



**Sustainability
Element**
1.3.2018



SUSTAINABILITY ELEMENT

The concept of "sustainability" has been an integral part of development work since the late 1980's. It originated in the UN's 1987 Brundtland Commission Report, *Our Common Future*. The central tenant is that "sustainable development," which is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" is key to societies survival. Sustainability is both a lens through which we can view society and it is an end goal in itself.

Sustainability is often explained as a stool held up by the three legs of economic prosperity, ecological or environmental responsibility, and social equity. These legs or pillars need to be equally balanced in order to achieve sustainability or the stool falls over. More recent definitions include a fourth stool leg of cultural vitality. In order to achieve the end goal of sustainability each of the four legs or pillars must be given the same weight.

The concept of a 'sustainable community' does not describe just one type of neighborhood, town, city or region. Activities that the environment can sustain and that citizens want and can afford may be quite different from community to community. Rather than being a fixed thing, a sustainable community is continually adjusting to meet the social and economic needs of its residents while preserving the environment's ability to support it.

A sustainable community uses its resources to meet current needs while ensuring that adequate resources are available for future generations. It seeks a better quality of life for all its residents while maintaining nature's ability to function over time by minimizing waste, preventing pollution, promoting efficiency and developing local resources to revitalize the local economy. Decision-making in a sustainable community stems from a rich civic life and shared information among community members. A sustainable community resembles a living system in which human, natural and economic elements are interdependent and draw strength from each other.

Potentially significant employment opportunities, consistent with more sustainable patterns of development, exist in many economic sectors. Redesigned and improved infrastructure, knowledge-based services, environmental technologies, improved management and use of natural resources, and tourism are all rich areas for private sector investment, supportive government policies, and expanded training.

Achieving sustainable community development means emphasizing sustainable employment and economic demand management (EDM). Sustainable employment includes, turning "wastes" into resources (e.g., recycling); improving efficiency with regard to energy and materials; converting to greater reliance on renewable energy sources; increasing community self-reliance (e.g., food and energy production); and sustainable management of natural resources (e.g., community forestry). EDM shifts our economic development emphasis from the traditional concern with increasing growth to reducing social dependence on economic growth.¹

One of the most significant and complex issues facing society today is climate change. It requires at least two kinds of responses: adapting to the effects of climate change conditions, and

¹ <http://www.sfu.ca/sustainabledevelopment/about-us/what-is-sustainable-community-development.html>

minimizing our contribution to greenhouse gas emissions (often referred to as mitigation), widely understood by the scientific community to be an underlying cause of climate change.

Local governments are key to the climate change response because they influence more than 45% of local carbon emissions² through the decisions they make related to land use, transportation options, building standards, and waste management. Leadership, commitment and public support are required to respond appropriately to the challenge. The benefits are long term, yet the costs are immediate and the solutions are challenging. At the same time, adapting to climate change presents economic opportunities including the potential for establishing new technologies locally and creating more livable, sustainable communities.

For example, the likely rise in the cost of energy, and so also the cost of transportation, encourages the sustainability strategy of more local production of basic consumables, like food and energy. Correspondingly, in an emergency, like a power outage or an earthquake, the less dependent we are on distant sources for things like food and energy, the more resilient we will be. This is especially true given our location on an island.

And just as with insurance, there is a balance to be struck between the amount of time and resources we devote to preparing for the future and the amount we devote to living in the present. Fortunately many sustainability strategies, such as improving energy efficiency, make cost-effective sense today as well as in a wide variety of possible futures. The sooner we begin the process of preparing for a sustainable future, the easier and more sustainable the process itself can be.

Community

The most important resource for moving Langley toward a sustainable future is the quality of our community. When people are well informed and in good relationship with their neighbors, they are able to work with change in creative and confident ways.

Many communities now recognize that the quality of life includes identifying and taking steps to preserve “Places of the Heart.” The Orton Family Foundation has developed “Heart and Soul Community Planning,” a process that involves the community in identifying specific places within the community that are worthy of preservation. The first step in the process is identifying core community values. Those values that are most often identified are:

1. Working locally and growing locally-owned businesses.
2. Living and shopping locally.
3. Participating in local schools, organizations, churches, and community events and festivals.
4. Keeping culture and nature in close proximity.
5. Providing easy access to goods and services.
6. Fostering a strong sense of community where people trust one another and feel safe.³

A well-defined sense of community is a key element of a sustainable community and this is true for the City of Langley. This can be seen in a variety of ways such as the high rate of volunteerism by community members, the number of community events held throughout the year bringing

² <http://www.toolkit.bc.ca>

³ Excerpted from Rural by Design, Second Edition by Randall Arendt. ©2015, American Planning Association.

together residents and visitors alike, and Langley's cultural vitality index of 3.06 (2013) which is more than three times that of Washington State.

City leadership plays a pivotal role in moving the community towards a more sustainable future. This can be achieved through City Council's adoption of goals, policies and regulations that guide activities and actions by citizens and others, as well as through the decisions and choices made by City Administration on such things as purchasing.

Demographics

A fundamental characteristic of a sustainable community is that it has a good balance of people of all ages, plus a diversity of skills and experience. The City cannot control the demographic balance of the community. It does, nevertheless, influence the demographic patterns through such things as land-use, housing, and economic-development policies. To strengthen the community's sustainability, the City should take into account the demographic implications of its policy choices and make choices that foster demographic diversity. As discussed in more detail in the Land Use and Housing elements, Langley's population is older than the County and State averages and is aging at a greater rate in comparison. Through a sustainability lens the City is facing a demographic imbalance which has implications such things as for housing, businesses seeking employees and health services.

Energy

To meet its energy needs sustainably, a community must pursue four approaches. BC Hydro has outlined them as "The Four R's of Sustainable Energy Planning": 1. Reduce energy demand (through energy efficient community design, green buildings, and efficient technologies); 2. Re-use waste heat (captured from industrial and commercial sources, sewers and waste, for heating buildings and water); 3. Use Renewable heat (including solar and geo-exchange); and 4. Use Renewable electricity (including biomass/biogas, micro-hydro, wind, solar, tidal and geothermal).

Local governments have more influence over land use-related energy demand than any other of the four mechanisms, thus a major focus should be placed on the opportunity to mitigate energy use through land uses. Renewable energy resources are those that can be regenerated relatively quickly and therefore are not exhausted. They derive either from the sun or from heat generated deep within the earth, and include electricity and heat generated from solar insolation (sunlight striking a surface), wind power, ocean energy harvested from wave and tidal power, biomass energy and geothermal energy.⁴

The City has recently become part of the SolSmart - a program of the US Department of Energy's SunShot Initiative. The purpose is to assist local governments to reduce barriers to solar energy growth. The City is taking advantage of Puget Sound Energy's (PSE) program to convert street lights to LEDs to reduce the City's energy bills. The City is also participating in PSE's 'Green Direct' program that offers participants access to energy that is generated from renewable sources instead of a mix of fossil fuels and hydroelectricity. The City's choices of fleet vehicles tend towards lower emission models.

⁴ https://crcresearch.org/files-crcresearch_v2/File/Sustainable%20Communities%20Research%20Collaborative-Ashaw.pdf

Economy

Complete, compact communities are central to economic development. Complete, compact development promotes active lifestyles, improves human health, and fosters human interaction, strengthening community, spurring local innovation, and reducing crime. Complete compact communities are more conducive to locally owned businesses that reinvest locally. Economic impact assessments have demonstrated that \$100 spent in a locally-owned store generates \$45 in local economic return while the same amount spent in a non-locally owned store generates only \$13 in return ⁵

Establishing and maintaining local economies that are economically viable, environmentally sound and socially responsible is key for community sustainability. Participation from all sectors of the community is necessary to determine community needs and to identify and implement innovative and appropriate solutions.⁶

Tourism is a significant economic activity in the City of Langley and contributes to the City's tax base through retail sales and hotel/restaurant patronage. According to US Census in 2015, 40.7 percent of Langley's population 16 years and older were in the labor force. Almost 51 percent had occupations in the fields of management, business, science and arts. Sales and office occupations made up 20.8 percent with service occupations making up 13 percent.

Some recent infrastructure improvements by Puget Sound Energy to construct a new substation, upgrade transmission lines and other improvements have improved the reliability of electrical service on South Whidbey. In addition, Whidbey Telecom has been installing fiber optic throughout the area that will offer 100 gigabit service, providing the region with some of the fastest internet speeds in the country. This increased bandwidth will greatly improve the speed at which business, telecommuters and others can operate and is a requirement for high-tech, high-paying jobs.

Food and Agriculture

Industrialization of agriculture has taken a large toll on small family farms. In the last century, the number of farms fell nearly 65 percent, and the farm labor force dropped from 41 to 1.9 percent. Today, just one in 10 small farms produces enough income to support a family. But small farms play a significant role in the economic, cultural and environmental health of a community. Whidbey Island fourth generation family farmers, as well as a new breed of young farmers, are recapturing the island's farming heritage, creating a fresh food culture supported by diverse crops, seed research, market demand, delivery systems and agritourism.

While hobby farms and roadside stands selling eggs, berries and honey are in abundance, a greater food systems cluster has developed, which consists of producers, processors, distributors and markets. This cluster enables Whidbey's 21st-Century farmers to resurrect farming traditions and to grow triple-bottom line endeavors: farms that benefit people, place and profit.⁷

⁵ <https://www.toolkit.bc.ca/business-case-climate-action>

⁶ <http://www.sustainable.org/economy>

⁷ <http://livebettermagazine.com/article/a-community-of-collaboration-whidbey-island-sustainable-agriculture/>

While there is no agriculturally zoned land in Langley agriculture is still being undertaken on a few larger properties and there are food gardens found in many backyards.

While the new agriculture of the 21st century will likely take many forms at many different scales, there is likely to be an important component in Langley's small-town scale. One of these forms will be personal gardens, either at the residence or as a plot in a community garden. Another form will be somewhat larger commercial market gardens, including various forms of community-supported agriculture (CSA). Two of the advantages of having such market gardens within Langley are: easy access to part-time labor, and reduced transport and handling costs to a significant local market. In addition, market gardens that also serve as teaching facilities and/or visitor attractions may benefit from the additional facilities and amenities that Langley provides. We also have our waterfront, which provides us with important access to marine food sources.

Beyond food production, additional important components of a more localized and less energy-dependent food system are food processing and food distribution. Here again, within its available capacity, the City can be part of the solution.

Infrastructure

Infrastructure systems can deliver the services citizens need in an economically and environmentally sustainable manner. Such systems are efficient and integrated, and take advantage of ecosystem-based infrastructure to reduce carbon footprints and resource requirements, and provide better value. On average, operation and maintenance of delivery systems account for 80% of a local government's infrastructure costs. As such, long-term sustainability is a key consideration for infrastructure planning.

Whether infrastructure is viewed through a holistic economic or a holistic environmental lens, the result is the same: an integrated sustainability vision. Asset management includes maintaining and increasing equipment efficiency and reducing leaks. More sophisticated approaches include extracting value from "waste," like methane and heat from sewage. Most fundamentally, it involves reducing financial liability with less infrastructure-intensive, low-density development that can be sustained through existing revenue streams.

Sustainable, low carbon infrastructure typically within local government jurisdiction includes:

- **Water Supply**, stormwater and wastewater systems that safely manage our water, are energy efficient, reduce the burden on water supplies and reduce ecological impacts.
- **Ecosystems** such as forests, urban landscaping, and aquatic systems that are integrated into the green/ecological infrastructure network of the community.
- **Solid waste management systems** that divert waste from landfills and utilize waste as a valuable source of materials and sometimes energy.
- **Energy systems** that provide clean, renewable sources of heat and electricity. Historically, these systems are not usually part of local government operations, but opportunities are emerging.
- **Integration** of the above systems wherever possible, and creation of closed loops that treat "waste" as a resource and potential revenue source.

Natural Environment

Climate and geology have combined to make Whidbey Island and Langley a beautiful and unique place. Situated at the north end of Puget Sound, Whidbey Island has a relatively cool and moist climate that is conducive to dense coniferous forests on land and a rich and diverse sea life. The downtown area is located along both the toe and the top of a steep bluff, most of which has been modified by seawalls or residential and commercial development. The bluff varies from about 30 feet to a maximum of about 84 feet and slope angles vary considerably. Much of the downtown shoreline has been modified with waterfront bulkheads. However, minor erosion and sloughing are still active on the steep slopes, due to groundwater seepage, freeze-thaw, direct precipitation, and the removal of large native vegetation.

The City is drained by three natural drainages/streams that originate south of the city and drain through the city generally in a northerly direction and into Saratoga Passage.

Island County was federally designated as a ‘Sole Source Aquifer’ in 1982 and the City uses two aquifers in the area as main sources of drinking water. Several wetland areas have been identified and are mapped as shown on Figure LU-7; and other (unmapped) wetlands exist throughout the City.

Mild weather, abundant rain, and a long growing season (202 days) support continued forest growth and agriculture in the region. Douglas Fir, Western Red Cedar, Western Hemlock, and associated understory border the city. Invasive plant species such as bamboo, knot weed and scotch broom require vigilant management to keep them at bay.

Bird and wildlife found in the area includes ring-necked pheasant, California quail, raccoon, coyote, great-horned owl, barred owl, blue heron, and bald eagle. Rabbits have become an increasing nuisance in the City. A large number of waterfowl are found in saltwater and intertidal zones; among them common and Barrow’s goldeneye, bufflehead, old squaw, and white-winged and surf scoter as well as eagles, herons, and gulls. Saratoga Passage is a common otter trail and is part of a salmon migratory route. Benthic organisms include shrimp, geoducks, clams, crabs, and mussels.

Implementation and Monitoring

A framework for implementation of the community’s vision, goals and policies is essential to ensure the Plan has the intended impact. Effective plan implementation requires: commitment at all levels to the vision, goals and policies in the Plan; ongoing community engagement in city decision-making; effective management of city processes; and the use of best practices by both the City and development proponents.

Plan monitoring is necessary to ensure that the Plan is operating as anticipated. It requires that questions be asked about the continued relevance of the Plan as circumstances change. To be effective, monitoring should consider the following points:

- Is progress being made towards the Plan’s vision, goals and are the policies having the expected result?
- Are the assumptions on which the Plan is based still valid (e.g. growth rates)?
- Are there new issues, concerns or opportunities that may require new or different policies?

- Are there changes in political or public priorities that may result in a different allocation of resources?

Following adoption of the Comprehensive Plan Council and its commissions and boards will be tasked with identifying priority action items. This list of priorities will then be used to establish work plans for the short and long term as well as budgets and capital plans.

SUSTAINABILITY GOALS AND POLICIES

GOAL S-1 Sustainability Framework

Establish a sustainability framework for the City of Langley to foster a multi-generational, resilient and more economically and culturally diverse community.

S-1.1	Consider multiple scenarios for future conditions when making decisions with long-term impacts. As appropriate, consider likely implications over many decades, including multi-generational time horizons.
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S-1.2	Undertake an Emergency Preparedness Plan with broad based community involvement to move the City towards greater resilience.
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GOAL S-2 Public Participation

The City shall strive to be transparent in its decision making, keep the community well informed and undertake meaningful public participation.

S-2.1	Public participation initiatives shall be comprehensive and accessible to the diverse needs of citizens.
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S-2.2	Seek diverse participation and use a variety of communication channels to inform and involve the community.
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S-2.3	Use public participation as a means of keeping perceptions and problem-solving fresh and multi-faceted.
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GOAL S-3 Multi-Modal Transportation

Strive for a multi-modal transportation network that safely and conveniently accommodates multiple functions including travel, social interaction and commerce, to provide for more vibrant neighborhoods and more livable communities.

S-3.1	When undertaking transportation planning and service decisions, evaluate and encourage land use patterns and policies that support a sustainable multi-modal transportation system.
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S-3.2	Strategically design transportation options - including bike routes, sidewalks, pedestrian trails and other non-motorized solutions - to support and anticipate land use and economic development goals.
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S-3.3	Plan for a multi-modal approach to transportation that promotes an integrated system of walking biking, transit, auto and other forms of transportation designed to effectively support mobility and access.
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GOAL S-4 Economic Development

Encourage economic development policies and programs designed to support and promote sustainability, resiliency, and energy efficiency. Maintain existing utility systems while seeking to expand the use of renewable energy sources.

S-4.1	Economic development should support and encourage resilience, development and expansion of locally-based business and employment opportunities.
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S-4.2	Regulatory and economic initiatives should emphasize flexibility and the ability to anticipate and meet evolving employment, technological and economic patterns.
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S-4.3	Land use and regulations should be designed to encourage and support the ability of local residents to work, shop, and obtain services locally.
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S-4.4	Infrastructure and land use policies should be designed to encourage and support home-based work and business activities that supplement traditional business and employment opportunities.
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GOAL S-5 Food Security

Facilitate access to healthy, locally- grown food.

S-5.1	Enhance food security by enabling and supporting of local food production.
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S-5.2	Reduce barriers to increase urban agriculture and local food production.
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GOAL S – 6 Natural Resources

Ensure that the contribution of natural resources to human well-being are recognized, protected and valued.

S-6.1	Restore, connect, and protect natural systems including fish and wildlife habitats, groundwater and critical areas.
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S-6.2	Plan for the provision and protection of green infrastructure that includes using trees, vegetation, amended soil, bio-retention to reduce development impacts.
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S-6.3	Encourage development that respects natural topography.
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S-6.4	Encourage water conservation and plan for a lasting water supply.
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S-6.5	Work to achieve a sustainable urban forest that contains a diverse mix of tree species and ages in order to use the forest's abilities to reduce storm water run-off and pollution, absorb air pollutants, provide wildlife habitat, absorb carbon dioxide, provide shade, stabilize soils and increase property values.
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GOAL S – 7 Implementation

Establish an implementation framework for the Comprehensive Plan.

S-7.1	Connect plan implementation to the capital planning process.
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S-7.2	Connect plan implementation to the annual budgeting process.
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S-7.3	Establish simple and easy to measure indicators, bench marks, and targets. Monitor them over time and report back to the community.
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S-7.4	Regularly evaluate and report on implementation progress.
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GOAL S – 8 Livable Built Environments

Ensure that all elements of the built environment, land use, transportation, housing, energy and infrastructure work together to provide sustainable green places for living, working and recreation, with a high quality of life.

S-8.1	Focus development and redevelopment on infill sites to take advantage of existing infrastructure.
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S-8.2	Encourage design standards appropriate to the community context that serve to improve or protect both the function and aesthetic appeal of Langley and that enhance our sense of place.
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S-8.3	Provide accessible public facilities and spaces that accommodate persons of all ages and abilities.
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S-8.4	Facilitate the use of green building design and energy conservation elements including solar.
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S-8.5	Discourage development in hazard zones.
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GOAL S – 9 Climate Change

Work with public and private partners to develop a strategy and related programs to prepare for and mitigate the potential impacts of climate change, both on city operations and on the broader Langley community.

S-9.1	Develop a strategic plan that will help guide and focus resources and program initiatives to 1) reduce GHGs and the city's carbon footprint as well as that of the broader community 2) assesses the risks and potential impacts of climate change, and 3) reduces and minimizes these risks.
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S-9.2	Develop policies and strategies for land use and development that result in reduced GHGs for new development as well as redevelopment activities.
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S-9.3	Develop programs and incentives that encourage existing land use, buildings and infrastructure to reduce their carbon footprints.
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S-9.4	Foster state-of-the-art resource-efficiency in both new and existing buildings and neighborhoods by promoting “green building” concepts such as those outlined by the U.S. Green Building Council and similar organizations.
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S-9.5	Foster local renewable-energy generation including solar.
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S-9.6	Foster approaches to transportation that reduce per capita fossil fuel use, such as the location of recharging stations for electric vehicles.
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S-9.7	Model these examples, where practical and cost-effective, through City facilities and activities, such as the selection of low emission vehicles for the City fleet
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GOAL S-10 Volunteerism

The City will encourage volunteerism throughout the community.

S-10.1	Encourage positive and long lasting neighbor-to-neighbor relationships.
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S-10.2	Encourage high levels of volunteer participation in both City-related and general community activities.
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