTURE FORECASTS

There are several external factors that could impact expected levels of service or the CVRD's ability to meet them.

Future Factor	Description	Impact or Strategy
Performance of existing infrastructure	The physical performance of existing solid waste infrastructure and equipment could impact the ability to provide the intended services to the community	Undertake on-going monitoring and assessment of the condition and performance of equipment and transfer station site infrastructure to manage operations, maintenance, and renewal plans and activities
Population growth or decline (through change in local population and tourism); regional growth patterns	Shifts in populations and users could lead to changes in service areas, collection frequencies, collection technology, depot location and volumes.	Monitor changes in local populations and align solid waste services to local needs (type of service, frequency, capacity)
Ability of residents to pay (affordability)	Economic factors including exchange rates, commodity markets, waste disposal costs, recycling revenues, and material processing rates could increase the costs to residents beyond their ability to pay Costs to dispose materials may contribute to littering and illegal dumping of materials	Potential reduction in available budgets for solid waste management Adjust the quantity or quality of services provided to align with the community's ability to pay Potential need for additional monitoring clean-up, and enforcement related to illegal dumping and littering
Change in public behaviours	Shifts in how residents dispose or recycle materials, and the types of materials being send for disposal, could impact the type of waste management services needed, or the quality of the materials being processed	Develop social marketing strategies to support the adoption or continued application of desired public behaviours regarding waste management services
New requirements for waste diversion, recycling, and quality	Changes to requirements for waste diversion targets, and quality of material streams (contamination rates) may require additional effort or methods of managing solid waste	Ability to divert materials to "best use" could be compromised; financial penalties for not meeting requirements.
Changes to how waste management services are delivered and priced	Movement to "user pay" models based on volume and type of materials produced (pay as you throw, rates by type of materials collected) would change how services are delivered and charged	Monitor technological capacity and social response to these types of strategies to reduce solid waste or to improved beneficial use of recovered materials.

Future Factor	Description	Impact or Strategy
Climate change – impacts on infrastructure and management	Reduction of GHG emissions from waste streams and existing landfill sites may require investment in new infrastructure or technologies mitigate climate change impacts (e.g. landfill gas collection)	Regulatory changes may require investments to capture or mitigate the production of GHG emissions from current or legacy facilities.
Capacity of provincial recycling programs	Current industry models (Recycling BC) may not be able to provide the current level of capacity and resources for recycling materials	Increase in the amount of materials for disposal or the need to develop new strategies for marketing materials for recycling
Changes in regulations	Changes in regulations may change the needs and requirements for operating and managing solid waste sites and facilities (current facilities and closed landfills). Recovery regulations may require changes to how material is collected and processed (type, volume, complexity)	Resources may be required to meet new regulatory requirements or regulatory methodologies (e.g. performance based regulations)
Site constraints may limit future capacity	Existing site areas may not have the space to develop / accommodate changes to material volumes or material processing requirements	Sites may need to be expanded or new facilities developed to accommodate future demands
Change in demand for staff resources	Staffing needs and skills may change as the type, quantity, and complexity of solid waste services change	Plan to forecast future staffing needs (resources, skills)
Development of regional facilities or services	New facilities may be developed regionally or across regions to handle waste materials Service delivery may be consolidated across the region for specific services (e.g. municipal and regional curbside recycling)	Work with regional partners and municipalities to identify opportunities Change in Regional District processes and facilities to integrate with any regional initiatives

2.11 PUBLIC SAFETY

The CVRD operates several fire service areas in the region. These fire service areas are supported with facilities and vehicles that enable staff and volunteers to provide designated emergency services in those locations.

2.11.1 SERVICE STATEMENTS AND PERFORMANCE CRITERIA

Service statements were developed to describe the services and identify the performance criteria for the various stakeholders.

For each service statement, service value categories have been identified to summarize the types of objectives that would be used to evaluate the services delivered to CVRD customers.

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
Service Users	Public	Emergency Services have the tools, resources, and equipment to support fire, medical emergency, rescues, and accident responses in their service areas.	Access Safety
		Facilities and equipment are located, available and appropriate for Emergency Services to respond to service requests in the appropriate amount of time.	Access Safety
Service Providers	Emergency Services Staff Volunteer Fire Fighters	Facilities enable staff and volunteers to safely and effectively manage resources and provide emergency services.	Access Quality Financial
		Equipment and vehicles enable staff and volunteers to safely and effectively provide emergency services	Access Safety Quality
Regulators	Federal regulations Provincial regulations WorkSafeBC National Fire Protection Association (NFPA)	Occupational Health and Safety standards, regulations, and guidelines are met	Safety
		All assets meet, or exceed, legislative guidelines and standards	Safety
	CVRD	All bylaws, policies and practices of the Regional District are met	Safety

Stakeholder Group	Stakeholder	Service Statement	Performance Criteria
	Office of the Fire Commissioner Insurance Underwriters	Area Fire services meet certification levels	Safety
		Area Fire response capability meets risk tolerance for insurance	Safety
Wider CVRD Community	Residents	Emergency Services provided in the community are affordable and balance public and private costs.	Financial
Neighbouring Communities	Mutual Aid and Automatic Aid Partners BC Wild Fire Service Police Ambulance First Nations	Fire Services provide aid support as per agreements	Safety

2.11.2 PERFORMANCE MEASURES AND INDICATORS

Performance measures (also called performance indicators) are used to track if the performance target has been met and thereby provide an indication that the required level of service is being met. A comparison of the measured result to the target identifies if some action needs to be taken.

The following table identifies the criteria and the associated performance measures for the identified services. Some of the identified measures are not currently tracked or may not have systems or processes in place to quantify some of these indicators. Target values for these performance measures will need to be developed that account for current services and the results of the community engagement and feedback on service levels that will be undertaken by the CVRD.

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Access	Customer	Number of Fire Halls	Y	
Access	Technical	Number of Fire Services Personnel (staff and volunteers)	Y	Current number of people available
Access	Technical	Number of Fire Vehicles	Y	
Access	Technical	Number of calls by type and by hall	Y	Annual statistics of call volumes
Access	Technical	Number of mutual aid calls responded	Y	From call tracking
Access	Technical	Number of buildings / structures in Fire Service Area	Y	Periodic updates from property records
Access	Technical	Population served by each Fire Service Area	Y	Periodic updates from census data
Access	Technical	Size of each Fire Service Area	Y	Periodic updates
Safety	Technical	Number of infractions, non-conformance or violation notices or findings	Y	Tracking based on notices issued by regulatory / compliance bodies
Financial	Technical	Cost to operate and maintain facilities and equipment ($/resident; $/property, $/area in fire service area, $/fire hall)	Y	Indicator of operating efficiency (O&M) and life cycle management (Capital); highlight impacts of system size From financial and inventory records

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Financial	Technical	Staffing Ratio – number of staff and volunteers per fire service area size	Y	From HR and inventory records
Financial	Customer	Annual change in emergency services budget (% change)	Y	Budget metrics
Financial	Customer	Per-capita funding for emergency services	Y	Budget metrics and census data
Financial	Technical	Annual cost and recoveries for aid agreement services provided	Y	From financial records
Financial	Technical	Asset Renewal Funding Ratio	N	Ratio of planned/budgeted renewals vs forecasted optimal renewal needs – 5 or 10 year forecast Financial records and AM Analysis
Financial	Technical	Lifecycle Funding Ratio Lifecycle Funding Gap	N	Ratio or difference between lifecycle expenditures and the whole of life costs over 10 years (average annual operations, maintenance, and renewal costs vs projected whole of life optimized annual operations, maintenance and asset consumption/depreciation costs) Financial records and AM Analysis
Quality	Technical	Facility and Equipment Condition Distribution – Average Condition, % Good, Fair, Poor	?	Condition of facilities, equipment and vehicles (from periodic condition assessments)
Quality	Technical	Number of Fire Halls meeting current building code or seismic performance targets	Y	From building assessments, property records
Safety	Technical	Value of Buildings in Fire Service Area	Y	Summary from annual property assessment data (BC Assessment, property taxes)
Safety	Technical	Value of property damaged by fires in Fire Service Area	Y	Tracking of property damage from fires - annual

Performance Criteria	Type	Performance Measures	Measured or Could Measure	Comments
Safety	Technical	Number of residents residing outside of a fire protection area	Y	Periodic update from census data
Satisfaction	Customer	Customer Satisfaction Survey Rating	Y	From regular CVRD surveys

2.11.3 FUTURE FORECASTS

There are several factors that could impact expected levels of service or the CVRD's ability to meet these expectations in the future.

Future Factor	Description	Impact or Strategy
Performance of existing infrastructure – facilities and equipment	The physical performance of existing infrastructure could impact the ability for staff and volunteers to provide emergency services	Undertake on-going monitoring and assessment of the condition and performance of facilities and equipment to manage operations, maintenance, and renewal plans and activities
Growth or decline of the number of residents living in fire service areas	Changes in the number of people living in fire service areas could impact demands for emergency services and resources (volunteers, ability to pay).	Growth in populations could increase the number of service calls for the emergency services. Changes to the community members may reduce the availability of volunteers to support fire services and could increase the cost of providing services.
Changes in demographic profiles of residents	Changing population demographics could change the demands for emergency services	Aging populations may increase demands for medical assistance support and other types of emergency calls.
Development and changes in zoning may change the type of structures in a fire service area, and therefore change the requirements for resources and equipment	The type of residential and commercial activity impacts the type of scenarios and the type of resources needed to respond to an emergency services call	Impacts of proposed developments need to be reviewed against emergency services capabilities. Funding for changes in service capacity needs to be identified and considered as part of development processes.

Future Factor	Description	Impact or Strategy
Ability of residents to pay (affordability)	Several existing facilities and equipment may require upgrades on replacement to meet current code and equipment standards. Residents may not have the fiscal ability to fund desired service levels.	Work with the community to define acceptable protection levels and fire service areas, and understand the economic trade-offs between public costs (fees for fire protection) versus private costs (cost of insurance or value of potential property losses)
Fire Services Staff and Resource Model	The ability to attract and retain volunteers may not be sufficient to provide an adequate number of people to respond to fire calls and events.	Resources may be required to increase and retain the pool of available volunteers. Emergency services may need to look at professional staffing for fire services.
Resiliency of existing facilities to operate in post-disaster situations	Several facilities do not meet the latest build code or seismic performance targets for post-disaster operations. Failure of these buildings during a disaster event could impact the ability for fire services personnel to respond in a disaster situation.	Disaster response will need to be assessed as part of asset renewal and maintenance planning. Risk assessments and mitigation strategies should be reviewed to identify how alternatives and mitigation measures could be implemented. Funding strategies should be developed.
Climate change – impacts on fire protection services and needs	Changes in climate may stress or damage natural and "green" ecosystems in developed areas. Changes to weather patterns could increase the number and severity of fires impacting developed areas. Extreme weather events could require or limit the ability of emergency services to respond to service calls.	Need to review management practices of natural areas and ecosystems adjacent to buildings and developed areas to mitigate the impacts of changing climates or extreme weather events related to emergency and fire risks. Greater demands for fire services to support and enable better management practices to mitigate the risks of interface fires, assess to fire suppression resources.
Changes in regulations	Changes in regulations may change the needs and requirements for operating and managing emergency services	Resources may be required to meet new regulatory requirements or regulatory methodologies (e.g. performance based regulations), or changes in fire protection standards. Alternatively, the level of fire protection may need to be revised to meet new codes or underwriter requirements.

APPENDIX

A

COMMUNICATIONS STRATEGY MEMO

MEMO

TO: Cowichan Valley Regional District

FROM: Doug Manarin, P.Eng., WSP

SUBJECT: **Levels of Service – Communications Strategy Development (18P-00144-00)**

DATE: **September 5, 2019**

COMMUNICATIONS STRATEGY DEVELOPMENT

Recommendations for a communications strategy and associated messaging has been developed to help develop information for residents about asset management, and the reason why the CVRD is undertaking an Asset Management program.

Material will need to be developed to help explain key asset management concepts and how asset management will help the CVRD provide value to the community.

KEY ELEMENTS

The key elements of this strategy should include:

- Why are we doing asset management
    - Factors that define Value (financial, risk, and benefits)
- Understanding the future needs
    - Activities, costs, resources, regulations, and community needs
    - Funding and sustainability
    - Inter-generational cost distribution and fairness
- Identifying asset life cycle
    - Key events, processes, and activities undertaken throughout the life of the assets.
- Assessing Performance
    - Physical Condition
    - Demand and Capacity
    - Functionality
- Lifecycle costs
    - Understanding the impacts of capital costs and long-term operations and maintenance costs

Some simple graphics showing how infrastructure is planned, created, and managed over the life cycle of the assets may help build a better understanding of the process for managing assets over time. A sample concept graphic for describing the lifecycle of an asset is shown in the following figure.

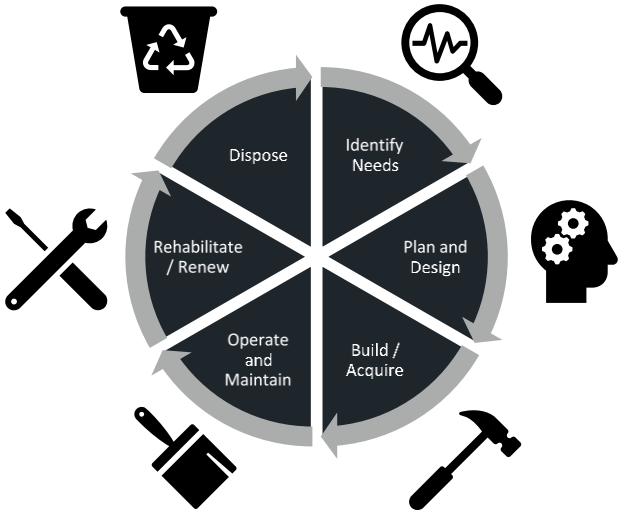

Figure 1 – Sample Asset Life Cycle Info Graphic Concept

KEY MESSAGES

The strategy will need to identify key messages for describing and discussing Levels of Service with the community:

- Levels of Service help us balance the services delivered to the community with the needs, priorities, risks, and available resources.
- For some services, requirements are set by other agencies (e.g. health authority standards, environmental standards, insurance requirements, contractual requirements, provincial and federal regulations). Services including potable water systems, wastewater systems, solid waste and recycling material processing, and fire protection services are a few examples of services areas where compliance with regulatory and other agency requirements define or set many requirements related to provision of that service.
    - These services have limited opportunities to change the quality or core requirements for delivering those services to the community.
    - For these areas, we will work with the community to understand the rules and the requirements we need to meet to provide that service to the community.
- For other services, the requirements are set by the community through the decisions of the board. Services areas like park areas, recreation activities, facilities, and waste collection services are generally set based on community needs and the resources available to the regional district to provide those desired services.
    - These services can be adjusted to meet the needs, priorities, and resources of the community.
    - For these areas, we will continue to work with the community to understand the needs, desires, priorities and benefits of delivering value for that service to the community.
- For all services, we will set performance targets that will help us manage the services provided, and that will help demonstrate how we are meeting the expectations of the community within our available resources.

COMMUNITY ENGAGEMENT

Some service areas will likely need to engage residents and customers to gain their inputs to better understand their LoS needs, while some services areas will need to educate and inform customers about LoS as there are limited opportunities to change services levels.

Some service areas (Park and Recreation services) have recently undertaken projects that have included extensive feedback and surveys with residents about services and service expectations. These areas have recent detailed information and likely will not need to undertake extensive consultations in the near term, except where they have specific needs to address potential changes to LoS.

Most other services, like utilities and emergency services, have LoS that are prescribed or that have limited abilities to be adjusted based on community feedback. For these areas, the strategy would be to identify where LoS need to be communicated to residents, and to identify what aspects of service delivery can be informed by public input.

An assessment of the current CVRD understanding of customers views on the Quality, Quantity, Access, and Funding (ability to pay) is included in the following table. Overall, we believe there is a good understanding and appreciation of customers views on current services. There are few areas where engagement will help the CVRD better understand some specific customer needs or help to frame decisions on future changes to Levels of Service that are currently anticipated due to regulatory requirements or future resource needs.

Service Area	Current CVRD Understanding				Key Gaps	Strategy	Objectives
	Quality	Quantity	Access	Funding			
Water Services	Good	Good	Good	Fair	Customer's understanding of why upgrades are required, and strategies to fund these works	Information Strategy - Regulatory Requirements	Educate water users of regulatory requirements and identify funding strategies to undertake required upgrade systems
Sewer Services	Good	Good	Good	Fair	Customer understanding of future rehabilitation needs	Information Strategy - Rehabilitation Planning	Develop support for future system renewal plans and understand how risk is viewed in the communities
Drainage Services	Good	Good	Good	Fair	Customer understanding of future rehabilitation needs	Information Strategy - Rehabilitation Planning	Develop support for future system renewal plans and understand how risk is viewed in the communities
Ornamental Street Lighting Services	Fair	Good	Good	Fair	Customer understanding of future rehabilitation needs, and options for service levels	Information Strategy - Rehabilitation Planning	Develop support for future system renewal plans and understand how risk is viewed in the communities

Service Area	Current CVRD Understanding				Key Gaps	Strategy	Objectives
	Quality	Quantity	Access	Funding			
Transit	Good	Fair	Good	Good	Understanding where improvements could help promote transit use and user satisfaction	Engagement Strategy - Bus Stop Improvements	Better understand what bus stop improvements would encourage more transit use, and identify preferred criteria for locating improvements
Administration	Good	Good	Good	Good	Public understanding of future rehabilitation needs to meet CVRD operation requirements	Information Strategy - Rehabilitation Planning	Develop support for future renewal plans and links to CVRD service delivery needs
Recreation Centres, Community Centres, and Community Halls	Good	Good	Good	Fair	Allocating available resources with community recreation needs and demand patterns	Engagement Strategy - Service Delivery Priorities	Support for decisions to align recreation services with available funding, and current and future service demands, across various facility types and locations.
Parks and Trails	Good	Good	Good	Good	Customer understanding of future rehabilitation needs	Information Strategy - Rehabilitation Planning	Develop support for future system renewal plans and understand how risk is viewed in the communities
Recycling and Waste Management	Good	Good	Good	Good	Community feedback on waste collection scope and frequency	Engagement Strategy - Service Delivery Priorities	Better understand how changes to collection frequencies and scope of collected materials can help to meet long term waste management goals and costs

Service Area	Current CVRD Understanding				Key Gaps	Strategy	Objectives
	Quality	Quantity	Access	Funding			
Public Safety*	Good	Good	Good	Fair	Customer understanding of future rehabilitation needs and associated costs	Information Strategy - Rehabilitation Planning	Develop support for future system renewal plans to meet the regulatory and future operational needs of Fire Services

FUTURE ENGAGEMENTS AND COMMUNICATIONS

For each service area, we recommend that CVRD staff review their current assessment of the community's current understanding, needs, and desires regarding how their services are viewed in the community, and identify what further inputs would be needed to improve this knowledge. This review will help identify appropriate strategies and methods to engage with service area stakeholders. Working with existing advisory groups or establishing focus groups may be the most effective method to engage with representative service users for many CVRD services and to develop materials to inform the wider community.

As primary service level targets and key performance measures are set for each service area, these results should be shared with the community on a regular basis, usually in conjunction with the annual budget and financial reporting processes. This provides an opportunity for the CVRD to identify how services are being delivered, and to help inform the community of the various choices that needed to be made in balancing future investment levels and future service delivery targets.

The cost of delivering the target levels of service for each area will typically depend on the resources required to provide that service (infrastructure, staff, resources), the quantity of the service being delivered (scope, volume, hours, frequency), and the quality of the service (how the service is experienced and the associate resources to meet that target).

When changes to levels of service are contemplated, the cost of those changes can be evaluated by comparing the current resources and effort for delivering that service with the anticipated resources needed to me the new service level. These costs should also include long-term investments and lifecycle renewal costs for the underlying infrastructure to provide a full picture of the cost of service. Ultimately, the community will need to balance the service levels that they wish the CVRD to provide with the resources available in the community, and the various priorities and needs of the community.

The Level of Service engagement strategy will need to be an on-going process for the CVRD as the understanding of service area clients, and the clients understanding of their level of service needs and desires, will change over time. Regularly tracking how well service is being delivered, and how satisfied the community is with the services they receive, will provide valuable insights to staff and the Board to inform future decisions regarding these levels of service. These discussions can be part of regular communications with residents, or they may need to be part of a focused outreach program when necessary.