Schedule 3: Sustainability Plan

3.1 Introduction

3.1.1 Declaration of Sustainability

WHEREAS

- The impacts of modern human civilization have had deep and lasting impacts on the capacity of our planet to support human life;
- At current rates of consumption, degradation, and destruction of natural resources, future generations will not be able to benefit from the supportive ecosystem that humans enjoy today;
- Human activity generates unsustainable quantities of waste and pollution that damage the world's ecosystem;
- Infinite growth is not sustainable in any system;
- It is imperative to implement social and economic systems that enhance the ability of future generations to enjoy a high quality of life;
- Local government and community organizations hold a profound capacity to affect the factors of sustainability;
- The Town of Qualicum Beach has a history of environmental stewardship and prudent use of land and resources;
- It is within the capacity of our community to make deep and profound impacts that will improve the ability of future generations to meet their needs; and
- The Town of Qualicum Beach and its citizens plan to leave a legacy of hope for future generations;

The Town of Qualicum Beach hereby establishes a Sustainability Plan to guide future governance and community action towards this vision of a Sustainable Qualicum Beach.

Have I done all to keep the air fresh? Have I cared enough about the water? Have I left the eagle to soar in freedom? Have I done everything I could to earn my grandchild's fondness?
- Chief Dan George

3.1.2 Background

The environment, economy, government, and social fabrics that support community life in Qualicum Beach stretch around the globe. The Town of Qualicum Beach is a very small part of a globalized society. Through trade and commerce, communication and entertainment, residents of Qualicum Beach interact every day with people around the world. As a result, the challenges of sustainability are deep and systemic. The challenges in Qualicum Beach are similar to those facing many other towns around the world, including:

- Climate Change / Air Quality;
- Fossil Fuels and Energy Supply;
- Waste / Resource Scarcity;
- Water Quantity / Quality Supply;
- Ecosystem Damage;
- Food Supply Risks;
- Economic Boom and Bust;
- Income Disparity / Endemic Disease;
- Affordable Housing; and
- Demographic Shifts.

Many of the actions needed to improve the sustainability of our community/country/planet are outside the direct control of Qualicum Beach, and will require action from different levels of government, neighbouring jurisdictions, foreign nations and corporations. However, many sustainability factors are within the Town's influence. By taking decisive action on those factors within local control, the Town and its residents can have a substantive impact and take a leadership role in the transition to sustainability. Through this Sustainability Plan, the Town and residents of Qualicum Beach have identified a vision that will transform Qualicum Beach into the model of a sustainable community.

The Qualicum Beach Sustainability Plan was drafted following a public engagement process that began in the fall of 2009. The public was engaged to explore the concepts of sustainability and to craft a vision for a sustainable Qualicum Beach.

What is Sustainability?

"… development that meets the needs of the present without compromising the ability of future generations to meet their own needs" - World Commission on the Environment and Development, 1987 (Bruntland)

The term 'sustainability' is an elusive concept that suggests responsible decision-making with an emphasis on the prosperity of future generations. Perhaps as evidence of the difficulty of defining the term, the most widely-used definition is from the original Bruntland report, quoted above. During the public process of developing this Sustainability Plan, residents were asked to come up with definitions for sustainability.

Residents of Qualicum Beach participated in a workshop and have suggested some additional definitions appropriate to the Town and its context. Examples include the following:

- *Long-term social and economic wellbeing requires our choosing to live in a just and equitable way that ensures that all living species endure. This requires maintenance of ecological process so that the biological productivity of the earth endures without dependence on non-renewable resources.*

- *To live in such a way that all beings, plants, animals, and minerals can live in harmony, supporting each other in such a way that none uses too much in detriment to others. To live in balance.*
- *"We are all one, we're inter-connected, inter-related, inter-dependent".*
- *Sustainability is a condition of long-term social and economic wellbeing through choosing to live in a just and equitable way that ensures all living species endure.*
- *A society which exists within the limit which can be supported by our present ecosystems.*
- *Don't use natural resources faster than they can be replenished and don't deposit wastes faster than they can be absorbed.*
- *Long-term social and economic wellbeing depends on the maintenance of fully-functioning ecological process. We need to choose to live in an equitable and just way that ensures that all living species endure.*

The specifics of the definition are less important than the common concepts that most definitions of sustainability have, including:

- Long-term considerations addressing future generations (e.g.: 21st & 22nd century);
- An approach to development that respects the limits of the earth's ability to provide us with resources and absorb our wastes;
- A respect for the rights of all species; and
- Others.

Although it is difficult to agree on a definition for sustainability in the abstract, the term becomes clearer when applied to our community. What is a sustainable Qualicum Beach? In a sustainable Qualicum Beach, how would people get around? What would the economy look like? What services would be available? The process of visioning raises these questions and many more.

Recognizing that the challenges of sustainability are pushing the Town of Qualicum Beach towards accelerating change, the Sustainability Plan is a visionary document that will guide change towards a more vibrant community life, a healthy and thriving natural ecosystem, and a prosperous economy and scale of development that retains the unique character and charming village atmosphere of Qualicum Beach.

Carrying capacity

The community of Qualicum Beach is supported by an ecosystem with finite limits. However, the scope of that ecosystem is undefined and includes local, regional and global components. The modern global economy has spatially distanced human activity from its impacts, so that the effects are sometimes seen most vividly on the other side of the planet. However, regardless of the disconnect between the causes and effects of ecosystem degradation, human activity in Qualicum Beach has both positive and negative effects on the planet's ability to support the continued prosperity of modern society. There is a limit to

the amount of human activity that can be supported by our ecosystems. This concept is commonly referred to as 'carrying capacity' and can describe both local and global limits.

Every resource comes from somewhere on this planet, whether it is petroleum to fuel our vehicles, natural gas to heat our homes, or rubber for our shoes. The rest of the world, including humans and all other forms of life, draws on the same resources through globalized trade networks. Absolute limits on the use of natural resources are irrefutable; the debate begins when one attempts to quantify the limit.
At the local level, the discussion of ecosystem limits and carrying capacity needs to be clarified in terms of how large an area is selected for analysis of carrying capacity and what is being supplied. In a conventional ecosystem, we would analyze the simple food, water and nesting/breeding area as the basics of the carrying capacity of a species. For humans, the tens of thousands of substances that are part of our lives including food, shelter, clothing, mobility, technology, and others makes the relevance of a simplistic ecosystem carrying capacity model questionable. In the natural world, any species that overshoots their region's carrying capacity starve or must move. This does not apply to humans at a regional scale as easily. A simple carrying capacity cannot be practically identified; there are too many variables in governance, technology and the economy to make carrying capacity the over-riding factor in decisions. Directly linking population and development potential with the technical calculation of carrying capacity could result in unexpected results that compromise the small town/village atmosphere. Quality of life and the health of our surrounding ecosystem provide a clearer basis for decision-making.
It is, however, apparent that an increase in the use of natural resources will bring us closer to the carrying capacity of the Earth overall. In fact, many researchers have concluded that the carrying capacity of the Earth has already been exceeded. As such, the absolute use of all natural resources, especially those that are not renewable, should be reduced.

Summary

The Sustainability Plan is intended to provide a vision of a high quality of life in Qualicum Beach. By realizing this vision, the Town will achieve a dramatic reduction of negative impacts on the local, regional and global ecosystems and as such, begin to bring the residents of Qualicum Beach within their share of our planet's global carrying capacity.

The visionary principles and targets in this document may appear difficult to achieve or impractical based on current market conditions, climate, availability of natural resources, and an assortment of other conditions. However, many of these conditions are on a trajectory of significant change. The Sustainability Plan is a long-term vision that will keep the Town on track towards a vision of Sustainability through any coming changes, over the next two generations and possibly seven updates to the Official Community Plan. It is unlikely that the economy, ecology and social life of Qualicum Beach will be the same in forty years as it is today.

Surrounding conditions can and will change over time, and the principles outlined in this document may become more or less important, but that does not lessen the importance of a community vision. The Sustainability Plan is based on current trends, with a firm commitment to the prosperity of future generations, the integrity of the surrounding ecosystem, and the community's vision of the ideal town. The "Qualicum Beach" that will be best suited to prosper over the next four decades and leave a legacy of prosperity and environmental stewardship for future generations is one that continues to build on the pillars of sustainability established in this plan.

3.2 Climate Emissions Planning

The Town of Qualicum Beach is a signatory to the Provincial Climate Action Charter and as such, it has committed to:

- Making its civic operations carbon-neutral;
- Creating a complete, compact, and more energy-efficient community.

The Provincial Community Energy and Emissions Inventory (CEEI) initiative has established a baseline for Qualicum Beach's emissions.

Buildings (residential, commercial, industrial)	11,691 tonnes $C0_2$(e)
Transportation (cars, trucks, commercial, RVs)	32,389 tonnes $C0_2$(e)
Solid Waste	6,758 tonnes $C0_2$(e)
Total	**50,837 tonnes $C0_2$(e)**

The scale of these emissions is small when compared to large emitters such as heavy industry and resource extraction. Regardless, it is appropriate for the Town of Qualicum Beach and its residents to take responsibility for their own impacts, just as large emitters should be expected to do the same. Consistent with its legislative obligations, Qualicum Beach is establishing the following provisional emission reduction targets from its 2007 emissions baseline for its Official Community Plan (these are absolute reductions regardless of growth levels):

- 33% by 2020 ~ 34,061 tonnes $C0_2$(e)
- 50% by 2030 ~ 25,418.5 tonnes $C0_2$(e)
- 65% by 2040 ~ 17,793 tonnes $C0_2$(e)
- 80% by 2050 ~ 10,167.4 tonnes $C0_2$(e)

These targets are consistent with balance of scientific evidence represented in the latest Intergovernmental Panel on Climate Change (IPCC) Assessment Report regarding the level of global emission reductions necessary to avoid dangerous, runaway climate change.

Policies and Actions

Qualicum Beach will:

- ***Land Use*** - Build complete, compact, connected neighbourhoods with a vibrant, prosperous uptown core;
- ***Buildings*** - Reduce emissions from buildings through increased energy and water efficiency, greater housing choice, as well as through creation of a zero/low-carbon heating source;
- ***Transportation*** - Shift transportation away from the private automobile to walking, cycling, transit and zero/low-emission vehicles;
- ***Solid Waste*** - Work to reduce solid waste and associated landfill emissions, in conjunction with the Regional District of Nanaimo; and

- ***Civic Emissions*** - Reduce emissions associated with civic facilities, operations and community infrastructure systems, in accordance with our commitments as signatories to the BC Climate Action Charter.

The Town will update its targets, policies and actions through future planning processes, such as an update to the Official Community Plan. Also, the Town will participate in regional planning work to create a regional strategy for Greenhouse Gas reduction.

3.3 Visionary Principles

The vision for a sustainable Qualicum Beach has been defined in eight fundamental components that will enable and sustain the future of a vibrant Qualicum Beach:

1. Complete, Compact Community Land Use
2. Low-impact Transportation
3. Community Health
4. Sustainable Food Systems
5. Progressive Infrastructure
6. Economic Prosperity
7. Healthy Landscapes
8. Green Buildings

3.3.1 Complete, Compact Community Land Use

In 2050, the community recognizes that careful management of land use is essential to a vibrant and sustainable community, economy and ecosystem. The uptown is the geographic, social and economic centre of the community. The uptown is connected to neighbourhoods and natural areas through a network of roads, ecological greenways and alternative transportation routes. Land use is carefully managed to enhance the natural ecology, local economy, and vibrancy of community life at a scale that is suited to the Qualicum Beach village character.

Vision

- **Ecological Network -** Key ecological corridors and aquifers are preserved and complemented by an interconnected network of natural areas, parks, recreational greenways, and resource lands;
- **Village Neighbourhood -** Businesses thrive in a compact, commercial core with expanded services, compact residential development and tourism facilities. This core will continue to maintain a strong village-character that helps define the experience of life in Qualicum Beach;
- **Neighbourhood Commercial -** The daily needs of residents can be met by convenience commercial (e.g. café or corner store that sells food essentials) that is located within walking distance of residential neighbourhoods so that it is not necessary to travel to the uptown core for every need. This neighbourhood commercial is scaled to meet the needs of local residents - not to draw customers from other areas or compete with the uptown core;
- **Tourist Commercial -** Amenities make the Town a pleasant and convenient place for visitors and tourists;
- **Neighbourhoods -** Residents have access to housing alternatives that meet a diversity of needs, lifestyles and income levels. This includes detached homes, small-lot homes, patio homes, secondary suites, garden suites, apartments, condominiums and other housing types that support community sustainability, including alternative forms of tenure and affordable housing;
- **Agriculture -** Residential neighbourhoods and commercial zones are surrounded by productive agricultural land that is strongly protected for agricultural use. Small-scale food production is supported on community gardens and residential land;
- **Character -** The unique character of Qualicum Beach has been maintained and strengthened. This includes the experience of its natural areas (the ocean, beach, waterfront areas, forests and

trails) and of its village (human-scale, pedestrian-friendly, community public spaces, historically-styled architecture and no large-format commercial stores); and

- **Quality of Life -** Land use has been carefully managed with a priority of maintaining a high quality of life and a maximum size of community of approximately 12,000 population based on the build-out under the goals and policies of the current Official Community Plan.

Objectives

- To control growth in Qualicum Beach to create a mixed-use pattern of land uses that includes:
    - Preservation of watersheds, sensitive environmental areas and agricultural lands;
    - Preservation of the waterfront area ;
    - A strong, complete, compact village core;
    - A network of appropriately-located small commercial nodes (café, food, other) to provide convenient access to services near where people live;
    - A growing transit service structure;
    - Commercial land that supports a diverse economy; and
    - A diversity of housing, including affordable options for singles, single parents, and growing families.

Target 2050

- 90% of residents in Qualicum Beach live less than a 15-minute walk (1 km max) to a café / restaurant and a place to buy essential, day-to-day groceries; and
- Distance from all homes to a community transportation route – 10-minute walk (700 metres).

3.3.2. Low-impact Transportation

In 2050, the residents and visitors of Qualicum Beach have a wide range of transportation alternatives to connect people, places, and goods. Travel to, from and around the Town is efficient and pleasant using the roads, pathways, corridors, and railway. Private automobiles have been replaced by low-carbon vehicles and there are other convenient alternatives to the private automobile. Convenient, efficient and pleasant travel is possible throughout the Town on foot or using low-carbon vehicles such as bicycles, scooters, or electric cars. Transportation infrastructure enhances the Town's vibrant social life, thriving economy and healthy ecosystem.

Vision

- **Transportation Alternatives -** Residents have access to amenities through a comprehensive network of transportation routes that support alternatives to the automobile. This includes alternatives for people with mobility issues that may not be able to walk or cycle;
- **Transportation Budget** - Budgeting decisions encourage a modal shift towards the modal share targets in this plan;
- **Greenway Network** - A fine-grained network of pedestrian and cyclist paths connects all areas of Qualicum Beach;
- **Uptown** - The village uptown is pedestrian-oriented and streets are made pedestrian-only for special occasions;
- **Bicycle Routes** - A convenient and safe network of bicycle routes extends throughout Qualicum Beach. These routes also facilitate the use of small electric scooters and golf carts;
- **Community Transportation** - BC Transit and the Regional District, with cooperation from the Town, offer a convenient transit service in Qualicum Beach with connections to surrounding communities. Amenities are offered to make the use of transit convenient and comfortable. The *Community Transportation* system includes "topic buses" (e.g.: movie bus) to connect residents to the larger region for specific activities, as well as community shuttles and other non-traditional forms of mass transit;
- **Railway** - A viable passenger and freight rail corridor connects Qualicum Beach to communities along the eastern edge of Vancouver Island;
- **Integrated Modal System** - Transfer between modes of transportation is facilitated through key inter-modal exchange nodes (greenways, bike lanes, transit stops, train station, park and ride, others);
- **Sharing** - Residents have access to shared cars (e.g. automobile co-op) and shared rides (car-pooling);
- **Alternative Fuels** - A convenient system supports the use of alternatively-fueled vehicles, and residents use zero-emissions vehicles. Infrastructure includes electric vehicle charging stations in new and existing areas;
- **Tourism** - Tourists travel to, from, and around Qualicum Beach in a manner that supports the Town's sustainability goals;
- **Goods Movement** - The transportation system supports efficient goods movement, including home delivery; and

- **Innovative Infrastructure** - Innovative infrastructure designs include:
    - Permeable paving, especially in parking areas;
    - Green streets that include park-like characteristics while still supporting vehicles (e.g. Dutch Woonerf model; British Home Zone model; Vancouver's Crown Street; Seattle's C-Street);
    - Fully accessible and wider sidewalks with lay-by areas to support electric scooters; and
    - Where needed, allocate street space to scooters.

Objectives

- To develop a convenient transportation system in Qualicum Beach that:
    - Is structured firstly around the pedestrian, cyclist and small electric scooter;
    - Integrates with future transportation options such as the Island Corridor Railway;
    - Supports alternatively-fueled (no carbon emission) vehicles;
    - Offers a pleasant experience of moving around;
    - Supports visitors and tourists coming to Qualicum Beach; and
    - Includes ecologically-friendly street and infrastructure design.

Target 2050

- Modal share by 2050 or before (achieving an 80% reduction in emissions from 2007 levels):
    - Transit: 15%;
    - Walking: 15%;
    - Cycling: 15%;
    - Alternative (zero-emission) vehicle: 35%;
    - Conventional automobile: 20%;
- 100% of residents live within 5-minute walk of a greenway / bicycle route to connect them to the uptown core:
    - Transit frequency on main lines during peak hours: 15 minutes; and
- Extent of "green streets"
    - First pilot project by 2015;
    - By 2050, 30% of local streets will be "green streets", with upgrade priority given:
        - to streets within a 5-minute walk of the Commercial Core;
        - along key pedestrian routes.

3.3.3. Community Health

In 2050, Qualicum Beach is healthy and prosperous, both at the individual and community level. Residents and visitors have local access to social, recreational, cultural and medical facilities. The community is resourceful and supportive, and shows resilience in response to challenges of all types. Community life is vibrant and residents have access to the use of a wide array of local amenities.

Vision: Facilities

- ***Recreation facilities*** - Residents and visitors have access to a variety of indoor and outdoor recreation facilities such as swimming pools, golf courses, field sports, lawn bowling, the Heritage Forest, Seniors' Centre, trails, and children's playgrounds;
- ***Cultural Facilities*** - Residents and visitors have access to a variety of cultural facilities (library, museum, art gallery, theatres, others); and
- ***Medical Facilities*** - Residents have access to local health and medical facilities that include:
    - A full-service medical facility or facilities offering urgent primary care, palliative care, ambulatory care, mental health services, counselling and others; and
    - Supporting a wide range of medical and health practitioners including doctors, dentists, chiropractors, naturopaths, optometrists and others.

Vision: Community Life

- ***Representation*** - Emphasis is put on the needs of seniors, youth and young families;
- ***Health*** - Lifestyles that support the many facets of community health are encouraged and facilitated;
- ***Participation*** - The Town continues its commitment to, and investment in, effective consultation on public policy issues, development and projects;
- ***Accessibility*** - Qualicum Beach is a leader in accessibility;
- ***Emergency Preparedness*** - A high level of capacity exists throughout the community to respond to emergencies, including appropriate neighbourhood networks, education and preparation within all homes and businesses in Qualicum Beach;
- ***Volunteerism*** - The volunteer bureau and other volunteer networks are supported and acknowledged;
- ***Sustainability Education*** - The community is engaged in an ongoing learning process on sustainability and related issues;
- ***Resilience*** - The community is resilient and adapts well to both internal and external changes; and
- ***Safety*** - The community and law enforcement agencies work together to reduce crime and to address its root causes;

Vision: Arts and Culture

- ***Planning*** – The Town works with the community on social and cultural planning projects;
- ***Aboriginal History*** – Indigenous Peoples communities are engaged in community development processes and the community has a deepening understanding of, and commitment to, the validation of Indigenous Peoples traditions;
- ***Indigenous Peoples***: Local Indigenous Peoples are engaged in public consultation; and
- ***Arts and Culture:*** Opportunities for arts and culture are strongly supported by the Town and business community, including opportunities for people of all ages and socio-economic profiles.

Objectives

- To continue to enhance individual and community health and wellbeing in Qualicum Beach, including:
    - Providing facilities and services that address the needs of the entire population, including addressing the basic needs of all Qualicum Beach residents (such as housing, food, health care, others);
    - Offering excellent indoor and outdoor public recreation facilities;
    - Offering a comprehensive range of medical facilities and services;
    - Celebrating the Town's history and heritage, including that of the Indigenous Peoples;
    - Promoting and enhancing a wide range of arts and cultural expression;
    - Supporting education infrastructure;
    - Supporting a strong culture of volunteerism;
    - Continuing to ensure that Qualicum Beach is safe and able to respond effectively to emergencies; and
    - Continuing to ensure that sustainability goals and actions are widely understood and supported.

Proposed targets

- All residents of Qualicum Beach have their basic needs met, including housing, food and shelter;
- All homes in Qualicum Beach have emergency preparedness kits; and
- 40% of residents in Qualicum Beach volunteer some time to community efforts every year.

3.3.4. Sustainable Food Systems

In 2050, a sustainable food system is fundamental to the identity of Qualicum Beach. Residents and visitors enjoy the benefits of a prosperous local food system through high quality restaurants, year-round access to farm-fresh produce, economic prosperity, and hands-on experience through community gardens and backyard gardening. The community enjoys farm-fresh markets, gourmet restaurants, a prosperous food economy, community understanding of food systems, and a rich land base of productive agricultural land.

Vision

- Existing ALR and agricultural land in the community is preserved, with considerations for opportunities to use this land to further enhance the local food economy or provide creative support for new farmers;
- Community gardens within convenient walking distances of neighbourhoods, especially multi-family areas (current or planned). Garden areas benefit from excellent growing conditions;
- The Town supports the widest diversity of food-related industries that are appropriate to the community, including small-scale market gardens, processing, seafood, and research and education facilities;
- The local food retail economy, especially value-added approaches, thrives as a major part of the local economy. Food producers, food services and consumers connect directly through farmers' markets, farm gate sales and other venues;
- The School Board promotes education on sustainable food systems in curriculum, school grounds and field trips;
- Tourism agencies and initiatives help to integrate the local food economy into the tourism experience in Qualicum Beach (e.g. agritourism). High-value and gourmet food are connected to the brand experience of Qualicum Beach;
- The community works with the Regional District to effectively manage organic waste streams;
- The community-support agencies continue to provide food to those that need it (e.g.: food banks); and
- Residents and visitors enjoy events that integrate local food into the culture and identity of Qualicum Beach.

Objectives

- To support a prosperous and healthy local food system and economy in Qualicum Beach including:
    - Preservation of ALR lands and agricultural and food production capacity;
    - The integration of agricultural and food industry uses into the fabric of the community;
    - Enhancement of the local food economy in Qualicum Beach;
    - A strong presence of education on sustainable food systems in schools;
    - Availability of community gardens in all multi-family neighbourhoods;
    - The integration of local food into the tourism economy;
    - A strong presence of organic and non-pesticide-based growing practices;
    - Productive approaches to the management of organic material waste streams;
    - Food security for all Qualicum Beach residents; and
    - A presence of the celebration of food in the culture of Qualicum Beach.

Proposed targets

- 90% of multi-family units have access to a community garden plot within a 10-minute walking distance;
- 100% of schools have a food system as part of the school grounds or curriculum.
- Residents have access to a farmers' market year-round;
- Of the food consumed in Qualicum Beach, the following percentages come from Vancouver Island:
    - 80% of the fruit and vegetables;
    - 100% of the dairy;
    - 15% of meat protein;
    - 5% of grain; and
    - 50% of alcohol;
- 100% of residents live within a 10-15 minute walking distance (less than 1 km) to a café or corner store that sells food essentials.

3.3.5. Progressive Infrastructure

Infrastructure for energy, water, waste water & storm water, and solid waste, is efficient and effective at advancing the Town's sustainability goals. Consumption of natural resources has been minimized, and 'waste' has been virtually eliminated through strategies of conservation and re-use.

ENERGY

Energy: Vision

- Energy efficiency is promoted in buildings (new and existing) through information, incentives, guidelines and regulations;
- Civic facilities are highly energy-efficient;
- Educational information on energy efficiency and zero/low carbon energy sources is widely available;
- District energy systems are utilized in some locations in Town;
- In partnership with a private utility, the Town has developed a municipally-owned energy utility to expedite the development of financially viable district energy systems;
- Renewable and zero/low carbon energy suppliers in the community are supported where appropriate; and
- Town infrastructure, such as street lights and water/sewer pumps, is highly efficient.

Energy: Objectives

- To support the development of high levels of energy efficiency in the Town and use of renewable and low/zero emission energy sources including:
    - Promoting energy-efficient buildings, lighting and infrastructure;
    - Working with landowners, businesses and utilities to develop a broad range of renewable energy supplies in Qualicum Beach; and
    - Addressing zero/low emission fuels in transportation.

Energy: Proposed targets

- By 2050 or before, 95% of the energy used in Qualicum Beach will come from renewable, zero (GHG) emission sources; and
- By 2015, all new buildings built in Qualicum Beach will be predesigned to support future installation of solar water systems or geothermal systems.

WATER

Water: Vision

- Plans, policies and regulations ensure that the Town's watersheds and aquifers are sufficiently protected and managed so as to ensure the quality and quantity of its supply into the future;
- High-efficiency plumbing fixtures are used in homes and businesses;
- Rain-harvesting is used in both residential and commercial applications;
- Buildings and infrastructure are planned to accommodate wastewater re-use, including irrigation systems for parks and open space;
- Water-wise landscape plantings are used in private and public grounds; and
- The community is engaged on water issues and efficiency in homes, businesses and schools in the Town through public education and awareness.

Water: Objectives

- To develop a water system for Qualicum Beach that includes:
    - Appropriate watershed and aquifer protection to ensure a secure water supply into the future;
    - The use of water being so efficient as to make Qualicum Beach one of the most water-efficient communities on Vancouver Island; and
    - Strategic re-use of rainwater and treated wastewater where appropriate.

Water: Proposed targets

- An overall reduction of water consumption per capita of:
    - 20% from 2010 levels by 2025 or before; and
    - 50% from 2010 levels by 2050 or before.

WASTEWATER & STORMWATER

Wastewater & Stormwater: Vision

- The Town works with the Regional District of Nanaimo to support progressive and sustainable approaches to management of wastewater;
- Treated wastewater is used for irrigation in the Town, including golf courses;
- Systems are utilized that treat wastewater for re-use in various capacities throughout the community, including installation of micro-treatment plants where appropriate and where no negative impacts are experienced by residents;
- Waste heat and biosolids are harvested from wastewater treatment to support district or other nearby heating systems;
- Streets and other infrastructure minimize pollutants in runoff;
- The cosmetic use of herbicides and pesticides has been banned to reduce the pollution in runoff;
- Landowners use appropriate retention/detention and percolation strategies in their homes and landscapes (such as green roofs and rain gardens);

- Art and sculpture are integrated into Town infrastructure where possible to not only meet engineering needs, but to add aesthetic and cultural value to public investments; and
- Amenity and habitat is created during water treatment processes by using wastewater polishing ponds, swales as songbird habitat, and other strategies.

Wastewater & Stormwater: Objectives

- Turn wastewater into a resource; and
- Eliminate any pollution or toxic impacts on the region's water system.

Wastewater & Stormwater: Proposed targets

- 75% of the Town's wastewater is treated to a level suitable for re-use as irrigation (tertiary treatment level).

SOLID WASTE

Solid Waste: Vision

- The Town supports the Regional District of Nanaimo's Zero Waste initiative, including pick-up for composting of household organic and yard waste and business organic waste;
- Recycling is standard practice in homes, businesses and public spaces;
- The benefits of composting are understood throughout the community;
- Waste reduction measures in Qualicum Beach businesses include reducing packaging, plastic bags, and others; and
- Organic and yard wastes are turned into resources that can be used in landscaping, farming or for bio-energy sources.

Solid Waste: Objectives

- To make solid waste and recycling services available throughout the Town, including businesses in the uptown;
- To achieve zero waste targets for homes and businesses in Qualicum Beach in alignment with the Regional Zero Waste Plan and to convert wastes to resources wherever possible.

Solid Waste: Proposed targets

- 100% diversion (zero waste) by 2050 or before.

3.3.6. Economic Prosperity

In 2050, the local economy is thriving, with opportunities for people of all ages. The economy has an emphasis on green business practices and local business. Sustainable tourism activities are also a fundamental part of the local economy.

Vision

- Economic impacts are considered, along with social and environmental concerns, in the decision-making process;
- Legal, fiscal and regulatory environment supports and encourages new business;
- Businesses that support a 'green', sustainable community, such as electric vehicles, renewable energy, solar panel installation, etc., are strongly supported;
- Research and development through local universities is encouraged;
- Tourists are attracted to Qualicum Beach because of the high quality of life and diversity of amenities for both residents and visitors;
- Sustainability objectives are integrated into the foundation of all economic development concepts and initiatives in the Town;
- The need to travel outside the community is reduced by a range of local jobs for all ages by development of sectors such as:
    - Tourism and service industries;
    - Agriculture and food industries;
    - Seafood industry;
    - Value-added forestry and additional small woodlot operations;
    - Arts and culture business opportunities;
    - Local businesses that make use of Information and Communication Technologies to access the regional and global economy;
    - Green technology businesses;
    - The education industry, including possibly a satellite campus of Vancouver Island University;
    - Mainstream and alternative health care;
    - Geriatric services, including research into seniors' health and needs;
    - Artisan value-added manufacturing;
    - Appropriate entertainment to meet desires of many age groups;
    - Local utilities; and
    - Progressive new industries (such as electric vehicles).
- Energy prices are relatively stable in the local economy due to energy efficiency and local, renewable, and clean sources of energy;
- Business activity in Qualicum Beach supports sustainability objectives and performance targets through the use of green business practices;
- Locally-made products are easily identified to support local businesses and the economic multiplier effect;
- Quality of life, a small artisan economy, a walkable community, health, and other elements are integral to the Town's unique "brand" and reputation;
- The quality of life is high while the cost of infrastructure and housing is reasonable;

- There is an appropriate mix of housing to support the workers that a diverse local economy needs; and
- The Town of Qualicum Beach is a local government that remains in good fiscal health.

Objectives

- To develop an economy that delivers sustainable prosperity to the residents of Qualicum Beach.

Proposed targets

- By 2050 or before:
    - All residents of Qualicum Beach have access to work or financial support necessary to meet basic needs, especially families with children;
    - 100% of businesses practice green business methods such as recycling, energy efficiency in their facilities, energy efficiency in their fleets, and others, including reducing average energy consumption by 50%; emissions by 80% and waste by 100%;
    - 80% of jobs will be within a 5-minute walking distance of a greenway or transit stop;
    - 50% of businesses will be in buildings that have undertaken comprehensive energy retrofits or achieved a green building certification of some level.

3.3.7. Healthy Landscapes

Vision

In 2050, the community is surrounded by a wealth of natural beauty and a high quality public realm. The community cares for natural ecosystems to ensure that they are healthy and thriving. Parks, landscaping and other shared spaces are carefully designed to serve many purposes, with an emphasis on enhancing community life and sustainable practices.

- Local ecosystems in the Town have been mapped to support effective management decisions, and the Town works with senior governments to maintain the Sensitive Ecosystems Inventory (SEI);
- The Town continues to work with local and regional environmental groups (such as Streamkeepers);
- The health and stability of watersheds, aquifers, unstable cliff areas, environmentally-sensitive areas and habitats, the intertidal and marine zones, riparian areas, agricultural lands and key ecological areas are sufficiently protected;
- Key ecological areas that have been damaged are rehabilitated over time;
- The community is working to effectively respond to future implications of climate change;
- Ecological objectives are integrated into all development and design (both public and private), including permeable surfaces, habitat-oriented landscape planting, tree planting, and others;
- Outdoor recreational infrastructure supports the needs of all ages, particularly seniors, through a comprehensive web of natural areas, parks, playfields and greenways, including:
    - Play fields;
    - Children's playgrounds;
    - Tennis courts;
    - Baseball diamonds;
    - Lacrosse areas;
    - Dog off-leash areas;
    - Golf;
    - Lawn Bowling;
    - Milner Gardens and the Heritage Forest; and
    - Others.
- Parks, protected areas and greenways are being expanded through a long-term strategy for land acquisition;
- Public art is supported through continual investment, especially in new development projects;
- There are ample outdoor performance spaces to support cultural activities and events;
- The quality of the public realm and public spaces is of the highest quality to maintain a high level of livability, especially in higher density areas; and
- Sustainable materials are used in urban and landscape design, including permeable paving, materials with recycled content, efficient outdoor lighting that is powered by renewable energy, and others.

Objectives

- To ensure public and private land in Qualicum Beach is managed to maintain a high level of ecological health and offer a great quality of life including recreation, arts and cultural expression and food production.

Proposed targets

- 100% of the Town's ecosystem areas are mapped and regularly monitored;
- 100% of residents live within a five-minute walk of a greenway or park (see Land Use section);
- 100% of new developments of any scale include a habitat-supportive landscape planting strategy; and
- 100% of multi-family units have access to a community garden plot within a 10-minute walking distance (see Food section).

3.3.8. Green Buildings

In 2050, buildings are constructed to the highest level of energy efficiency and environmental performance, and older buildings have gone through extensive retrofits. Greenhouse gas emissions as a result of the construction and operation of buildings are close to zero. Due, in part, to the new way that buildings are conceived and constructed, the community enjoys improved physical and social health, economic prosperity, and a healthy ecosystem.

Vision

- Sustainable building performance has been achieved in all civic facilities;
- Green building practices are common throughout the community, including:
    - Energy efficiency;
    - Solar orientation;
    - Renewable and zero/low emission energy systems;
    - Water efficiency;
    - Wastewater and stormwater re-use;
    - Healthy and non-toxic materials;
    - Locally-sourced materials;
    - Habitat-supportive and water-wise landscape design; and
    - Others.
- Existing buildings are re-used where possible; and
- Older buildings have been retrofitted in accordance with green building practices.

Objectives

- To ensure that, over time, new and existing buildings in Qualicum Beach become more energy-efficient, water-efficient and healthy.

Proposed Targets

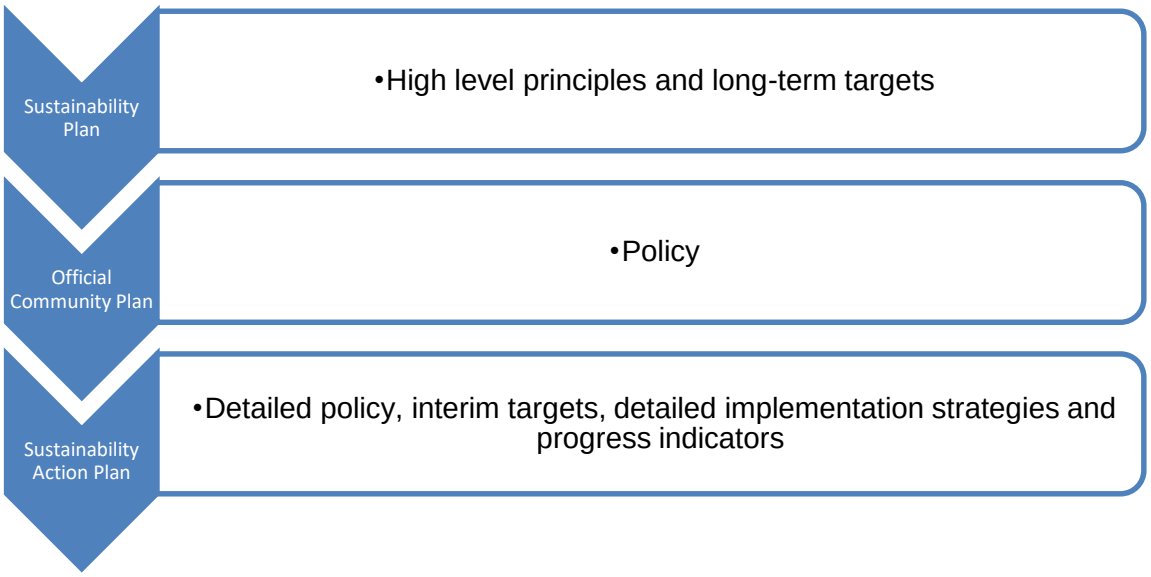
- New civic facilities will meet increasingly high green building performance targets until all are net zero annual energy consumption, water consumption and greenhouse gas emissions;
- All new buildings will be required to meet the Town's climate emission targets over time until an 80% reduction from 2010 levels is achieved;
- All existing buildings (prior to 2010) will be retrofitted to achieve a minimum 30% reduction in energy use or an Energuide rating level of 80;
- Water efficiency will increase by 50% over 2010 levels through use of high efficiency fixtures and efficient user behaviour;
- 100% of new buildings are "solar ready" (built with conduits for roof to water heater plumbing connections); and
- 100% of new buildings are built with dual plumbing for re-use of treated wastewater in toilets and irrigation.

3.4 Sustainability Plan Implementation

The Sustainability Plan is intended to be a strategic plan and long-term vision that identifies desired outcomes and directions for a wide range of issues. The Sustainability Plan is not intended to be applied directly to regulation; the implementation of the Sustainability Plan will be primarily through its connection with, and influence on, other legal plans and policies.

The primary implementation mechanism is through policies in the Official Community Plan (OCP). In addition, the Sustainability Plan will influence the Town's transportation plans and other management plans which it shares with the Regional District of Nanaimo.

The responsibility for some areas of action on sustainability is beyond the jurisdiction and resources of the Town of Qualicum Beach and, as such, many agencies and individuals need to be engaged. In this context, the Town will work closely with the Regional District's sustainability team, as well as with staff and decision-makers from other jurisdictions, agencies and levels of government.

The implementation plans associated with the OCP and other documents noted above will serve as the "action strategy" or implementation approach for the Sustainability Plan.

There are some areas in the Sustainability Plan that are not addressed in the OCP. For this reason, a Sustainability Action Plan will be developed to provide further detail on implementation measures and to provide a mechanism for monitoring progress.