SMART BYLAWS – SUMMARY

Deborah Curran

West Coast
Environmental
Law – 2003

Acknowledgments

National Library of Canada Cataloguing in Publication

Contents...

Why a Guide?

Many municipalities and developers in British Columbia are emerging as North American leaders in smart growth practices at the regional and local scale. Residents are demanding more choices in where they live and the quality of neighbourhoods and job opportunities. Bounded by ocean, mountains, rivers and working lands, communities are also being forced to use land more efficiently to stop urban sprawl, revitalize commercial centres, and maintain a working land base.

In recognition of this leadership role, West Coast Environmental Law has developed this *Smart Bylaws Guide* to assist local governments to implement smart growth strategies through policy and bylaw changes. It describes smart growth practices, and backs up the theory with case studies, technical standards and bylaws that can be tailored to specific municipal circumstances. The *Guide* brings together the best practices of municipalities across BC, and highlights other innovators in the US.

The *Smart Bylaws Guide* is composed of seven interconnected tools:

1. The Case for Smart Growth outlines what smart growth is and why it is of benefit to local governments. It goes beyond principles and provides economic and other data to prove that smart growth strategies work – how smart growth costs less for municipalities and developers, increases property values, creates safer streets, increases housing and transportation choices, and protects drinking water supplies.

   www.wcel.org/issues/urban/sbg/case

2. This Smart Bylaws Summary describes the basic elements of smart growth using case studies ranging from the regional and municipal scale to site and building scale. It provides an overview of the entire *Guide*, and links from within the chapters take readers to more detailed online tools. A glossary at the end provides definitions

"We do not achieve the kind of residential and commercial mix of land uses, and the densities, that you have in your town and city centres. Citizens in British Columbia value their open space as much as they value vibrant commercial centres and healthy downtowns. We need to apply this lesson across the US."

Don Chen, Executive Director, Smart Growth America

"With our communities framed by mountains, oceans, forests, rivers, environmentally sensitive areas and highly productive agricultural lands, British Columbia is a natural spawning ground for innovative land development. BC communities have led the way in Canada with some of the most progressive growth Management strategies in North America that have allowed us to prosper while protecting that which generates our future wealth and opportunity."

Cheeying Ho, Executive Director, Smart Growth BC

for the well-known and emerging terms associated with smart growth.

www.wcel.org/issues/urban/sgb/summary

3. Web pages discuss each smart growth tool in more depth and provide examples of case studies.

    www.wcel.org/issues/urban/sbg/

4. Case studies document development projects that exhibit a number of smart growth features, including bylaws and contact information.

    www.wcel.org/issues/urban/sbg/casestudies

5. Bylaws and policies accompany each smart growth strategy.

    www.wcel.org/issues/urban/sbg/bylaws

6. Checklists enable staff, council members and citizens to evaluate projects and municipal programs.

    www.wcel.org/issues/urban/sbg/checklists

7. Resources provide links to further online information. www.wcel.org/issues/urban/sbg/resources

The whole *Smart Bylaws Guide* can be accessed at www.wcel.org/issues/urban/sbg.

Who is the Guide for?

The *Guide* is addressed to the staff and councilors of the towns and small cities in BC that often do not have the resources to research and apply new practices in a comprehensive way. It is also useful for planners, engineers, developers, citizens and others interested in creating livable communities.

What is Smart Growth?

British Columbians desire communities where they can:

- Choose between different housing types and prices in the same neighbourhood and on the same street;

- Travel, live, work and recreate safely;

- Access a variety of shopping and recreation opportunities;

- Get to know their neighbours from diverse backgrounds and age groups;

- Move around by foot, bike, transit, and automobile conveniently; and

- Have a say in what types of development will improve their quality of life.

"Smart growth" means the land use strategies and types of developments that will address these desires by creating more compact complete communities, and also use tax dollars more efficiently. It means neighbourhoods that have a mix of stores and services within walking distance of a variety of housing options, connected by sidewalks and bike paths, and accessible by public transportation. Smart growth means revitalizing existing commercial centres and also supporting a viable rural working land base.

"Smart Growth has two primary features: the "where" and the "how."
It happens "where" development can be accommodated with minimal adverse impact to the environment, and in places where development takes maximum advantage of public investments already made. Smart Growth also addresses "how" the finished development will work with neighboring development to restore choices that are missing in places marked by sprawl: such as the choice to walk or use public transit, the choice to meet neighbors in attractive common spaces, or the choice to live in an apartment, a house, or a condominium."

New Jersey Future, Proposed Development Scorecard p.1
http://www.njfuture.org/articles/development_card.pdf

The Eight Principles of Smart Growth:

West Coast Environmental Law has identified a set of smart growth principles already used in many BC communities to help guide this future planning and development. These principles form the basis for the *Smart Bylaws Guide.*

1. Promoting urban revitalization and rural preservation by containing urban areas, channeling development into existing neighbourhoods and adopting integrated planning and management approaches
2. Incorporating green infrastructure into communities
3. Creating compact complete communities by mixing land uses and using land more efficiently
4. Increasing transportation choices through land use decisions
5. Creating inclusive neighbourhoods by ensuring that a diversity of housing types are accessible to a wide range of people of different age groups, family types and incomes
6. Maximizing the enduring benefits of developments by using resources wisely on sites and in buildings that are tailored to specific neighbourhood conditions
7. Supporting municipal goals through cost recovery by ensuring that development cost charges and property taxes reflect the true cost of different types of growth
8. Promoting smart growth throughout the development process by reforming administrative processes and addressing liability issues

How Can We Grow Smarter?

Over the next twenty-five years, the elder population in BC will increase by 100 percent – from 12.5 to 25 percent of the population.

With a projected 1.6 million more people calling BC home in 2025, municipalities are turning to smart growth approaches to maintain the livability of communities while ensuring that municipal costs do not snowball. Most importantly, this means using the landbase more efficiently and protecting working lands. It also means providing more choices – in housing, transportation and recreation – for our changing communities.

While population growth has had the greatest impact on the use of land over the past twenty-five years, changing demographics will have the largest effect in the near future. Over the next twenty-five years, the elder population in BC will increase by 100 percent – from 12.5 to 25 percent of the population. Household sizes are becoming smaller, while the population is growing. These demographic trends are resulting in more demand for different types of housing, including apartments,[1] and access to nearby service. At the same time, many communities are limited geographically. Outward expansion is not possible.

Percentage Change in Population Size of British Columbia and Regions 1976-2001

Increases in urban land use in BC, 1971-2001
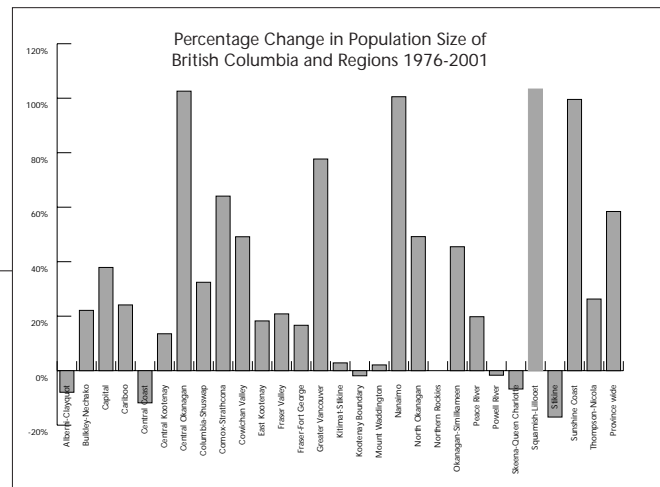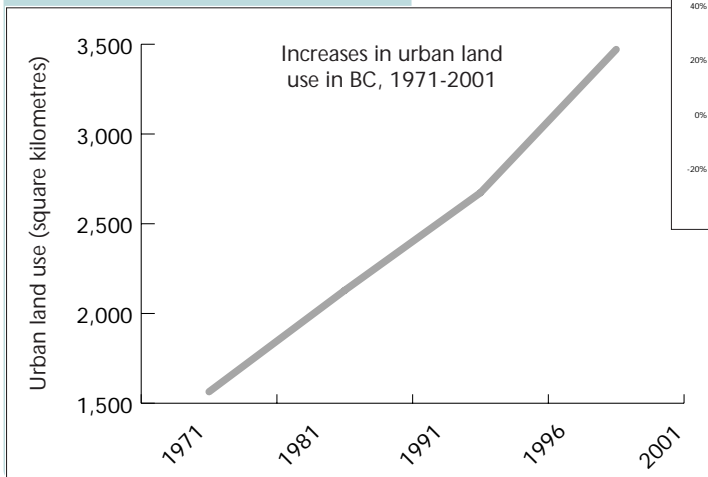
Community Rules

Growing smarter means applying smart growth principles from the regional scale to individual sites. What puts these principles into action are the regulations and performance standards specifying how development should take place. Local government bylaws both facilitate and inhibit good development.

To demonstrate how bylaws can foster good development, best development practices that incorporate smart growth principles are presented here. Each principle includes working examples to demonstrate that smart growth, incorporating one or more best development practices, is not just a possibility – it is happening here in BC and around the country.

Promote urban revitalization and rural preservation…

1...

...by containing urban areas, channeling development into existing neighbourhoods and adopting integrated planning and management approaches

The key to supporting both urban and rural economies is to maintain the integrity of the working land base, and to direct investment into commercial centres. Communities can do this by ensuring that new development does not interfere with rural industries such as farming, and that new commercial activity builds on existing assets. By using available infrastructure, redevelopment revitalizes already-built areas and decreases the pressure for rural development that threatens the viability of working lands. These strategies can be managed on a municipal- or region-wide basis through integrated planning (planning for the community as a whole, including its environmental, economic and social health) and permitting.

An often-overlooked aspect of land design is that creating good neighbourhoods fosters a sense of community by providing opportunities for neighbours to interact. Informal gathering places (parks, coffee shops, libraries, and plazas) and other land use patterns (narrow streets, mixed uses, and pedestrian-friendly environments) typical of traditional neighbourhoods bring people together and help develop a positive neighbourhood identity.

Contain Urban Areas

Urban growth boundaries (UGBs) are lines drawn on planning maps around developed areas showing where urban land ends and rural land begins. By channeling growth into existing neighbourhoods and areas where density can be maximized, UGBs assist local governments to meet planning goals such as downtown revitalization, creating vibrant mixed-use neighbourhoods, protecting the environment and improving the viability of transit. UGBs also create certainty for developers by directing where infrastructure investment will occur.

A Tale of Three Urban Containment Boundaries

The most famous UCB in North America contains **Metropolitan Portland, Oregon**. Established in 1980, it involves the coordination of three counties, 24 cities and more than 60 special service districts, in which live 1.3 million people on 100,000 hectares in the fertile Willamette Valley. In over 20 years, the land area of the UCB has expanded by only two percent, while the population of the City of Portland has increase by 50 percent, and Metropolitan Portland by 17 percent. The great successes of this UCB are the vibrant agricultural industry in the valley and the revitalization of the City of Portland.

In BC, **Saanich** established a UCB in 1964 to delineate the catchment area that could be serviced by gravity into the sanitary trunk sewer system. In the 1980's the UCB was hardened by Council to protect rural areas and to encourage more dense development in the municipality. Comprised of 11,100 hectares and 104,000 residents, Saanich has only extended the UCB twice for residences experiencing septic failure. Now, extensions can only be granted with the assent of the electors via referendum, and the UCB is entrenched in the Regional Growth Strategy.

Nanaimo recently decided, in consultation with the Regional District, not to expand its UCB even though it is experiencing development pressures in the north end.

www.wcel.org/issues/urban/sbg/Part1/ucb

Channel Development Into Existing Neighbourhoods

Making the most of existing infrastructure and revitalizing commercial areas requires that new development is concentrated in neighbourhoods with clearly defined centres. Both large and small municipalities are using this strategy to decrease long-term servicing costs and to create vibrant mixed-use districts that have their own unique character. This also helps to maintain small town character by following traditional patterns of compact development.

Public Services at the Core of Community

The Gibsons and District Public Library opened in July 1996 in the centre of **Gibsons** and the three residential areas that it serves. It is next to the museum, post office, school district offices, health unit, motor vehicle offices, and town hall, and was built on donated Town land. The library is on the bus route and within walking or biking distance for the majority of the users. Parking is underground. It boasts a 67 percent (and growing) membership.

Nodal Development

The cities of **Kelowna** and **Markham** are developing around commercial and transportation nodes by concentrating development in neighbourhood centres. They are accomplishing this by creating a variety of housing types, linking transportation routes and ensuring that residents can live, work and recreate in their neighbourhood.

www.wcel.org/issues/urban/sbg/Part1/centres

Adopt Integrated Planning and Management Approaches

Municipalities are increasingly adopting a systems approach to planning because all land use decisions have implications for economic development, the green infrastructure, transportation, community health, and the environment. This is accomplished through the use of a hierarchy of plans from the regional to the neighbourhood level, management plans, integrated permitting processes, and development agreements. Design charrettes (design workshops for a neigh-

bourhood or centre) and community energy planning are at the forefront of proactive planning.

East Clayton Neighbourhood Concept Plan: The Headwaters Project
www.sustainable-communities.agsci.ubc.ca/projects/Headwaters.html

Integrated Planning in Action

The **James Taylor Chair** at the **University of British Columbia** has been working with **Surrey** over the past five years to create a feasible Neighbourhood Plan for the East Clayton area of 550 acres and future population of 13,000 residents. The purpose was to provide an innovative suburban model for bare land development, and to develop and have adopted alternative development and engineering standards for the design of new and retrofitted communities in BC. Using a design charrette process, the Chair created a visual plan for the neighbourhood that mapped the built development onto the green infrastructure. Concentrating development on smaller lots, in townhouses, and secondary suites, and by mixing uses, the plan sets out a network of natural amenities that also double as the stormwater management system. Ninety percent of water falling in the neighbourhood will infiltrate back into the soil, and automobile trips are estimated to be forty percent less than in a conventional subdivision. Costs per unit are also lower because of the variety of housing types. The East Clayton Neighbourhood Plan was adopted by Surrey in March, 2003.

www.wcel.org/issues/urban/sbg/casestudies/EastClayton

In 1998 the Town of **Okotoks, Alberta** (population 12,000), located 40 km south of Calgary, adopted a resolution to pursue a "Sustainable Okotoks" approach to development after experiencing growth rates exceeding five percent since 1985. The approach includes living within the carrying capacity of the nearby Sheep River's ability to supply water to the Town, which effectively caps growth at 30,000 residents, and substantially modifying urban design to create more mixed-use and higher density developments to decrease reliance on the automobile. The vision outlined in the Municipal Development Plan seeks to create new development markets by changing traditional low-density development, and prohibit expansion of the Town's borders to maintain a small town atmosphere.

www.wcel.org/issues/urban/sbg/casestudies/Okotoks

Whistler is in the final stages of adopting its **Comprehensive Sustainability Plan**. After achieving the goal of becoming a world class destination resort community, Whistler's focus is now on creating a strategy that will address key issues such as the continued provision of employee housing and infrastructure, and environmental, business and social sustainability. The Sustainability Plan will consolidate and supercede existing policy documents such as the Comprehensive Development Strategy, and will integrate sustainability into all aspects of community development. Five test scenarios for the future have been developed, and will be put before the community for discussion.

www.wcel.org/issues/urban/sbg/Part1/Whistler

Stick To Municipal Plans

Official community plans and neighbourhood plans set the long-term vision for how a community will evolve. It is difficult to evaluate what effect piecemeal changes, such as rezonings, have on that vision. Several municipalities in BC entertain OCP amendments and rezonings only once or twice per year to ensure that new development is in keeping with the long-term plan for the community.

Use Performance Indicators

Local governments across North America are becoming involved in quality of life monitoring. Indicators, representing environmental, social and economic measures such as percentage green space per capita, availability of public transit, and number of cross-country ski visits to the municipality, can show trends in the health of a municipality or region. Local governments use the results of monitoring programs to establish priorities and set policy. Indicators also provide crucial baseline data to determine changes in municipal conditions.

See more resources on this topic in the *Guide* at www.wcel.org/issues/urban/sbg/Part1:
- Kelowna's State of the Environment reporting and Watershed Report Cards
- Maple Ridge's new library that creates a town gathering place, shares resources with other agencies and attracts impressive usership because of its central location
- North Vancouver (District), Kelowna and Nanaimo's limits on servicing
- Regional District of Nanaimo's urban containment boundary
- San Francisco's policy on using the precautionary principle
- Whistler's annual review of potential types and amounts of additional development

Incorporate the Green Infrastructure and Working Lands into Communities

Green infrastructure refers to the ecological processes, both natural and engineered, that provide economic and environmental benefits in urban areas. Municipalities are returning to the benefits of green infrastructure because they are often less costly than hard infrastructure, and offer aesthetic and recreational benefits. Using the green infrastructure to manage common processes, such as stormwater, keeps water on the land longer, thus recharging streams, aquifers and water reservoirs more fully. Street trees, greenways and rooftop gardens, the "urban forest," help mediate summer heating in developed areas while also improving air quality, and provide habitat for many species. Green infrastructure in neighbourhoods, such as ponds and greenways, are seen as amenities and increase property values. Finally, maintaining working lands is important both for the economy and for their contribution to the green infrastructure of a region.

The green infrastructure includes:

- ditches, rivers, creeks, streams and wetlands that retain and carry stormwater, improve water quality, and provide habitat;

- parks and greenways that link habitat and provide recreation opportunities;

- working lands such as agricultural or forested areas;

- aquifers and watersheds that provide drinking water;

- engineered wetlands and stormwater detention ponds that retain stormwater and improve infiltration; and

- trees, rooftop gardens and community gardens that clean air and cool urbanized areas in the summer.

Connect the Green Infrastructure

To maintain the ecological functioning of the green infrastructure, both the quality and quantity of its land and water are important. Connecting public and private natural areas for water infiltration and habitat creates a green infrastructure network that serves as the foundation for built communities.

Green Infrastructure Strategies

The **Capital Regional District (Victoria)** and Provincial Capital Commission developed the Regional Green/Blue Spaces Strategy to identify how regional green/blue spaces areas should be protected and who the partners in such initiatives would be. The Strategy outlines a Green/Blue spaces system that is the essential regional infrastructure for creating a livable and healthy region. Adopted in 1997, the Strategy sets priorities for the integrated contributions of citizens, landowners, businesses, community groups and all levels of government to sustain the green infrastructure in cooperative stewardship. In 2000, the residents of the Capital Region approved an annual $10 property tax levy for ten years to fund the acquisition of priority lands.

The rural **Highlands** mapped its considerable greenways before imposing zoning in the community. Although the municipality is 35 percent public parkland, much of the natural areas are in private ownership and designated in the regional Green/Blue Spaces Strategy. The municipality uses a variety of methods to ensure that this extensive habitat remains free from development, such as large lot zoning, public education, clustering development, and building smaller roads.

www.wcel.org/issues/urban/sbg/Part2/Connect

Source Control for Stormwater

Chilliwack requires new developments to manage stormwater so that there is no net increase in post-development flows into receiving watercourses. The City's objective is "…to control runoff volume so that watersheds behave as though they have less than ten percent impervious area." To achieve this goal, the City's regulations in its Subdivision Development Control Bylaw were developed as a case study application for the provincial *Stormwater Planning: A Guidebook for British Columbia*. Several subdivisions now include source control water detentions facilities such as infiltration galleries, rock pits and detention ponds to manage up to ten year storm events. While the City requires developers to also construct conventional stormwater infrastructure to handle greater than 10 year events, it is examining the development cost charge structure from Oregon where developments that provide source control pay a lower fee. City engineers estimate that the City will save $15 to $20 million over the next 20 years because it will not have to upgrade its trunk sewer, pump station or canal.

www.wcel.org/issues/urban/sbg/Part2/Stormwater

In 2002, the City published its own Policy and Design Criteria Manual for Surface Water Management, as part of the Subdivision and Development Control Bylaw, to define the City's drainage planning approach and to provide developers and City officials with the necessary design criteria to implement the stormwater management objectives at a site level. The Manual is a key component of a five year action plan to integrate stormwater management and land use planning.

www.chilliwack.com/main/attachments/files/658/Surface_Water_Management.pdf

The province has created extensive resources for local governments on stormwater management, including *Stormwater Planning: A Guidebook for British Columbia* http://wlapwww.gov.bc.ca/epd/epdpa/mpp/stormwater/stormwater.html

An intergovernmental partnership has also developed a Water Balance Model program to assist municipalities to model water conveyance and drainage. It is an interactive tool that replicates how impervious surfaces, absorbent landscaping, infiltration facilities, green roofs and rainwater re-use affects water behaviour under different development circumstances.

www.sustainability.ca/Docs/Intergovernmental%20Partnership-%20Water%20Balance.pdf?CFID=620358&CFTOKEN=93452797

Manage Stormwater throughout the Green Infrastructure

Water, and the watercourses that hold and convey it, are a precious commodity. Many communities are facing water shortages, as well as enormous costs for accessing additional sources of water. Scientific evidence now shows that paving more than ten percent of a watershed affects its biological productivity. Municipalities are moving beyond only using setbacks and water quality guidelines for protecting watercourses to taking an integrated stormwater management planning approach that applies watershed goals at a site-specific and neighbourhood level. The objective is to put as much water back into the ground to support aquifers and streams while protecting and enhancing riparian habitat.

Stormwater Management as Ecological Restoration

The **Willowbrook Subdivison** at 650 MacKenzie in **Saanich** involved the alteration of a two hectare cow pasture, within the urban containment boundary and in a single family neighbourhood, to restore part of Swan Creek and allow housing to be built in what had been the 200 year floodplain. In return for gaining approval for 39 single family dwellings, the developer paid for the relocation and restoration of the portion of Swan Creek, and the construction of a series of stormwater treatment ponds that ensured that the housing was no longer located within the 200 year floodplain. Seventeen percent of the land was dedicated to Saanich as parkland, and the stormwater ponds were constructed in the new park and on a Saanich sanitary sewer right-of-way. An interdisciplinary team worked with the developer, regulatory agencies, municipal staff and neighbours to obtain support for the project.

www.wcel.org/issues/urban/sbg/casestudies/Willowbrook

Permit the Green Infrastructure to Shape the Block

Over the past 50 years the landscape has been flattened or filled to accommodate new development. The new value placed on the green infrastructure is changing this approach to one that tailors development to existing and desired natural processes.

"The shape of blocks is not random. In a sustainable community, the block design should satisfy two imperatives: (1) merge blocks with the landscape; and (2) maintain a high degree of interconnectivity and permeability. The recommended maximum standard block length for interconnectivity is 180 metres. Interconnected blocks are easy to understand and to get around in; they are also welcoming. Blocks modified by the landscape are distinguishable from one another and make unique and – literally – distinguished neighbourhoods. Capitalize on the site by allowing natural features to shape the block without eroding interconnectivity."

Patrick M.Condon, Jacqueline Teed and Sara Muir with Chris Midgley. Site Design Manual for BC Communities (2002) www.sustainable-communities.agsci.ubc.ca/projects/typology.htm

"The **East Clayton** pedestrian and bicycle network is a series of multi-use corridors that are to connect areas of public and natural interest with mixed-use and residential neighbourhoods. A key component of green infrastructure is that the proposed pedestrian/bicycle circulation system is designed to encourage alternatives to automobile travel and to provide opportunities for passive recreational use throughout East Clayton."

City of Surrey, East Clayton Neighbourhood Plan, p.86

Support Working Lands

Working lands (land used for agriculture, forestry or other resource industries) are both the backbone of many rural and near-urban economies, and important components of the green infrastructure. Crucial to sustaining working lands is to ensure that uses within agriculture and resources zones support an economy based on a working landscape, and that these lands are buffered from more urban uses. Large lot zoning, buffer specifications, and explicit regulations on accessory activities for processing, sales and other uses help to maintain the viability of farming and resource industries.

Between 1976 and 1996, the **Greater Toronto Area** (population 4.5 million) lost about 60,000 hectares (148,000 acres) of farmland, most of which was classed as prime agricultural land.[2] Thanks to the Agricultural Land Reserve, from 1974 to 2000 BC (population 4 million) lost significantly less: 13,193 hectares of prime agricultural land (32,600 acres), with no net loss of farmland.[3] Likewise, 2.7 percent of BC's land base provides over $1.4 billion or 78 percent of the Province's total gross farm receipts.[4]

The primary goal of **Spallumcheen** is to preserve the Township's agricultural land base. In the official community plan and zoning bylaws residential development is not encouraged and council will not support subdivision applications for land in the agricultural land reserve. Minimum lot sizes are 30.5 hectares and accessory farm sales and farmers markets are supported in all agricultural zones.

www.wcel.org/issues/urban/sbg/Part2/workinglands

Support Working Watersheds

In addition to supporting working lands, working watersheds that provide communities with drinking water require special management approaches. Through integrated management and using recycled water, working watersheds are better able to continue to supply an adequate quality and quantity of water.

Vernon has been a pioneer in water reclamation since the 1970's when the City decided to address the proliferation of Eurasian Milfoil (a foreign invasive aquatic plant) by decreasing the amount of phosphorus nutrients entering Okanagan Lake from the City's wastewater effluent. The late David MacKay of the Engineering Department gained support for using reclaimed water to irrigate and fertilize pastures in the south of the City. What began as a pilot project in 1971 became a permanent solution in 1977. Vernon's sewage receives primary and secondary treatment, and is then pumped through seven miles of pipe to an elevation of 1000 feet for storage in a reservoir. Approximately 13,000 cubic metres of water are added to the reservoir each day, and between May 1 and September 30 the City irrigates 2,500 acres of agricultural, recreational and forest land from the reservoir. Before irrigation the water is treated with chlorine to an "unrestricted access" standard. The irrigation project effectively replaces a tertiary treatment plant, and water quality has improved near Vernon in Okanagan Lake. At the time the system was constructed, the provincial government paid 70 percent of the cost, the federal government 15 percent, leaving the municipality to pay ten percent and operating costs.

www.wcel.org/issues/urban/sbg/Part2/water

See more resources on this topic in the *Guide* at www.wcel.org/issues/urban/sbg/Part2:
- UniverCity on Burnaby Mountain at Simon Fraser University in Burnaby that comprehensively addresses stormwater and healthy creeks, and Burnaby's integrated stormwater management plan and process for Stoney Creek
- Capital Regional District's water demand management program and coordination of three integrated watershed management plans
- Central Okanagan Regional District Agri-tourism definition and guest room limits
- Mill Bay/Malahat agricultural land protection policies, including 12 hectare minimum lot sizes and buffer specifications for the Agricultural Protection Development Permit Area
- Saanich's stormwater management approach of zero increase in post-development flows
- The East Clayton Neighbourhood Concept Plan in Surrey that creates a network of green infrastructure, and Surrey's buffer requirements adjacent to agricultural land

Create compact complete communities…

3…

…by mixing land uses and using land more efficiently

Smart growth is about choice – the ability to choose to walk to work or live in the same neighbourhood in different housing types throughout one's entire life. What is new about smart growth is the understanding that providing different housing choices increases the affordability of neighbourhoods, and that mixing uses in the same neighbourhood creates more vibrant communities. Municipalities are returning to traditional compact neighbourhood patterns where access to services from residences is five minutes on foot along tree-lined streets laid out in a safe grid street pattern. Neighbourhood commercial centres and frequent transit are supported by sufficient housing density, and a healthy green infrastructure creates a network of natural amenities.

With the focus on using existing infrastructure more fully, local governments are also tasked with defining what density means for their community. For most towns, density means townhouses, duplexes, secondary suites (suites in existing houses or accessory buildings) and low-rise apartments. This creates a diversity of housing types that allows individuals to meet their housing needs in the same neighbourhood throughout different life stages.

"Zoning is a privilege: zoning is a gift from the public"

Franc D'Ambrosio, D'Ambrosio Architecture and Urbanism

"…recent research supports the importance of quality of place as a key to competition in the New Economy. Richard Florida's conclusions are forceful: 'quality of place is absolutely vital in attracting knowledge workers and in supporting leading edge high-tech firms and industries. Regions must make quality of place central elements of their strategies to build high-technology economies…' Jobs are a necessary but insufficient condition to attract young knowledge workers…'community quality of life' was the second most important factor associated with the attractiveness of a new job. First came salary."

Federation of Canadian Municipalities, *Bridging the Innovation Gap: Count Cities In* (2002) www.fcm.ca/ newfcm/Java/gap.pdf

Mix Housing, Jobs & Green Infrastructure

Quality of life has a lot to do with access to and variety of recreation, employment, shopping and entertainment close to where one lives. Mixing uses in all neighbourhoods, and more intensively in neighbourhood centres, allows each function or amenity to fulfill several roles. A park is used for habitat, recreation, stormwater management and as part of the pedestrian infrastructure. A retail plaza features shopping, art and entertainment, and is a daily stop for coffee. The new library in Portland, Oregon takes mixed-use to a new level. In addition to its civic uses as a library, community gathering place and event venue, it includes housing and a green roof on the top of the building.

Doing More With Less Land

Because of the geographic and infrastructure cost constraints of continued suburban expansion and the desire to create more compact complete communities, many municipalities are focusing on using serviced land more efficiently. Appropriate residential densification can be achieved in most communities by encouraging:

- Secondary suites (see Part 6 – Create Inclusive Neighbourhoods);

The **Selkirk Waterfront** in **Victoria** was designed as a new mixed-use centre on an old sawmill site. A fifteen-minute walk from downtown, it is adjacent to the Gorge Waterway and Galloping Goose Regional Trail. The 24-acre site is a comprehensive development zone that allows industrial, institutional, office, commercial, and residential uses in a variety of building types. Services such as restaurants and a fitness centre/rowing club attract non-residents to the area. An elementary school and daycare operate on site, and the Vancouver Island headquarters for Centra Gas provides a buffer from the heavy industrial uses next door. The result is a vibrant mixed-use neighbourhood that met the developer's primary goal – to build a project of which his grandchildren would be proud.

www.wcel.org/issues/urban/sbg/casestudies/Selkirk

Okotoks encourages a suite of different housing types in an effort to attain its goal of a sustainable small town. To decrease energy use and the reliance on cars, the Town has substantially modified its urban design to create more mixed-use and higher density developments. Over 87 percent of community respondents to a Consumer Receptivity Survey said they would be interested in purchasing a home in the Intensive Employment District (Tucker Lands).

"The sustainable community goal to live-work-shop in an inviting and safe environment can overcome the conventional high auto dependence of traditional suburban developments. In a 'place-making dividend' design, the employment area density is higher than in typical suburban business districts. Also, buildings are oriented to the street, surface parking is minimized and pedestrian linkages are maximized. The density of office workers is higher than in retail-only areas. This translates into less land requirement than the 11 hectares originally targeted to achieve the Town's employment and live-work community goals."

CMHC, Sustainable Community Design Demonstration in Okotoks, Alberta: Testing Consumer Receptivity (2002)

www.wcel.org/issues/urban/sbg/casestudies/Okotoks

- Conversion of single family homes to multi-unit dwellings;
- Garden suites or granny flats above garages or as an accessory building to a single family dwelling;
- Zoning for duplex, triplex and four-plex structures in single family neighbourhoods;
- Townhouses;
- Infill projects on small lots where a single family lot is subdivided and an additional dwellings are constructed;
- Small lots and lots with zero lot lines;
- Ground-oriented apartments around neighbourhood centres.

See the Smart Bylaws Guide at www.wcel.org/issues/urban/sbg/Part3/compact for a host of examples and bylaws in this area.

How do different densities impact my community?

The **San Francisco League of Conservation Voters** developed a density calculator to show what different densities look like, and to calculate the impact of different densities on factors such as amount of land used, number of vehicles and parking required, local employment generated and gas and vehicle costs. Although San Francisco focused, users are able to insert desired densities for a more specific calculation. The site shows that no perfect density exists for towns and cities – a wide range of densities creates interesting, different neighbourhoods and provides renters and buyers with choices of housing, shopping and access to transit in all neighbourhoods.

www.sflcv.org/density/index.html

The **City of Kelowna** maintains a Residential Density Zoning Spectrum factsheet on its web site to show what types of residential development are typical in each zoning category.

www.wcel.org/issues/urban/sbg/Part3/density

Encourage Transit-Supportive Land Uses

Locations along existing and future transit lines are the logical places to encourage more intensive development because of their proximity to transit and commercial areas. Transit area zoning can apply to specific transit hubs, corridors, or transit network. These zones feature mixed-use, higher density developments that generate significant transit ridership (such as offices and apartments), and good pedestrian access. The proximity to transit, shops and other amenities means that many daily commercial needs can be met on foot.

Design Great Neighbourhoods

Design guidelines for more intensive development ensure that new neighbourhoods adhere to well-accepted design principles, and that infill development respects the character of existing neighbourhoods. Development that looks like it fits with a street demonstrates to residents that different types of housing are in single family neighbourhoods.

"If a corridor is long enough (up to eight miles [12.8 km]) and has a significant downtown as a job magnet, residential densities as low as ten units per acre can justify regular and direct bus services to the downtown core. This density is achievable with 50-by-120 foot residential lots with a duplex or a second unit on 50 percent of the parcels."

Local Government Commission and Steve Tracy, *Smart Growth Zoning Codes: A Resource Guide* (2003)

Fremont, California's *Design Guidelines for Small-Lot Single-Family Residential Development* were created to provide clear direction to developers on what the City expects for small lot proposals. The City provides flexibility in the planning of good quality developments under the small lot zoning provisions and expects variations in siting, lot sizes, density and setbacks, and/or non-conventional residential unit types. The Guidelines cover the topics of site planning, lot site plan, building configuration, building design, open space, and landscaping using clear photos and graphics.

www.wcel.org/issues/urban/sbg/Part3/Fremont

Central Saanich has design guidelines to clarify what is expected of infill and small lot developments for this suburban community where the objective is to retain the small town character and viable agricultural land base adjacent to a major centre.

www.wcel.org/issues/urban/sbg/Part3/design

See also the discussion of the Affordable Housing Design Advisor on page 35.

www.designadvisor.org

The glare from streetlights makes stargazing difficult in urban areas. Several jurisdictions, including **Saanich** and **Tempe, Arizona**, have adopted street lighting standards aimed at shielding the sky from light pollution, and directing the light downwards to where it will be used.

www.wcel.org/issues/urban/sbg/Part3/darksky

See more resources on this topic in the *Guide* at www.wcel.org/issues/urban/sbg/Part3:

- Apex, North Carolina's Unified Development Ordinance that provides excellent graphics showing development standards, building design features and neighbourhood layout
- Gresham, Oregon's maximum and minimum densities to assure that new development will support the transit corridor zones
- Kelowna's downtown neighbourhood zoning
- Nelson's town centre zoning
- Pleasant Hill, California's rapid transit Property Code and Architectural Standards that provide clear photos and graphics to show how the mixed-use zones will be developed
- Vancouver's zoning for single family home conversion to multifamily without changing the appearance of the home
- Victoria's density bonus for historic preservation and spot zoning for infill

Examples of multi-family housing forms and density that are appropriate for single-family neighbourhoods

Duplex

Single family conversion to 4 units

Fourplex

Ground-oriented multifamily

Ground-oriented multifamily

Increase transportation choices through land use decisions

4.00

The layout and design of streets shapes the culture of a neighbourhood. Streets affect mobility choices, safety in public places, and the quality of human interaction. They form the largest segment of public space in a community. The issue is how to design streets to increase the mobility of people and goods, the accessibility of transportation, and the quality of streetscapes. The best street standards create a pleasant streetscape where walking and cycling infrastructure is built in, and cars travel at safe speeds. Pubic amenities, such as sidewalks, transit shelters, bike parking and high occupancy vehicle lanes support the desired users. Parking is limited but other transportation modes are efficient and comfortable. It also means managing the demand for roads by prioritizing investment in infrastructure for non-automobile transportation.

The Move to Active Living

Transportation engineers, municipal governments, public health agencies, community organizations and fiscal responsibility advocates are all embracing "active living." Active living is a way of life that integrates physical activity into daily living. Land use plays a crucial role in creating active living communities, which support pedestrian, bicycle, and recreation activities integrated into all neighbourhoods. See, for example, the Institute of Transportation Engineer's papers on active living at www.ite.org/Conference/

Smart street design includes:

- A street and block pattern of an interconnected grid network that provides many routes for travel in the neighbourhood and disperses the impact of automobile traffic. Block lengths are between 90 and 240 metres (300 and 800 feet), with an average of 150 metres (500 feet). With rectangular-shaped parcels, an alley can provide rear garage access and eliminate curb cuts and driveways on the street;

- An hierarchy of streets within the interconnected grid with right-of-way width, pavement width, number of lanes, sidewalks, landscaping, and design speed clearly described;

- Streetscape features such as sidewalks, street trees and other landscaping, lighting and crosswalks shown with clear graphics. Sidewalks should be at least 1.5 metres (5 feet) wide in residential areas and 1.8 and 3.7 metres (6 to 12 feet) in mixed-use and commercial areas. Parkway strips of 1.5 to 3 metres (5 to 10 foot) buffer pedestrians from traffic and allow tree planting. Crosswalks should be provided mid-block if the blocks are longer than 90 metres (300 feet).

adapted from Local Government Commission and Steve Tracy, *Smart Growth Zoning Codes* 2003

Connect Destinations and Transportation Types

Historic towns featured streets that were connected in a grid network to provide different routes for travel and disperse the impact of traffic. An interconnected grid system of streets shortens the distance between destinations, making trips by bike and on foot more attractive. It is also used to connect transportation types by building in transit, bicycle and pedestrian infrastructure – both at major destinations, such as shopping and office areas, and along safe travel corridors for the different modes.

The new **East Clayton Neighbourhood Plan** in **Surrey** is a model of smart growth streets. Some of the performance objectives in the Plan include to "[e]nsure pedestrian priority of pedestrians over vehicles along all local residential streets with minimum driveway interruptions…[m]aximize opportunities for extending the fine grained interconnected pedestrian/bike circulation system to increase options for passive recreational opportunities for all age groups..[e]nsure that commercial and transit services are within a 400 metre (1/4 mile) walk-able radius of all residences." The Road Network Plan uses a modified grid system of local and minor collector streets, with a focus on short blocks and rear lanes to provide many route choices and a refined pedestrian/cyclist network. On-street parking is encouraged, and driveways must be on the lane where lanes exist. The Plan sets out detailed road standards in charts, as well as diagrams for each street type. Streets are also seen as a key component in meeting environmental protection goals and include street drainage that emphasizes stormwater infiltration and street trees as part of the "urban forest."

www.wcel.org/issues/urban/sbg/casestudies/EastClayton

Tailor Road Requirements to their Preferred Uses

Wide suburban roads may empty automobile traffic quickly onto arterial throughways, but they do not provide a safe route for children walking to school. Many municipalities are more closely tailoring street standards to their intended uses to decrease the cost of construction and maintenance. Avoiding excess road widths also ensures that traffic speeds fit into the character of neighbourhoods.
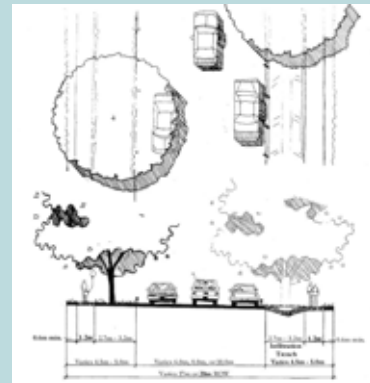
Highlands has specific road standards designed to meet the requirements of traffic calming, environmental protection, and minimizing the area of land devoted to the automobile. The regulations set maximum widths to ensure small, narrow, and windy roads in keeping with the character of the municipality. Coupled with the strict revegetation standards, the use of swales, and requirements for minimum clearing to discourage scotch broom, most new roads quickly integrate into the rural setting.

Calming Traffic

In response to inappropriate use of residential streets for larger volumes of cut-through traffic, many neighbourhoods are working with municipalities on traffic calming. Traffic calming refers to the physical structures on roads used to reduce vehicle speeds, and restore a safe route for pedestrians and cyclists. These include curb extensions, centre islands, speed bumps and roundabouts.

www.wcel.org/issues/urban/sbg/Part4/trafficcalming

Portland, Oregon's urban core is renowned for combining high densities with excellent transit and amenities to make a very livable city. In several zones in the core there are no minimum parking requirements while parking maximums are low. The zoning also offers car sharing, car-pooling and other provisions for reducing parking, and details long- and short-term bicycle parking requirements.

The compact transit-oriented P11-E District in Burnaby has very low parking requirements (1 per unit with a 0.2 increase for every bedroom above the baseline, and 0.2 per unit for visitors).

www.wcel.org/issues/urban/sbg/Part4/parking

Scale Parking to Neighbourhood Needs

In smart growth neighbourhoods, parking lines the streets to create a buffer for pedestrians and reduce the amount of land dedicated to off-street parking. Working with curb extensions at intersections and mid-block, on-street parking also helps to decrease the speed of traffic. The parking requirements in most zoning bylaws are intended to meet peak parking demand for non-residential developments, but are underused for most of the year. Strategies such as shared parking, minimum parking standards, counting on-street parking as part of parking requirements, and locating parking lots behind buildings minimize the impact of parking on neighbourhoods.

Manage Transportation Demand

Transportation demand management focuses on reducing the demand for road capacity, rather than building more costly road infrastructure. Techniques include increasing transportation choices, adopting land use patterns that encourage non-automobile forms of transportation, and trip reduction or carpooling programs.

When **Kamloops** decided to decrease projected infrastructure costs over the next 20 years, it aimed to reduce total vehicle hours traveled by 35 percent over projected growth. By adjusting the distribution of land use, the City is focusing on infill, redevelopment, mixed-use and special development areas in its TravelSmart Program. It also undertook a Community Energy Plan to address other energy use and supply issues such as integrating energy and community planning.

The **University of Victoria Students' Society** worked with BC Transit to develop a bus pass system for students that is paid for as part of student fees. The UPass was approved by a vote of the students in 1999, and in the first four months of its use transit ridership to the University increased by 30 percent. Both the University of British Columbia and Simon Fraser University have adopted Upass systems, and a one year bus pass will be provided to the first residents of the Cornerstone Building in the UniverCity project.

Both **Vancouver** and **Toronto** have parking programs where developers can contribute $10,000 per required parking stall (average cost is $15,000 per stall) towards off-site facilities or to a general fund aimed at reducing the need for parking spaces.

www.wcel.org/issues/urban/sbg/Part4/parking

See more resources on this topic in the *Guide* at www.wcel.org/issues/urban/sbg/Part4:

- Apex, North Carolina's zoning that requires narrow, tree-lined streets with sidewalks designed to slow traffic
- Burnaby's urban trail network designed for non-motorized transportation and its flexible parking standards near transit stations
- Dade County, Florida's zoning that limits blocks to a 1,300 foot perimeter and 400 foot length (or less), with alleys
- Hillsboro, Oregon where local and minor collector streets have a target design speed of 40 kilometres per hour (25 miles per hour) or less and the zoning requires bicycle parking near light rail stations
- Kelowna's Transportation Demand Management Business Plan
- Local Government Commission's resources addressing fire department concerns about innovative street retrofits and design
- *Online Transportation Demand Management Encyclopedia* www.vtpi.org/tdm
- Vancouver's maximum parking requirements for downtown office buildings
- A variety of Design Guidelines for streetscapes

Create inclusive neighbourhoods...

5...

...by ensuring that a diversity of housing types are accessible to a wide range of people of different age groups, family types and incomes

Smart growth includes seniors relocating within their home neighbourhoods when it comes time to move out of their single family residence. Smart growth also includes affordable housing choices for families with children in existing neighbourhoods close to services and employment. Housing options close to employment, such as townhouses, duplexes, and ground-oriented apartments, are unavailable in many communities.

The affordability of housing depends on many factors, but it rings true for all growing communities that housing is becoming less affordable. Affordable housing is housing that is safe, appropriate and accessible and where rent or mortgage plus taxes are 30 percent or less of the household's gross annual income.

Two factors are having a drastic impact on the housing choices available in BC communities – the type of housing being built and changing household characteristics. Over the past 20 years new housing in most communities has been predominantly single-family detached dwellings in new suburban neighbourhoods. This has weighted the housing stock in favour of larger, less affordable detached houses. At the same time, the changing demographic of BC shows that smaller housing forms close to commercial centres are needed. Elders will soon comprise 25 percent of the population, while families without children and single person households are on the rise. This changing market means that a greater mix of housing types in all neighbour-hoods and on all streets are required to allow people in different life stages to remain in the same community. These factors have created an historic opportunity for smart growth in BC to increase the variety, choice and affordability of housing.

Diversify Housing

Zoning bylaws are becoming more complex as municipalities allow a greater range of housing choices in each neighbourhood. Infill offers great potential for increasing housing affordability as many smaller communities have significant capacity to develop or redevelop more compactly. Infill means building one or more dwelling units on a site already containing one or more existing buildings, some or all of which are retained. Infill can also be achieved through the conversion of single-family dwellings into multiple dwellings without changing the building footprint or character of the existing structure. Municipalities are using density bonuses to encourage medium-density mixed-use (three to four storey apartment with office and retail on the ground and second floors) and high-density developments. A developer who opts for a density bonus receives more units in return for providing amenities such as underground parking, parkland, landscaping, public art, daycare facilities, price-controlled units, rental units and preservation of heritage features.

See Part 4, Doing More with Less Land, above, for a variety of strategies that diversify housing.

Legalize Secondary Suites

A secondary suite is an accessory dwelling located within the structure of a principal single-family detached dwelling, townhouse or strata titled apartment. Secondary suites create affordable housing in serviced areas without changing the character of neighbourhoods. They increase the number of residents living in an area, thus making neighbourhood commercial uses and transit more viable, and increase the diversity of housing types. They also increase property tax revenues for municipalities. Several BC municipalities found that parking and noise complaints did not increase when secondary suites were legalized, and a high degree of support for suites remains in those communities.

Suburban development actually increases housing prices over time. Even though per hectare land prices are higher in urban centres than at the periphery, suburban lots and houses tend to be larger. If a community is growing predominantly through suburban expansion without developing more compactly in core areas, building larger homes on larger lots at the urban fringe means that the per unit cost of housing increases even though the land costs are lower. This can sway the total housing stock in favour of larger single family homes in suburban locations, and away from more affordable types such as apartments and townhouses.

After conducting a survey of homeowners and holding public meetings to determine that a majority of citizens accepted suites in the community, **Port Coquitlam** legalized secondary suites located in all RS zoned neighbourhoods that do not have covenants on title. One suite is allowed in all single family residences up to 90 square metres in size or 40 percent of the habitable space. In an effort to make suites visible and accessible, the City does not require additional parking, inspections, or owner-occupation. While all new secondary suites must be built to Building Code standards, the City assumes that existing suites are built to Code and provides residents with information on upgrading suites. The City's policy decision not to inspect a suite unless a complaint is received attracts no additional liability to the municipality. It will enforce the Code for duplexes that are converted to fourplexes. Owners are billed an annual utility fee of $582. The City has found no noticeable impact, such as increase in complaints or parking problems, from the legalization of secondary suites. The program has removed the stigma against suites, and residents who live in suites are participating more actively in City programs such as dog licensing.

www.wcel.org/issues/urban/sbg/Part5/2suites

New zoning for the mixed-use development called **UniverCity** in **Burnaby** at **Simon Fraser University** allows suites in strata townhouses or apartments. Called "multi-family flex units," these minimum 74 square metre (796.5 square feet) dwellings contain a defined area for potential rental accommodation. The potential rental must be at least 24 square metres (258.3 square feet) and not more than 35 percent of the gross floor area of the dwelling. It must contain a secondary kitchen area, closet and bathroom, and must be wired for an independent telephone connection, as well as have a separate lockable entrance door providing direct access to the exterior of the dwelling unit. Not less than ten and not more than 50 percent of units in a multi-family dwelling shall be flex units, and the dwelling must provide a common washing machine and dryer for every 20, or part thereof, multi-family flex units. If the unit is available for rent it must be registered with the student housing registry at the University.

www.wcel.org/issues/urban/sbg/Part5/2Suites

Whistler is addressing its employee housing crisis by encouraging the construction of secondary suites. Attached and detached suites may be built within a property owner's existing allocation of gross floor area. In most RS zones, the zoning bylaw already dictates that a suite cannot be used for tourist accommodation. The municipality recently amended its zoning bylaw to allow a density bonus for employee suites. In the residential RS1, 2 and 3 zones, a density bonus of up to 56 square metres (600 square feet) is permitted for a restricted employee suite. To ensure that the suite remains affordable, the property owner is required to place a covenant on title to set a maximum rental rate at $1.25 per square foot and, in the event of a strata subdivision of that space, to limit the resale of the suite space to $125 per square foot. This density bonus is only permitted where a 0.35 floor space ratio is possible.

www.wcel.org/issues/urban/sbg/Part5/densitybonus

Support Rental Housing

The construction of new rental housing is becoming rare. Several municipalities have regulations specifying the conditions under which the redevelopment of affordable rental housing to condominiums or other uses such as hostels will be allowed, and others are offering density bonuses in return for rental units.

"The conversion of rental multi-family dwelling units to strata title multi-family dwelling units will not be approved unless the rental vacancy rate within the **District of Salmon Arm** is four per cent or greater."

District of Salmon Arm OCP

The **Victoria Cool Aid Society** developed **Mike Gidora Place** to provide affordable, safe and independent housing for low income urban singles in **Victoria, BC**. The building in the downtown core houses 45 small residential units (250 square feet) and space on the ground floor for office, retail and community uses. Financially, the project involved a number of public and private loans and grants. The grant to do the initial feasibility study was provided by the federal government, with construction financed through mortgages, grants and equity contributions from banks, the City of Victoria, and private foundations. The provincial government has provided a fifteen year subsidy to ensure that ten of the units remain rentable at the level allowed by the provincial shelter allowance for individuals on social assistance. Overall, the rents average 87 percent of market value which appears high for "affordable housing," however comparable suites in the downtown core are almost nonexistent. The mix of unit sizes and amenities ensures a greater diversity of tenants, thus stabilizing both the Project and downtown community's economic and social composition. The Project has no dedicated parking associate with it, thus decreasing its cost. The building is located next door to the Downtown Activity Centre where residents can obtain other services, and the Society notes that simply providing stable housing allows many low-income residents to improve other aspects of their lives.

www.wcel.org/issues/urban/sbg/casestudies/MikeGidora

Support Non-Market Housing

Because the market will not supply all forms of housing, municipalities are becoming innovators with non-profit housing corporations to integrate non-market housing into neighbourhoods. BC municipalities support the development of non-market housing by contributing staff time and services, donating land, providing long-term leases on municipal land, and decreasing or eliminating parking requirements.

A ten-year study in seven BC communities showed that social housing projects had no negative effect on the sale price of single-family detached homes in the same neighbourhood. In all cases, average sales prices had increased substantially since the non-market homes were constructed.

Ministry of Community, Aboriginal and Women's Services, *Impact of Non-Market Housing on Property Values* (2000) www.mcaws.gov.bc.ca/housing/00_Jan_PropVal.html

Victoria sold land being used as a City parkade exit for $1 to the Cool Aid Housing Society for Mike Gidora Place. In return, the Society provided a three metre easement to the City for a smaller exit. **Grand Forks** provided a 25-year lease for an affordable housing development called The Gables.

www.wcel.org/issues/urban/sbg/Part5/nonmarket

Great Neighbourhoods by Design

Many communities use design guidelines for infill, industrial, commercial and multifamily developments. Design guidelines can ensure that new development is attractive and fits into a neighbourhood. They can be formally adopted as part of development permit areas and rezonings.

The **US Department of Housing and Urban Development** hosts an extensive web-based resource titled the **Affordable Housing Design Advisor**. It includes case studies, a design gallery, checklists, and other resources intended to help developers and municipal officials understand the design process and improve the design quality of their own projects. Indexes, such as for special design characteristics or dwelling type, allow users to search the site for projects containing specific features. The Design Considerations Checklist explains over 60 recommended design principles in the areas of parking, building appearance and location, public and private open space, landscaping and unit layout.

www.designadvisor.org

See more resources on this topic in the *Guide* at www.wcel.org/issues/urban/sbg/Part5:
- Canadian Home Builders (Victoria) and Saanich affordable housing project designed to provide a template for collaborative multifamily projects
- Victoria's conversion policy for pre-1970 houses

6. Maximize the enduring benefits of developments…

…by using resources wisely on sites and in buildings that are tailored to specific neighbourhood conditions

Each community, neighbourhood, and site is unique. To reflect this diversity, municipalities are tailoring development standards to site-specific conditions using zoning, development permits, and covenants. This unique treatment increases the attractiveness of developments by providing amenities on site and nearby, and integrates sites into the larger vision for the community and system of green infrastructure. This trend is particularly evident in the high-performance building field (energy, water and resource efficient buildings) where the uptake of green building technologies and the Leadership in Energy and Environmental Design Building Rating System has been exponential in BC over the past three years.

Use Site Resources Wisely

While the green infrastructure shapes the block, it also shapes the site. Local governments can use tools such as subdivision standards, development permits and conservation covenants to ensure that buildings and uses are properly situated to maximize the use of the site for private and public means.

The **Highlands** has secured hundreds of acres of public parkland while clustering subdivisions in a small portion of a larger site. The continued integrity of the private greenspace, which forms part of the connected ecological network in the municipality, is secured through conservation covenants.

Redevelop Brownfields & Greyfields

Brownfields (unused industrial lands that may or may not be contaminated, or that have been remediated) and greyfields (aging strip malls and shopping centres) offer great opportunities for growth in serviced areas because they are often sizeable tracts of land. Municipalities can plan for mixed-use and diverse developments in these locations that can include housing, office and retail, civic uses and light industrial. Old industrial lands can also be refurbished using smart growth principles, most notably integrating the green infrastructure and supporting transit and other transportation modes, to accommodate new industrial uses.

Redeveloping at All Scales

Koo's Corner in Vancouver involved the redevelopment of an automotive repair shop in a single family neighbourhood into six units. On the corner lot, the developer added on to an existing structure using several green building features.

www.wcel.org/issues/urban/sbg/casestudies/Koos

The **Selkirk Waterfront** is a 24 acre redevelopment of an old mill site in Victoria that includes industrial, commercial, office, retail, school and residential uses.

www.wcel.org/issues/urban/sbg/casestudies/Selkirk

The **District of North Vancouver** held a design charrette to collect the best ideas for an eco-industrial network park as the redevelopment strategy for its aged industrial waterfront lands.

www.wcel.org/issues/urban/sbg/Part6/eco-industrial

Create High Performance Buildings

Over the past decade the building industry has embraced making buildings more healthy and pleasant to work and live in through high quality design and materials. The LEED (Leadership in Energy and Environmental Design) Green Building Rating System is the industry standard for evaluating how sustainable a building is, taking into account site location and design, energy and water efficiency, the source and content of materials, indoor environmental quality, and innovation in the design process. The purpose is to ap-

proach the design of buildings from a systems perspective, accounting for the impact the building will have on the surrounding environment, transportation systems and industry as well as on the users.

The **Vancouver Island Technology Park** (VITP) in **Saanich** was awarded the first LEED Gold certification in Canada. It was also constructed on the same timeline and budget as a conventional building. The former hospital is located on a suburban site next to a community college. Green building features include energy efficient lighting and computers that reduce the heat load in the building, waterless urinals, dual flush toilets, no-irrigation landscaping, movable walls that create an adaptable building, low-volatile organic compound carpets and paints, and space-saving features such as sliding office doors. Saanich decreased the parking requirements at the site by 50 percent because of the transit access and bike route on site. Commuters can use the on-site gym and indoor bike storage. VITP goes beyond LEED certification by managing all the stormwater through infiltration and detention in swales and ponds, a strategy that saved $500,000.

www.wcel.org/issues/urban/sbg/casestudies/VITP

Portland, Oregon obtained the first City-specific LEED standard that reflects its more rigorous standards in the areas of stormwater management, erosion control and energy efficiency. The Portland LEED provides a green building incentive structure where developers can receive innovation credits for mixed-use developments that reduce automobile use, manage stormwater on site and maximize the construction and demolition materials that are recycled.

www.wcel.org/issues/urban/sbg/Part6/LEED

Tofino and Port Edward require new developments to incorporate water saving features such as low flow showerheads and low flush toilets. While water supply is not a problem for Port Edward, the cost of wastewater treatment makes the quantity of effluent flowing through their new plant an important issue.

www.wcel.org/issues/urban/sbg/Part6/water

See more resources on this topic in the Guide at www.wcel.org/issues/urban/sbg/Part6:
• White Rock's new LEED accredited municipal building
• University of British Columbia's C.K. Choi building

Support municipal goals through cost recovery…

7.

…by ensuring that development cost charges and property taxes reflect the true cost of different types of growth

Municipalities may recover part of the costs for roads, parks, sewer and water infrastructure that new development incurs for a municipality. Across BC most municipalities charge these development cost charges (DCCs) on a per unit (for residential development) or square foot (for commercial development) basis. These calculations rarely take into account whether the development can take advantage of existing infrastructure. No municipality in BC takes green building technologies into account. Fine tuning DCCs and other cost recovery mechanisms helps municipalities to more equitably account for the cost of new development.

Fine Tuning Development Cost Charges

The cost of development for municipalities is lower if existing infrastructure can be used for more units. In several municipalities this figure is around $5,000.[5] This includes new buildings incorporating water efficient techniques and locating development in serviced areas to decrease the demand for road infrastructure. DCCs can reflect these differences in cost, and encourage more efficient development.

Kelowna has a detailed DCC program. DCC charges vary by type of infrastructure and by area within the municipality. For example, the DCC bylaw designates six different areas for road DCCs, four for water, three for sanitary sewer and one area for each of parks and storm drainage. Multifamily charges vary by density, and commercial charges vary by density for the drainage component. The result is that charges differ considerably by location and density. For example, the total DCC for a 1.4 floor area ratio apartment project of 1000 square foot units would be $7,605 per unit in the City Centre while it would be $13,097 in the South Mission area. For single family, in Dilworth the total DCC is $9,881 per lot and in South Mission the DCC is $17,205 per lot. Kelowna is currently updating its DCC charges to include four different residential density charges.

www.wcel.org/issues/urban/sbg/Part7/dcc

Providing Fiscal Incentives: Property Taxes

Local governments have some ability to encourage property owners to sustain the green infrastructure, such as by decreasing property taxes when a conservation covenant has been placed on riparian land. This approach makes fiscal sense because landowners who help to maintain the green infrastructure will decrease municipal costs over the long term.

Understanding Fiscal Impact Analysis

The costs and benefits of new development are complex and dependent on many changing factors. Evaluation methods vary, and it is important for municipal councilors and staff to understand how to assess the accuracy of project information.

See more resources on this topic in the *Guide* at www.wcel.org/issues/urban/sbg/Part7:
- *Evaluation of Development Cost Charges in BC* with recommendations about how to make them more accurately reflect smart growth goals
- Nanaimo's absence of housing DCCs in the downtown area.

Gibsons lowers property taxes for landowners who protect riparian areas using a covenant.

www.wcel.org/issues/urban/sbg/Part7/taxes

The *Online Transportation Demand Management Encyclopedia* contains a detailed chapter on transportation evaluation methods and how they can be used to evaluate the value of transportation demand management programs.

www.vtpi.org/tdm/tdm14.htm

The **National Resources Defense Council** published a primer for local governments on the basics of fiscal impact analysis to assist decision-makers with understanding the potential revenues and costs of development. Different types of developments have different revenue-to-cost characteristics. Both costs and revenue patterns differ too if developments attract different types of residents or business activities. This guide provides citizens, planners, local officials and others concerned with growth issues with an explanation of the accounting practices used to value new development.

www.nrdc.org/cities/smartGrowth/dd/ddinx.asp

Promote smart growth throughout the development process...

...by reforming administrative processes and addressing liability issues

When planning and project approvals take an inclusive and results-based approach, the development process works more efficiently. It also works more harmoniously because citizens have helped to set the vision for their community and understand where and how development will occur. Acrimonious hearings and slow approvals deter developers from trying innovative projects, and create mistrust between a local government and its citizens. By encouraging ongoing community dialogue – from the development of official community plans to the design of traffic calming infrastructure – many municipalities are creating a culture of cooperation where the final product is appropriate for a neighbourhood and contributes to a regional vision for compact complete communities.

Gain Community Support

At first glance it may appear that asking developers to gain community support before coming forward with a project will add significant time and costs to the project. However, many complex projects have been rejected or stalled at public hearings after the developer and community have been engaged in a hostile discussion in the media. Other projects have received council accolades because the developer has worked effectively with the community and staff to create a high quality project that has addressed neighbourhood concerns.

Saanich asks developers to meet with the appropriate neighbourhood associations and discuss their concerns before making a formal application to the municipality. This approach has improved the dialogue between citizens, developers and the municipality, and ensures that neighbourhood issues are addressed before they come to council.

www.wcel.org/issues/urban/sbg/Part8/support

Integrate Project Management

When developers are asked why they do not bring forward innovative projects more often, they respond that they cannot afford the added time involved in securing municipal approvals. Municipal staff in different departments do not sit down together to work out approvals issues, and the rejection of one aspect of a project can change the entire project. Some local governments are addressing these problem by taking an integrated project management approach to more complex developments so that approvals can be worked out collaboratively. The municipal team meets with the developer's team on a regular basis to solve problems and move the project forward on a schedule.

Provide Clear Direction

Developers are also unwilling to try something new when a municipality is not clear on its own priorities. Providing clear performance-based standards or specific objectives helps municipal staff and developers to work together to achieve measurable goals.

Victoria staff met bi-weekly with the developer's team to address project issues for the 23 acre Selkirk Waterfront project. The rezoning (to a comprehensive development zone), subdivision, and approval of the Urban Design Guidelines took nine months and was adopted by City council with the support of the neighbourhood association.

www.wcel.org/issues/urban/sbg/casestudies/Selkirk

Chilliwack's Policy and Design Criteria Manual for Surface Water Management relies on excellent graphics and calculations to provide clear design criteria that show how to comply with performance standards for stormwater source control, detention and conveyance. It also outlines the technical information that developers must submit to the City to gain development approvals.

www.wcel.org/issues/urban/sbg/Part8/direction

Runoff from the roads in the new development on **Burnaby Mountain** is infiltrated back into the soil using swales and catchment areas. The **City of Burnaby** agreed to allow this approach, without requiring an additional back-up scheme of conventional pipes, if the developers agreed to adjust future systems if problems emerged. The developer also agreed to an adaptive management approach where it will monitor the system over time to evaluate its effectiveness and increase the knowledge about how such systems work in a wet, hilly climate. This will allow the owners to adjust the system as its function changes.

www.wcel.org/issues/urban/sbg/Part8/risk

Assess the Merits of Development

Quantifying the real benefit and costs of new development requires standards against which municipal staff and officials can evaluate individual projects. Several checklists exist that help local government to assess projects and bylaws when measured again the communities long-term goals and standards. They provide a consistent approach to determining whether a new project is indeed smart growth.

Address Risk

Concerns about liability stop innovative projects. This is particularly evident in the area of surface stormwater drainage. Developers and municipalities are addressing risks through adaptive management agreements (evaluating the performance of new management approaches and changing practices over time as experience is gained on a project) and monitoring. By requiring ongoing monitoring of new technologies and approaches, municipalities are building up a body of knowledge that will decrease liability concerns about new approaches over the long term.

See more resources on this topic in the *Guide* at www.wcel.org/issues/urban/sbg/Part8
- Kelowna's Neighbourhood Satisfaction Survey and public education on the benefits of mixed housing forms
- Municipal Insurance Association's new Model Building Bylaw that clarifies roles for those involved in developments
- Saanich's Environment and Social Review process
- The Vancouver Island Technology Park in Saanich where the project manager agreed to replace waterless urinals if they did not meet health standards

Conclusion

British Columbia municipalities have already chosen the smart growth path at the fork in the road, and are setting examples at a North American scale for good development. Innovative councils and staff are continually improving on new approaches and technologies. What lags behind are the bylaws and policies that dictate how development occurs. This Smart Bylaws Guide is designed to provide easy access to some of the best municipal regulations in BC, and help municipalities to more easily improve their quality of life while decreasing costs over the long term.
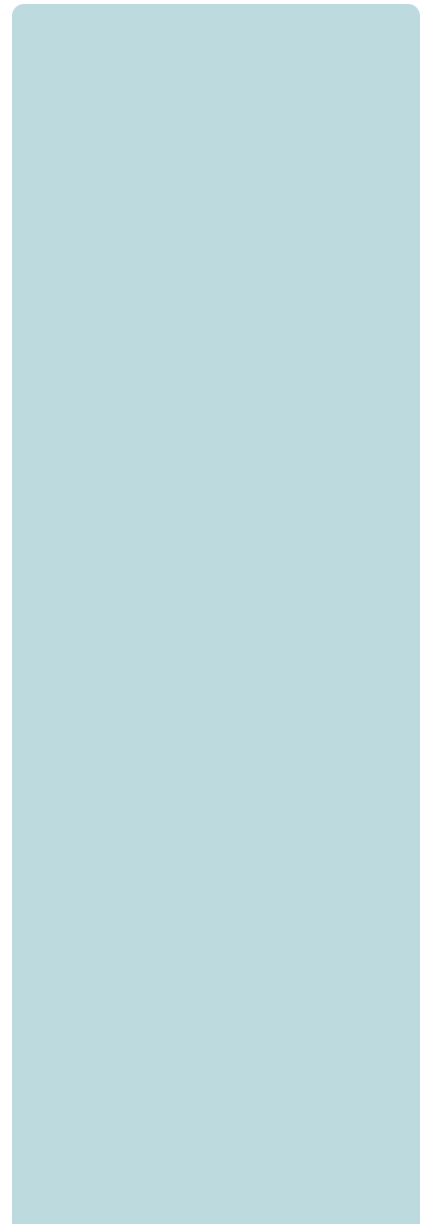
Glossary of Terms Related to Smart Growth

Adaptive management - evaluating the performance of new management approaches and changing practices over time as experience is gained.

Affordable housing – housing that is safe, appropriate and accessible and where rent or mortgage plus taxes are 30 percent or less of the household's gross annual income.

Brownfield – unused industrial lands that may or may not be contaminated, or that have been remediated.

Charrette – a neighbourhood or centre design process where a multidisciplinary team (including residents, business owners, the municipality and design professionals such as architects and landscape architects) creates a visual plan for an area over the span of several days.

Cluster development – concentrating development on smaller lots on a portion of a larger site to protect the integrity of the green infrastructure

Community Energy Planning – the consideration of energy supply and demand in regional, urban and neighbourhood design and development. It involves efficiency in land use, transportation, site planning, building design, retrofits, and infrastructure design, as well as development of renewable energy. The goal is more environmentally, socially and economically sustainable communities.

Demand management – strategies to reduce the demand for a resource, such as water or road space, rather than supply more of the resource. Transportation demand management techniques include increasing transportation choices, adopting land use patterns that encourage non-automobile forms of transportation, and trip reduction or carpooling programs. Water demand management techniques include water metering, water-efficient fixtures, and outdoor watering limits.

Density – the amount of residential, commercial or industrial development permitted on a parcel of land. It is usually measured in dwelling units per acre or floor space/area ratio.

Density bonus – voluntary scheme in zoning bylaws that enable developers to build additional units in return for public amenities such as affordable housing, underground parking, parkland, and daycare facilities.

Development cost charges (DCCs) – the expenses for roads, parks, sewer and water infrastructure a municipality may recover from a developer as part of the costs that new developments create.

Development permit area (DPA) – areas designated in the official community plan to which special regulations apply. A DPA may be designated to protect the environment, control the design of intensive (including single family) development, and control the design of commercial development.

Engineered ecology – wetlands, ditches, green roofs, and trees that are constructed to fulfill ecological functions and form part of the green infrastructure.

Environmentally sensitive area (ESA) – areas of valuable ecological features, habitat, or species that are protected from urban development (even if they are in an urbanized area).

Floor area ratio – the ratio between the total floor area to be built on a site and the size of a site.

Garden suites or Granny Flats – Detached suites on single family lots above garages or in accessory buildings.

Green building – see High performance building.

Green infrastructure – the ecological processes, both natural and engineered, that act as the natural infrastructure. It includes ditches, creeks, wetlands, parks, open space, trees, green roofs, gardens, working lands, aquifers and watersheds that supply drinking water.

Greyfield – aging strip malls and shopping centres.

High performance building – buildings that incorporate a variety of sustainability features such as energy and water efficiency, natural stormwater management, and indoor environmental quality.

Infill – building housing or other buildings on a site already containing existing buildings, some or all of which are retained.

Impervious surfaces – surfaces of land where water cannot infiltrate back into the ground such as roofs, driveways, streets and parking lots. Total imperviousness means the actual amount of surface taken up with impervious surfaces. Effective imperviousness means how the site acts given its total impervious cover. A site with total imperviousness of 60% can act like a site with only 10% imperviousness if strategies such as channeling roof runoff into the garden and using swales to capture rainwater from the driveway and sidewalk are used.

Intensification – redevelopment of existing neighbourhoods, corridors or commercial areas at higher densities.

Mixed-use zoning – areas where several uses are allowed in a pedestrian- and transit-friendly design. These zones usually include retail, residential, commercial and civic uses.

Nodal development – concentrating new development into centres with existing infrastructure capacity and serviced by transit.

Official Community Plan (OCP) – An official community plan is a statement of objectives and policies to guide decisions on planning and land use management, within the area covered by the plan (usually an entire municipality or parts of regional districts). An OCP establishes how a local government will grow.

Secondary suite – an accessory dwelling located within the structure of a principal single-family detached dwelling, townhouse or strata titled apartment.

Traffic calming – physical structures on roads used to reduce vehicle speeds, and restore a safe route for pedestrians and cyclists, including curb extensions, centre islands, speed bumps and roundabouts.

Transit-supportive or transit-oriented development – development that is greater than 10 units per acre and designed along transit corridors.

Urban containment boundary (UCB) – lines drawn on planning maps around developed areas showing where urban land ends and rural land begins. UCB's are supported by zoning and infrastructure policies.

Working lands – land used for agriculture, forestry or other resource industries.
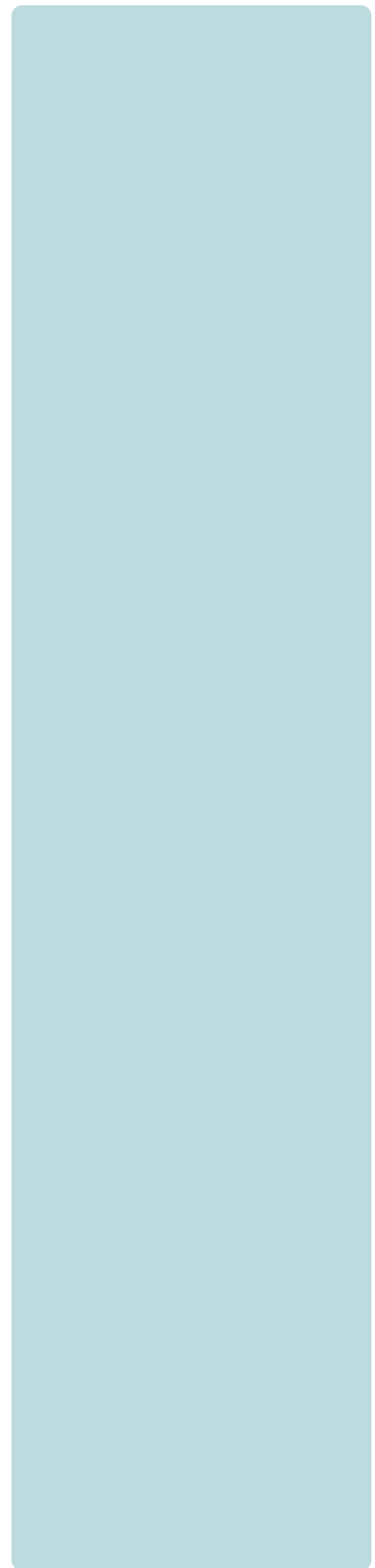
More Resources

Condon, Patrick, Jacqueline Teed and Sara Muir with Chris Midgley. Sustainable Urban Landscapes: Neighbourhood Pattern Typology (2002)
www.sustainable-communities.agsci.ubc.ca/projects/typology.htm

Condon, Patrick, Joanne Proft, Jacqueline Teed & Sara Muir. Sustainable Urban Landscapes: Site Design Manual for BC Communities (2002)
www.sustainable-communities.agsci.ubc.ca/projects/DesignManual.html

Curran, Deborah. *Economic Benefits of Natural Greenspace Protection* (2001) www.smartgrowth.bc.ca/downloads/Economic Benefits of Natural Green Space Protection.pdf

Curran, Deborah & May Leung. *Smart Growth: A Primer* (2000) www.smartgrowth.bc.ca/downloads/SmartGrowthPrimer.pdf

Nowlan, Linda, Chris Rolfe & Kathy Grant. *The Smart Growth Guide to Local Government Law and Advocacy* (2001)
www.wcel.org/wcelpub/2001/13300.pdf

Smart Growth BC. *Smart Growth Toolkit* (2001)
www.smartgrowth.bc.ca/index.cfm?Group_ID=3383

Smart Growth Network & International City/County Management Association. *Getting to Smart Growth: 100 Policies for Implementation* (2002) www.smartgrowth.org/pdf/gettosg.pdf

West Coast Environmental Law, *Cutting Green Tape: An Action Plan for Removing Regulatory Barriers to Green Innovations* (2002)
www.wcel.org/wcelpub/2002/13724.pdf

Web Sites

1000 Friends of Oregon www.friends.org

Better Environmentally Sound Transportation
www.best.bc.ca

CivicInfo www.civicinfo.bc.ca

Federation of Canadian Municipalities www.fcm.ca

International Downtown Association
www.ida-downtown.org

James Taylor Chair in Landscapes and Livable Environments
UBC www.sustainable-communities.agsci.ubc.ca/about.html

Low Impact Development Centre
www.lowimpactdevelopment.org

New Rural Economy
www.landcentre.ca/lcframeweb.cfm?ID=5382

New Schools Better Neighbourhoods www.nsbn.org

Ontario Smart Growth Network
www.greenontario.org/smartgrowth

Pedestrian and Bicycle Information Centre
www.walkinginfo.org

Project for Public Spaces www.pps.org

Smart Growth BC www.smartgrowth.bc.ca

Smart Growth America www.smartgrowthamerica.org

Smart Growth Network www.smartgrowth.org

Sustainable Communities Network www.sustainable.org

The Land Centre www.landcentre.ca

US Green Building Council www.usgbc.org

Victoria Transport Policy Institute www.vtpi.org

West Coast Environmental Law www.wcel.org

Endnotes

[1] Andrew Ramlo, Change Management: A Framework for Community and Regional Planning (2000).

[2] Neptis Foundation, quoted in Linda Pim and Joel Ornoy, *A Smart Future for Ontario* (2002) www.ontarionature.org/enviroandcons/issues/sprawl.html.

[3] Calculated from figures available from the Agricultural Land Commission www.alc.gov.bc.ca.

[4] Barry Smith, Planning for Agriculture (1998) www.alc.gov.bc.ca/publications/planning/Planning_for_Agriculture/index.htm

[5] Coriolis Consulting Corp., Do Development Cost Charges Encourage Smart Growth and High Performance Building Design?: An Evaluation of Development Cost Charge Practices in British Columbia (2003). www.wcel.org/issues/urban/dcc_report.pdf