

DATE OF MEETING JANUARY 23, 2023

AUTHORED BY TING PAN, MANAGER, SUSTAINABILITY

SUBJECT MONITORING STRATEGY – INTRODUCTION

OVERVIEW

Purpose of Report:

To provide the Governance and Priorities Committee with an update on the development of a *Monitoring Strategy for City Plan: Nanaimo Reimagined*.

BACKGROUND

During the Special Council meeting on 2020-DEC-14, Council passed the following motion:

“That the City of Nanaimo adopt the Doughnut Economic Model as a cohesive vision for all City initiatives and planning processes; and that a city portrait for Nanaimo be created to scale down the doughnut economics framework, that the city portrait be blended with the REIMAGINE NANAIMO process and that the appropriate measurable targets and indicators relevant to the community be identified and included in the framework to track progress.”

This motion informed the approach to tie a Monitoring Strategy to the Nanaimo Doughnut Framework. The Strategy is intended to track the progress towards City Goals that are organized around the framework and to provide insights on whether our actions are effective.

During Phase 2 of the REIMAGINE project, a workshop on 2021-MAR-10 involved Council, Committee members, staff, and key community stakeholders to select potential indicators and targets for the proposed City Plan. Using the results of the workshop, staff further refined the indicators and provided Council with a draft set of indicators and targets 2021-JUN-14 (see Attachment A).

The adoption of the City Plan in July 2022 includes a commitment to regularly monitor and review the effectiveness of actions taken to implement the Five City Plan Goals. This involves the development of a Monitoring Strategy to establish priority targets and high-level key indicators.

- **Targets** define, in measurable terms, desired outcomes for City Plan. They show what we wish to achieve and when we want to achieve it by.
- **Indicators** tell us how we are doing and are measures used to show how well a social, cultural, economic, or environmental system is working over a period of time.

This previous workshop held during 2021 informed the development of the Monitoring Strategy that began in late 2022 to further review and refine the 28 areas of impacts selected to be measured using 24 draft indicators and establish a process for target setting.

While the City does, and will continue to monitor many supporting statistics through various processes, the focus of the Strategy is to monitor a manageable set of key indicators related to the Five City Goals.

DISCUSSION

The approach being used to develop the draft monitoring strategy involves using the MultiCapital Scorecard™ (MCS), a triple bottom line performance measurement methodology designed to show an organization's effective progress towards meeting its sustainability goals. The MCS helps the City to select context-based sustainability performance indicators that are specific to Nanaimo's context and can be directly linked to a science- or ethics-based sustainability end goal, in order to connect actions with the Framework and the Five City Goals in a meaningful and practical way.

The MCS is a tool to help organizations move beyond incremental progress (i.e. measuring the direction of progress without connecting to an end goal). The tool was designed for use at an organization level (businesses, not-for-profits etc.), and this is the first time it is being adapted and applied to a whole community using a vision established through a long-term community plan.

This has involved taking the following steps:

1. Applying selection criteria that focus on the significance of a draft indicator's area of impact we have influence or control over and the existence of a science- or ethics-based sustainability end goal relating to the core values of the City Plan framework (see Attachment B).
2. Assessing each indicators' suitability by ensuring the indicator is meaningful in Nanaimo's context and linked to a defined sustainability end goal and identifying the quantity of the resources that must be maintained in order to ensure the well-being of the community.
3. Developing metrics that quantify and compare actual impact (i.e. what we are measuring) and a sustainability end goal (i.e. what we ultimately want to maintain or achieve).

Through this process, the original draft indicators selected in 2021 have been sorted into primary indicators that meet the criteria and supportive indicators that could provide critical insights on progress towards City Goals but don't meet the criteria. Currently 16 primary indicators are being proposed, at least five of which would require further investigation or collecting new data that does not currently exist (see Attachment C).

NEXT STEPS

A report on recommended primary and supportive indicators to be included in the Monitoring Strategy will be presented to Council for consideration during spring 2023. The Monitoring Strategy is anticipated to be completed in mid-2023. Remaining tasks include:

- Engaging stakeholders and setting targets for each primary indicator's area of impact
- Developing graphic and communication materials
- Creating a standard operating procedure for annual and five year monitoring and reporting

To support these remaining tasks, Staff recently submitted a pre-application to the Federation of Canadian Municipalities Green Municipal Fund's Signature Initiative. If the project is deemed eligible, Staff will return to Council to request support for a full application. |

SUMMARY POINTS

- The City Plan Monitoring Strategy is intended to establish priority targets and high-level key indicators related to the Nanaimo Doughnut Framework and the Five City Plan Goals.
- The result of a 2021 indicator workshop during Phase 2 of the REIMAGINE project informed the development of the Monitoring Strategy that began in late 2022 to further review and refine the original 24 draft indicators and establish a process for target setting.
- The approach being used to develop the Monitoring Strategy involves using the MultiCapital Scorecard™ methodology to develop a manageable number of indicators that are specific to Nanaimo's context and can be directly linked to a science- or ethics-based sustainability end goal, in order to connect actions with the Framework and the Five City Plan Goals in a meaningful and practical way.
- A report on recommended primary and supportive indicators will be presented to Council for consideration during spring 2023. The Monitoring Strategy is anticipated to be completed in mid-2023.

ATTACHMENTS

ATTACHMENT A: 2021 Draft Indicators and Targets

ATTACHMENT B: Indicator Selection Process Flow Chart

ATTACHMENT C: 2022 Draft Primary Indicators |

Submitted by:

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Concurrence by:

Lisa Bhopalsingh
Director, Community Development

Bill Corsan
Director, Corporate & Business Development

Bill Sims
General Manager, Engineering & Public
Works

Richard Harding
General Manager, Parks, Recreation &
Culture

Dale Lindsay
General Manager, Development Services /
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DRAFT INDICATORS & TARGETS – ECOLOGICAL CEILING



A GREEN NANAIMO:
RESILIENT & REGENERATIVE ECOSYSTEMS

Water Resources: so everyone has access to clean drinking water and we preserve this resource for future generations

Draft Indicator	Draft Target	Baseline (if known)
Water Consumption by Residents	» New target to be set as previous target was exceeded	206 litres / capita / day (2019)

Waste: so we use our resources sustainably

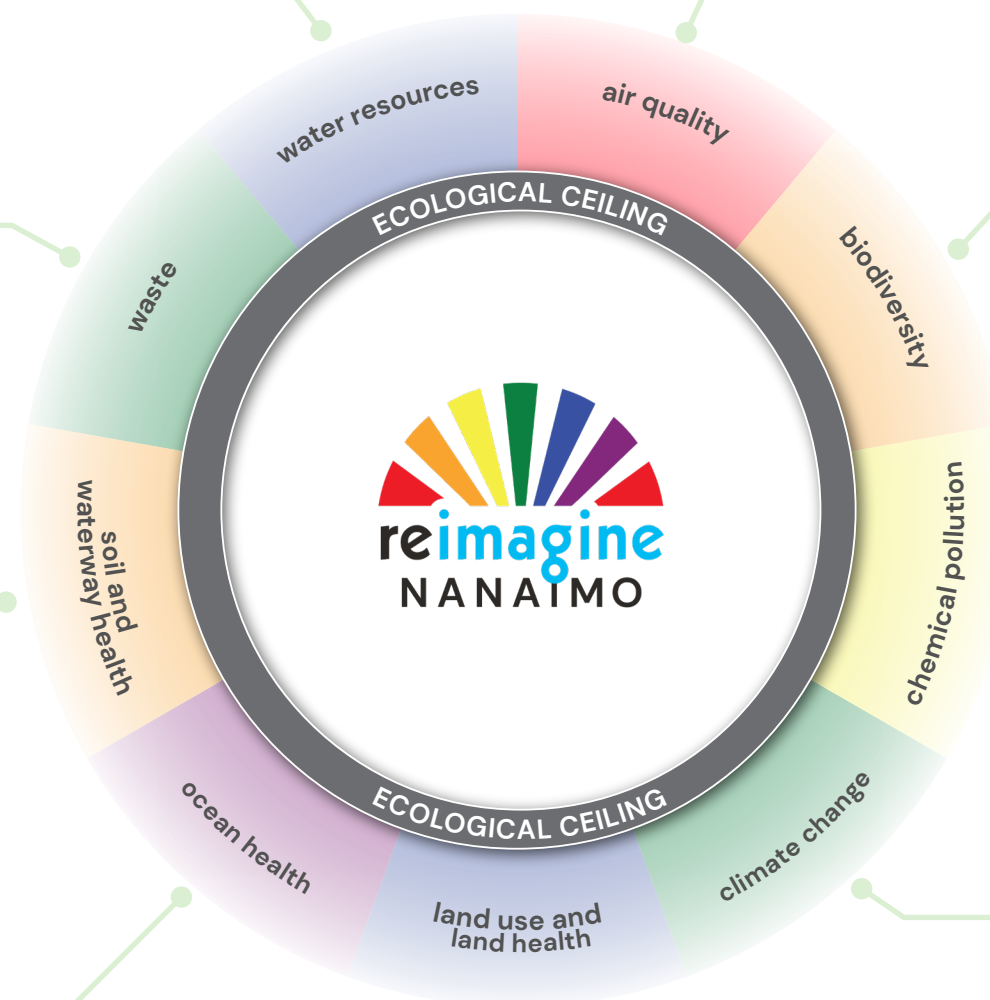
Draft Indicator	Draft Target	Baseline (if known)
Household Waste Sent to the Landfill	» By 2030 150 kg / household / yr » By 2040 120 kg / household / yr » By 2050 100 kg / household / yr	191 kg / household / year (2019)

Soil and waterway health: so our lands and waters are healthy and cared for / managed sustainably

Draft Indicator	Draft Target	Baseline (if known)
Number of Water Samples at Monitored Sites Meeting BC Water Quality Guidelines	» Zero samples that fail to meet guidelines	TBD

Ocean health: so our lands and waters are healthy and cared for / managed sustainably

Draft Indicator	Draft Target	Baseline (if known)
Number of Water Samples at Monitored Sites Meeting BC Water Quality Guidelines	» Zero samples that fail to meet guidelines	TBD



Air quality: so everyone has good quality air to breathe

Monitored hourly at the provincial level.

Biodiversity: so our ecosystems are healthy and cared for

Draft Indicator	Draft Target	Baseline (if known)
Area of Lands Dedicated for Natural Area Protection (PRC1-Zoning)	» General: increase » Specific target TBD	2,152 ha

Chemical Pollution: so our lands and waters are healthy and cared for / managed sustainably

Draft Indicator	Draft Target	Baseline (if known)
Number of Water Samples at Monitored Sites Meeting BC Water Quality Guidelines	» Zero samples that fail to meet guidelines	TBD

Climate change: so the impacts of climate change are minimized for present and future generations

Draft Indicator	Draft Target	Baseline (if known)
Community greenhouse gas emissions (tCO ₂ e)	» By 2030 reduce to 50%–58% below 2010 » By 2050 reduce to 94%–107% below 2010	465,000 tCO ₂ e (2010)

Land use and land health: so our lands and waters are healthy and cared for / managed sustainably

Draft Indicator	Draft Target	Baseline (if known)
Area of Lands Dedicated for Natural Area Protection (PRC1-Zoning)	» General: increase » Specific target TBD	2,152 ha

DRAFT INDICATORS & TARGETS – SOCIAL FOUNDATIONS



A HEALTHY NANAIMO: COMMUNITY WELLBEING & LIVABILITY

so everyone has access to healthy, safe, and affordable food and housing

Element	Draft Indicator	Draft Target	Baseline (if known)
Chronic / Episodic Homelessness	Point-in-time count of people experiencing homelessness	» Zero	433 (2020)
Rental Housing Affordability	Average rent of a 2-Bedroom Apartment	» TBD	\$1,263 (2020)
Vacancy Rate	Percent of vacancies in rental accommodation	» 3%-5%	1% (2020)
Mix of Housing Types	Proportion of single-family, ground-oriented, and apartment housing types	» TBD	» 60% single-family » 18% ground-oriented » 22% apartment (2020)
Food Security	TBD	» TBD	TBD



AN ENABLED NANAIMO: ECONOMIC PROSPERITY & RESILIENCY

so everyone has opportunity to find good employment and businesses and institutions can thrive

Element	Draft Indicator	Draft Target	Baseline (if known)
Workforce Population	Percent of population that are of an age likely to be in the workforce (15-64)	» 67% of total population	63% (2020)
Non-Residential Building Permits	Value of commercial and public building permits issued	» General: increase » Specific target TBD	\$37.5 million (2020)
Ample & Diverse Business Opportunities	Number of total businesses and businesses with employees	» General: increase » Specific target TBD	6,281 businesses with 1+ employees (2020)
Economic Success & Competitiveness	Economic Structure Index	» TBD	TBD



A CONNECTED NANAIMO: EQUITABLE ACCESS & MOBILITY

so everyone has safe, affordable, and sustainable options to move around and to access their daily needs

Element	Draft Indicator	Draft Target	Baseline (if known)
Transportation by Mode	Trips made by different modes of transportation	Modal split by 2041: » 12% walking » 4% cycling » 8% transit » 76% vehicle	2016 Modal split: » 6% walking » 2% cycling » 4% transit » 86% vehicle
Distance Driven	Average distance driven per person per day	» 10 km / day / person by 2041	14 km / day / person (2011)
Access to Daily Needs	Number of households within walking distance to employment lands, essential services, schools, transit, recreation services, parks, and healthcare	» TBD	» TBD
Growth in Town Centres and Corridors	Proportion of growth occurring in designated growth areas – urban nodes and corridors	» TBD	TBD
Traffic Injury Rate	Number of reported crashes in the City	» Vision Zero	TBD



AN EMPOWERED NANAIMO: DIVERSITY, CULTURE, RECONCILIATION, & SOCIAL INTEGRITY

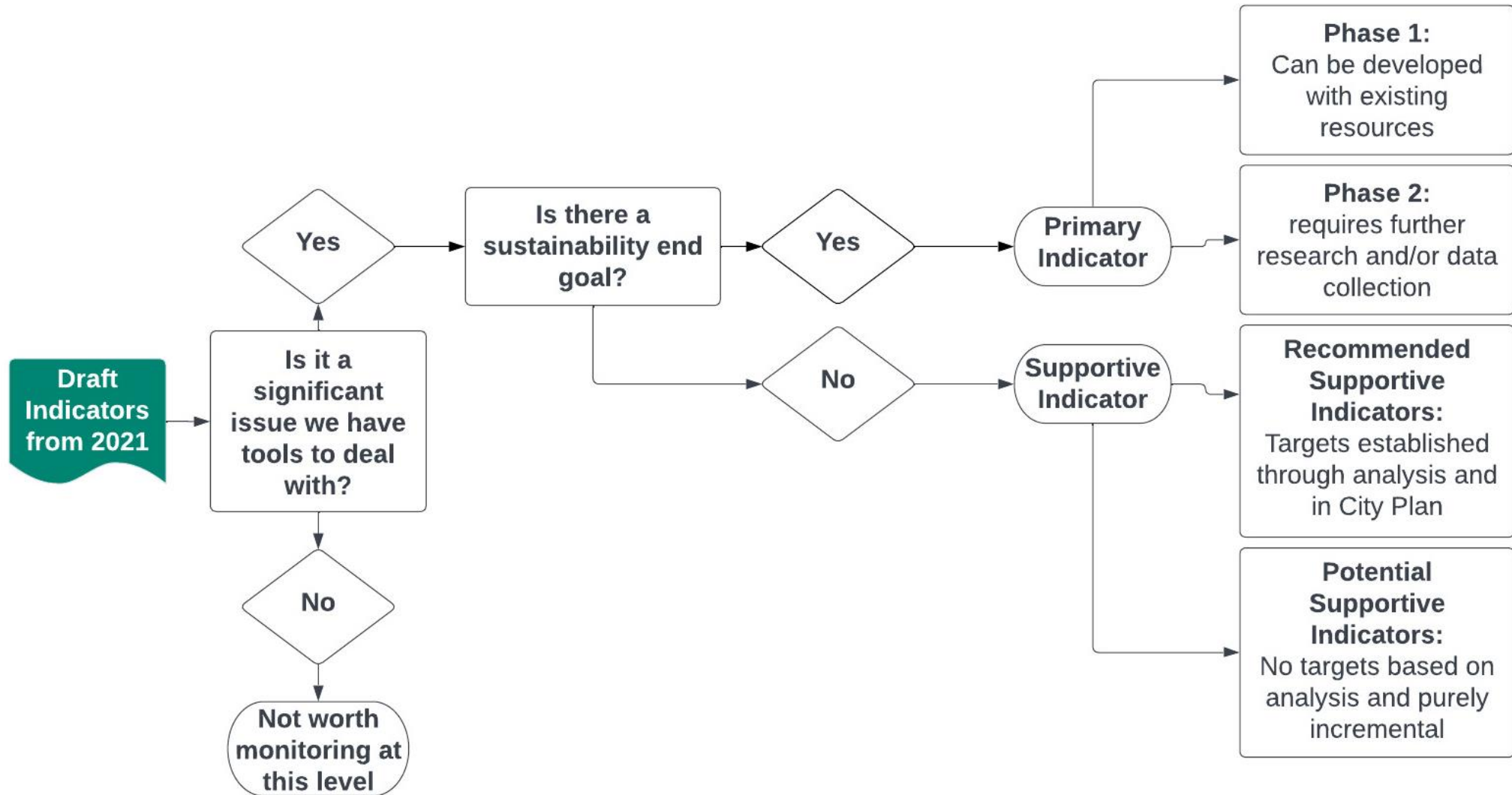
so everyone can thrive and have opportunities to connect and participate in a way that fulfills them

Element	Draft Indicator	Draft Target	Baseline (if known)
Inclusion & Diversity	TBD	» TBD	TBD
Investment in Arts, Culture and Heritage	Dollars being invested into arts, culture, and heritage	» General: increase » Specific target TBD	TBD
Participation in PRC Programs and Services	Number of people participating in PRC programs and services	» General: increase » Specific target TBD	TBD
Public Waterfront Access	Length of waterfront with public access and number of publicly accessible waterfront features	» Increase	TBD
Political Voice	TBD	» TBD	TBD



ATTACHMENT B

Indicator Selection Process Flow Chart



Monitoring Strategy | Introduction

2023-JAN-23



Why



Provide meaningful, holistic **insights** and tell us if our actions are **effective**

Track the progress towards **City Goals**

Indicators and Targets

KEY INDICATORS



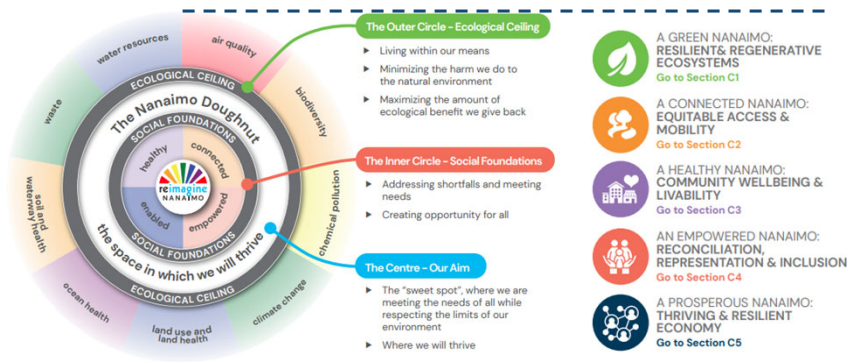
- Tell us how we are doing
- Show how well a system is working over a period of time

TARGETS



- Define desired outcomes
- Show what we wish to achieve and when we want to achieve it by

The Nanaimo Doughnut Framework → Five City Goals



2021 DRAFT INDICATORS AND TARGETS

DRAFT INDICATORS & TARGETS – ECOLOGICAL CEILING

A GREEN NANAIMO RESILIENT & REGENERATIVE ECOSYSTEMS

Water Resources: so everyone has access to clean drinking water and we preserve this resource for future generations

Element	Draft Indicator	Draft Target	Baseline (if known)
Water Consumption by Residents	New target to be set as previous target was exceeded	200 litres / capita / day	(2019)

Waste: so we use our resources sustainably

Element	Draft Indicator	Draft Target	Baseline (if known)
Household Waste Sent to the Landfill	By 2030 150 kg / household / yr By 2040 100 kg / household / yr By 2050 50 kg / household / yr	150 kg / household / year	(2019)

Soil and waterway health: so our lands and waters are healthy and cared for / managed sustainably

Element	Draft Indicator	Draft Target	Baseline (if known)
Number of Water Samples at Monitored Sites Meeting BC Water Quality Guidelines	Zero samples that fail to meet guidelines	100	(2019)

Ocean health: so our lands and waters are healthy and cared for / managed sustainably

Element	Draft Indicator	Draft Target	Baseline (if known)
Number of Water Samples at Monitored Sites Meeting BC Water Quality Guidelines	Zero samples that fail to meet guidelines	100	(2019)



Air quality: so everyone has good quality air to breathe

Element	Draft Indicator	Draft Target	Baseline (if known)
Monitored hourly at the provincial level			

Biodiversity: so our ecosystems are healthy and cared for / managed sustainably

Element	Draft Indicator	Draft Target	Baseline (if known)
Area of Lands Dedicated for Natural Area Protection (PBC-Zoning)	General increase Specific target TBD	2,000 ha	(2019)

Chemical Pollution: so our lands and waters are healthy and cared for / managed sustainably

Element	Draft Indicator	Draft Target	Baseline (if known)
Number of Water Samples at Monitored Sites Meeting BC Water Quality Guidelines	Zero samples that fail to meet guidelines	100	(2019)

Climate change: so the impacts of climate change are minimized for present and future generations

Element	Draft Indicator	Draft Target	Baseline (if known)
Community greenhouse gas emissions (CO2e)	By 2030 reduce to 50% 50% below 2019 By 2050 reduce to 94% 92% below 2019	480,000 tCO2e (2019)	(2019)

Land use and land health: so our lands and waters are healthy and cared for / managed sustainably

Element	Draft Indicator	Draft Target	Baseline (if known)
Area of Lands Dedicated for Natural Area Protection (PBC-Zoning)	General increase Specific target TBD	2,000 ha	(2019)

2021 DRAFT INDICATORS AND TARGETS

DRAFT INDICATORS & TARGETS – SOCIAL FOUNDATIONS

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Rental Housing Affordability	Average rent of a 2-Bedroom Apartment	TBD	\$1,263 (2020)
Vacancy Rate	Percent of vacancies in rental accommodation	3%-5%	7% (2020)
Mix of Housing Types	Proportion of single-family, ground-oriented, and apartment housing types	TBD	60% single-family 18% ground-oriented 22% apartment (2020)
Food Security	TBD	TBD	TBD

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Ample & Diverse Business Opportunities	Number of total businesses and businesses with employees	General increase Specific target TBD	6,289 businesses with 14 employees (2020)
Economic Success & Competitiveness	Economic Structure Index	TBD	TBD



A CONNECTED NANAIMO EQUITABLE ACCESS & MOBILITY

so everyone has safe, affordable, and sustainable options to move around and to access their daily needs

Element	Draft Indicator	Draft Target	Baseline (if known)
Transportation by Mode	Trips made by different modes of Transportation	Modal split by 2041: 52% walking 4% cycling 4% transit 40% vehicle	2019 Modal split: 48% walking 4% cycling 4% transit 44% vehicle
Distance Driven	Average distance driven per person per day	10 km / day / person by 2041	14 km / day / person (2019)
Access to Daily Needs	Number of households within walking distance to employment lands, essential services, schools, transit, recreation services, parks, and healthcare	TBD	TBD
Growth in Town Centres and Corridors	Proportion of growth occurring in designated growth areas - urban nodes and corridors	TBD	TBD
Traffic Injury Rate	Number of reported crashes in the City	Vision Zero	TBD

AN EMPOWERED NANAIMO DIVERSITY, CULTURE, RECONCILIATION, & SOCIAL INTEGRITY

so everyone can thrive and have opportunities to connect and participate in a way that fulfills them

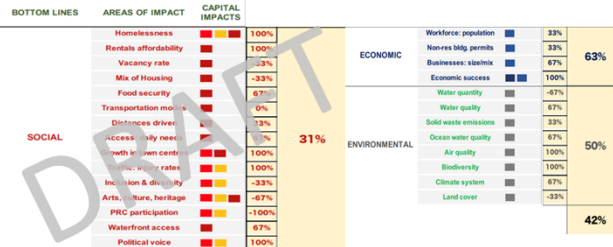
Element	Draft Indicator	Draft Target	Baseline (if known)
Inclusion & Diversity	TBD	TBD	TBD
Investment in Arts, Culture and Heritage	Dollars being invested into arts, culture, and heritage	General increase Specific target TBD	TBD
Participation in PRC Programs and Services	Number of people participating in PRC programs and services	General increase Specific target TBD	TBD
Public Waterfront Access	Length of waterfront with public access and number of publicly accessible waterfront features	Increase	TBD
Political Voice	TBD	TBD	TBD

MultiCapital Scorecard™

The MultiCapital Scorecard: Mockup Configured for City of Nanaimo (June 20, 2022 - with sample scores)

Vital capitals:

■ Natural	■ Internal Economic-Financial
■ Constructed	■ Internal Economic-Nonfinancial
■ Human	■ External Economic-Financial
■ Social & Relationship	■ External Economic-Nonfinancial



A performance measurement methodology to help an organization:

- Move beyond incremental progress
- Develop context-based sustainability performance indicators
- Connect actions with goals in a meaningful way

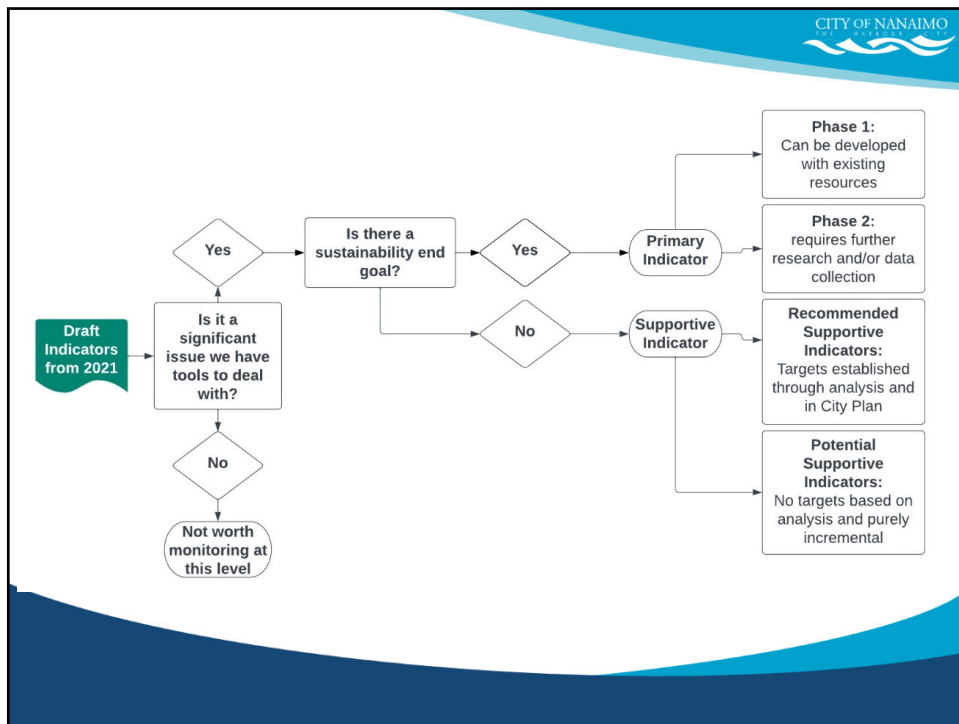
Step 1: Selection Criteria

1. Significance

Is this a significant and relevant issue to our community that we have tools to deal with?

2. End goal

Is there a science- or ethics-based sustainability end goal in this area of impact relating to the core values of the framework?



CITY OF NANAIMO
THE QUALITY CONNECTION

Primary Indicators

	Phase 1	Phase 2		Phase 1	Phase 2
Water infrastructure capacity	X		Vacancy rate	X	
Waste	X		Food security		X
Waterway health	X		Workforce population	X	
Ocean health	X		Growth in town centres and corridors	X	
Biodiversity		X	Traffic related fatalities	X	
Climate change	X		Inclusion and diversity		X
Chronic/Episodic homelessness	X		Participation in PRC services and programs (no-barrier)		X
Housing affordability	X		Political voice		X

Supportive Indicators

	Recommended	Potential
Land use and land health		X
Mix of housing types	X	
Non-residential building permit		X
Ample and diverse business opportunities		X
Economic success and competitiveness		X
Transportation by Mode	X	
Distance driven	X	
Access to daily needs		X
Investment in arts, culture and heritage		X
Participation in PRC services and programs (general population)		X
Public waterfront access		X

Step 2: Indicator Assessment

1. Is the indicator a sustainability measure of performance, not just an incremental one?
2. What is the threshold of the quantity of the resources or capitals involved that must be maintained in order to ensure the well-being of the community?

Example 1: Water infrastructure capacity

Water consumption by residents

(Incremental)



Watershed reservoir capacity

(Sustainability performance measure)

Sustainability threshold:

At least 30% of water reservoir capacity should be maintained at all times

Example 2: Housing affordability

Average rent of a 2-bedroom apartment

(Incremental)



Percentage of income spent on housing costs

(Sustainability performance measure)

Sustainability threshold:

No resident in Nanaimo should be required to spend more than 30% of their household income spent on housing costs (rent or mortgage payments and strata fees)

Step 3: Metric Development

Actual Impact (what we are measuring)

A Sustainability End Goal (what we ultimately want to maintain/achieve)

Example 1: Water infrastructure capacity

The sum of watershed reservoir capacity value from 30 days of the year that have the lowest capacity

30 (i.e. all 30 days are above 50% watershed reservoir capacity)

Look up table	
Watershed Reservoir Capacity	Value
0-30%	0
31-35%	0.2
36-40%	0.4
41-45%	0.6
46-50%	0.8
51%-100%	1

Where score of 1 = sustainable performance, score of 0 = unsustainable, between 0-1 = concern

Example 2: Housing affordability

Proportion of housed population with housing costs that do not exceed 30% of their income

100% housed population with housing costs that do not exceed 30% of their income

Where score of 1 = sustainable performance, score of <1 = less than ideal

Proposed Next Steps

City Plan IAP and Monitoring Review		Proposed Date
C1 & C2	A Green Nanaimo actions A Connected Nanaimo actions	GPC – March 13
C3	A Healthy Nanaimo actions An Empowered Nanaimo actions	GPC – April 24
C4, C5, D, E	A Prosperous Nanaimo actions, City Structure and Taking Action AND draft Monitoring Strategy Introduction	GPC – May 8
	Completed draft Integrated Action Plan and Monitoring Strategy	GPC – May 29

* Extra meetings can be scheduled if needed to ensure we have a final draft by May